

**2017
Periodic Review Report
Former Davis-Howland Oil
Corporation Site
NYSDEC Site No. 8-28-088
City of Rochester
Monroe County, New York**

February 2018

Prepared for:

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DEPARTMENT OF ENVIRONMENTAL REMEDIATION
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List of Abbreviations and Acronyms

1,1,1-TCA	1,1,1-trichloroethane
AS	air sparge
bgs	below ground surface
BTEX	benzene, toluene, ethyl benzene, and xylene
cis-1,2-DCE	cis-1,2-dichloroethene
cVOC	chlorinated volatile organic compound
DHOC	Former Davis-Howland Oil Corporation Site
DCB	dichlorobenzene
DUSR	Data Usability Summary Report
EEEPC	Ecology and Environment Engineering, P.C.
EC	Engineering Controls
IC	Institutional Controls
IDW	investigation-derived waste
µg/L	micrograms per liter
MS/MSD	matrix spike/matrix spike duplicate
NYSDEC	New York State Department of Environmental Conservation
O&M	operations and maintenance
OM&M	operations, maintenance, and monitoring
PAHs	polycyclic aromatic hydrocarbons
PCE	perchloroethylene or tetrachloroethene
PPE	personal protective equipment
PRR	Periodic Review Report
QA/QC	quality assurance/quality control
ROD	record of decision
RSO	Remedial Site Optimization
SMP	Site Management Plan
SSDS	sub-slab depressurization system

List of Abbreviations and Acronyms (cont.)

SVE	soil vapor extraction
SVOC	semivolatile organic compound
TCA	trichloroethane
VOC	volatile organic compound

Enclosure 1

Engineering Controls – Engineering Standby Contractor Certification Form

Former Davis-Howland Oil Corporation Site

NYSDEC Site No. 8-28-088



Enclosure 1
Engineering Controls - Standby Consultant/Contractor Certification Form



Site Details		Box 1	
Site No.	828088		
Site Name Davis-Howland Oil Corporation			
Site Address: 200 Anderson Avenue Zip Code: 14607			
City/Town: Rochester			
County: Monroe			
Site Acreage: 2.0			
Reporting Period: December 31, 2016 to December 31, 2017			
		YES	NO
1.	Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.			
2.	To your knowledge has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☒	☐
3.	To your knowledge has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4.	To your knowledge have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.			
N/A - Site is in the NYS Superfund Program			
5.	To your knowledge is the site currently undergoing development?	☐	☒
		Box 2	
		YES	NO
6.	Is the current site use consistent with the use(s) listed below? Industrial	☒	☐
7.	Are all ICs/ECs in place and functioning as designed?	☒	☐
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.			
Signature of Standby Consultant/Contractor _____		Date _____	

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
106.84-1-11	Goodman Yard LLC	Soil Management Plan Monitoring Plan Site Management Plan O&M Plan
The site has two records of decision (RODs) dating from March 1997 and March 1998.		
106.84-1-4.002	Gary I & Marcia Stern	Soil Management Plan Monitoring Plan Site Management Plan O&M Plan
The site has two records of decision (RODs) dating from March 1997 and March 1998.		
106.84-1-5	John Nacca, Esq.	Soil Management Plan Site Management Plan O&M Plan
The site has two records of decision (RODs) dating from March 1997 and March 1998.		
106.84-1-6	John Nacca	Ground Water Use Restriction Soil Management Plan Landuse Restriction IC/EC Plan Monitoring Plan Site Management Plan O&M Plan
An Environmental Notice was filed with Monroe County clerk on 8/15/2013 in Book 11290, pages 171-176 as miscellaneous record. The Controls requires:		
No disturbance that threatens the integrity of the Engineering controls, no disturbance of the engineering controls, adherence to the Site Management Plan, allowance of access by the NYSDEC, land use is to be used for industrial use only, and no groundwater water is to be used for drinking water unless properly treated.		
106.84-1-7	Anderson Acquisitions, llc	Soil Management Plan Site Management Plan O&M Plan
The site has two records of decision (RODs) dating from March 1997 and March 1998.		
107.77-1-28.1	New York Central Lines, CSXT	

The site has two records of decision (RODs) dating from March 1997 and March 1998.

121.28-2-4

Allan Stern

Monitoring Plan
Site Management Plan
O&M Plan

The site has two records of decision (RODs) dating from March 1997 and March 1998.

121.28-2-5

Allan Stern

Monitoring Plan
Site Management Plan
O&M Plan

The site has two records of decision (RODs) dating from March 1997 and March 1998.

Box 4

Description of Engineering Controls

Parcel

Engineering Control

106.84-1-11

Groundwater Treatment System
Air Sparging/Soil Vapor Extraction
Monitoring Wells

The engineering control on this site parcel is a dual-phase groundwater system with air sparge below the watertable, shallow groundwater pumping, and soil-vapor extraction. PW-1, a top-of-bedrock pumping well installed in a vault is located on this parcel.

106.84-1-4.002

Groundwater Treatment System
Air Sparging/Soil Vapor Extraction
Monitoring Wells

The engineering control on this site parcel is a dual-phase groundwater system with air sparge below the watertable, shallow groundwater pumping, and soil-vapor extraction.

106.84-1-5

Air Sparging/Soil Vapor Extraction

The engineering control on this site parcel is a dual-phase groundwater system with air sparge below the watertable, and soil-vapor extraction.

106.84-1-6

Groundwater Treatment System
Air Sparging/Soil Vapor Extraction

The engineering control on this site parcel is a dual-phase groundwater system with air sparge below the watertable, shallow groundwater pumping, and soil-vapor extraction.

The sparge points AS-29, AS-30, AS-39, AS-40, AS-41, AS-42, and AS-43 inject air into saturated soil below the watertable.

Working in conjunction with the sparge points, SVEP-3, SVEP-4, SVEP-5, SVEP-6, and SVEP-7 are shallow vacuum points which remove the injected air which has passed through the water and soil.

P-3 overburden well belongs to a network of shallow groundwater pumping wells which lower the water table enhance organic vapor stripping through the soil.

106.84-1-7

Groundwater Treatment System
Air Sparging/Soil Vapor Extraction

The engineering control on this site parcel is a dual-phase groundwater system with air sparge below the watertable, shallow groundwater pumping, and soil-vapor extraction.

107.77-1-28.1

Groundwater Treatment System
Air Sparging/Soil Vapor Extraction
Monitoring Wells

The engineering control on this site parcel is a dual-phase groundwater system with air sparge below the

Parcel

Engineering Control

watertable, shallow groundwater pumping, and soil-vapor extraction.

Monitoring wells and piezometers are also located on the parcel.

121.28-2-4

Groundwater Treatment System

Pumping well PW-2 is located on the parcel near the boundary with 15-17 Norwood St.

121.28-2-5

Monitoring Wells

Monitoring well MW-1S is located on or near near the property boundary with 183-185 Anderson Ave.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

- a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification, including data and material prepared by previous contractors for the current certifying period, if any;
- b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO



2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

- (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) nothing has occurred that would constitute a failure to comply with the Site Management Plan, or equivalent if no Site Management Plan exists.

YES NO



IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

Signature of Standby Consultant/Contractor

Date

IC/EC CERTIFICATIONS

Professional Engineer Signature

I certify that all information in Boxes 2 through 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Thomas R. Heins at Ecology and Environment Engineering, P.C.
print name

368 Pleasant View Drive

Lancaster, NY 14086

(print business address)

am certifying as a Professional Engineer.

Signature of Professional Engineer



Date

2/11/18

1

Introduction and Background

1.1 Introduction

This Periodic Review Report (PRR) provides information on the operations, maintenance, monitoring, compliance, and operating costs at the former Davis-Howland Oil Corporation (DHOC) Remediation Site (hereinafter referred to as the “Site”) during calendar year 2017. This PRR also provides information concerning the institutional and engineering controls (ICs/ECs) facilitating the remedial cleanup of the Site.

This PRR was prepared by Ecology and Environment Engineering, P.C. (EEEPC) in accordance with the requirements in the *Final Site Management Plan, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088* (SMP; EEEPC 2014).

1.2 Site Description

The Site was used from 1942 to 1972 to produce industrial chemicals, oils, greases, and other lubricants. From 1972 to 1994, the Site was used by DHOC to process and recycle waste oil, grease, and other lubricants. In 1994, DHOC closed and all manufacturing and product-processing operations ceased.

Between 1974 and the early 1990s, the New York State Department of Environmental Conservation (NYSDEC) received reports of releases of materials at the Site, including waste oil, mineral oil, hydrochloric acid, and sulfuric acid. However, no single incident has been identified that can account for a majority of the contamination now found at the Site. NYSDEC inspected the Site in June 1991 and found several hundred drums of oils, solvents, and other materials. Some of the drums were leaking, and several areas with stained surficial soil also were found.

In 1993, the Site was listed on the New York State Inactive Hazardous Waste Disposal Site Remedial Program Registry as a Class 2 Site. The Site was defined as a single parcel (ID No. 106.84-1-6) located at 192 through 200 Anderson Avenue in the city of Rochester, Monroe County, New York (see Figure 1-1). Documentation in NYSDEC’s Environmental Site Remediation Database defines the Site as encompassing the parcels described as 190 through 220 Anderson Avenue and the portion of 176 Anderson Avenue immediately north and west of 190 through 220 Anderson Avenue.

1 Introduction and Background

Remedial actions have been performed and remedial systems have been installed at the Site, specifically at the parcel located at 192 through 200 Anderson Avenue, the adjacent parcels at 190 and 220 Anderson Avenue, the portion of 176 Anderson Avenue immediately north and west of 190 through 220 Anderson Avenue, a portion of the CSX Railroad right-of-way to the north of 176 Anderson Avenue, and a small area south of Anderson Avenue encompassing the northern portions of 183 through 185 Anderson Avenue and 15 through 17 Norwood Avenue.

The approximately 1.5-acre Site is located in an area that includes residences and commercial and industrial facilities. No significant surface water is located in the immediate vicinity of the Site. Figure 1-2 presents the general Site layout. Groundwater and soil vapor at the Site are treated via multiple systems. A detailed description of each process and treatment system is provided below.

1.3 Air Sparge/Soil Vapor Extraction (AS/SVE) System

The Air Sparge/Soil Vapor Extraction (AS/SVE) system is a shallow groundwater remedy that has also contributed to the cleanup of VOC contamination in the site soils. The AS/SVE system was installed in shallow soils under an asphalt cap in the area to the north of the Site buildings and also under the Site building slabs. The AS components of the system utilize a low-pressure compressor designed to operate on a continuous basis to inject air into the soil via sparge points located around the Site. Forty-seven air sparging points were installed approximately 12 feet below ground surface (bgs) inside and outside the buildings located at 200 Anderson Avenue. The SVE system extracts soil vapor under negative pressure from the air-sparging treatment zone via a network of outdoor and indoor underground collection piping. The collection piping consists of lateral collection slot-drains (primarily outdoor) or collection points (indoor). The soil vapors are collected at a central location (treatment trailer) and discharged to the atmosphere. Three pumping wells (P-1, P-2, and P-3) are also associated with this system to maintain groundwater levels at the site at 4 feet below the ground surface. These pumping wells are also part of the groundwater pump-and-treat system and pump to the air stripper, which removes VOCs from the groundwater.

1.4 Groundwater Remediation System

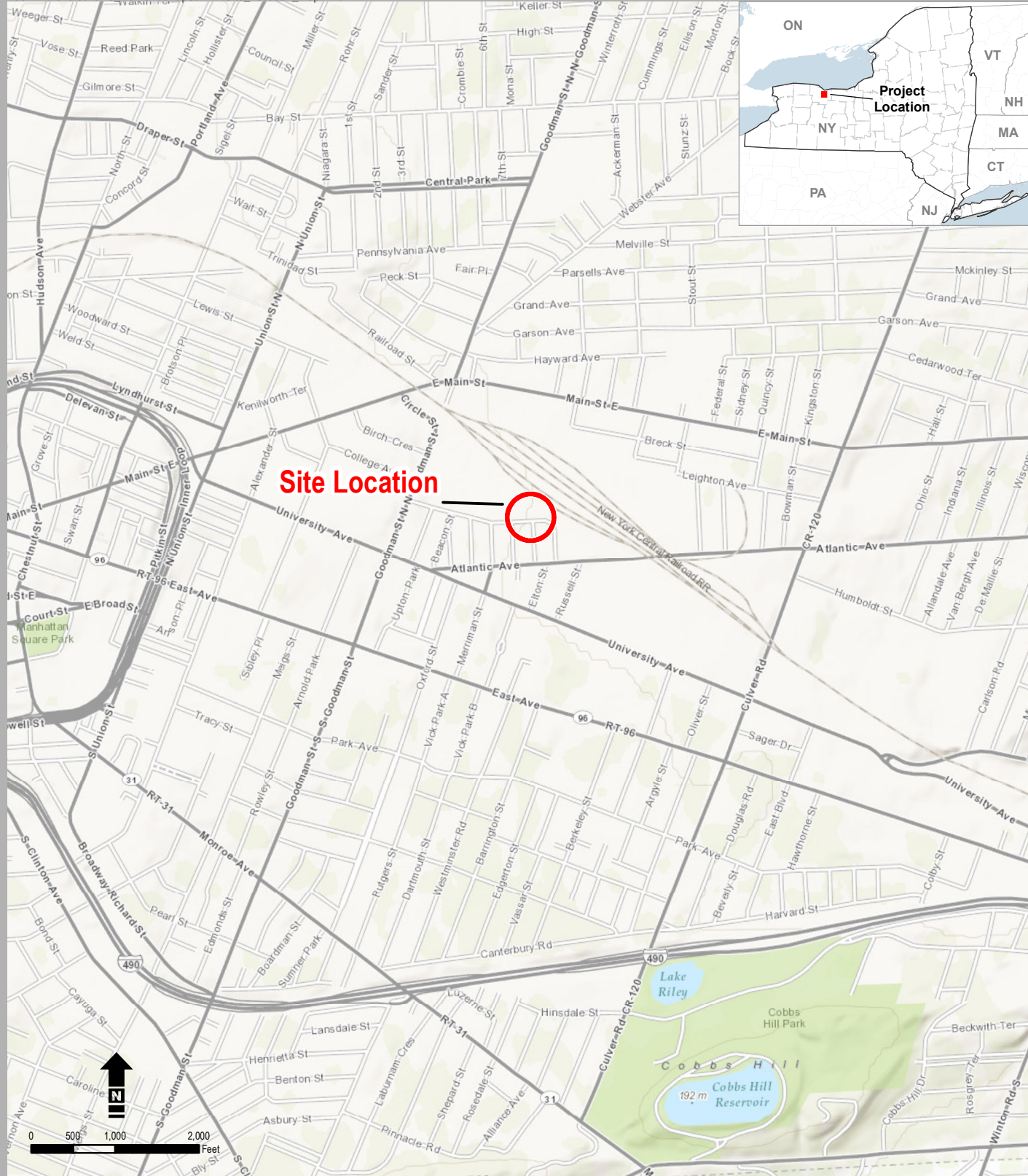
The groundwater treatment system consists of five pumping wells, which are capable of processing a combined flow of up to 30 gallons of water per minute on a continuous basis. Groundwater wells PW-1 and PW-2 were installed as deep bed-rock groundwater pumping wells to extract groundwater from the bedrock aquifer. Overburden pumping wells P-1, P-2, and P-3 were installed to keep the shallow aquifer groundwater levels below the elevation of the SVE lines and also remove VOC contamination in the overburden groundwater. P-1 was shut down indefinitely in November 2013 following recommendations in the 2012 PRR. The remaining four active pumping wells pump groundwater to the treatment trailer for processing. All of the groundwater pumping wells cycle on and off at preset water levels within each well.

1 Introduction and Background

The groundwater VOC treatment system in the treatment trailer consists of influent meters; a 500-gallon equalization tank; a sequestering agent feed tank; a feed pump; a five-tray, low-profile air stripper with air blower; an effluent pump; an effluent meter; and an effluent discharge line to the main trunk sewer under Anderson Avenue.

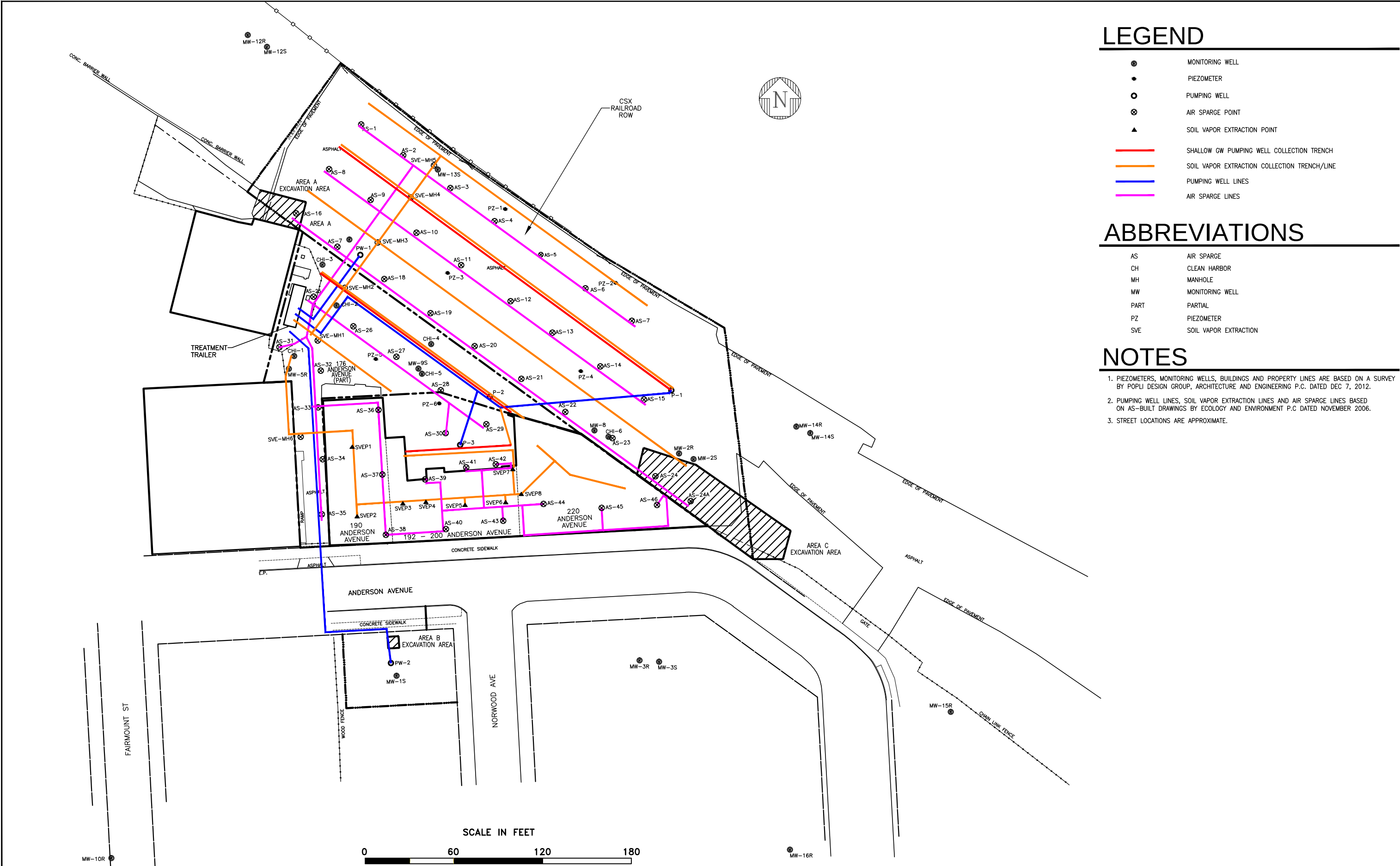
Groundwater is pumped from the shallow and bedrock-level extraction wells to the equalization tank, where it is then pumped to the air stripper on a batch basis. Contaminated groundwater from the top of the air stripper tower drains down over a series of five stacked orifice trays in the column. A fan forces air countercurrent to the water flow and volatilizes the VOCs in the groundwater. The air discharged from the air stripper is vented to the atmosphere. A sump at the bottom of the tower collects the treated groundwater, which is discharged in batches to the Monroe County combined storm and sanitary sewer system under Monroe County Sewer Use Permit No. 864.

Six piezometers (PZ-1 through PZ-6) associated with the shallow overburden groundwater pumping wells (P-1, P-2, and P-3) are used to monitor the depth to groundwater under the paved AS/SVE area on a weekly basis.



Source: ESRI 2012.

Figure 1-1
Site Location Map
Former Davis-Howland Oil Corporation
Rochester, NY



2

Remedial Systems Compliance

2.1 Groundwater Treatment

Treated groundwater is discharged from the Site to the Monroe County combined storm and sanitary sewer system under Monroe County Sewer Use Permit No. 864, effective from May 29, 2016, through May 31, 2019. Table 2-1 presents the permit criteria currently in place.

Table 2-1 Effluent Discharge Criteria, Former Davis-Howland Oil Corporation Site

Parameter	Analytical Method	Permit Criterion
Effluent flow (average discharge); based on effluent meter	—	Not to exceed 28 gpm
Acetone	40 CFR 136-625	Monitor only
pH (s.u.)	MCAWW 150.1	5.0 to 12.0
Purgeable halocarbons	40 CFR 136-625	The analytical summation of this group of contaminants shall not exceed 2.13 ppm in the effluent discharge.
Purgeable aromatics		

Key:

- CFR = Code of Federal Regulations
- gpm = gallons per minute
- MCAWW = (U.S. Environmental Protection Agency) Methods for Chemical Analysis of Water and Wastes
- ppm = parts per million
- s.u. = standard units

In 2017, the analytical results for effluent discharges from the groundwater treatment system were in compliance with the permit criteria. Analytical data for the treated groundwater is provided in Sections 4.3 and 4.4.

2.2 Air Sparge/Soil Vapor Extraction

In accordance with the SMP (EEEEPC 2014), soil vapors from the AS/SVE system are monitored when requested by NYSDEC. Ten rounds of air sampling were performed in early 2017 on the combined effluent from the system. Section 4.5 discusses the results of the air sampling events.

3

Evaluation of Site Institutional and Engineering Controls

Institutional controls (ICs) and engineering controls (ECs) are employed on the Site to support remedial operations.

3.1 Institutional Controls

No ICs were required by the two Records of Decision (RODs) issued for the Site. Programmatically, the ICs that are necessary to provide for the effectiveness of this phase of the remedial action include an SMP and deed restrictions/environmental notices. The following are currently listed as ICs for the Site on Enclosure 1 – Institutional Controls – Standby Consultant/Contractor Certification Form included with this report:

- SMP
- Soils Management Plan
- Monitoring Plan
- Operations and Management (O&M) Plan
- Ground Water Use Restriction
- Land Use Restriction
- IC/EC Plan

The current SMP (EEEPC 2014) includes a soils management plan, monitoring plan, and O&M plan.

An environmental notice was filed and recorded with the Monroe County Clerk on August 15, 2013, in Book 11290, pages 171-176, as a record that informs future owners of development restrictions on the property due to environmental concerns. The ICs require that there be no disturbance that threatens the integrity of the ECs, no disturbance of the ECs, adherence to the SMP, allowance of access by NYSDEC, that land be used for industrial use only, and that no groundwater is to be used for drinking water unless properly treated. A copy of the environmental notice for the Site is provided in Appendix D of the SMP.

3 Evaluation of Site Institutional and Engineering Controls

The ICs at the Site restrict disturbance of residual contaminated material. Current and future Site owners are required to perform soil characterization and disposal/reuse activities in accordance with NYSDEC regulations if residual contaminated soil is disturbed or excavated.

3.2 Engineering Controls

The ECs that support remedial operations at the Site are consistent with the SMP regarding operations, maintenance, and monitoring (OM&M) of the Site. The following ECs are present at the Site:

- A groundwater treatment system consisting of monitoring wells, bedrock groundwater pumping wells, and an air stripper;
- An AS/SVE system consisting of piezometers, shallow overburden groundwater pumping wells, AS points, SVE points, lines and trenches, and air-handling components of the on-site treatment plant; and
- Fencing/access control.

The water treatment component of the on-site treatment plant is a component of both the groundwater treatment system and the AS/SVE system.

The ECs for the outdoor portion of the on-site parcel consist of shallow overburden groundwater pumping wells P-2 and P-3 and two sets of AS/SVE points. The ECs for the indoor portion of the on-site parcel consists of 14 AS points and eight SVE points. The rest of the controls, which include the remaining wells, the water treatment system, and the additional AS/SVE points, are located on off-site parcels. The AS/SVE points beneath the asphalt cover on the off-site parcels have been shut down since 2004 to focus the VOC extraction process on soils beneath and near the buildings located at 190 through 220 Anderson Avenue.

Operational changes were implemented in November 2013 as a result of recommendations made in the 2012 PRR. These changes included turning off overburden pumping well P-1. The treatment systems were shut down on July 14, 2016, as a result of one of the recommendations made in the Remedial Site Optimization (RSO) Alternatives Report (EEEP 2016a), which was approved by NYSDEC on June 10, 2016. However, the treatment systems were put back into service on December 14, 2016, for further data collection as outlined in the Sampling Work Plan and Equipment Repairs (EEEP 2016b) before eventual decommissioning of the plant at the request of NYSDEC. Further details regarding the additional sampling performed in 2017 are provided in Section 7 of this report and in the Remedial System Evaluation Report (EEEP 2018).

4

Evaluation of Remedial Treatment Operations

4.1 System Operational Uptime in 2017

The operational uptime percentages are calculated based on actual monthly hours of treatment system operations in the reporting period divided by the potential hours of operation in the reporting period. The system was shut down throughout the year due to the pulsed pumping evaluation completed as part of the optimization evaluations described in the Sampling Work Plan (EEEPC 2016b).

Local power outages or equipment failures affect operations of the remedial treatment systems. To limit downtime, the systems have an auto-dialer that sends an alarm to the OM&M subcontractor and EEEPC if an equipment failure occurs. In addition, the treatment facility can be called at any time at (585) 241-3431, unless phone service is down, to check on the status of the various operating equipment in the building.

Based on information from the weekly OM&M reports from the subcontractor, Popli Design Group, in 2017 the groundwater treatment system operated 3,888 hours out of a possible 8,880 hours, for an uptime operation of approximately 44%. The downtime for the treatment system was due to the pulsed pumping evaluation schedule previously mentioned. Table 4-1 provides details on the monthly operation of the groundwater treatment system.

The AS/SVE system operated for 8,736 hours out of a possible 8,880 hours, for an uptime of approximately 98%. Downtime for the AS/SVE system was due, in part, to a malfunctioning air sparge motor from February 24 to March 6, 2017. Table 4-1 provides details on the monthly operation of the AS/SVE treatment system.

Table 4-1 Former Davis-Howland Oil Corporation Site Groundwater Treatment System Uptime in 2017

Reporting Period	Total Possible Hours per Month/ Period (hours)	Groundwater System Operation Time (hours)	Groundwater System Operation Time (%)	AS/SVE System Operation Time (hours)	AS/SVE System Operation Time (%)
December 28, 2016 to January 27, 2017	720	612	85%	720	100%
January 27, 2017 to February 24, 2017	672	180	27%	672	100%
February 24, 2017 to March 30, 2017	840	492	59%	696	83%
March 30, 2017 to April 28, 2017	696	336	48%	696	100%
April 28, 2017 to May 25, 2017	648	0	0%	648	100%
May 25, 2017 to June 29, 2017	840	144	17%	840	100%
June 29, 2017 to July 28, 2017	696	0	0%	696	100%
July 28, 2017 to August 24, 2017	648	192	30%	648	100%
August 24, 2017 to September 28, 2017	840	0	0%	840	100%
September 28, 2017 to October 26, 2017	696	348	50%	696	100%
October 26, 2017 to November 30, 2017	864	864	100%	864	100%
November 30, 2017 to December 29, 2017	720	720	100%	720	100%
Total Hours of Operation in 2017	8,880	3,888	44%	8,736	98%

4 Evaluation of Remedial Treatment Operations

Additional details are presented in the monthly OM&M reports (EEEPc 2017a through 2017l).

4.2 Groundwater Processed and Discharged through the Remedial Treatment System in 2017

The amount of groundwater processed and discharged is read directly from the effluent discharge meter located after the air-stripper unit. Readings are taken weekly at the master discharge meter and then calculated for each monthly reporting period.

Based on information obtained from the weekly monitoring reports from the OM&M subcontractor, the remedial treatment system processed and discharged 605,400 gallons of treated groundwater to the Monroe County sanitary sewer system from December 28, 2016, to December 29, 2017 (see Table 4-2). The variability in the number of gallons of groundwater treated on a monthly basis is due to several factors, including the number of weeks reported for that month (four or five), seasonal changes in groundwater elevations, system shutdowns, equipment efficiency, and maintenance requirements.

The average effluent flow rate while the system was in operation in 2017 was approximately 2.60 gallons per minute.

Table 4-2 Groundwater Processed and Discharged by the Groundwater Treatment System in 2017

Month	Actual Period	Gallons Treated
January 2017	December 28, 2016, to January 27, 2017	119,700
February 2017	January 27, 2017, to February 24, 2017	42,100
March 2017	February 24, 2017, to March 30, 2017	71,300
April 2017	March 30, 2017, to April 28, 2017	66,300
May 2017*	April 28, 2017, to May 25, 2017	0
June 2017	May 25, 2017, to June 29, 2017	38,400
July 2017*	June 29, 2017, to July 28, 2017	0
August 2017	July 28, 2017, to August 24, 2017	30,200
September 2017*	August 24, 2017, to September 28, 2017	0
October 2017	September 28, 2017, to October 26, 2017	34,300
November 2017	October 26, 2017, to November 30, 2017	127,500
December 2017	December 30, 2017, to December 29, 2017	75,600
Total Gallons Treated in 2017		605,400

* System was shut down due to planned pulsed pumping evaluations.

4.3 Volatile Organic Compounds Removed from Groundwater in 2017 (Air Stripping Operations)

The amount of VOCs removed from the groundwater is estimated based on the influent and effluent analytical results and the amount of groundwater processed through the treatment system. Based on calculations prepared by EEEPC on the

4 Evaluation of Remedial Treatment Operations

operation of the remedial treatment unit from December 28, 2016, to December 29, 2017, approximately 2.28 pounds of VOCs were removed from the groundwater by the air stripper system in 2017 (see Table 4-3). Total VOCs removed from the Site also include 0.18 pounds of VOCs not removed from the groundwater by the air stripper that were discharged to the Monroe County sanitary sewer system. Thus, a total of approximately 2.46 pounds of VOCs were removed from the Site by the groundwater pumping and treatment system during 2017. Additional VOC results are presented in the monthly OM&M reports (EEEPC 2017a through 2017l).

Table 4-3 VOCs Removed by the Former Davis-Howland Oil Corporation Site Groundwater Treatment System in 2017

Month	Actual Period	Influent VOCs (µg/L)	Effluent VOCs (µg/L)	Removal Efficiency	VOCs Removed by Air Stripper (pounds)	VOCs Removed from Site (pounds)
January 2017	12/28/16 to 1/27/17	409	50	88%	0.36	0.41
February 2017	1/27/17 to 2/24/17	1,149	118	90%	0.36	0.40
March 2017	2/24/17 to 3/30/17	410	85	79%	0.19	0.24
April 2017	3/30/17 to 4/28/17	1,382	48	97%	0.74	0.76
May 2017*	4/28/17 to 5/25/17	-	-	-	0.00	0.00
June 2017	5/25/17 to 6/29/17	122	4	97%	0.04	0.04
July 2017*	6/29/17 to 7/28/17	-	-	-	0.00	0.00
August 2017	7/28/17 to 8/24/17	192	17	91%	0.04	0.05
September 2017*	8/24/17 to 9/28/17	-	-	-	0.00	0.00
October 2017	9/28/17 to 10/26/17	227	12	95%	0.06	0.06
November 2017	10/26/17 to 11/30/17	313	0	100%	0.33	0.33
December 2017	11/30/17 to 12/29/17	265	8	97%	0.16	0.17
Total					2.28	2.46

* System was shut down due to planned pulsed pumping evaluations.

Key:

µg/L = Micrograms per liter

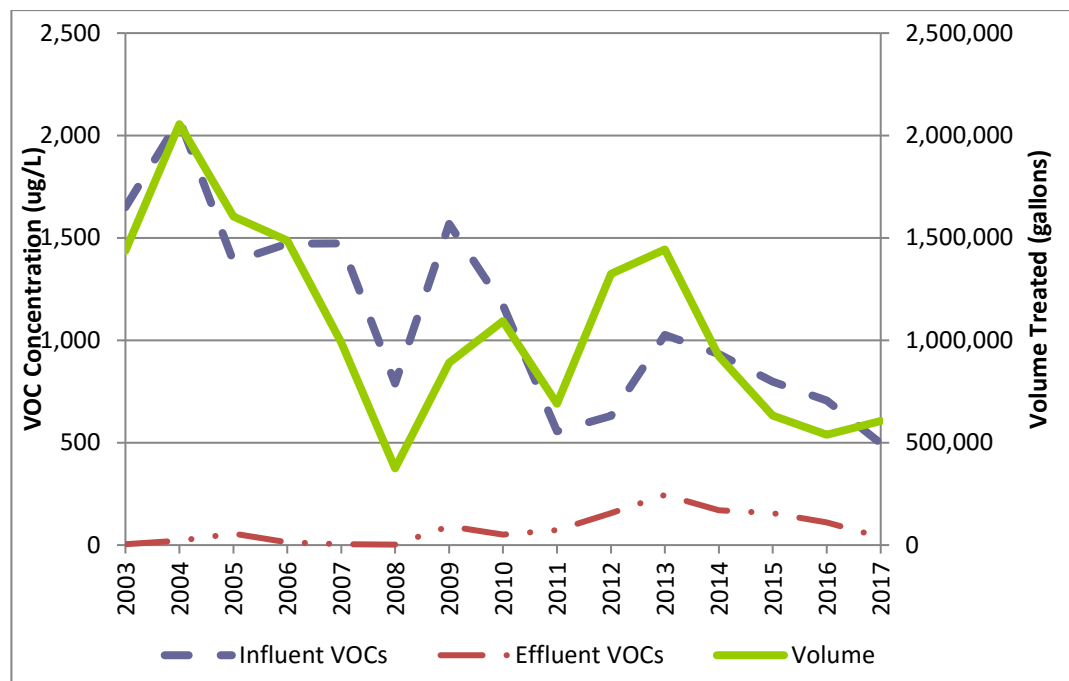
VOC = Volatile organic compound

Figure 4-1 shows the historical treatment trend for the DHOC Site from 2003 through 2017. Since 2003, the average total VOC concentration in the influent of the system has generally decreased, indicating the contaminant concentration in the extracted groundwater is decreasing. Effluent concentrations from the groundwater treatment system were increasing up to 2011 and have been decreasing since that time, and continue to remain under the sewer permit discharge limit.

The increase in flow between 2009 and 2010 was due to the pump rehabilitation/replacement effort in August 2009, which resulted in an increase in the volume of groundwater that was being processed. The decrease in flow between

4 Evaluation of Remedial Treatment Operations

2010 and 2011 was due to the decrease in production from pumping well PW-1, which developed an obstruction in the transfer line from the wellhead to the treatment system trailer. This obstruction was cleared in spring 2012, and a regular cleaning/maintenance program for this line has been implemented. The line was cleaned again in November 2013, August 2014, March 2015, October 2015, and May 2016. Pump P-1 was shut down indefinitely in November 2013 as was recommended in the 2012 PRR for the Site (EEEPC 2013). The decrease in volume in 2015 was a result of the pulsed pumping evaluation completed as part of the optimization evaluations described in the RSO Sampling Plan (EEEPC 2015a). All groundwater pumps were offline for a total of two months between August and November 2015. The decrease in processed volume in 2016 was due to system shutdown from July 13 to December 15, 2016, as requested by NYSDEC, and a blower malfunction in June 2016. In 2017, the system was in operation throughout the year with limited shutdowns due to additional pulsed pumping evaluations.



Notes:

- 1 Deactivation of the catalytic oxidizer unit occurred in March 2008, requiring the treatment system to be shut down for five months.
- 2 Pump rehabilitation/replacement occurred in August 2009.
- 3 The system was shut down in March 2011 due to damage caused by overflow of the system.
- 4 The system was shut down from July 14 to December 14, 2016 by NYSDEC request. Influent and effluent VOCs averages for 2016 include January through June, and December.
- 5 System was shut down due to planned pulsed pumping evaluations during May, July, and September, 2017.

Figure 4-1 Historical Treatment Trends, 2003-2017

4 Evaluation of Remedial Treatment Operations

4.4 Groundwater Treatment - 2017

The effluent from the remedial treatment system met the discharge permit requirements (see Appendix A) for each month of 2017. Table 4-4 presents a summary of the monthly analytical results for the treated effluent and compares them to the Monroe County discharge permit criteria.

Table 4-4 2017 Monthly Compliance Results for Treated Groundwater Effluent, Former Davis-Howland Oil Corporation Site

Month	Average Effluent (gpm)	pH (s.u.)	Purgeable Halocarbons and Purgeable Aromatics (ppm)	Permit Compliance
Discharge Permit Limits	28	5.0-12.0	2.13	-
January	3.26	8.35	0.05	Yes
February	3.90	8.16	0.118	Yes
March	2.42	8.07	0.085	Yes
April	3.29	7.31	0.048	Yes
May*	-	-	-	-
June	4.44	8.05	0.004	Yes
July*	-	-	-	-
August	2.62	8.31	0.017	Yes
September*	-	-	-	-
October	1.64	7.96	0.012	Yes
November	2.46	8.01	0.00	Yes
December	1.75	8.09	0.008	Yes

* System was shut down due to planned pulsed pumping evaluations.

Key:

gpm = gallons per minute

s.u. = standard units

ppm = parts per million

4.5 AS/SVE System Performance

Sampling of the combined effluent of the AS/SVE system was performed weekly over a period of 10 weeks for VOCs. These samples were collected to evaluate the VOC removal of the system as part of Remedial Site Optimization evaluations as described in the Remedial System Evaluation report (EEEPC 2018). Analytical results indicated that effluent VOCs concentrations were generally below NYSDOH guidelines (NYSDOH 2015), with the exception of tetrachloroethene (PCE) during one sampling event and trichloroethene (TCE) during three sampling events (see Table 3-1 in the Remedial System Evaluation report). A comparison of VOC removal rates versus historical removal rates by the AS/SVE system indicates that they system has reached an asymptotic state and is no longer efficiently removing VOC contamination.

4 Evaluation of Remedial Treatment Operations

The VOC concentrations in these combined effluent samples were significantly smaller than VOC concentrations in samples collected from the individual SVE extraction points in 2016. The average TCE concentration at the individual SVE points in 2016 was 575 $\mu\text{g}/\text{m}^3$ and the average PCE concentration was 68 $\mu\text{g}/\text{m}^3$. In 2017, TCE and PCE concentrations in the combined effluent was 41 $\mu\text{g}/\text{m}^3$ and 30 $\mu\text{g}/\text{m}^3$, respectively.

5

General Status of Remedial Treatment Equipment

In 2017, OM&M of the DHOC Site remedial treatment system was performed on a weekly basis by EEEPC's OM&M subcontractor (Popli Design Group). In the event of a major component malfunction (resulting in a component shutdown) or treatment trailer intrusion detection at the Site, an auto-dialer primary contact alarm alerts the OM&M subcontractor of the problem and a secondary alarm alerts EEEPC.

EEEPC provides NYSDEC with a monthly compliance report on the OM&M work performed on the remedial treatment system. When equipment repairs are required, the OM&M subcontractor reports the needed repairs to EEEPC, and EEEPC reports them to NYSDEC. Information regarding repairs performed on the remedial treatment system components is provided in the weekly OM&M reports submitted to EEEPC and in the monthly compliance reports provided to NYSDEC by EEEPC.

Equipment issues are handled on a case-by-case basis. The costs of minor equipment issues (e.g., electronic maintenance, repair, and replacement) are funded through the contingency task established when the project was initiated. Major equipment issues that are not identified as a component of the contingency task budget are discussed with the NYSDEC project manager, and a corrective action approach is subsequently developed. Upon acceptance by NYSDEC, the corrective action is initiated.

Analytical services for the Site are provided by ALS Environmental, Rochester, New York. The analytical testing frequency matrix is provided in Table 5-1.

Table 5-1 Analytical Frequency Matrix, Former Davis-Howland Oil Corporation Site

	Groundwater	Air	Schedule
Treatment system (influent and effluent)	X	NA	Monthly
Groundwater monitoring wells network	X	NA	Yearly
AS/SVE System	NA	X	As requested by NYSDEC

Key:
NA = Not applicable

5 General Status of Remedial Treatment Equipment

5.1 Remedial Treatment System Equipment Condition, Replacement, and Repairs in 2017

The main components of the remedial treatment system, including the chemical sequestering system, equalization tank, blowers, air-stripping unit, and groundwater pumping system, continue to operate at a high rate of efficiency as a result of the weekly monitoring and maintenance program.

The groundwater pumping well network remains in working condition, with the exception of P-1, which was shut down in November 2013 following recommendations in the 2012 PRR. Following shut down of P-1, all associated pumping equipment was removed from the well.

Items that have had significant maintenance requirements over the last few years have been the pumps and the flow meters/flow sensors for the groundwater pumping system, the air sparge compressor, the AS/SVE flow sensor/pressure gauge/control valve assemblies, and electronic control components. These components have been in operation for over 10 years and are subject to harsh conditions. The following non-regular maintenance activities were performed in 2017.

- A new pipe tap was installed on January 13, 2017 at back of the tee in the air stripper stack to run a new poly line into the trailer as the old lines were brittle and air was not flowing. A flow meter, valve, and connector were installed on the air line inside the trailer.
- The love-joy connection between the Air Sparge motor and compressor was replaced on January 19, 2017.
- Air Sparge compressor was not operating as noted in the January 20, 2017 weekly inspection report. The compressor was repaired and reinstalled on March 6, 2017.
- Replaced filters on the SVE system on November 16, 2017.

Other issues regarding operations include shallow groundwater depths measured by piezometers associated with pumping well P-1. Following the indefinite shutdown of pumping well P-1 on November 15, 2013, the groundwater levels measured from piezometers PZ-1 and PZ-2 in 2017 (located near the edge of pavement on the northern portion of the CSX right-of-way) continue to indicate a groundwater depth of less than 4 feet bgs. In accordance with the SMP, the depth to groundwater in areas of active air sparging and soil vapor extraction must be maintained at 4 feet bgs to prevent the groundwater from interfering with the collection of soil vapors. However, the AS/SVE portion of the remedial treatment system in the area of PZ-1 and PZ-2 has been shutdown in order to focus the VOC vapor extraction process under the on-site buildings; therefore, it is no longer necessary to maintain a minimum groundwater depth of 4 feet bgs in this area.

5 General Status of Remedial Treatment Equipment

5.2 Groundwater Monitoring Well Network Inspection

Between November 13 and 20, 2017, EEEPC conducted inspections of overburden and bedrock groundwater monitoring wells. The purpose of these inspections was to document the physical condition of the wells and identify maintenance actions required to keep the groundwater monitoring well network operational.

Based on the inspection, it was determined that the groundwater monitoring wells were generally in good condition though some are in need of minor repairs. A summary of the monitoring well inspection findings is presented in Table 5-2.

Table 5-2 Summary of November 2017 Well Inspection, Former Davis-Howland Oil Corporation Site

Well Identification	Date Inspected	Well Casing ID (inches)	Inspection Observations
CHI-1	11/13/2017	2	Needs new bolts
CHI-6	11/13/2017	2	Needs new bolts
MW-1S	11/14/2017	2	
MW-2S	11/14/2017	2	
MW-9S	11/13/2017	2	
MW-12S	11/13/2017	2	Well covered by gravel/dirt stockpile
MW-13S	11/13/2017	2	Well covered by sand/gravel stockpile
MW-14S	11/14/2017	2	Needs new bolts and screws
MW-2R	11/16/2017	4	
MW-5R	11/15/2017	4	
MW-8R	11/15/2017	4	
MW-10R	11/20/2017	4	
MW-12R	11/13/2017	4	Well covered by gravel/dirt stockpile
MW-14R	11/16/2017	4	
MW-15R	11/13/2017	4	Well covered by gravel/dirt stockpile
MW-16R	11/17/2017	4	Steel well cap in poor condition
PZ-1	11/13/2017	1	Needs new bolts
PZ-2	11/17/2017	1	
PZ-3	11/16/2017	1	
PZ-4	11/17/2017	1	

Key:

ID = inner diameter

6

2017 Groundwater Sampling Event Summary

This section discusses the groundwater monitoring activities performed at the Site in November 2017 and compares the results to historical data. Field activities were conducted according to the Groundwater Monitoring and Long-term Well Sampling Procedures included as Appendix J of the Final SMP (EEEP 2014). Sampling locations are identified on Figure 1-2.

6.1 Field Activities

6.1.1 Monitoring Well Sampling

Groundwater samples were collected from 10 monitoring wells, three piezometers, and four extraction wells at the Site from November 13 through 20, 2017. Samples could not be collected from monitoring wells CHI-1 and CHI-6 because they were dry. Monitoring wells MW-12S, MW-13S, MW-12R, and MW-15R could not be sampled because they were obstructed by gravel and debris placed by site users. Monitoring wells MW-3S and MW-3R were decommissioned in February 2016 by Leader Professional Services, Inc., as part of property redevelopment at 10 Norwood Avenue. These monitoring wells are slated to be replaced with new wells at alternate locations following RSO evaluations at the site. Pumping well P-1 was shutdown indefinitely in November 2013, and all pumping components were removed from the well. This well was not sampled as part of the annual sampling event.

Prior to purging, static water levels were measured to the nearest 0.01 foot in each monitoring well using an electronic water-level indicator. The water level and total depth of each well were recorded (see Table 6-1). The suffix “R” in a monitoring well designation (for example, MW-12R) denotes a bedrock well, and the suffix “S” denotes a monitoring well that is screened in the shallow overburden groundwater zone.

6 2017 Groundwater Sampling Event Summary

Table 6-1 November 2017 Groundwater Elevations, Former Davis-Howland Oil Corporation Site

Well ID	Measurement Date	Measured Total Depth (feet TOIC)	Ground Elevation (feet amsl)	TOIC Elevation (feet amsl)	Depth to Water (feet TOIC)	Groundwater Elevation (feet amsl)
Shallow Overburden Wells						
MW-1S	11/14/2017	17.96	500.23	499.72	9.90	489.82
MW-2S	11/14/2017	14.01	496.03	497.48	5.35	492.13
MW-9S	11/13/2017	15.91	497.94	498.01	6.64	491.37
MW-14S	11/14/2017	12.93	495.48	495.16	1.68	493.48
PZ-2	11/17/2017	12.48	497.13	496.87	3.19	493.68
PZ-3	11/16/2017	13.50	497.87	497.56	5.69	491.87
PZ-4	11/17/2017	11.52	497.76	497.22	4.18	493.04
Deep Bedrock Wells						
MW-2R	11/16/2017	30.20	496.14	497.54	14.38	483.16
MW-5R	11/15/2017	34.74	501.32	498.23	14.65	483.58
MW-8R	11/15/2017	36.14	499.63	497.64	15.50	482.14
MW-10R	11/20/2017	35.56	497.89	497.44	17.81	479.63
MW-14R	11/16/2017	23.60	495.6	495.18	4.85	490.33
MW-16R	11/17/2017	22.30	493.48	493.04	18.24	474.80

Key:

- amsl = Above mean sea level
- MW = Monitoring well
- TOIC = Top of inner casing
- = Data not applicable or not obtained for these wells.

Monitoring well purging was completed using either a submersible or peristaltic pump with new polyethylene tubing. For the four pumping wells that were sampled, the pumps were active at the time of sampling to purge the wells, and grab samples were collected directly from sample ports before treatment. Measurements of temperature, pH, conductivity, turbidity, and oxidation-reduction potential were recorded throughout the well-purging process and immediately prior to sampling. The final water quality measurements are presented in Table 6-2. Except as noted, purging was continued at each well until the groundwater quality parameters were stable and a minimum of three well volumes of water had been purged from the well. The only exception was MW-16R, which was purged dry and sampled after sufficient recharge had occurred. Appendix B presents copies of the monitoring well purge and sample records for the November 2017 sampling event.

Non-dedicated sampling equipment was decontaminated in accordance with the Groundwater Monitoring and Long-term Well Sampling Procedures included as Appendix J of the SMP. Purge and decontamination water were handled according to procedures outlined in Section 6.1.3.

6 2017 Groundwater Sampling Event Summary

Table 6-2 Summary of Groundwater Quality Field Measurements, Former Davis-Howland Oil Corporation Site

Well ID	Sample Date	pH (s.u.)	Temperature (°F)	ORP (mV)	Conductivity (µS/cm)	Unfiltered Turbidity (NTU)
Overburden Wells						
MW-1S	11/14/2017	6.88	55.5	76.0	1,177	0.74
MW-2S	11/14/2017	6.67	56.5	-8.0	1,472	1.17
MW-9S	11/13/2017	7.22	57.4	117	1,127	1.84
MW-14S	11/14/2017	7.24	54.1	-12.0	354	0.75
PZ-2	11/17/2017	7.48	53.4	-9.0	611	3.06
PZ-3	11/16/2017	6.95	56.3	15.0	2,153	1.40
PZ-4	11/17/2017	7.88	55.2	19.0	418	2.83
Bedrock Wells						
MW-2R	11/16/2017	7.18	54.0	-74.0	1,738	11.86
MW-5R	11/15/2017	7.25	55.5	-12.0	1,657	0.44
MW-8R	11/15/2017	7.16	54.4	-83.0	1,957	21.6
MW-10R	11/20/2017	7.31	52.9	21.0	1,172	0.55
MW-14R	11/16/2017	7.54	55.0	-34.0	1,020	1.42
MW-16R	11/17/2017	7.68	54.7	-40.0	711	21.2

Key:

- °C = degrees Celsius
- mV = millivolts
- µS/cm = microsiemens per centimeter
- NTU = nephelometric turbidity unit
- ORP = oxidation-reduction potential
- s.u. = standard units

Upon collection, samples were labeled and immediately placed in a cooler maintained with ice at approximately 4°C. The samples were delivered directly to the laboratory by the EEEPC field team with chain-of-custody documents. Groundwater samples were submitted to the ALS Environmental laboratory in Rochester, New York, for VOC analysis by United States Environmental Protection Agency Method 624.

6.1.2 Quality Assurance/Quality Control Review

In addition to the normal field samples, quality assurance/quality control (QA/QC) samples were collected. Trip blanks accompanied each shipment for VOC analysis to check for the possible introduction of VOCs from the time the samples were collected to the time they were analyzed. Sample portions for VOCs collected on a single day were transported in the same cooler. One field (equipment) blank was collected. This sample consisted of laboratory deionized water poured over a decontaminated sampling pump to check the thoroughness of decontamination procedures and evaluate potential cross-contamination of samples.

To check consistency in sample collection, one duplicate sample was collected from monitoring well MW-2S. The sample consisted of aliquots of sample media placed in separate sample containers and labeled as separate samples (MW-2S-17NOV and MW-2S-17NOV-Q). Additionally, extra volume for matrix

6 2017 Groundwater Sampling Event Summary

spike/matrix spike duplicate (MS/MSD) analyses was collected from monitoring well MW-1S to simulate the background effect and interferences found in the actual samples. The calculated percent recovery of the spike is used as a measure of the accuracy of the total analytical method. Field duplicates and MS/MSD samples are typically collected at a rate of one per 20 field samples per the Master Quality Assurance Project Plan (EEEPC 2011). For this event, one duplicate sample and one MS/MSD sample were collected for 17 wells. This collection rate is considered acceptable with no impact on data usability due to the routine nature of this sampling.

QA/QC data were reviewed by an EEEPC chemist, and a Data Usability Summary Report (DUSR) was prepared (see Appendix B). Data qualifiers were applied as described in the DUSR and incorporated into the data summary tables. No significant issues were identified, and all analytical data is considered usable for its intended purpose.

6.1.3 Investigation-Derived Waste Management

Investigation-derived waste (IDW) generated during this investigation was handled according to procedures outlined in EEEPC's Groundwater Sampling Procedures. Three types of IDW were generated: purged groundwater, decontamination water, and expendable materials, including personal protective equipment (PPE). Purged and decontamination water was placed into the equalization tank of the on-site groundwater treatment system.

Expendable PPE generated during the investigation (including gloves and plastic sheeting) was bagged and removed from the site for disposal as non-hazardous solid waste.

6.2 Site Hydrogeology

The Site is situated on alluvial organic silt and sand overlaying glacial till deposits and lacustrine sand and silt of varying thickness. Bedrock beneath the Site is the Penfield Dolostone of the Middle Silurian Lockport Group and is encountered at depths of about 15 to 27 feet.

Two groundwater aquifers have been identified beneath the Site: a shallow overburden aquifer and an upper bedrock aquifer. These aquifers are not listed by the United States Environmental Protection Agency as sole-source aquifers (Lawler, Matusky & Skelly Engineers, LLP, and Galson/Lozier Engineers 1996). A summary description of each water-bearing zone is provided below.

6.2.1 Overburden Aquifer

Historically, groundwater flow direction at the Site has been observed to be highly variable. In 1997, a flow divide existed near the railroad tracks, resulting in groundwater flow to the northeast, southeast, southwest, and south. In 2004, groundwater flow was observed to travel northeast across the Site, while in 2007 it was observed to travel southwest from a high area along the railroad tracks

6 2017 Groundwater Sampling Event Summary

(EEEPC 2007). The overburden groundwater flow in 2009 through 2011 was observed to be primarily toward the south and west (EEEPC 2009, 2010, 2013). From 2012 through 2016, the flow was primarily to the southwest, with localized groundwater sinks in the middle of the Site, indicative of capture primarily by pumping well P-2 and, to a lesser extent, P-3 (EEEPC 2015b; EEEPC 2016c; EEEPC 2017m).

Overburden groundwater flow in November 2017, was once again primarily towards the southwest, with localized variation (see Figure 6-1).

6.2.2 Bedrock Aquifer

Historically, the bedrock groundwater flow direction at the Site has generally been more consistent than that in the overburden. In 1997 and 2004, groundwater flow was observed to be radially outward from a mound beneath the Site, with the primary flow directions to the northeast and southeast (EEEPC 2004). In 2007, 2009, 2010, and 2011, groundwater flow in the bedrock aquifer appeared to be more variable, with radial flow from high areas on the west (near MW-5R) and east (near MW-14R/MW-15R) sides of the Site and a groundwater sink near MW-2R (EEEPC 2007, 2009, 2010, 2013). From 2012 through 2015, similar outward radial flow from MW-5R and MW-14R was observed with radial capture at pumping wells PW-1 and PW-2. Groundwater capture was enhanced beginning in 2012, likely the result of routine well maintenance producing higher flow rates (EEEPC 2015b; EEEPC 2016c).

In November 2016 and 2017, the primary bedrock groundwater flow direction was to the south (see Figure 6-1). There is evidence of slight mounding (higher elevations) at MW-14R, as depicted on Figure 6-1.

6.3 Analytical Results

This section presents the analytical results for the November 2017 groundwater samples collected at the DHOC Site and compares them to historical results. The laboratory results of detected contaminants for overburden monitoring wells and pumping wells are presented in Table 6-3. Laboratory results of detected contaminants for bedrock monitoring wells and pumping wells are presented in Table 6-4. Groundwater sample results discussed below were compared to the NYSDEC Class GA groundwater standards and guidance values (NYSDEC 1998). The complete laboratory report for the sampling event is provided in Appendix B.

6.3.1 Overburden Groundwater Results

Volatile Organic Compounds

Fifteen different VOCs were detected in one or more groundwater samples collected from overburden wells. All of these compounds are chlorinated aliphatic (straight-chained) VOCs (cVOCs), including PCE, TCE, 1,1,1-trichloroethane (1,1,1-TCA), and their degradation by-products. Two chlorinated aromatic VOCs

6 2017 Groundwater Sampling Event Summary

(dichlorobenzene [DCB] isomers) were detected. Benzene and ethylbenzene were also present in overburden pumping well samples.

Seven VOCs were detected in one or more overburden monitoring or pumping wells at concentrations exceeding NYSDEC Class GA groundwater standards. These chemicals are highlighted in Table 6-3. The concentrations of cVOCs in overburden groundwater were highest in PZ-04 and pumping wells P-2 and P-3. In 2017, the total concentration of chlorinated aliphatic hydrocarbons was approximately 400 µg/L in PZ-04, approximately 343 µg/L in P-2, and 441 µg/L in P-3. The primary contributors to these total concentrations were cis-1,2-dichloroethene (cis-1,2-DCE) at all three locations and TCE at PZ-04. DCB isomers were detected in wells MW-9S at relatively low concentrations. The only BTEX detected in overburden wells was a low concentration of benzene in P-2 and a low concentration of ethylbenzene in P-3 (see Table 6-3).

The November 2017 concentration isopleths of BTEX and cVOCs in the overburden groundwater samples are presented on Figure 6-2.

Semivolatile Organic Compounds

As per the 2016 PRR (EEEPC 2017m) recommendations, sampling for semivolatile organic compounds (SVOCs) was not performed in 2017.

Petroleum Products

As per the 2016 PRR (EEEPC 2017m) recommendations, sampling for petroleum products was not performed in 2017.

6.3.2 Bedrock Groundwater Results

Volatile Organic Compounds

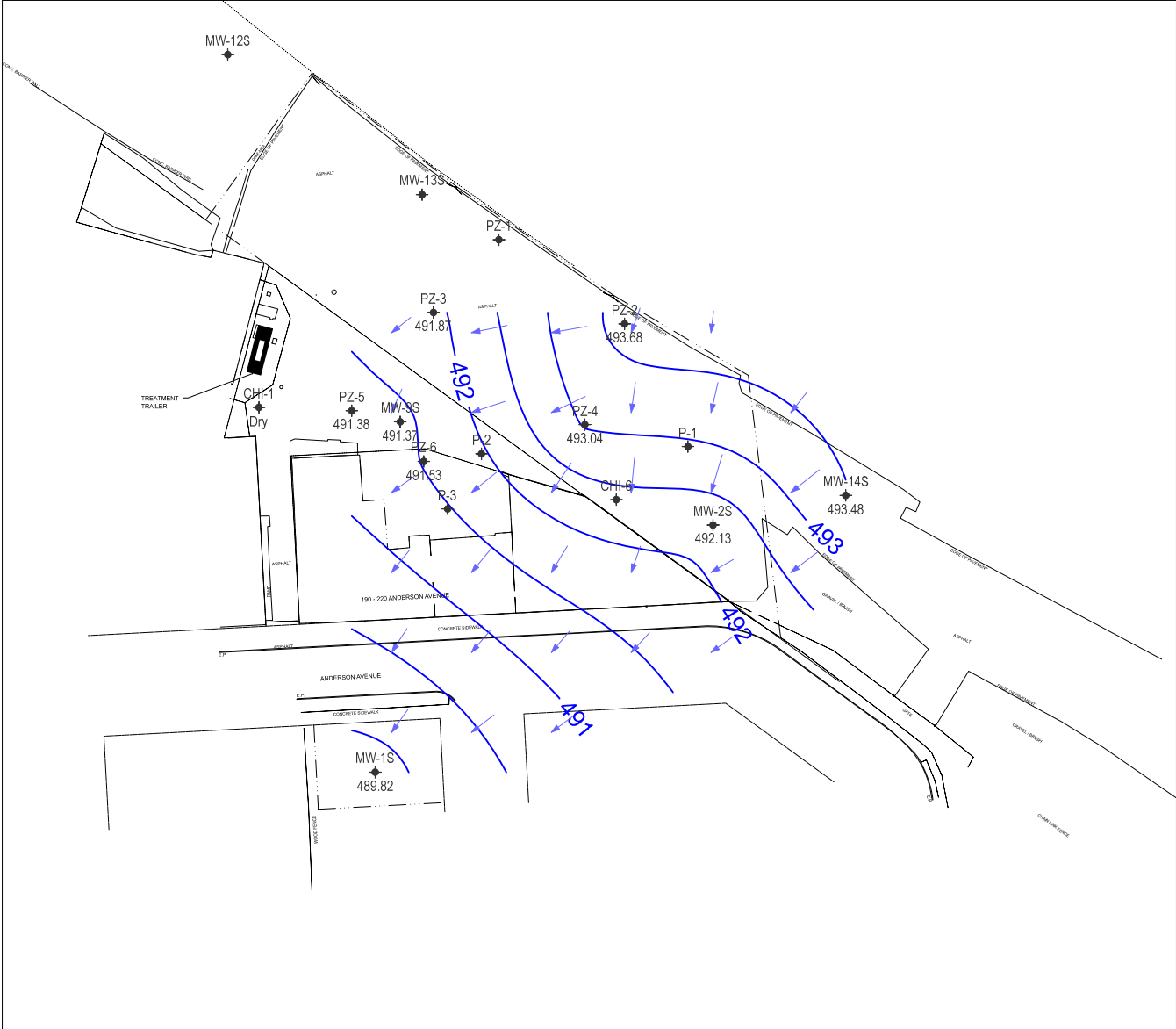
Ten different VOCs were detected in one or more of the groundwater samples collected from bedrock monitoring and pumping wells, including cVOCs (PCE; TCE; 1,1,1-TCA; and their degradation by-products) and BTEX (benzene only). The concentrations of eight detected VOCs exceeded NYSDEC Class GA groundwater standards in at least one well. These chemicals are highlighted in Table 6-4.

The maximum total cVOC concentration detected in bedrock groundwater samples from monitoring or pumping wells was approximately 6,175 µg/L in monitoring well MW-8R. The maximum total cVOC concentration has consistently been detected in MW-8R. The primary contributor to the total cVOC concentrations is cis-1,2-DCE in all wells except MW-10R, where TCE is present at the highest concentration. DCB isomers were not present in any of the bedrock well samples. BTEX was detected only in samples from one monitoring wells (MW-5R) and one pumping well (PW-1).

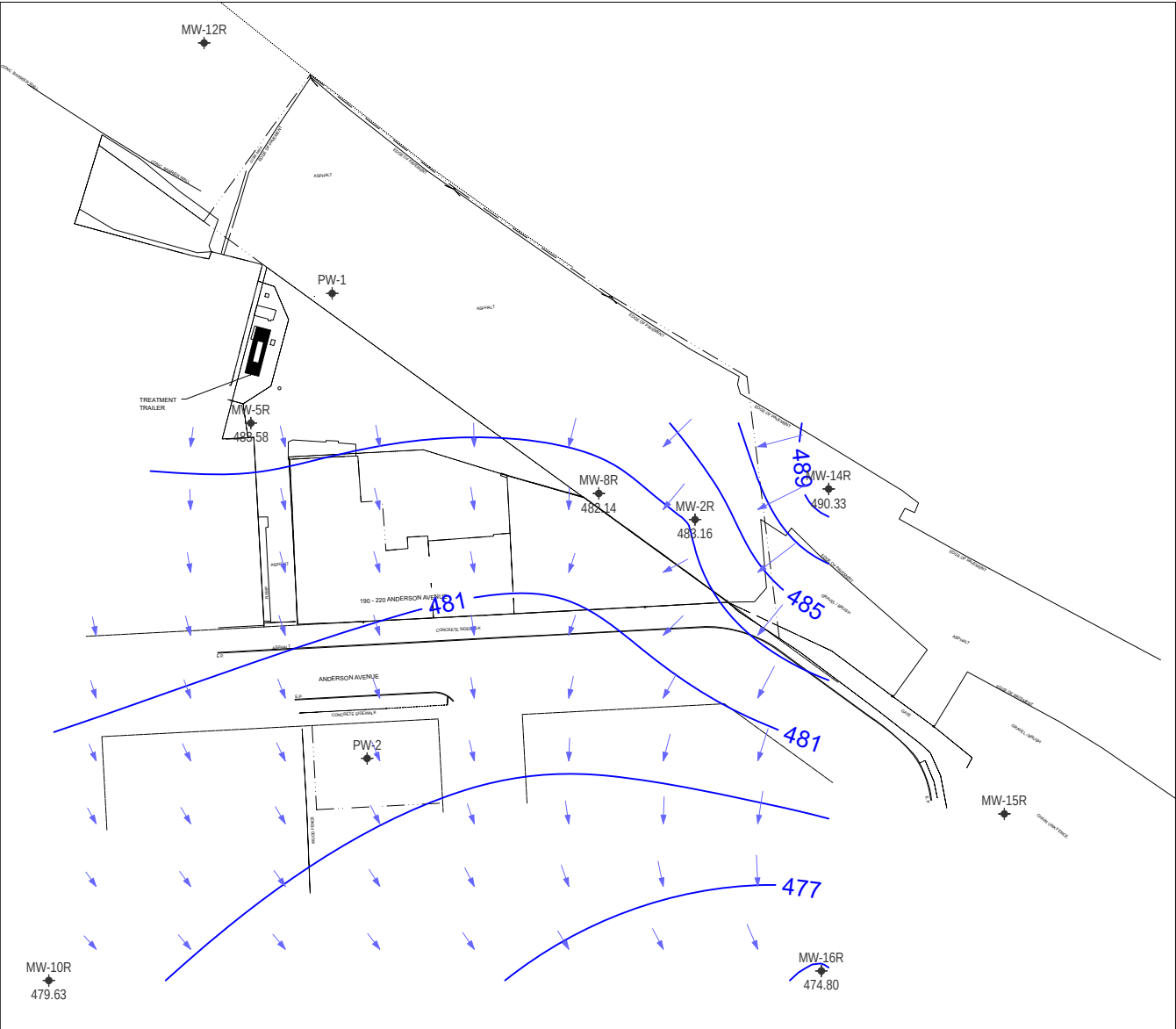
The November 2017 concentration isopleths of BTEX and cVOCs in the bedrock groundwater samples are presented on Figure 6-3.



**Groundwater Elevation Isopleths
Overburden Monitoring Wells**



**Groundwater Elevation Isopleths
Bedrock Monitoring Wells**



Notes:
1) Groundwater elevations measured November 13 - 20, 2017.

Legend

-  Groundwater Flow Direction and Relative Magnitude of Gradient
-  Groundwater elevation isopleth



FIGURE 6-1
Groundwater Elevation Isopleths
Overburden and Bedrock Monitoring Wells
November 2017
Former Davis-Howland Oil Corporation Site
Rochester, NY

**Table 6-3 Summary of Positive Analytical Results for Groundwater Samples from Overburden Monitoring Wells
Former Davis-Howland Oil Corporation Site, City of Rochester, New York**

Analyte	Location ID:		MW-1S	MW-2S	MW-9S	MW-14S	PZ-02	PZ-03	PZ-04	P-2	P-3
	Depth:		12 - 22 ft	8.8 - 19 ft	5.3 - 15 ft	3.7 - 13 ft	0 - 13 ft	0 - 14 ft	0 - 12 ft	13 - 13 ft	13 - 13 ft
	Date:		11/14/17	11/14/17	11/13/17	11/14/17	11/17/17	11/16/17	11/17/17	11/20/17	11/20/17
Screening Criteria ⁽¹⁾	Notes										
Volatile Organic Compounds by Method 8260C (µg/L)											
1,1,1-Trichloroethane	5		1.3	0.2 U	1.3	0.2 U	0.73 J	0.96 J	11	2.9	8.1
1,1-Dichloroethane	5		0.7 J	1.3	9.2	0.21 U	0.32 J	6.4	6	23	44
1,1-Dichloroethene	5		0.5 J	0.2 U	0.49 J	0.2 U	0.2 U	0.23 J	2	2.6	1.7 J
1,2-Dichlorobenzene	3		0.25 U	0.25 U	6.5	0.25 U	0.25 U	0.25 U	0.5 U	0.5 U	0.63 U
1,2-Dichloroethane	0.6		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.4 U	0.51 J
1,3-Dichlorobenzene	3		0.22 U	0.22 U	0.33 J	0.22 U	0.22 U	0.22 U	0.44 U	0.44 U	0.55 U
Benzene	1		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.55 J	0.5 U
Chloroethane	5		0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.48 U	0.54 J	1.1 J
Chloroform	7		0.2 U	0.2 U	0.45 J	0.2 U	0.2 U	0.2 U	0.4 U	0.4 U	0.5 U
Cis-1,2-Dichloroethene	5		15	0.2 U	26	0.2 U	1.2	9.3	190	250	310
Ethylbenzene	5		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.4 U	0.77 J
Tetrachloroethylene (PCE)	5		2.3	0.4 J	39	0.2 U	0.78 J	0.2 U	8.3	3.2	9.6
Trans-1,2-Dichloroethene	5		0.2 U	0.2 U	2.6	0.2 U	0.2 U	0.36 J	2.1	2.9	3.9
Trichloroethene (TCE)	5		12	0.2 U	33	0.2 U	1.6	2.0	170	23	38
Vinyl Chloride	2		0.2 U	0.2 U	2.5	0.2 U	0.2 U	0.84 J	11	35	24

Key:

Qualifiers

J = Estimated value

U = Not detected (method detection limit shown)

Other

µg/L = Micrograms per liter

"-Q" denotes field duplicate sample

Bold values denote positive hits.

1

Exceeds groundwater standard.

10

1. 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.

**Table 6-4 Summary of Positive Analytical Results for Groundwater Samples from Bedrock Monitoring Wells
Former David-Howland Oil Corporation Site, City of Rochester, New York**

Analyte	Location ID:		MW-2R	MW-5R	MW-8R	MW-10R	MW-14R	MW-16R	PW-1	PW-2
	Depth:		25 - 35 ft	27 - 37 ft	26 - 36 ft	27 - 37 ft	23 - 34 ft	23 - 33 ft	20 - 25 ft	23 - 31 ft
	Date:		11/16/17	11/15/17	11/16/17	11/20/17	11/16/17	11/17/17	11/20/17	11/20/17
	Screening Criteria ⁽¹⁾	Notes								
Volatile Organic Compounds by Method 8260C (µg/L)										
1,1,1-Trichloroethane	5		2 U	0.5 U	5 U	3.6 J	0.2 U	0.2 U	0.4 U	0.75 J
1,1-Dichloroethane	5		68	45	140	4.5 J	0.77 J	6.5	11	14
1,1-Dichloroethene	5		24	6.7	64	12	0.55 J	1.9	2.8	2.3
Benzene	1		2 U	12	5 U	2 U	0.2 U	0.2 U	0.59 J	0.4 U
Chloromethane	5		2.8 J	0.58 U	6 J	2.3 U	0.25 U	0.23 U	0.4 U	0.41 U
Cis-1,2-Dichloroethylene	5		2200	550	5300	60	14	130	210	200
Tetrachloroethene (PCE)	5		2 U	0.5 U	5 U	2.8 J	0.2 U	0.2 U	0.4 U	1.1 J
Trans-1,2-Dichloroethene	5		5.3 J	5.5	7.3 J	8 J	3.8	0.6 J	2.2	1 J
Trichloroethene (TCE)	5		2 U	8.7	8 J	860	22	0.22 J	13	11
Vinyl Chloride	2		370	170	650	2 U	1.7	64	39	11

Key:

Qualifiers

J = Estimated value

U = Not detected (method detection limit shown)

Other

µg/L = Micrograms per liter

Bold values denote positive hits.

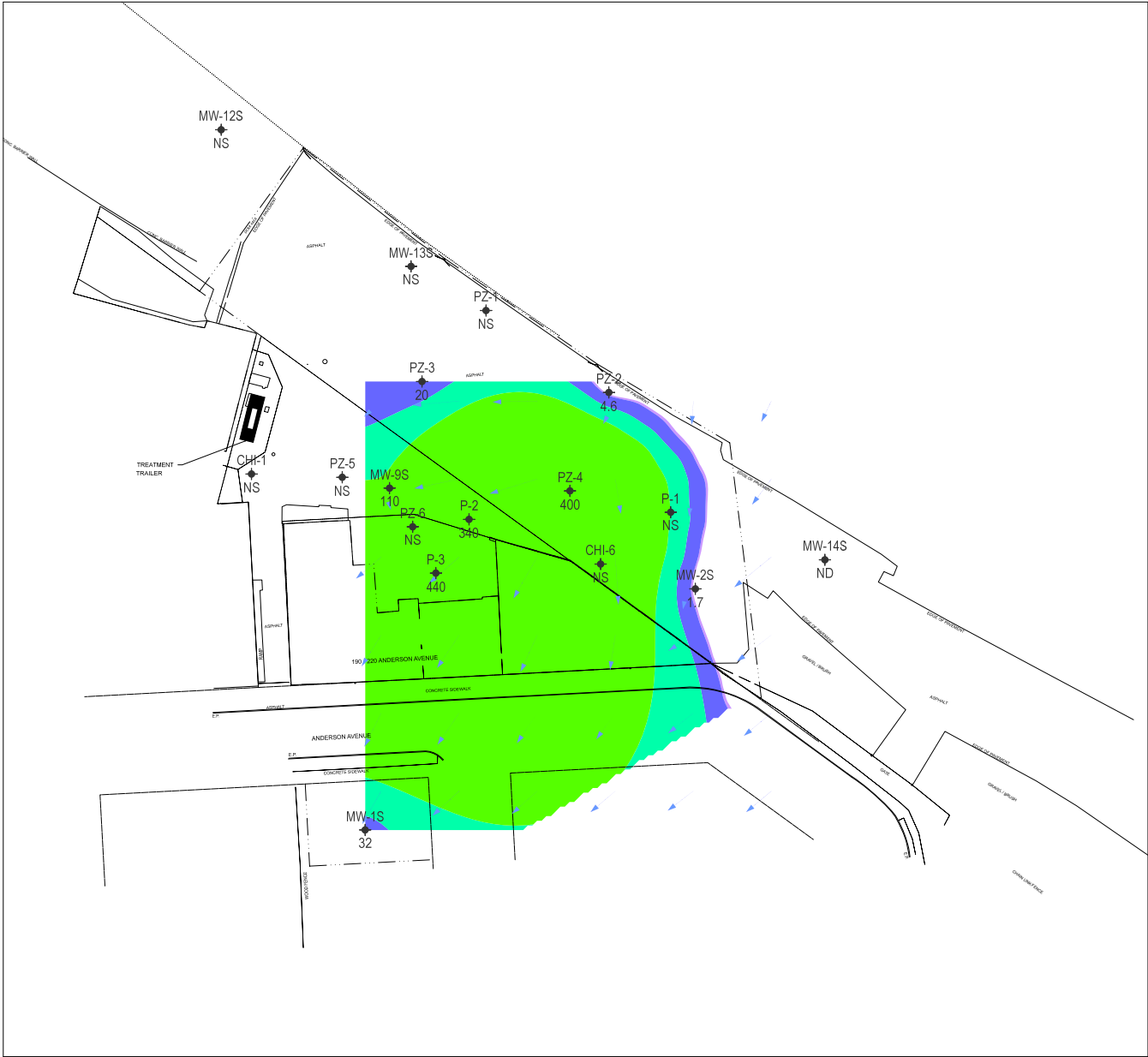
Exceeds groundwater standard.

1
10

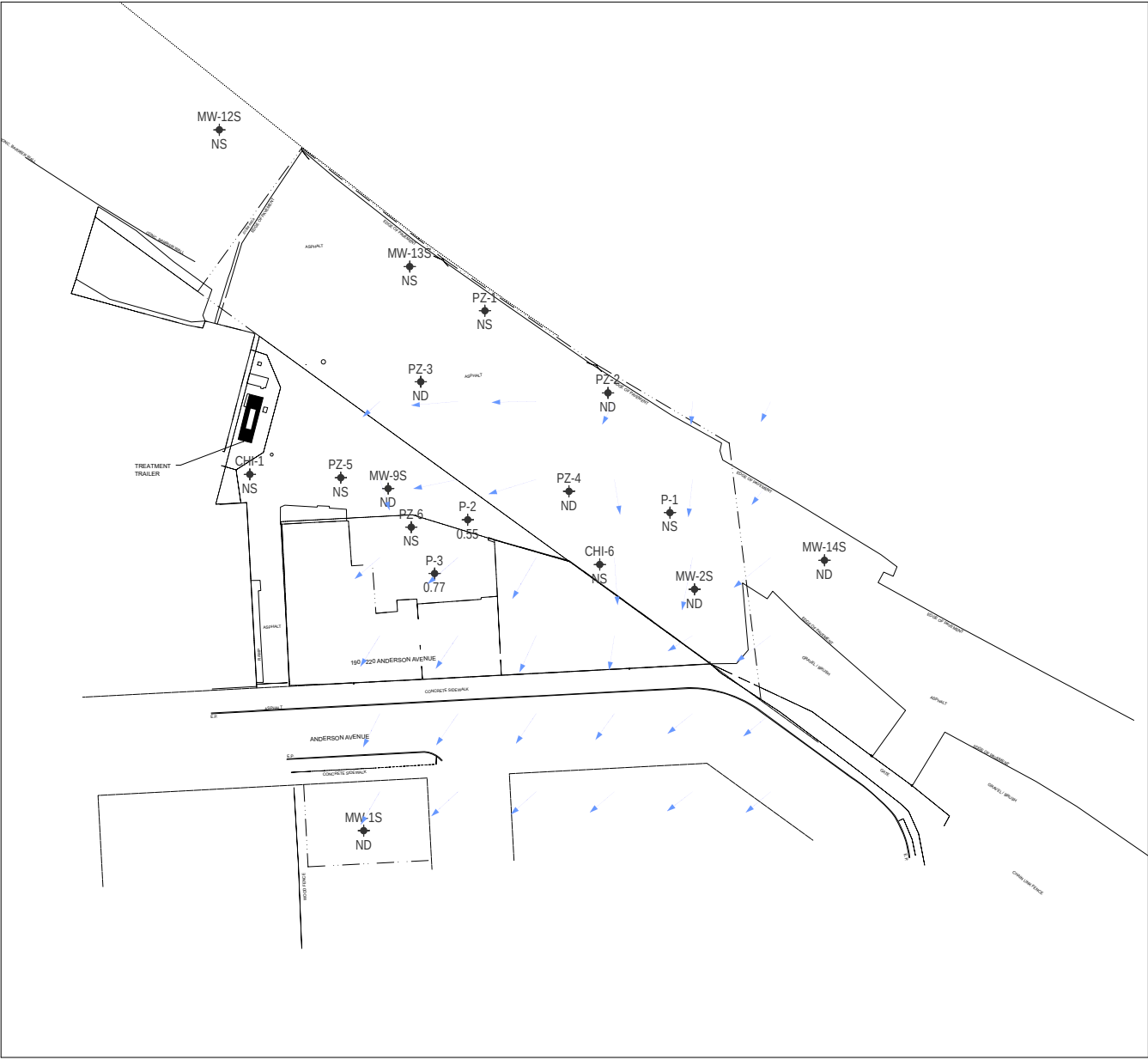
1. New York State Department of Environmental Conservation, Technical and Operational Guidance Series Memorandum #1.1.1: *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*, 1998 (with updates), Class GA Groundwater Standards and Guidance Values.



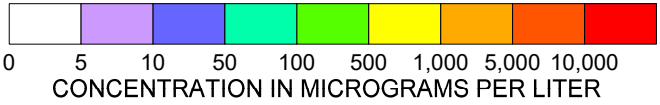
Total Chlorinated VOC Concentrations (µg/L)



Total BTEX Concentrations (µg/L)



- Notes:
- 1) BTEX = sum of benzene, toluene, ethylbenzene, and xylene isomers (BTEX was detected in P-2 and P-3 at 0.55 µg/L and 0.77 µg/L in November 2017).
 - 2) VOC = volatile organic compound.
 - 3) Chlorinated VOCs include all chlorinated aliphatic hydrocarbons detected. Other VOCs detected but not presented on this figure include chlorinated aromatics (i.e., dichlorobenzene isomers) in MW-9S (6.8 µg/L).
 - 4) ND = not detected.
 - 5) NS = not sampled.



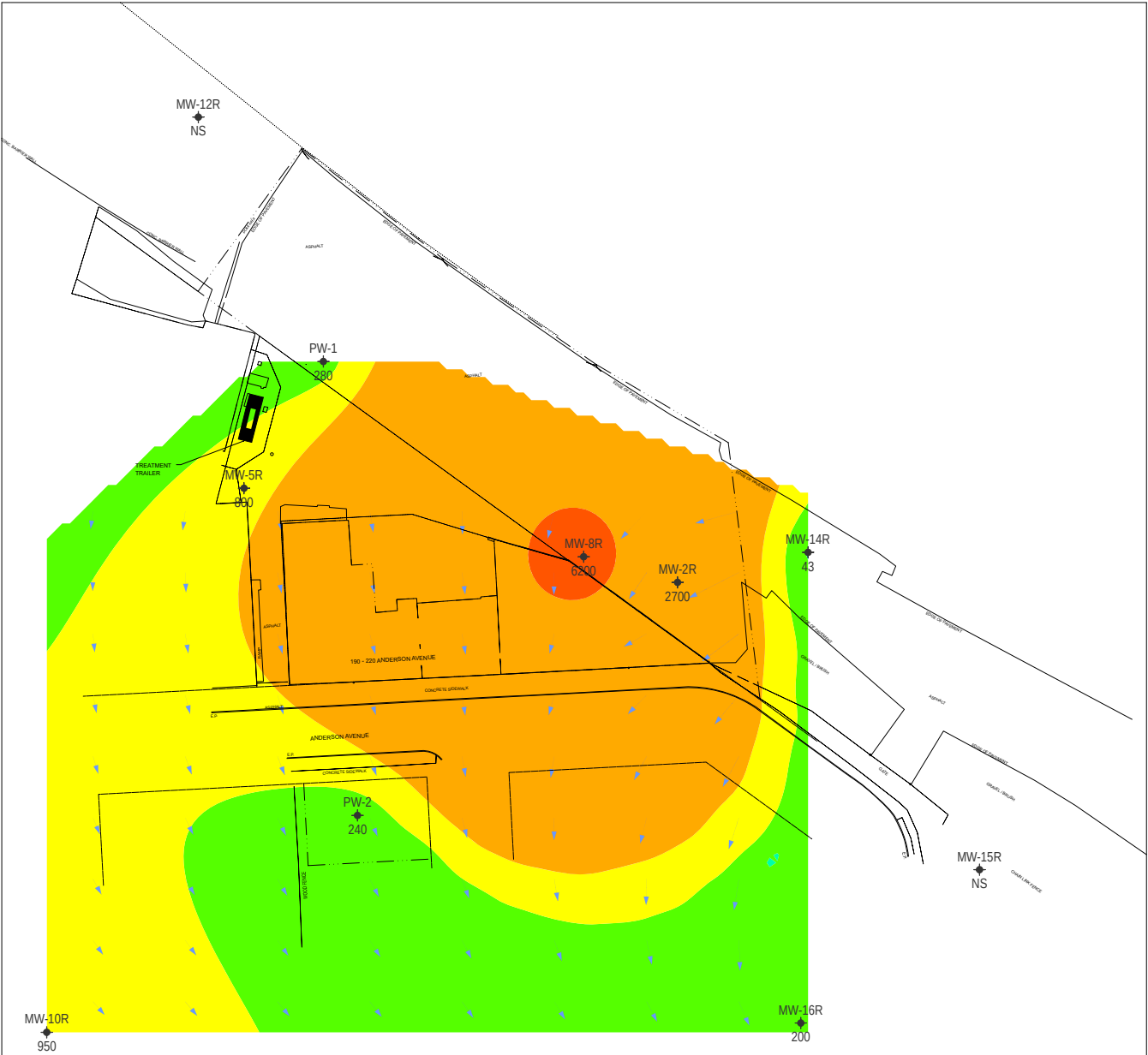
Legend

➔ Groundwater Flow Direction and Relative Magnitude of Gradient

FIGURE 6-2
Total Chlorinated VOCs and BTEX
in Overburden Groundwater, November 2017
Former Davis-Howland Oil Corporation Site
Rochester, New York



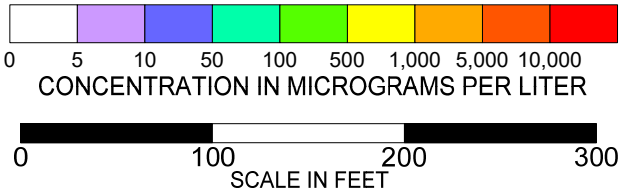
Total Chlorinated VOC Concentrations (µg/L)



Total BTEX Concentrations (µg/L)



- Notes:
- 1) BTEX = sum of benzene, toluene, ethylbenzene, and xylene isomers (the only detections were benzene in MW-5R and PW-1).
 - 2) VOC = volatile organic compound.
 - 3) Chlorinated VOCs include all chlorinated aliphatic hydrocarbons detected. No other VOCs, including dichlorobenzenes, were detected.
 - 4) ND = not detected
 - 5) NS = not sampled



Legend

Groundwater Flow Direction and Relative Magnitude of Gradient

FIGURE 6-3
Total Chlorinated VOCs and BTEX
in Bedrock Groundwater, November 2017
Former Davis-Howland Oil Corporation Site
Rochester, New York

Semivolatile Organic Compounds

As per the 2016 PRR (EEEPC 2017m) recommendations, sampling for SVOCs was not performed in 2017.

Petroleum Products

As per the 2016 PRR (EEEPC 2017m) recommendations, sampling for petroleum products was not performed in 2017.

6.3.3 Comparison with Historical Analytical Data

Tables 6-5 and 6-6 present historical cVOC and BTEX results, respectively. The following is a summary of the findings:

- Overall, total BTEX concentrations in the overburden groundwater have decreased significantly since 1998. BTEX was not detected in the seven overburden monitoring wells from 2009 to 2012, and in 2013 and 2014 only very low estimated concentrations (0.88 µg/L and 0.12 µg/L, respectively) were detected in MW-9S. BTEX was not detected in any of the seven overburden wells from 2015 to 2017. BTEX were present in pumping wells at low estimated concentrations of 0.55 µg/L of benzene in pumping well P-2 and 0.77 µg/L of ethylbenzene in pumping well P-3 in 2017. In 1997 and 1998, significant concentrations of BTEX were detected in overburden wells MW-9S (1,420 µg/L and 4,700 µg/L) and MW-13S (10,600 µg/L and 9,440 µg/L).
- BTEX concentrations in the bedrock groundwater have also decreased since 1997. Total BTEX has been detected in five of the nine bedrock wells at the Site, with the highest concentrations occurring in 1997 at MW-5R (200 µg/L) and MW-8R (126 µg/L). Since 1997, BTEX concentrations have decreased to the point where only one or two wells have contained relatively low concentrations of BTEX from 2007 to 2013. In 2014, four wells had detections of BTEX at relatively low concentrations. MW-5R has consistently contained some BTEX since 1997, but the concentration had decreased to 2.3 µg/L in 2014 but increased to 12 µg/L in 2017. In 2015, BTEX was detected in only two of the nine bedrock wells (MW-5R and MW-8R) at very low concentrations (3.9 µg/L and 8.3 µg/L, respectively). In 2016, BTEX was also detected in only two monitoring wells (MW-5R and MW-16R) at very low concentrations (1.7 µg/L and 10 µg/L, respectively). BTEX (ethylbenzene only) was present in pumping well PW-2 at a 10 µg/L in 2016. In 2017, BTEX (benzene only) was detected in only one monitoring well (MW-5R) at 12 µg/L. BTEX (benzene only) was present in pumping well PW-1 at 0.59 µg/L in 2017.
- Overall, cVOC concentrations in the overburden wells have decreased significantly since 1997 and 1998. The highest concentrations of cVOCs were detected in 1998 (15,000 µg/L in MW-9S and 40,000 µg/L in MW-13S). Total cVOC concentrations decreased significantly between 1998 and 2004. The number of wells with detectable levels of cVOCs has ranged from three to six wells since 2007, and concentrations remained relatively stable from 2010 to 2012. In 2013, the total cVOC concentrations dropped or remained essentially the same as in 2012 in the wells, with the exception of MW-9S, where it

6 2017 Groundwater Sampling Event Summary

increased from 140 to 240 µg/L. In 2014, total cVOC concentrations were similar to those in 2013 but mostly showed slight decreases. In 2015, the concentrations in MW-12S and MW-3S were non-detect, the concentrations in MW-1S and MW-12S had decreased, and the concentrations in MW-2S and MW-13S had increased slightly. Additional samples were taken in 2015 at four overburden piezometers not previously monitored (PZ-01, PZ-02, PZ-03, and PZ-04). Total cVOC concentrations at these locations ranged from 9 µg/L in PZ-02 to 430 µg/L in PZ-04. In 2016, the concentrations generally remained similar to those in 2015, with slight increases in wells MW-1S and PZ-04. cVOC concentrations in 2017 are generally similar to or lower than 2015 and 2016 concentrations, with a slight increase only at MW-9S.

- Overall, cVOC concentrations in most bedrock wells have decreased since 1997 or 1998, when significant concentrations (>1,000 µg/L) were detected in six of the nine wells (MW-2R, MW-3R, MW-5R, MW-8R, MW-10R, and MW-16R). The cVOC concentrations generally decreased until 2010 and have remained relatively stable (all less than 2,000 µg/L except in MW-8R) since 2010. The total cVOC concentration in MW-8R increased to a maximum of approximately 14,000 µg/L in 2010 and has since decreased, but this well continues to exhibit the highest cVOC concentration (4,200 µg/L in 2016) of the wells at the Site, due primarily to cis-1,2-DCE. Increased concentrations were observed at three monitoring wells in 2017 compared to 2015 and 2016: MW-2R, MW-5R, and MW-8R. In well MW-2R, the cVOC concentration remains lower than the historical maximum of 2,100 µg/L detected in 1997, but the concentration has continued to increase through 2017 from a low of 31 µg/L detected in 2013. In well MW-8R, the total cVOC concentration in 2016 was approximately 4,200 µg/L, which is similar to the concentrations detected since 2011. In 2017, the concentration at MW-8R increased to approximately 6,175 µg/L. In well MW-5R, the total cVOC concentration has increased from 340 µg/L in 2013 to 786 µg/L in 2017. In 2016, the cVOC concentration in well MW-16R nearly quadrupled to 720 µg/L from 200 µg/L in 2015 and was the highest since 1998. However, in 2017, the total cVOC concentration in MW-16R decreased to 203 µg/L, similar to concentrations seen between 2012 and 2015. The total cVOC concentrations in MW-2R, MW-5R, MW-8R, and MW-16R are primarily influenced by relatively high concentrations of cis-1,2,-DCE and vinyl chloride.

Table 6-5 Historical Total Chlorinated VOCs Results for Monitoring Wells

Well ID	Sample Date												
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2007	2004	1998	1997
Overburden Monitoring Wells													
MW-1S	32	76	37	38	41	68	67	NA	45	98	410	120	19
MW-2S	2	4.6	7.0	6.3	2.5	1.7	1.9	1.3	ND	1.4	ND	NA	3.0
MW-3S	NA	NA	ND	0.30	0.68	ND	ND	ND	ND	4.6	ND	ND	ND
MW-9S	121	110	140	180	240	140	140	140	92	48	32	15,000	6,300
MW-12S	NA	NA	ND	0.30	0.36	13	ND	ND	ND	4.4	ND	6.0	29
MW-13S	NA	7.8	12	9.9	12	33	ND	19	3.7	69	41	40,000	36,000
MW-14S	ND	ND	ND	ND	ND	4.2	ND	ND	ND	0.36	ND	2.0	4.0
PZ-01	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-02	5	6.9	8.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-03	20	20	29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ-04	400	590	430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bedrock Monitoring Wells													
MW-2R	2,670	1,500	1,100	350	31	940	1,200	240	NA	NA	940	NA	2,100
MW-3R	NA	NA	1,800	1,700	1,400	530	960	410	1,600	3,300	1,200	4,300	3,200
MW-5R	786	500	550	650	340	1,200	160	1,400	210	2,700	1,100	4,200	5,200
MW-8R	6,175	4,200	3,400	5,400	4,600	5,600	5,700	14,000	5,800	4,300	3,800	NA	2,600
MW-10R	951	910	990	1,200	1,400	1,500	1,400	160	1,200	1,600	1,200	3,000	2,300
MW-12R	NA	NA	26	41	34	ND	45	35	66	75	22	NA	270
MW-14R	43	59	45	59	72	59	61	54	45	67	17	50	22
MW-15R	NA	NA	10	12	11	11	11	6.4	4.7	7.4	7.7	NA	35
MW-16R	203	720	200	230	180	210	220	48	320	250	260	2,400	1,100

Notes:

Analytical results are all in micrograms per liter (µg/L).

Key:

ND = Not detected

NA = Not analyzed

Chlorinated VOCs = sum of chlorinated aliphatic hydrocarbon concentrations (does not include dichlorobenzenes)

Table 6-6 Historical Total BTEX Results for Monitoring Wells

Well ID	Sample Date												
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2007	2004	1998	1997
Overburden Monitoring Wells													
MW-1S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-2S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-3S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0
MW-9S	ND	ND	ND	0.12 J	0.88 J	ND	ND	ND	ND	2.5	1.5	4,700	1,420
MW-12S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-13S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.34	9,440	10,600
MW-14S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bedrock Monitoring Wells													
MW-2R	ND	ND	ND	ND	ND	ND	4.7	ND	ND	NA	1.2	NA	ND
MW-3R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	ND	ND
MW-5R	12	1.7	3.9	2.3	4.6	32	45	45	3.1	15	71	42	200
MW-8R	ND	ND	8.3	12 J	16	ND	ND	ND	ND	21	18	NA	126
MW-10R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-12R	ND	ND	ND	0.14 J	ND	ND	ND	ND	ND	ND	ND	NA	4.0
MW-14R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-15R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
MW-16R	ND	0.31	ND	0.11 J	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Analytical results are all in micrograms per liter (µg/L).

Key:

BTEX = sum of benzene, toluene, ethylbenzene, and xylene concentrations

J = value is estimated

NA = not analyzed

ND = Not detected

7

Actions to Support Eventual Site Closure

The overall project goals are to (1) reduce the concentrations of VOCs in the soils beneath the capped or paved area north of the DHOC buildings on Anderson Avenue to meet the standards, criteria, and guidance values found in NYSDEC soil cleanup guidance Final Commissioner Policy CP-51 (October 21, 2010) and 6 NYCRR Part 375 soil cleanup objectives; and (2) reduce the concentrations of VOCs in the contaminated groundwater plume to below the groundwater standards established by NYSDEC. Attaining these goals will allow for the eventual closure of the groundwater recovery system and overall remedial treatment system.

In 2015, NYSDEC requested that EEEPC prepare an RSO plan to review alternatives for eventual site closure within a shorter timeframe and at lower cost than the current system expectation. The RSO Alternatives Report was completed in 2016. In July 2016, NYSDEC initially requested that the DHOC treatment systems be shutdown following the results of the RSO Alternatives Report. In September 2016, the decision was made to restart the systems and complete additional effluent air sampling of the AS/SVE system and pulsed pumping evaluations of the air stripper treatment system. Section 7.1 discusses the existing system at the site. Section 7.2 discusses the long-term groundwater monitoring program. Section 7.3 presents the results of the additional RSO evaluations performed in 2017 and how the sampling supports shut down of the treatment systems.

7.1 DHOC Site Treatment System

In 2017, the treatment system continued to collect groundwater and remove VOCs through air stripping, and collect and remove VOCs through AS/SVE. Based on the observed changes in the distribution of the VOC concentrations beneath the Site, the groundwater treatment system, in conjunction with natural processes, continues to reduce overall contaminant concentrations. Total VOC concentrations in all monitoring wells have decreased relative to historical maximums.

7.2 Long-Term Groundwater Monitoring

Based on a review of the reported analytical data from the long-term groundwater monitoring program from January 1997 to November 2017, VOC concentrations have decreased over time. In 2016, recent groundwater monitoring data were

7 Actions to Support Eventual Site Closure

compared with historical data to determine whether changes in the long-term monitoring program are warranted. Based on this comparison, the decision was made to reduce sampling for SVOCs and polycyclic aromatic hydrocarbon (PAHs) to every other year (EEEPC 2017m). Therefore, samples collected in 2017 were analyzed only for VOCs.

While VOC concentrations on-site have continued to decrease relative to historical maximums, sampling and analysis for VOCs should continue as part of the long-term monitoring program. Based on an evaluation of the historical monitoring data, the 2016 PRR recommended that MW-12S be removed from the annual sampling event (EEEPC 2017m).

7.3 Remedial System Optimization

In June 2016, EEEPC submitted an RSO Alternatives Report (EEEPC 2016a) to NYSDEC. This report summarized the results of the additional sampling performed at the site in 2015, including results from the extraction well pulsed-pumping sampling and additional soil boring sample collected from the site. The report also analyzed remedial alternatives for the site and provided recommendations for various changes to the system to improve system performance and reduce the costs of system operation.

The RSO Report noted that contaminant removal by the pump-and-treat system has been declining over time. Sampling from pulsed pumping of the wells did not indicate increased removal of VOC contamination from the site. Results from the soil boring sampling completed in November 2015 indicated that the remaining contamination at the Site meets 6 NYCRR Part 375 soil cleanup objectives for restricted-residential use. VOC contamination in the groundwater remains above standards, criteria, and guidance values. Recommendations in the RSO indicated that no single alternative would result in optimization of the system. It was recommended to install soil vapor mitigation systems in on-site buildings impacted by soil vapor intrusion and to perform a pilot bioremediation study to evaluate the effectiveness of bioengineered materials injected into the overburden aquifer. Additionally, the groundwater monitoring network would be optimized by decommissioning damaged and unneeded wells, installing new wells, and reducing the groundwater monitoring program based on historical results from annual sampling. The final recommendation was to implement a monitored natural attenuation pilot program to quantify the time frame in which attainment of the remedial action objectives is expected, and discontinue operation of the groundwater pump-and-treat system and the AS/SVE system.

Following submission of the RSO Report, NYSDEC made the determination to shut down the treatment systems on July 13, 2016, and to continue with long-term groundwater monitoring of the site. Following further review of the site data and NYSDEC's *Technical Guidance for Site Investigation and Remediation* (DER-10) requirements (NYSDEC 2010), NYSDEC requested on September 14, 2016, that the treatment systems be restarted and additional sampling of the systems be performed.

7.3.1 Pulsed Pumping

Operational data indicates that the DHOC remedial groundwater pumping and air stripping treatment system has reached asymptotic removal rates. In accordance with Section 6.4.b.1 of DER-10 (NYSDEC 2010), continued operation and pulsing of the system for a period of time must confirm that asymptotic groundwater conditions have resulted from treatment. In a pulsed pumping system, the resting phase allows time for contaminants to diffuse from low to high permeability zones where the contaminants can then be removed through the pumping phase. This operation minimizes the volume of water to be treated while maximizing contaminant concentrations in the water.

For the pulsed pumping, all operational pumping wells (PW-1, PW-2, P-2, and P-3) were pulsed on a set schedule as described in the Remedial Systems Evaluation report (EEEEPC 2018). Regular sampling of influent and effluent of the treatment system and at the beginning and end of the pulsed pumping efforts was performed to analyze changes in the treatment system concentrations of VOCs and concentration of VOCs at each pumping well and evaluate whether greater removal of VOCs is achievable.

Statistical analysis of the influent VOC concentrations of the pumping well system was performed to determine whether the treatment system had reached an asymptotic state despite pulsed pumping efforts. The analytical results from the pulsed pumping well samples collected indicates that the cumulative pounds of VOCs removed from the groundwater has statistically remained the same, indicating that the treatment system is no longer efficiently removing VOCs from the site. The sampling indicates that asymptotic conditions have been achieved and the mass of contaminants extracted over time is not dependent on continued operation of the system.

Analytical results from individual pumping wells samples collected pre- and post-shutdown of the wells indicates that removal concentrations of PCE, TCE, and vinyl chloride were consistent, demonstrating the discontinued efficiency of continued pumping. Concentrations of cis-1,2-DCE were variable but showed no correlation between operation or shutdown of the pumping wells.

7.3.2 AS/SVE System Sampling

Since decommissioning of the catalytic oxidizer system in 2008, effluent air samples from the AS/SVE system have not been collected. As part of system optimization sampling, additional effluent samples were analyzed for VOCs. Pursuant to Section 6.4 of DER-10 (NYSDEC 2010), effluent air quality and air flow-rate data were collected once per week over a 10-week period (EEEEPC 2018).

Statistical analysis of the VOC concentrations in the effluent air from the AS/SVE system indicates that the cumulative pounds of VOCs removed by the system has remained statistically the same, indicating that the treatment system has reached an asymptotic state and is no longer efficiently removing VOCs from the site.

7 Actions to Support Eventual Site Closure

The sample results indicate that asymptotic conditions have been achieved and the mass of contaminants extracted over time is not dependent on continued operation of the system.

7.4 Recommendations

As a result of the additional system sampling completed in 2017 as part of remedial system evaluation, EEEPC recommends the following for the site and the treatment systems:

- **Shutdown treatment systems.** Both the AS/SVE and pumping well/air stripper treatment systems have reached asymptotic states and are no longer efficiently removing contamination from the site. Continued operation of these systems will not meet remedial cleanup goals for groundwater in a timely manner. The restricted-residential soil cleanup goals have already been met at the site based on sampling performed in 2015. While groundwater has not reached the remedial goals as specified in the RODs, groundwater is not used as a potable water source in the area. The treatment systems should be shut-down and decommissioned.
- **Continue long-term monitoring program.** Continued longterm groundwater monitoring should occur on an annual basis to monitor VOC contamination at the site. Sampling for PAHs should continue every other year for two more rounds of sampling and if these compounds remain non-detect they can be removed from the monitoring program. MW-3S and MW-3R were decommissioned in 2016 as part of property redevelopment. These wells should be replaced and additional existing wells selected to remain as part of the monitoring program.
- **Installation of sub-slab depressurization systems (SSDs).** The existing site buildings are currently in the process of being sold and redeveloped. As part of their redevelopment, property owners should be required to install SSDs to mitigate VOC vapor intrusion into the buildings.

8

Annual Remedial Action Costs

The 2017 costs of OM&M of the remedial treatment system at the Site, including equipment in the treatment trailer, the groundwater pumping system, long-term groundwater monitoring network, EEEPC oversight, RSO activities, subcontracted services, replacement equipment, and utilities, are presented in Table 8-1.

The total 2017 cost for operating the remedial treatment system at the Site was \$105,104.

Table 8-1 2017 Remedial Action Costs for the Former Davis-Howland Oil Corporation Site

Description	WA D007617-12
EEEEPC OM&M Admin, Management, and Reporting	\$37,369
EEEEPC RSO Evaluations and Reporting	\$4,425
EEEEPC Long-term Monitoring Program	\$12,224
Sub – OM&M Services	\$30,763
Sub – Analytical Services (O&M)	\$1,901
Sub – Analytical Services (GW Monitoring)	\$1,672
Sub – Analytical Services (RSO Evaluations)	\$5,423
Replacement Equipment & Contractor Services	\$2,433
Utilities – Electric	\$8,366
Utilities – Telephone	\$528
2017 Total	\$105,104

9

Department or Local Public Reporting

9.1 NYSDEC Fact Sheet

The most recent information regarding the DHOC Site can be found on the Environmental Site Remediation Database Search at:

<http://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3>.

9.2 Local Public Reporting

No local public reporting of the Site or remedial Site operations were brought to EEEPC's attention in 2017. The local reporting newspaper in Rochester, New York, is the *Democrat and Chronicle*.

10

References

Ecology and Environment Engineering, P.C. (EEEEPC). 2004. *Davis-Howland Oil Corporation Site, Groundwater Sampling Draft Data Summary Report 2004, Rochester, New York*. Prepared for New York State Department of Environmental Conservation, Albany, New York.

_____. 2007. *Groundwater Sampling and Data Summary Report, Davis-Howland Oil Corporation Site*.

_____. 2009. *Former Davis-Howland Oil Corporation Site 2009 Groundwater Sampling Draft Data Summary Report, Rochester, New York*. July 2009. Prepared for New York State Department of Environmental Conservation, Albany, New York.

_____. 2010. *Former Davis-Howland Oil Corporation Site 2010 Groundwater Sampling Draft Data Summary Report, Rochester, New York*. July 2010. Prepared for New York State Department of Environmental Conservation, Albany, New York.

_____. 2011. *Master Quality Assurance Project Plan (QAPP) for New York State Department of Environmental Conservation Projects*. Prepared for New York State Department of Environmental Conservation, Albany, New York, April 2011.

_____. 2013. *Periodic Review Report, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088, City of Rochester, Monroe County, New York*. July 2013.

_____. 2014. *Final Site Management Plan, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088, City of Rochester, Monroe County, New York*.

_____. 2015a. *Davis Howland Oil Company Remedial Site Optimization Plan*. June 2015.

_____. 2015b. *2014 Periodic Review Report, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088, City of Rochester, Monroe County, New York*. January 2015.

- _____. 2016a. *Remedial Site Optimization Alternatives Report, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088, City of Rochester, Monroe County, New York.* June 2016.
- _____. 2016b. *Sampling Work Plan and Equipment Repairs, Former Davis-Howland Oil Corporation Site, Site # 8-28-088.* November 2016
- _____. 2016c. *2015 Periodic Review Report, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088, City of Rochester, Monroe County, New York.* January 2016.
- _____. 2017a. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, January 2017 Operations, Maintenance, and Monitoring Report.*
- _____. 2017b. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, February 2017 Operations, Maintenance, and Monitoring Report.*
- _____. 2017c. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, March 2017 Operations, Maintenance, and Monitoring Report.*
- _____. 2017d. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, April 2017 Operations, Maintenance, and Monitoring Report.*
- _____. 2017e. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, May 2017 Operations, Maintenance, and Monitoring Report.*
- _____. 2017f. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, June 2017 Operations, Maintenance, and Monitoring Report.*
- _____. 2017g. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, July 2017 Operations, Maintenance, and Monitoring Report.*
- _____. 2017h. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, August 2017 Operations, Maintenance, and Monitoring Report.*
- _____. 2017i. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, September 2017 Operations, Maintenance, and Monitoring Report.*

- _____. 2017j. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, October 2017 Operations, Maintenance, and Monitoring Report.*
- _____. 2017k. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, November 2017 Operations, Maintenance, and Monitoring Report.*
- _____. 2017l. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, December 2017 Operations, Maintenance, and Monitoring Report.*
- _____. 2017m. *2016 Periodic Review Report, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088, City of Rochester, Monroe County, New York.* January 2017.
- _____. 2018. *Remedial Systems Evaluation Report, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088, City of Rochester, Monroe County, New York.* January 2018.
- Lawler, Matusky Skelly Engineers, LLP and Galson/Lozier Engineers. 1996. *New York State Superfund Contract, Remedial Investigation Report, Davis-Howland Oil Corporation Remedial Investigation/Feasibility Study. Vol. I.* October 1996.
- New York State Department of Environmental Conservation (NYSDEC). 1998 (with updates). *Division of Water Technical and Operational Guidance Series (1.1.1): Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.* Albany, New York: Division of Water.
- _____. 2010. *Technical Guidance for Site Investigation and Remediation, Division of Environmental Remediation (DER)-10.* May 2010.
- New York State Department of Health (NYSDOH). 2015. *Guidelines for Evaluating Soil Vapor Intrusion in the State of New York.* Updated August 2015. Accessed online at: https://www.health.ny.gov/environmental/investigations/soil_gas/svi_guidance/docs/svig_final2006_complete.pdf.

A

County of Monroe Discharge Permit

COUNTY OF MONROE
SEWER USE PERMIT RENEWAL

Firm Name: NYSDEC Div. of Env. Remed.
200 Anderson Avenue, Davis How

Permit Number: 864
Fee: \$ 75.00
Expires: May 31, 2019

Mailing Addr: 625 Broadway, 12th Floor
Albany, NY 12233-7013

W/C Expire:
District No: 8575

Business Type: Groundwater Remediation

Has there been any revision to the plant sewer system or any change in industrial wastes discharged to the public sewer in the past twelve months

Yes: ___ No: ☒ If yes, please explain in a separate letter.

Average monthly consumption for the past twelve (12) months:

Water Account No.(s) NA (cu ft/gal) NA

In consideration of the granting of this renewal permit the undersigned agrees to comply with all the requirements in the Initial Permit as listed under II.

Name of person to be contacted for inspection & sampling purposes:

Ashlee Patnode

Type or Print: Ecology & Environment Phone No: 716-684-8060

YOUR PERMIT MUST BE SIGNED AS FOLLOWS:

1. For a corporation: by a responsible corporate officer. A corporate officer means:

- (a) A president, secretary, treasurer or vice - president of the corporation in charge of a principal business function, or any other person who performs similar policy - or decision - making functions for the corporation; or
- (b) The manager of one or more manufacturing, production, or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second - quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

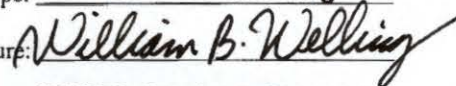
2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

3. By a duly authorized representative of the individual designated in items (1) or (2) above if:

- (a) The authorization is made in writing by the individual described in items (1) or (2);
- (b) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; (A duly authorized representative may thus be either a named individual or any individual occupying named position); and
- (c) The written authorization is submitted to this Department.

Print or Type: William B. Welling

Phone No: 518-402-9813

Signature: 

Date: May 24, 2016

Title: NYSDEC Project Manager

Renewal Approved by: _____

Issued this ___ day of _____ 20__.

Michael J. Garland, P.E.
Director of Environmental Services-PureWaters
Monroe County

B

November 2017 Groundwater Monitoring Event Field Notes and Analytical Data



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: PZ-02

EEEP Project No.: 1703074.0012.03

Date: 11/17/2017

Initial Depth to Water: 3.19 feet TOIC

Start Time: 13:21

Total Well Depth: 12.48 feet TOIC

End Time: 14:01

Depth to Pump: 12.0 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.60 (Lpm)/gpm

Pump Type: Peristaltic

adjusted to: 0.275 at 13:26

Well Diameter: 1 inches

adjusted to: _____ at _____

1x Well Volume: 0.38 gallons $3x = 1.14$

Time	Purge Volume (gallons)(liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm)mS/cm	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
1321	0	7.60	53.8	20	432.9	—	19.0	—
1326	1.9	7.46	54.0	-4	554.6	—	53.0	7.33
1331	3.3	7.48	54.3	-15	567.2	—	33.7	7.10
1336	4.65	7.44	54.6	-15	588.2	—	27.3	7.07
1341	5.0	7.47	54.2	-16	597.5	—	17.0	7.07
1346	5.3	7.48	54.2	-18	603.6	—	10.62	7.02
1351	5.6	7.46	54.2	-11	602.8	—	8.79	7.02
1356	5.9	7.48	53.1	-10	604.7	—	5.41	7.02
1401	6.2	7.48	53.6	-9	610.9	—	5.23	6.93
<i>Clarity well</i> <u>11/17/17</u>								
Final Sample Data:		7.48	53.4	-9	610.9	—	3.06	6.84

Sample ID: PZ-02-17Nov

Duplicate? ☐

Dupe Samp ID: _____

Sample Time: 14:05

MS/MSD? ☐

No. of Bottles: 3

Analyses:

Methods:

Comments:

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ _____

☐ Metals/CN

☐ Dioxin

Sampler(s): GW JS



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: P2-03

EEEP Project No.: 1703074.0012.08

Date: 11/16/17

Initial Depth to Water: 5.69 feet TOIC

Start Time: 15:21

Total Well Depth: 13.50 feet TOIC

End Time: 15:38

Depth to Pump: 13 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.3 Lpm / gpm

Pump Type: peristaltic

adjusted to: 0.24 Lpm at 15:39

Well Diameter: 1 inches

adjusted to: _____ at _____

1x Well Volume: 0.32 gallons 3x = 0.96 gal

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
15:21	0	7.04	57.4	21	2101	—	71000	—
15:25	0.3	7.01	57.2	28	2100	—	13.2	—
15:29	0.6	7.00	57.3	26	2099	—	11.29	—
15:33	1.0	6.95	57.0	23	2163	—	5.64	—
15:35	1.25	6.95	56.4	19	2247	—	6.55	—
15:38	1.50	6.95	56.5	16	2244	—	3.65	—
15:41	1.75	6.95	56.3	15	2153	—	1.40	8.64
<i>Christy W.</i>								
Final Sample Data:		6.95	56.3	15	2153	—	1.40	8.64

Sample ID: P2-03-17NOV

Duplicate? ☐

Dupe Samp ID: _____

Sample Time: 15:35 15:39

MS/MSD? ☐

No. of Bottles: 3

Analyses: _____ Methods: _____ Comments: _____

☒ VOCs ☐ CLP _____

☐ SVOCs ☐ SW846 _____

☐ PCBs ☐ EPA/CWA _____

☐ Pest. ☐ _____

☐ Metals/CN _____

☐ Dioxin _____

Sampler(s): CW JS



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: PZ-04

EEEP Project No.: 1703074.0012.08

Date: 11/17/17

Initial Depth to Water: 4.18 feet TOIC

Start Time: 12:12

Total Well Depth: 11.52 feet TOIC

End Time: 13:04

Depth to Pump: 10 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.25 Lpm/gpm

Pump Type: peristaltic

adjusted to: 0.10 Lpm at 12:17

Well Diameter: 1 inches

adjusted to: _____ at _____

1x Well Volume: 41.52 gallons $1x = 0.30$ gal

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm/mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
12:12	0	7.96	56.1	24	128.1	—	29.6	—
12:17	1.25	7.60	55.2	12	216.9	—	14.4	6.73
12:24	1.95	7.63	54.6	12	251.3	—	10.81	7.59
12:29	2.45	7.61	55.4	6	267.5	—	11.41	7.97
12:34	2.95	7.65	55.0	4	295.9	—	8.44	8.42
12:39	3.45	7.70	55.0	3	331.2	—	7.37	8.82
12:44	3.95	7.87	55.0	3	320.6	—	11.30	9.13
12:49	4.45	7.93	55.2	6	344.9	—	4.31	9.19
12:54	4.95	7.90	54.8	10	383.8	—	3.87	9.14
12:59	5.45	7.88	55.4	13	398.3	—	2.75	9.12
13:04	5.95	7.88	55.2	16	414.9	—	2.75	9.17
		7.88				(20)		9.17
Final Sample Data:								
		7.88	55.2	19	417.8	—	2.83	9.17



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: MW-15

EEEP Project No.: 1703074.0012.08

Date: 11/14/2017

Initial Depth to Water: 9.90 feet TOIC

Start Time: 14:30

Total Well Depth: 17.96 feet TOIC

End Time: 15:10

Depth to Pump: 17.0 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.625 lpm / gpm

Pump Type: submersible

adjusted to: 0.20 lpm at 15:15

Well Diameter: 2 inches

adjusted to: _____ at _____

1x Well Volume: 1.31 gallons 3x = 3.94 gal

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm) mS/cm	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
14:30	0	6.91	55.1	64	1162	—	28.2	18.45
14:40	1.5	6.86	55.9	73	1171	—	2.82	18.68
14:50	3.5	6.86	56.1	76	1172	—	1.22	10.65
15:00	5.0	6.86	56.1	76	1174	—	0.91	10.65
15:10	6.5	6.86	56.0	77	1178	—	0.61	10.65
CL51 11/14/17 UJ								
Final Sample Data:		6.88	55.5	76	1177	—	0.74	10.18

Sample ID: MW-15-17Nov

Duplicate? ☐

Dupe Samp ID: _____

Sample Time: 15:15

MS/MSD? ☒

No. of Bottles: 309

Analyses:

Methods:

Comments: _____

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ _____

☐ Metals/CN

☐ Dioxin

Sampler(s): CW IS



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: MW-2R

EEEP Project No.: 1703074.0012.08

Date: 11/16/2017

Initial Depth to Water: 17.38 feet TOIC

Start Time: 0938

Total Well Depth: 30.20 feet TOIC

End Time: 11:38

Depth to Pump: 29.0 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 1.3 (Lpm) gpm

Pump Type: submersible

adjusted to: 0.25 Lpm at 11:40

Well Diameter: 4 inches

adjusted to: _____ at _____

1x Well Volume: 10.33 gallons $3x = 30.99$ gal

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm, mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
0938	0	6.9	54.6	196	761.4	—	44.9	14.99
0946	2.5	7.39	55.0	91	266.2	—	32.7	17.93
0958	5.5	7.27	55.7	40	257.2	—	18.0	20.89
1008	7.6	7.29	55.5	14	275.7	—	13.1	23.74
1018	8.5	7.25	55.6	-2	394.1	—	24.9	24.62
1028	11.0	7.21	54.7	-21	1122.0	—	77.0	25.61
1038	14.5	7.18	54.5	-57	1496.0	—	52.4	25.89
1048	17.5	7.18	54.5	-64	1629.0	—	24.3	25.81
1058	20.5	7.18	54.5	-69	1689.0	—	11.6	25.78
1108	23.5	7.18	54.4	-70	1709.0	—	10.44	25.68
1118	26.5	7.19	54.4	-77	1708.0	—	8.59	25.86
1128	29.5	7.18	54.4	-73	1716.0	—	6.29	25.79
1138	32.5	7.18	54.4	-73	1739.0	—	9.00	25.72
<i>Chloride</i> <u>1738.0</u> <u>11/16/17</u>								
Final Sample Data:		7.18	54.0	-74	1738.0	—	11.86	25.11

Sample ID: MW-2R-17Nov

Duplicate? ☐

Dupe Samp ID: _____

Sample Time: 11:40

MS/MSD? ☐

No. of Bottles: 3

Analyses:

Methods:

Comments: odor

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ _____

☐ Metals/CN

☐ Dioxin

Sampler(s): CW JS



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: MW-25

EEEP Project No.: 1703074.0012.08

Date: 11/14/17

Initial Depth to Water: 5.35 feet TOIC

Start Time: 10:00

Total Well Depth: 14.01 feet TOIC

End Time: 11:05

Depth to Pump: 13.0 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.400 Lpm / gpm

Pump Type: Submersible

adjusted to: 0.25 Lpm at 10:10

Well Diameter: 2 inches

adjusted to: 0.20 at 11:05

1x Well Volume: 1.15 gallons $3 \times 3.45 \text{ gal} = 13.08 \text{ L}$

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
10:00	0	6.61	56.5	55	1695	—	12.96	4.99
10:10	~~4.0~~ 0.75	6.70	56.5	-3	1501	—	4.99	6.08
10:20	1.25	6.67	56.8	-5	1494	—	3.46	6.50
10:30	1.90	6.67	56.2	-5	1492	—	2.27	6.53
10:40	2.25	6.66	56.5	-5	1485	—	1.56	6.69
10:50	2.90	6.67	56.4	-6	1481	—	2.87	6.64
11:00	3.25	6.67	56.5	-8	1478	—	0.99	6.57
11:05	3.50	6.67	56.5	-8	1472	—	1.17	6.58
<i>Christy L. L.</i> <u>11/14/17</u>								
Final Sample Data:		6.67	56.5	-8	1472	—	1.17	6.58

Sample ID: MW-25-17Nov

Duplicate? ☒

Dupe Samp ID: MW-25-17Nov-a

Sample Time: 11:08

MS/MSD? ☐

No. of Bottles: 300 6

Analyses: Methods:

Comments: flow rate fluctuates, sampled at 0.20 Lpm

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐

☐ Metals/CN

☐ Dioxin

Sampler(s): CW IS



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: NW-5R

EEEP Project No.: 1703074.0012.08

Date: 11/15/2017

Initial Depth to Water: 14.65 feet TOIC

Start Time: 09:33

Total Well Depth: 34.74 feet TOIC

End Time: 11:03

Depth to Pump: 33.5 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 1.9 Lpm/gpm

Pump Type: Submersible

adjusted to: 0.20 Lpm at 11:05

Well Diameter: 4 inches

adjusted to: _____ at _____

1x Well Volume: 13.12 gallons $3 \times = 39.36$ gal.

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm, mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
09:33	0	7.04	55.5	-36	1253	—	8.64	14.65
09:38	3	7.17	55.1	-59	1608	—	4.83	15.98
09:43	5	7.22	55.2	-48	1664	—	2.82	16.04
09:53	10	7.24	55.2	-42	1691	—	1.48	16.16
10:03	14	7.25	54.5	-41	1684	—	1.52	16.24
10:13	19	7.25	55.5	-40	1686	—	0.94	16.57
10:23	23	7.26	55.5	-39	1677	—	0.68	16.61
10:33	28	7.26	55.5	-39	1681	—	0.46	16.51
10:43	32	7.27	55.6	-39	1665	—	0.54	16.44
10:53	35	7.28	55.5	-35	1659	—	0.43	16.15
11:03	39	7.28	55.6	-34	1656	—	0.49	16.01
Chloride Test 11/15/17								
Final Sample Data:		7.25	55.5	-12	1657	—	0.44	15.61



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: MW-8R

EEPC Project No.: 1703074.0012.08

Date: 11/15/17

Initial Depth to Water: 15.50 feet TOIC

Start Time: 11:36

Total Well Depth: 36.14 feet TOIC

End Time: 13:56

Depth to Pump: 35.0 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 1.3 Lpm / gpm

Pump Type: submersible

adjusted to: 0.20 Lpm at 14:00

Well Diameter: 4 inches

adjusted to: _____ at _____

1x Well Volume: 13.48 gallons 3x = 40.43 gal

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
11:36	0	7.18	54.4	-54	1940	—	11.3	15.68
11:46	4	7.22	54.5	-82	1790	—	10.01	20.74
11:56	6.5	7.25	54.8	-78	1660	—	9.55	21.90
12:06	10	7.25	54.4	-74	1644	—	11.95	24.55
12:16	12	7.24	54.4	-76	1705	—	18.4	25.27
12:26	14	7.21	54.3	-79	1830	—	24.4	26.65
12:36	17	7.19	54.4	-78	1868	—	45.8	27.93
12:46	20	7.19	54.4	-79	1917	—	47	28.28
12:56	23	7.16	54.2	-79	1971	—	30	28.28
13:06	26	7.18	54.4	-80	1994	—	84.2	28.28
13:16	28	7.16	54.5	-80	1988	—	55.0	28.26
13:26	32	7.16	54.4	-81	1975	—	42.8	28.26
13:36	35	7.16	54.4	-80	1969	—	30.4	28.26
13:46	37	7.16	54.4	-82	1966	—	35.9	28.15
13:56	40	7.16	54.4	-81	1961	—	32.9	28.21
Final Sample Data:		7.16	54.4	-83	1957	—	21.6	27.25

Sample ID: MW-8R-17Nov

Duplicate? ☐

Dupe Samp ID: _____

Sample Time: 14:00

MS/MSD? ☐

No. of Bottles: 3

Analyses:

Methods:

Comments: flow rate is fluctuating

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ _____

☐ Metals/CN

☐ Dioxin

Sampler(s): CW JS



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: MW-9S

EEEP Project No.: 1703074.0012.08

Date: 11/13/17

Initial Depth to Water: 6.64 feet TOIC

Start Time: 13:22

Total Well Depth: 15.91 feet TOIC

End Time: 14:52

Depth to Pump: 14.5 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.125 Lpm / gpm

Pump Type: Submersible

adjusted to: 1329 at 0.275

Well Diameter: 2 inches

adjusted to: _____ at _____

1x Well Volume: 1.51 gallons $3x = 4.53$

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
1326	0.5	7.05	56.2	188	857.4	—	24.6	6.88
1342	4.9	7.32	56.4	188	880.2	—	11.4	9.18
1352	5.7	7.33	58.2	172	930.0	—	10.15	9.55
1402	7.6	7.29	57.6	158	942.1	—	5.53	10.0
1412	9.5	7.27	57.0	141	980.4	—	2.80	10.11
1422	11.4	7.24	58.4	133	1058	—	1.69	11.69
1432	13.3	7.22	57.5	131	1103	—	1.76	10.98
1442	17.0	7.22	57.0	125	1097	—	2.25	11.45
1452	19.0	7.22	57.4	117	1127	—	1.84	12.09
CEC 11/13/17 J.S.								
Final Sample Data:		7.22	57.4	117	1127	—	1.84	12.09

Sample ID: MW-9S-NOV17

Duplicate? ☐

Dupe Samp ID: _____

Sample Time: 14:59

MS/MSD? ☐

No. of Bottles: 3

Analyses: Methods:

Comments: flow rate fluctuates - lowered to 0.20 Lpm at

☒ VOCs ☐ CLP

Sampling

☐ SVOCs ☐ SW846

☐ PCBs ☐ EPA/CWA

☐ Pest. ☐ _____

☐ Metals/CN

☐ Dioxin

Sampler(s): C.W. J.S.



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: MW-10R

EEEP Project No.: 1703074.0012.08

Date: 11/20/17

Initial Depth to Water: 17.81 feet TOIC

Start Time: 09:28

Total Well Depth: 35.56 feet TOIC

End Time: 11:18

Depth to Pump: 30 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 1.9 (Lpm) / gpm

Pump Type: Submersible

adjusted to: 1.5 Lpm at 10:38

Well Diameter: 4 inches

adjusted to: 0.20 Lpm at 11:20

1x Well Volume: 11.59 gallons 3x = 34.77 gal

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm, mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
09:28	0	7.66	54.3	-18	961.7	—	6.37	18.20
09:38	5	7.34	54.0	-60	958.3	—	2.32	19.08
09:48	11	7.34	53.7	-37	1046	—	3.51	19.89
09:58	15	7.34	53.5	-35	1034	—	1.41	20.27
10:08	21	7.23	53.6	-52	842.4	—	6.51	21.13
10:18	25	7.20	53.9	-67	832.4	—	7.78	21.65
10:28	29	7.28	53.5	-43	1096	—	1.87	21.64
10:38	32	7.27	53.9	-23	1015	—	4.37	21.83
10:48	36	7.28	53.0	-12	1131	—	0.95	21.60
10:58	40	7.31	53.7	6	1149	—	0.86	21.68
11:08	44	7.32	53.4	15	1156	—	0.58	21.76
11:18	47	7.32	53.6	21	1167	—	0.50	21.61
		7.31	52.9	21	1172	—	0.55	21.32 (15)
Chloride WJ								
11/20/17								
Final Sample Data:		7.31	52.9	21	1172	—	0.55	21.32

Sample ID: MW-10R-17NOV

Duplicate? ☐

Dupe Samp ID: _____

Sample Time: 11:20

MS/MSD? ☐

No. of Bottles: 3

Analyses:

Methods:

Comments:

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ _____

☐ Metals/CN

☐ Dioxin

Sampler(s): CW JS



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: MW-14R

EEPC Project No.: 1703074.0012.08

Date: 11/16/17

Initial Depth to Water: 4.85 feet TOIC

Start Time: 12:51

Total Well Depth: 23.60 feet TOIC

End Time: 14:41

Depth to Pump: 22.5 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 1.3 Lpm/gpm

Pump Type: Submersible

adjusted to: 0.26 gpm at 14:45

Well Diameter: 4 inches

adjusted to: _____ at _____

1x Well Volume: 12.24 gallons $3 \times = 36.72$ gal

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
12:51	0	7.56	55.2	-50	299.3	—	71.8	4.70
13:01	3.5	7.49	55.0	-29	850.5	—	37.0	6.72
13:11	6.5	7.54	55.0	-38	882.7	—	10.06	7.52
13:21	9.5	7.58	54.9	-35	974.8	—	5.71	7.72
13:31	12.5	7.54	55.0	-36	928.1	—	8.74	8.38
13:41	15.5	7.54	55.2	-34	969.1	—	3.24	8.58
13:51	18.5	7.56	55.0	-35	1008	—	1.47	8.51
14:01	20.5	7.56	55.0	-34	908.4	—	3.40	8.54
14:11	24.5	7.54	55.0	-30	1008	—	3.17	9.47
14:21	28.5	7.54	54.9	-33	1009	—	4.18	9.34
14:31	32.5	7.54	54.9	-32	1029	—	1.45	9.34
14:41	36.5	7.54	54.9	-34	1033	—	1.48	9.32
<i>Chloride WJ</i> <u>11/16/17</u>								
Final Sample Data:								
		7.54	55.0	-34	1020	—	1.42	7.96

Sample ID: MW-14R-17NOV

Duplicate? ☐

Dupe Samp ID: _____

Sample Time: 14:45

MS/MSD? ☐

No. of Bottles: 3

Analyses: _____ Methods: _____

Comments: Flow rate fluctuated some

☒ VOCs ☐ CLP

☐ SVOCs ☐ SW846

☐ PCBs ☐ EPA/CWA

☐ Pest. ☐ _____

☐ Metals/CN

☐ Dioxin

Sampler(s): CW JS



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NYWell ID: MW-145EEEP Project No.: 1703074.0012.08Date: 11/14Initial Depth to Water: 1.68 feet TOICStart Time: 12:21Total Well Depth: 12.93 feet TOICEnd Time: 13:41Depth to Pump: 12.0 feet TOIC☐ Bailer ☒ PumpInitial Pump Rate: 0.150 Lpm / gpmPump Type: Submersibleadjusted to: 0.225 Lpm at 12:29Well Diameter: 2 inchesadjusted to: 0.40 Lpm at 12:511x Well Volume: 1.83 gallons 3x = 5.5 gal

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm/mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
12:21	0	7.21	56.0	-40	320.2	—	71000	2.30
12:31	0.25	7.06	55.0	-14	309.4	—	30.9	3.05
12:41	1.0	7.03	54.9	6	322.9	—	13.3	3.35
12:51	1.8	7.08	54.3	13	344.9	—	8.91	3.69
13:01	2.9	7.13	54.2	3	358.4	—	5.48	3.90
13:11	4.0	7.17	54.1	0	362.9	—	2.00	4.38
13:21	5.0	7.20	54.2	-4	358.3	—	1.06	4.70
13:31	6.0	7.23	54.1	-11	356.5	—	0.80	4.60
13:41	7.0	7.24	54.1	-12	353.9	—	0.75	4.54
<i>Chloride</i> <i>11/14/17</i>								
<i>Final Sample Data:</i>								
		7.24	54.1	-12	353.9	—	0.75	4.50

Sample ID: MW-145-17NovDuplicate? ☐

Dupe Samp ID: _____

Sample Time: 13:45MS/MSD? ☐No. of Bottles: 3

Analyses:

Methods:

Comments:

☒ VOCs☐ CLP☐ SVOCs☐ SW846☐ PCBs☐ EPA/CWA☐ Pest.☐ _____☐ Metals/CN☐ DioxinSampler(s): CW JS



WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland Oil Company, Rochester, NY

Well ID: MW-16R

EEEP Project No.: 1703074.0012.08

Date: 11/17/17

Initial Depth to Water: 18.24 feet TOIC

Start Time: 09:43

Total Well Depth: 22.60 feet TOIC

End Time: 10:30

Depth to Pump: 22.0 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.50 Lpm/gpm

Pump Type: submersible

adjusted to: 0.20 Lpm at 11:05

Well Diameter: 4 inches

adjusted to: _____ at _____

1x Well Volume: 2.85 gallons 3x = 8.54

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
09:43	0	8.30	55.2	183	147.4	—	11.3	18.44
09:53	1.75	8.36	56.5	134	155.9	—	11.19	20.60
10:03	3.0	7.60	53.1	6	561.7	—	15.7	21.69
10:13	3.75	7.51	55.2	-36	671.4	—	15.6	21.94
10:23	4.50	7.54	55.1	-49	680.2	—	14.4	22.21
10:30	4.75	DRY						
Clogged 4/17/17								
Final Sample Data:		7.68	54.7	-40	710.9	—	21.2	20.71

Sample ID: MW-16R-17NOV

Duplicate? ☐

Dupe Samp ID: _____

Sample Time: 11:05

MS/MSD? ☐

No. of Bottles: 3

Analyses: Methods:

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ _____

☐ Metals/CN

☐ Dioxin

Comments: flow rate fluctuated a lot - smaller tubing
may help stabilize water level in future.

Allowed to recharge after purging dry, then
sampled.

Sampler(s): CW JS

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: January 16, 2018	Completed by: Hannah Mason; Lynne Parker

The analytical data provided by the laboratory were reviewed for precision, accuracy, and completeness based on applicable sections of the following guidance:

- NYSDEC Division of Environmental Remediation Guidance for Data Deliverables and the Development of Data Usability Summary Reports (in DER-10, May 2010);
- EPA Region 2 Data Validation Standard Operating Procedures.

Specific criteria for QC limits were obtained from EEEPC's Master QAPP for NYSDEC projects. Compliance with the project QA program is indicated in the checklist and tables below. Any major or minor concerns affecting data usability are listed below. The checklist and tables also indicate whether data qualification is required and/or the type of qualifier assigned.

Reference:

Project ID	Lab Work Order	Laboratory
1703074.0012.08	R1710784	ALS, Rochester, NY

Work Orders, Tests and Number of Samples included in this DUSR

Work Orders	Matrix	Test Method	Method Name	Number of Samples	Sample Type
R1710784	WQ	E624	Volatile Organic Compound by GC/MS	5	TB
R1710784	WG	E624	Volatile Organic Compound by GC/MS	1	FD
R1710784	WG	E624	Volatile Organic Compound by GC/MS	18	N

Table 1 Sample Summary Tables from Electronic Data Deliverable

Work Order	Matrix	Sample ID	Lab ID	Sample Date	Field QC
R1710784	WQ	TRIP BLANK-20171113	R1710784-001	11/13/2017 11:00	TB
R1710784	WG	MW-9S-17NOV	R1710784-002	11/13/2017 14:59	
R1710784	WQ	TRIP BLANK-20171114	R1710784-003	11/14/2017 10:00	TB
R1710784	WG	MW-2S-17NOV	R1710784-004	11/14/2017 11:08	
R1710784	WG	MW-2S-17NOV-Q	R1710784-005	11/14/2017 11:08	FD
R1710784	WG	MW-14S-17NOV	R1710784-006	11/14/2017 13:45	
R1710784	WG	MW-1S-17NOV	R1710784-007	11/14/2017 15:15	MS/MSD
R1710784	WQ	TRIP BLANK-20171115	R1710784-008	11/15/2017 09:00	TB
R1710784	WG	MW-5R-17NOV	R1710784-009	11/15/2017 11:05	
R1710784	WG	MW-8R-17NOV	R1710784-010	11/16/2017 14:00	
R1710784	WG	MW-2S-17NOV	R1710784-011	11/16/2017 11:40	
R1710784	WG	MW-14S-17NOV	R1710784-012	11/16/2017 14:50	
R1710784	WG	PZ-03-17NOV	R1710784-013	11/16/2017 15:39	
R1710784	WQ	TRIP BLANK-20171117	R1710784-014	11/17/2017 09:30	TB
R1710784	WG	MW-16R-17NOV	R1710784-015	11/17/2017 11:05	
R1710784	WG	PZ-04-17NOV	R1710784-016	11/17/2017 13:05	
R1710784	WG	PZ-02-17NOV	R1710784-017	11/17/2017 14:05	
R1710784	WQ	TRIP BLANK-20172011	R1710784-018	11/20/2017 09:00	TB
R1710784	WG	MW-10R-17NOV	R1710784-019	11/20/2017 11:20	
R1710784	RB	RB-20172011	R1710784-020	11/20/2017 11:45	RB
R1710784	WG	P-2-17NOV	R1710784-021	11/20/2017 12:50	
R1710784	WG	PW-1-17NOV	R1710784-022	11/20/2017 13:00	
R1710784	WG	P-3-17NOV	R1710784-023	11/20/2017 13:05	
R1710784	WG	PW-2-17NOV	R1710784-024	11/20/2017 13:15	

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: January 16, 2018	Completed by: Hannah Mason; Lynne Parker

General Sample Information	
Do Samples and Analyses on COC check against Lab Sample Tracking Form?	Yes.
Did coolers arrive at lab between 2 and 6°C and in good condition as indicated on COC and Cooler Receipt Form?	No. The cooler associated with Trip Blank-20171117, MW-16R-17NOV, PZ-04-17NOV, and PZ-02-17NOV arrived at 6.8°C, with a corrected temperature of 9.4°C. The samples were delivered to the lab, on wet ice, 50 minutes after the last sample had been taken. Therefore, it was not possible for the samples to cool to the proper storage temperature in the given time. Samples are refrigerated at <6°C upon receipt at the lab, and no qualification of the data is necessary.
Frequency of Field QC Samples Correct? Field Duplicate - 1/20 samples Trip Blank - Every cooler with VOCs waters only Equipment Blank - 1/ set of samples per day?	Yes.
Case narrative present and complete?	Yes.
Any holding time violations?	No.

The following tables are presented at the end of this DUSR and provided summaries of results outside QC criteria:

- Method Blanks Results (Table 2)
- Surrogates Outside Limits (Table 3)
- MS/MSD Outside Limits (Table 4)
- LCS Outside Limits (Table 5)
- Re-analysis Results (Table 6)
- Field Duplicate Results (Table 7)

Go to [Tables](#) List

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: January 16, 2018	Completed by: Hannah Mason; Lynne Parker

Volatile Organics and Semi-volatile Organics by GC/MS	
Description	Notes and Qualifiers
Any compounds present in method, trip, and field blanks (see Table 2)?	Yes. 1,4-Dichlorobenzene was recovered above MDL and below MRL in sample MB RQ1711970-05. Chloromethane was recovered above MDL and below MRL in sample MB RQ1712201-04. Chloromethane was recovered above MDL and below MRL in sample MB RQ1712266-04. Methylene chloride recovered above MDL and below MRL in sample MB RQ1712279-04.
For samples, if results are < 5 times the blank or < 10 times blank for common laboratory contaminants then "U" flag data. Qualification also applies to TICs.	Sample MW-9S-17NOV (MB RQ1711970-05) recovered 1,4-dichlorobenzene below the MRL, which shows that even with the result possibly biased high due to method blank contamination, the sample is non-detect. No qualification is required. All other associated samples are non-detect, and no qualification is required. Samples MW-8R-17NOV and MW-2R-17NOV (MB RQ1712201-04) recovered chloromethane above 2X the MRL. Due to the method blank result falling below the MRL, the potential high bias for chloromethane is negligible compared to the sample results, and no qualification of the data is required. All other associated samples are non-detect, and no qualification is required. Samples MW-8R-17NOV and MW-2R-17NOV (MB RQ1712266-04) recovered chloromethane above 2X the MRL. Due to the method blank result falling below the MRL, the potential high bias for chloromethane is negligible compared to the sample results, and no qualification of the data is required. All other associated samples are non-detect, and no qualification is required. Sample P-3-17NOV and rinse blank RB-20172011 (MB RQ1712279-04) recovered methylene chloride below the MRL, which shows that even with the result possibly biased high due to method blank contamination, the sample is non-detect. No qualification is required.
Surrogate for method blanks and LCS within limits?	Yes.
Surrogate for samples and MS/MSD within limits? (See Table 3). All samples should be re-analyzed for VOCs? Samples should re-analyzed if >1 BN and/or > AP for BNAs is out. Matrix effects should be established.	Yes.
Laboratory QC frequency one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: January 16, 2018	Completed by: Hannah Mason; Lynne Parker

Volatile Organics and Semi-volatile Organics by GC/MS	
Description	Notes and Qualifiers
MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then J flag positive data in original sample due to matrix?	Yes.
LCS within QC criteria (see Table 5)? If out, and the recovery high with no positive values, then no data qualification is required.	Yes.
Do internal standards areas and retention time meet criteria? If not was sample re-analyzed to establish matrix (see Table 6)?	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Yes.
Is continuing calibration for target compounds < 20.5%D.	No. 2-Chloroethyl vinyl ether recovered high %D during the CCVs completed on 11/20/2017 (analysis lot 570743, %D=35.8%), 11/21/2017 (analysis lot 570946, %D=39.3%), and 11/22/2017 (analysis lot 571161, %D=44.4%) All associated samples were non-detect, and have been qualified UJ as estimated non-detect.

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: January 16, 2018	Completed by: Hannah Mason; Lynne Parker

Volatile Organics and Semi-volatile Organics by GC/MS	
Description	Notes and Qualifiers
Were any samples re-analyzed or diluted (see Table 6)? For any sample re-analysis and dilutions is only one reportable result by flagged?	Yes. Samples MW-5R-17NOV, MW-8R-17NOV, MW-2R-17NOV, PZ-04-17NOV, MW-10R-17NOV, P-2-17NOV, PW-1-17NOV, P-3-17NOV, and PW-2-17NOV were diluted to bring target analytes within calibration range. For each analyte, only one reportable result is flagged. The reporting limits for 1,1,2-trichloroethane, 1,2-dichloroethane, 1,2-dichloropropane, benzene, cis-1,3-dichloropropene, and trans-1,3-dichloropropene in sample MW-10R-17NOV exceed the screening level. The analytes may be present in the sample greater than the screening limit, but less than the method detection limit. The reporting limits for 1,1,2-trichloroethane, 1,2-dichloroethane, 1,2-dichloropropane, cis-1,3-dichloropropene, and trans-1,3-dichloropropene in sample MW-2R-17NOV exceed the screening level. The analytes may be present in the sample greater than the screening limit, but less than the method detection limit. The reporting limits for cis-1,3-dichloropropene, and trans-1,3-dichloropropene in sample MW-5R-17NOV exceed the screening level. The analytes may be present in the sample greater than the screening limit, but less than the method detection limit. The reporting limits for 1,1,2-trichloroethane, 1,2-dichlorobenzene, 1,2-dichloroethane, 1,2-dichloropropane, 1,3-dichlorobenzene, 1,4-dichlorobenzene, acetone, bromomethane, benzene, chloroethane, cis-1,3-dichloropropene, M,P-xylene (Sum Of Isomers), and trans-1,3-dichloropropene in sample MW-8R-17NOV exceed the screening level. The analytes may be present in the sample greater than the screening limit, but less than the method detection limit. The reporting limits for cis-1,3-dichloropropene, and trans-1,3-dichloropropene in sample P-3-17NOV exceed the screening level. The analytes may be present in the sample greater than the screening limit, but less than the method detection limit.
For TICs are there any system related compounds that should not be reported?	N/A
Do field duplicate results show good precision for all compounds except TICs (see Table 7)?	Yes.

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: January 16, 2018	Completed by: Hannah Mason; Lynne Parker

Summary of Findings

- SW8260C: The continuing calibration verification associated with all samples analyzed on November 20th, 21st, and 22nd exhibited a %D for 2-chloroethyl vinyl ether outside the control limits of $\pm 20.5\%$ (-35.8%, -39.3%, and -44.4%, respectively). All associated samples were non-detect, and have been qualified UJ as estimated non-detect. The %D is biased low, however, the impact on the data usability is expected to be minimal due to the associated high quantitation limits for 2-chloroethyl vinyl ether.
- SW8260C: The reporting limits exceeded the screening level in sample MW-10R-17NOV for 1,1,2-trichloroethane, 1,2-dichloroethane, 1,2-dichloropropane, benzene, cis-1,3-dichloropropene, and trans-1,3-dichloropropene. The analytes may be present in the sample greater than screening limits, but less than the method detection limit.
- SW8260C: The reporting limits exceeded the screening level in sample MW-2R-17NOV for 1,1,2-trichloroethane, 1,2-dichloroethane, 1,2-dichloropropane, cis-1,3-dichloropropene, and trans-1,3-dichloropropene. The analytes may be present in the sample greater than screening limits, but less than the method detection limit.
- SW8260C: The reporting limits exceeded the screening level in sample MW-5R-17NOV for cis-1,3-dichloropropene, and trans-1,3-dichloropropene. The analytes may be present in the sample greater than screening limits, but less than the method detection limit.
- SW8260C: The reporting limits exceeded the screening level in sample MW-8R-17NOV for 1,1,2-trichloroethane, 1,2-dichlorobenzene, 1,2-dichloroethane, 1,2-dichloropropane, 1,3-dichlorobenzene, 1,4-dichlorobenzene, acetone, bromomethane, benzene, chloroethane, cis-1,3-dichloropropene, M,P-xylene (Sum Of Isomers), and trans-1,3-dichloropropene. The analytes may be present in the sample greater than screening limits, but less than the method detection limit.
- SW8260C: The reporting limits exceeded the screening level in sample P-3-17NOV for cis-1,3-dichloropropene, and trans-1,3-dichloropropene. The analytes may be present in the sample greater than screening limits, but less than the method detection limit.

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: January 16, 2018	Completed by: Hannah Mason; Lynne Parker

Table 2 - List of Positive Results for Blank Samples

Method	Sample ID	Sample Type	Analyte	Result	Lab Qualifier	Units	MDL	PQL
E624	RQ1711970-05	MB	1,4-dichlorobenzene	0.22	J	µg/l	0.20	1.0
E624	RQ1712201-04	MB	chloromethane	0.25	J	µg/l	0.20	1.0
E624	RQ1712266-04	MB	chloromethane	0.30	J	µg/l	0.20	1.0
E624	RQ1712279-04	MB	methylene chloride	0.29	J	µg/l	0.02	1.0

Table 2A - List of Samples Qualified for Method Blank Contamination

None

Table 2B - List of Samples Qualified for Field Blank Contamination

None

Table 3 - List of Samples with Surrogates outside Control Limits

None.

Table 4 - List MS/MSD Recoveries and RPDs outside Control Limits

None.

Table 5 - List LCS Recoveries outside Control Limits

None.

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: January 16, 2018	Completed by: Hannah Mason; Lynne Parker

Table 6 –Samples that were Re-analyzed

Sample ID	Lab ID	Method	Sample Type	Action
MW-5R-17NOV	R1710784-009	E624	N	2.5X: Diluted to bring target analytes within calibration range. Elevated reporting limits provided.
MW-5R-17NOV	R1710784-009	E624	N	5X: Diluted to bring cis-1,2-dichloroethane within calibration range. Elevated reporting limits provided.
MW-8R-17NOV	R1710784-010	E624	N	25X: Diluted to bring target analytes within calibration range. Elevated reporting limits provided.
MW-8R-17NOV	R1710784-010	E624	N	50X: Diluted to bring cis-1,2-dichloroethane within calibration range. Elevated reporting limits provided.
MW-2R-17NOV	R1710784-011	E624	N	10X: Diluted to bring target analytes within calibration range. Elevated reporting limits provided.
MW-2R-17NOV	R1710784-011	E624	N	25X: Diluted to bring cis-1,2-dichloroethane within calibration range. Elevated reporting limits provided.
PZ-04-17NOV	R1710784-016	E624	N	2X: Diluted to bring target analytes within calibration range.
MW-10R-17NOV	R1710784-019	E624	N	10X: Diluted to bring target analytes within calibration range. Elevated reporting limits provided.
P-2-17NOV	R1710784-021	E624	N	2X: Diluted to bring target analytes within calibration range.
PW-1-17NOV	R1710784-022	E624	N	2X: Diluted to bring target analytes within calibration range.
P-3-17NOV	R1710784-023	E624	N	2.5X: Diluted to bring target analytes within calibration range. Elevated reporting limits provided.
PW-2-17NOV	R1710784-024	E624	N	2X: Diluted to bring target analytes within calibration range.

Table 7 – Summary of Field Duplicate Results

Method	Analyte	Unit	Matrix	PQL	Anal Type	MW-2S-17NOV	MW-2S-17NOV-Q	RPD	RPD Rating	Sample Qual
E624	1,1-Dichloroethane	ug/L	Water	1	A	1.2	1.3	8.0%	Good	None
E624	Tetrachloroethene	ug/L	Water	1	A	0.4	ND	NC	--	--

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: January 16, 2018	Completed by: Hannah Mason; Lynne Parker

Acronym List and Table Key:

COC	= chain of custody
DUSR	= data usability summary report
EB	= Equipment blank
FD	= Field duplicate sample
GC/MS	= gas chromatography / mass spectrometry
LCS	= laboratory control sample
LCSD	= laboratory control sample duplicate
MBLK	= method blank
MS	= matrix spike
MSD	= matrix spike duplicate
N	= Normal field sample
NC	= not calculated
ND	= not detected
NYSDEC	= New York State Department of Environmental Conservation
PQL	= practical quantitation limit
QA	= quality assurance
QAPP	= quality assurance project plan
QC	= quality control
RB	= Rinsate blank sample
RPD	= relative percent difference
SDG	= sample delivery group
TB	= Trip blank sample
TRG	= Target analyte
µg/l	= Micrograms per liter
VOC	= volatile organic compound
WG	= Groundwater (matrix)



December 27, 2017

Service Request No:R1710784

Ms. Ashlee Patnode
Ecology And Environment, Incorporated
368 Pleasantview Drive
Lancaster, NY 14086

Laboratory Results for: Davis Howland Oil Company Site

Dear Ms.Patnode,

Enclosed are the results of the sample(s) submitted to our laboratory November 13, 2017
For your reference, these analyses have been assigned our service request number **R1710784**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

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Narrative Documents

ALS Environmental—Rochester Laboratory

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www.alsglobal.com

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Received: 11/13/17 - 11/20/17

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt

Twenty Four Water samples were received for analysis at ALS Environmental on 11/13-17/2017. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at $\leq 6^{\circ}\text{C}$ upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Volatile Organic Analyses:

No significant anomalies were noted with this analysis.

Approved by  Date 12/27/2017

SAMPLE DETECTION SUMMARY

CLIENT ID: MW-9S-17NOV	Lab ID: R1710784-002

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1,1-Trichloroethane (TCA)	1.3		0.20	1.0	ug/L	624
1,1-Dichloroethane (1,1-DCA)	9.2		0.21	1.0	ug/L	624
1,1-Dichloroethene (1,1-DCE)	0.49	J	0.20	1.0	ug/L	624
1,2-Dichlorobenzene	6.5		0.25	1.0	ug/L	624
1,3-Dichlorobenzene	0.33	J	0.22	1.0	ug/L	624
1,4-Dichlorobenzene	0.76	BJ	0.20	1.0	ug/L	624
Chloroform	0.45	J	0.20	1.0	ug/L	624
Tetrachloroethene (PCE)	39		0.20	1.0	ug/L	624
Trichloroethene (TCE)	33		0.20	1.0	ug/L	624
Vinyl Chloride	2.5		0.20	1.0	ug/L	624
cis-1,2-Dichloroethene	26		0.20	1.0	ug/L	624
trans-1,2-Dichloroethene	2.6		0.20	1.0	ug/L	624

CLIENT ID: MW-2S-17NOV	Lab ID: R1710784-004

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1-Dichloroethane (1,1-DCA)	1.2		0.21	1.0	ug/L	624
Tetrachloroethene (PCE)	0.40	J	0.20	1.0	ug/L	624

CLIENT ID: MW-2S-17NOV-Q	Lab ID: R1710784-005

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1-Dichloroethane (1,1-DCA)	1.3		0.21	1.0	ug/L	624

CLIENT ID: MW-1S-17NOV	Lab ID: R1710784-007

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1,1-Trichloroethane (TCA)	1.3		0.20	1.0	ug/L	624
1,1-Dichloroethane (1,1-DCA)	0.70	J	0.21	1.0	ug/L	624
1,1-Dichloroethene (1,1-DCE)	0.50	J	0.20	1.0	ug/L	624
Tetrachloroethene (PCE)	2.3		0.20	1.0	ug/L	624
Trichloroethene (TCE)	12		0.20	1.0	ug/L	624
cis-1,2-Dichloroethene	15		0.20	1.0	ug/L	624

CLIENT ID: Trip Blank-20171115	Lab ID: R1710784-008

Analyte	Results	Flag	MDL	PQL	Units	Method
Chloromethane	0.29	BJ	0.20	1.0	ug/L	624

CLIENT ID: MW-5R-17NOV	Lab ID: R1710784-009

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1-Dichloroethane (1,1-DCA)	45		0.53	2.5	ug/L	624
1,1-Dichloroethene (1,1-DCE)	6.7		0.50	2.5	ug/L	624
Benzene	12		0.50	2.5	ug/L	624
Chloromethane	0.58	BJ	0.50	2.5	ug/L	624
Trichloroethene (TCE)	8.7		0.50	2.5	ug/L	624
Vinyl Chloride	170		0.50	2.5	ug/L	624
cis-1,2-Dichloroethene	550	D	1.0	5.0	ug/L	624

SAMPLE DETECTION SUMMARY

CLIENT ID: MW-5R-17NOV	Lab ID: R1710784-009

Analyte	Results	Flag	MDL	PQL	Units	Method
trans-1,2-Dichloroethene	5.5		0.50	2.5	ug/L	624

CLIENT ID: MW-8R-17NOV	Lab ID: R1710784-010

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1-Dichloroethane (1,1-DCA)	140		5.3	25	ug/L	624
1,1-Dichloroethene (1,1-DCE)	64		5.0	25	ug/L	624
Chloromethane	6.0	J	5.0	25	ug/L	624
Trichloroethene (TCE)	8.0	J	5.0	25	ug/L	624
Vinyl Chloride	650		5.0	25	ug/L	624
cis-1,2-Dichloroethene	5300	D	10	50	ug/L	624
trans-1,2-Dichloroethene	7.3	J	5.0	25	ug/L	624

CLIENT ID: MW-2R-17NOV	Lab ID: R1710784-011

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1-Dichloroethane (1,1-DCA)	68		2.1	10	ug/L	624
1,1-Dichloroethene (1,1-DCE)	24		2.0	10	ug/L	624
Chloromethane	2.8	J	2.0	10	ug/L	624
Vinyl Chloride	370		2.0	10	ug/L	624
cis-1,2-Dichloroethene	2200	D	5.0	25	ug/L	624
trans-1,2-Dichloroethene	5.3	J	2.0	10	ug/L	624

CLIENT ID: MW-14R-17NOV	Lab ID: R1710784-012

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1-Dichloroethane (1,1-DCA)	0.77	J	0.21	1.0	ug/L	624
1,1-Dichloroethene (1,1-DCE)	0.55	J	0.20	1.0	ug/L	624
Chloromethane	0.25	BJ	0.20	1.0	ug/L	624
Trichloroethene (TCE)	22		0.20	1.0	ug/L	624
Vinyl Chloride	1.7		0.20	1.0	ug/L	624
cis-1,2-Dichloroethene	14		0.20	1.0	ug/L	624
trans-1,2-Dichloroethene	3.8		0.20	1.0	ug/L	624

CLIENT ID: PZ-03-17NOV	Lab ID: R1710784-013

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1,1-Trichloroethane (TCA)	0.96	J	0.20	1.0	ug/L	624
1,1-Dichloroethane (1,1-DCA)	6.4		0.21	1.0	ug/L	624
1,1-Dichloroethene (1,1-DCE)	0.23	J	0.20	1.0	ug/L	624
Chloromethane	0.25	BJ	0.20	1.0	ug/L	624
Trichloroethene (TCE)	2.0		0.20	1.0	ug/L	624
Vinyl Chloride	0.84	J	0.20	1.0	ug/L	624
cis-1,2-Dichloroethene	9.3		0.20	1.0	ug/L	624
trans-1,2-Dichloroethene	0.36	J	0.20	1.0	ug/L	624

SAMPLE DETECTION SUMMARY

CLIENT ID: Trip Blank-20171117	Lab ID: R1710784-014

Analyte	Results	Flag	MDL	PQL	Units	Method
Chloromethane	0.25	BJ	0.20	1.0	ug/L	624

CLIENT ID: MW-16R-17NOV	Lab ID: R1710784-015

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1-Dichloroethane (1,1-DCA)	6.5		0.21	1.0	ug/L	624
1,1-Dichloroethene (1,1-DCE)	1.9		0.20	1.0	ug/L	624
Chloromethane	0.23	BJ	0.20	1.0	ug/L	624
Trichloroethene (TCE)	0.22	J	0.20	1.0	ug/L	624
Vinyl Chloride	64		0.20	1.0	ug/L	624
cis-1,2-Dichloroethene	130		0.20	1.0	ug/L	624
trans-1,2-Dichloroethene	0.60	J	0.20	1.0	ug/L	624

CLIENT ID: PZ-04-17NOV	Lab ID: R1710784-016

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1,1-Trichloroethane (TCA)	11		0.40	2.0	ug/L	624
1,1-Dichloroethane (1,1-DCA)	6.0		0.42	2.0	ug/L	624
1,1-Dichloroethene (1,1-DCE)	2.0		0.40	2.0	ug/L	624
Tetrachloroethene (PCE)	8.3		0.40	2.0	ug/L	624
Trichloroethene (TCE)	170		0.40	2.0	ug/L	624
Vinyl Chloride	11		0.40	2.0	ug/L	624
cis-1,2-Dichloroethene	190		0.40	2.0	ug/L	624
trans-1,2-Dichloroethene	2.1		0.40	2.0	ug/L	624

CLIENT ID: PZ-02-17NOV	Lab ID: R1710784-017

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1,1-Trichloroethane (TCA)	0.73	J	0.20	1.0	ug/L	624
1,1-Dichloroethane (1,1-DCA)	0.32	J	0.21	1.0	ug/L	624
Chloromethane	0.26	BJ	0.20	1.0	ug/L	624
Tetrachloroethene (PCE)	0.78	J	0.20	1.0	ug/L	624
Trichloroethene (TCE)	1.6		0.20	1.0	ug/L	624
cis-1,2-Dichloroethene	1.2		0.20	1.0	ug/L	624

CLIENT ID: Trip Blank-20172011	Lab ID: R1710784-018

Analyte	Results	Flag	MDL	PQL	Units	Method
Methylene Chloride	0.32	BJ	0.20	1.0	ug/L	624

CLIENT ID: MW-10R-17NOV	Lab ID: R1710784-019

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1,1-Trichloroethane (TCA)	3.6	J	2.0	10	ug/L	624
1,1-Dichloroethane (1,1-DCA)	4.5	J	2.1	10	ug/L	624
1,1-Dichloroethene (1,1-DCE)	12		2.0	10	ug/L	624
Chloromethane	2.3	BJ	2.0	10	ug/L	624
Tetrachloroethene (PCE)	2.8	J	2.0	10	ug/L	624
Trichloroethene (TCE)	860		2.0	10	ug/L	624

SAMPLE DETECTION SUMMARY

CLIENT ID: MW-10R-17NOV	Lab ID: R1710784-019

Analyte	Results	Flag	MDL	PQL	Units	Method
cis-1,2-Dichloroethene	60		2.0	10	ug/L	624
trans-1,2-Dichloroethene	8.0	J	2.0	10	ug/L	624

CLIENT ID: RB-20172011	Lab ID: R1710784-020

Analyte	Results	Flag	MDL	PQL	Units	Method
Methylene Chloride	0.37	BJ	0.20	1.0	ug/L	624
Trichloroethene (TCE)	2.6		0.20	1.0	ug/L	624

CLIENT ID: P-2-17NOV	Lab ID: R1710784-021

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1,1-Trichloroethane (TCA)	2.9		0.40	2.0	ug/L	624
1,1-Dichloroethane (1,1-DCA)	23		0.42	2.0	ug/L	624
1,1-Dichloroethene (1,1-DCE)	2.6		0.40	2.0	ug/L	624
Benzene	0.55	J	0.40	2.0	ug/L	624
Chloroethane	0.54	J	0.48	2.0	ug/L	624
Chloromethane	0.51	BJ	0.40	2.0	ug/L	624
Tetrachloroethene (PCE)	3.2		0.40	2.0	ug/L	624
Trichloroethene (TCE)	23		0.40	2.0	ug/L	624
Vinyl Chloride	35		0.40	2.0	ug/L	624
cis-1,2-Dichloroethene	250		0.40	2.0	ug/L	624
trans-1,2-Dichloroethene	2.9		0.40	2.0	ug/L	624

CLIENT ID: PW-1-17NOV	Lab ID: R1710784-022

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1-Dichloroethane (1,1-DCA)	11		0.42	2.0	ug/L	624
1,1-Dichloroethene (1,1-DCE)	2.8		0.40	2.0	ug/L	624
Benzene	0.59	J	0.40	2.0	ug/L	624
Trichloroethene (TCE)	13		0.40	2.0	ug/L	624
Vinyl Chloride	39		0.40	2.0	ug/L	624
cis-1,2-Dichloroethene	210		0.40	2.0	ug/L	624
trans-1,2-Dichloroethene	2.2		0.40	2.0	ug/L	624

CLIENT ID: P-3-17NOV	Lab ID: R1710784-023

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1,1-Trichloroethane (TCA)	8.1		0.50	2.5	ug/L	624
1,1-Dichloroethane (1,1-DCA)	44		0.53	2.5	ug/L	624
1,1-Dichloroethene (1,1-DCE)	1.7	J	0.50	2.5	ug/L	624
1,2-Dichloroethane	0.51	J	0.50	2.5	ug/L	624
Chloroethane	1.1	J	0.60	2.5	ug/L	624
Methylene Chloride	0.81	BJ	0.50	2.5	ug/L	624
Ethylbenzene	0.77	J	0.50	2.5	ug/L	624
Tetrachloroethene (PCE)	9.6		0.50	2.5	ug/L	624
Trichloroethene (TCE)	38		0.50	2.5	ug/L	624

SAMPLE DETECTION SUMMARY

CLIENT ID: P-3-17NOV	Lab ID: R1710784-023

Analyte	Results	Flag	MDL	PQL	Units	Method
Vinyl Chloride	24		0.50	2.5	ug/L	624
cis-1,2-Dichloroethene	310		0.50	2.5	ug/L	624
trans-1,2-Dichloroethene	3.9		0.50	2.5	ug/L	624

CLIENT ID: PW-2-17NOV	Lab ID: R1710784-024

Analyte	Results	Flag	MDL	PQL	Units	Method
1,1,1-Trichloroethane (TCA)	0.75	J	0.40	2.0	ug/L	624
1,1-Dichloroethane (1,1-DCA)	14		0.42	2.0	ug/L	624
1,1-Dichloroethene (1,1-DCE)	2.3		0.40	2.0	ug/L	624
Chloromethane	0.41	BJ	0.40	2.0	ug/L	624
Tetrachloroethene (PCE)	1.1	J	0.40	2.0	ug/L	624
Trichloroethene (TCE)	11		0.40	2.0	ug/L	624
Vinyl Chloride	11		0.40	2.0	ug/L	624
cis-1,2-Dichloroethene	200		0.40	2.0	ug/L	624
trans-1,2-Dichloroethene	1.0	J	0.40	2.0	ug/L	624



Sample Receipt Information

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request:R1710784

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R1710784-001	Trip Blank-20171113	11/13/2017	1100
R1710784-002	MW-9S-17NOV	11/13/2017	1459
R1710784-003	Trip Blank-20171114	11/14/2017	1000
R1710784-004	MW-2S-17NOV	11/14/2017	1108
R1710784-005	MW-2S-17NOV-Q	11/14/2017	1108
R1710784-006	MW-14S-17NOV	11/14/2017	1345
R1710784-007	MW-1S-17NOV	11/14/2017	1515
R1710784-008	Trip Blank-20171115	11/15/2017	0900
R1710784-009	MW-5R-17NOV	11/15/2017	1105
R1710784-010	MW-8R-17NOV	11/16/2017	1400
R1710784-011	MW-2R-17NOV	11/16/2017	1140
R1710784-012	MW-14R-17NOV	11/16/2017	1445
R1710784-013	PZ-03-17NOV	11/16/2017	1539
R1710784-014	Trip Blank-20171117	11/17/2017	0930
R1710784-015	MW-16R-17NOV	11/17/2017	1105
R1710784-016	PZ-04-17NOV	11/17/2017	1305
R1710784-017	PZ-02-17NOV	11/17/2017	1405
R1710784-018	Trip Blank-20172011	11/20/2017	0900
R1710784-019	MW-10R-17NOV	11/20/2017	1120
R1710784-020	RB-20172011	11/20/2017	1145
R1710784-021	P-2-17NOV	11/20/2017	1250
R1710784-022	PW-1-17NOV	11/20/2017	1300
R1710784-023	P-3-17NOV	11/20/2017	1305
R1710784-024	PW-2-17NOV	11/20/2017	1315



Cooler Receipt and Preservation Check Form

R1710784

5

Ecology And Environment, Incorporated
Davis Howland Oil Company SiteProject/Client E+EFolder Number dm 11/17/17Cooler received on 11/17/17by: dmCOURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y ☒ N
2	Custody papers properly completed (ink, signed)?	☒ Y N
3	Did all bottles arrive in good condition (unbroken)?	☒ Y N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	☒ Y N

5a	Perchlorate samples have required headspace?	Y N ☒ NA
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y ☒ N NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	☒ NA

8. Temperature Readings Date: 11/17/17 Time: 1456ID: R#7 IR#9

From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>6.8°</u>						
Correction Factor (°C)	<u>+2.6</u>						
Corrected Temp (°C)	<u>9.4°</u>						
Temp from: Type of bottle	<u>40mL vial</u>						
Within 0-6°C?	Y ☒ N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: Ice melted Poorly Packed (described below) Same Day Rule& Client Approval to Run Samples: Standing Approval Client aware at drop-off Client notified by: All samples held in storage location: Proc2 by dm on 11/17/17 at 1456
5035 samples placed in storage location: by on at Cooler Breakdown: Date: 11/25/17 Time: 10:55 by: TS

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
10. Did all bottle labels and tags agree with custody papers? YES NO
11. Were correct containers used for the tests indicated? YES NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
13. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated NA

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12		NaOH	Yes	No						
≤2		HNO ₃								
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
Residual Chlorine (-)		For CN Phenol and 522			If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃	-	-						
		ZnAcetate	-	-						
		HCl	**	**						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Bottle lot numbers: Explain all Discrepancies/ Other Comments:

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: PC Secondary Review:

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

P:\INTRANET\QAQC\Forms Controlled\Cooler Receipt r15.doc

10/11/17



Cooler Receipt and Preservation Check Form

R1710784

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Ecology And Environment, Incorporated
Davis Howland Oil Company SiteProject/Client E+E Folder Number _____Cooler received on 11-20-17 by: HECOURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <u>N</u>
2	Custody papers properly completed (ink, signed)?	<u>Y</u> N
3	Did all bottles arrive in good condition (unbroken)?	<u>Y</u> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<u>Y</u> N

5a	Perchlorate samples have required headspace?	Y N <u>NA</u>
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y <u>N</u> NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	<u>NA</u>

8. Temperature Readings Date: 11-20-17 Time: 14:42ID: IR#7 IR#9From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>1.1</u>						
Correction Factor (°C)	<u>+2.6</u>						
Corrected Temp (°C)	<u>3.7</u>						
Temp from: Type of bottle	<u>VOA vial</u>						
Within 0-6°C?	<u>Y</u> N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: ROD by HE on 11-20-17 at 14:45
5035 samples placed in storage location: _____ by _____ on _____ at _____Cooler Breakdown: Date: 11/21/17 Time: 13:18 by: HE

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
10. Did all bottle labels and tags agree with custody papers? YES NO
11. Were correct containers used for the tests indicated? YES NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
13. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated NA NA

pH	Lot of test paper	Reagent	Preserved?	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12		NaOH	Yes No						
≤2		HNO ₃							
≤2		H ₂ SO ₄							
<4		NaHSO ₄							
Residual Chlorine (-)		For CN Phenol and 522		If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃	- -						
		ZnAcetate	- -						
		HCl	** **						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Bottle lot numbers: 7-144-003

Explain all Discrepancies/ Other Comments:

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: HEPC Secondary Review: HE 11/21/17 *significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

Project Name Davis Howland		Project Number 10C3074.0012.08		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																				
Project Manager Ashlee Patnode		Report CC		PRESERVATIVE B																Preservative Key 0. NONE 1. HCL 2. HNO ₃ 3. H ₂ SO ₄ 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO ₄ 8. Other <u>ICE</u>				
Company/Address Ecology + Environment 368 Pleasant View Dr. Lancaster, NY 14086				NUMBER OF CONTAINERS	GC/MS VOAs • 8260 • 824 • CLP GC/MS SVOCs • 8270 • 825 GC VOAs • 8021 • 801/802 PESTICIDES • 8081 • 808 PCBs • 8082 • 808 METALS, TOTAL (List in comments below) METALS, DISSOLVED (List in comments below)																			
Phone # (716) 684-8060		Email apatnode@ene.com																						
Sampler's Signature Chris Wood		Sampler's Printed Name Chris Wood																						
CLIENT SAMPLE ID		FOR OFFICE USE ONLY LAB ID	SAMPLING DATE		TIME	MATRIX																	REMARKS/ ALTERNATE DESCRIPTION	
Trip Blank - 20171113			11/13/17		11:00	GW																		
MW - 95 - Nov 17			11/13/17		14:59	GW																		
Chris Wood 11/13/17																								
SPECIAL INSTRUCTIONS/COMMENTS Metals						TURNAROUND REQUIREMENTS ____ RUSH (SURCHARGES APPLY) ____ 1 day ____ 2 day ____ 3 day ____ 4 day ____ 5 day x Standard REQUESTED REPORT DATE ____						REPORT REQUIREMENTS ____ I. Results Only ____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required) x III. Results + QC and Calibration Summaries ____ IV. Data Validation Report with Raw Data Edata X Yes ____ No						INVOICE INFORMATION						
																		PO # BILL TO: See CONTRACT						
STATE WHERE SAMPLES WERE COLLECTED																								
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY										
Signature Chris Wood		Signature Daniel Wood		Signature		Signature		Signature		Signature		Signature		Signature										
Printed Name Chris Wood		Printed Name Daniel Wood		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name										
Firm EEPC		Firm ALS		Firm		Firm		Firm		Firm		Firm		Firm										
Date/Time 11/13 15:50		Date/Time 11/13/1550		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time										
R1710784																5								
Ecology And Environment, Incorporated Davis Howland Oil Company Site																								
																								



Cooler Receipt and Preservation Check Form

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Ecology And Environment, Incorporated
Davis Howland Oil Company Site



Project/Client E+E Folder Number R1710784

Cooler received on 11/13/17 by: Don

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y ☒ N
2	Custody papers properly completed (ink, signed)?	Y ☒ N
3	Did all bottles arrive in good condition (unbroken)?	Y ☒ N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	Y ☒ N

5a	Perchlorate samples have required headspace?	Y ☒ N ☒ NA
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y ☒ N ☒ NA
6	Where did the bottles originate?	AKS/ROC CLIENT
7	Soil VOA received as: Bulk Encore 5035set	☒ NA

8. Temperature Readings Date: 11/13/17 Time: 16:27 ID: R#7 IR#9 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>0.4</u>						
Correction Factor (°C)	<u>+1.5</u>						
Corrected Temp (°C)	<u>1.9</u>						
Temp from: Type of bottle	<u>Cent. tube</u>						
Within 0-6°C?	☒ Y ☒ N	Y ☒ N	Y ☒ N	Y ☒ N	Y ☒ N	Y ☒ N	Y ☒ N
If <0°C, were samples frozen?	Y ☒ N	Y ☒ N	Y ☒ N	Y ☒ N	Y ☒ N	Y ☒ N	Y ☒ N

If out of Temperature, note packing/ice condition: Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: Standing Approval Client aware at drop-off Client notified by:

All samples held in storage location: R-02 by Don on 11/13/17 at 16:27
5035 samples placed in storage location: by on at

Cooler Breakdown: Date: 11-14-17 Time: 11:27 by: ME

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
10. Did all bottle labels and tags agree with custody papers? YES NO
11. Were correct containers used for the tests indicated? YES NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO

13. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12		NaOH	Yes No						
≤2		HNO ₃							
≤2		H ₂ SO ₄							
<4		NaHSO ₄							
Residual Chlorine (-)		For CN Phenol and 522		If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃	- -						
		ZnAcetate	- -						
		HCl	** **						

**Not to be tested before analysis -- pH tested and recorded by VOAs on a separate worksheet

Bottle lot numbers: 7-144-003

Explain all Discrepancies/ Other Comments:

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: ME

PC Secondary Review:

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

Project Name Davis Howland		Project Number 10C3674.0012.08		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																
Project Manager Ashlee Patrode		Report CC		PRESERVATIVE B																
Company/Address Ecology + Environment 368 Pleasant View Dr. Lancaster, NY 14086				NUMBER OF CONTAINERS	GC/MS VOA's • 8260 • 8224 • CLP GC/MS SVOA's • 8270 • 825 GC VOA's • 8021 • 801/802 PESTICIDES • 8081 • 808 PCBs • 8082 • 808 METALS, TOTAL (List in comments below) METALS, DISSOLVED (List in comments below) Preservative Key 0. NONE 1. HCL 2. HNO₃ 3. H₂SO₄ 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO₄ 8. Other ICE															
Phone # (716) 684-8060		Email apatrode@ene.com																		
Sampler's Signature <i>Chris Wood</i>		Sampler's Printed Name Chris Wood																		
REMARKS/ ALTERNATE DESCRIPTION																				
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE TIME		MATRIX																
Trip Blank - 2017/11/14		11/14/17	10:00	WG	3	X														
MW-2S-17NOV			11:08	GW	3	X														
MW-2S-17NOV-G		I	11:08	GW	3	X														Duplicate
MW-14S-17NOV			13:45	GW	3	X														
MW-1S-17NOV			15:15	GW	9	X														ms/msd
<i>Chris Wood</i> 11/14/17																				
SPECIAL INSTRUCTIONS/COMMENTS Metals					TURNAROUND REQUIREMENTS ____ RUSH (SURCHARGES APPLY) ____ 1 day ____ 2 day ____ 3 day ____ 4 day ____ 5 day * standard REQUESTED REPORT DATE _____					REPORT REQUIREMENTS ____ I. Results Only ____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required) X ____ III. Results + QC and Calibration Summaries ____ IV. Data Validation Report with Raw Data Edata X Yes ____ No					INVOICE INFORMATION					
															PO # BILL TO: SEE CONTRACT					
STATE WHERE SAMPLES WERE COLLECTED																				
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY						
Signature <i>Chris Wood</i>		Signature <i>Chris Wood</i>		Signature		Signature		Signature		Signature		Signature		Signature						
Printed Name Chris Wood		Printed Name Chris Wood		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name						
Firm EEPC		Firm ALS		Firm		Firm		Firm		Firm		Firm		Firm						
Date/Time 11/14 16:05		Date/Time 11/14/17/ 16:05		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time						





Cooler Receipt and Preservation Check Form

R1710784

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Ecology And Environment, Incorporated
Davis Howland Oil Company SiteProject/Client E+E Folder Number _____Cooler received on 11/14/17 by: DWCOURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y ☒ N ☐
2	Custody papers properly completed (ink, signed)?	☒ Y ☐ N
3	Did all bottles arrive in good condition (unbroken)?	☒ Y ☐ N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	☒ Y ☐ N

5a	Perchlorate samples have required headspace?	Y ☐ N ☒ NA
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y ☒ NA
6	Where did the bottles originate?	AKS/ROC CLIENT
7	Soil VOA received as: Bulk Encore 5035set	☒ NA

8. Temperature Readings Date: 11/14/17 Time: 1016 ID: IR#7 CR#9 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>3.6</u>						
Correction Factor (°C)	<u>+1.2</u>						
Corrected Temp (°C)	<u>4.8</u>						
Temp from: Type of bottle	<u>ALV</u>						
Within 0-6°C?	☒ Y ☐ N	Y ☐ N	Y ☐ N	Y ☐ N	Y ☐ N	Y ☐ N	Y ☐ N
If <0°C, were samples frozen?	Y ☐ N	Y ☐ N	Y ☐ N	Y ☐ N	Y ☐ N	Y ☐ N	Y ☐ N

If out of Temperature, note packing/ice condition: _____ Ice melted _____ Poorly Packed (described below) _____ Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval _____ Client aware at drop-off _____ Client notified by: _____

All samples held in storage location: ROZ by DW on 11/14/17 at 1010
5035 samples placed in storage location: _____ by _____ on _____ at _____Cooler Breakdown: Date: 11/15/17 Time: 1127 by: D

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
10. Did all bottle labels and tags agree with custody papers? YES NO
11. Were correct containers used for the tests indicated? YES NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO

13. Air Samples: Cassettes / Tubes Intact _____ Canisters Pressurized _____ Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO ₃								
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
Residual Chlorine (-)		For CN Phenol and 522			If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃	-	-						
		ZnAcetate	-	-						
		HCl	**	**						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Bottle lot numbers: 7-144-003

Explain all Discrepancies/ Other Comments: _____

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: D

PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm ; WC > 1 in. diameter

Project Name Davis Howland		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																
Project Manager Ashlee Patnode		Report CC		PRESERVATIVE	8															Preservative Key 0. NONE 1. HCL 2. HNO ₃ 3. H ₂ SO ₄ 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO ₄ 8. Other <u>LCE</u>
Company/Address Ecology + Environment		NUMBER OF CONTAINERS		GC/MS VOAs • 8260 • 824 • CLP • 8270 • 625	GC/MS SVOAs • 8021 • 601/602	PESTICIDES • 8061 • 608	PCBs • 8092 • 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)											
368 Pleasant View Dr.																				
Lancaster, NY 14086																				
Phone # (716) 684-8060		Email apatnode@ene.com																		REMARKS/ ALTERNATE DESCRIPTION
Sampler's Signature Chris Wood		Sampler's Printed Name Chris Wood																		
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING		MATRIX																
		DATE	TIME																	
Trip Blank-2017/11/5		11/15/17	09:00	WQ	3	X														
MW-5R-17Nov		I	11:05	WG	3	X														
MW-8R-17Nov		I	14:00	WG	3	X														
MW-2R-17Nov		11/16/17	11:40	WG	3	X														
MW-14R-17Nov		I	14:45	WG	3	X														
PZ-03-17Nov		I	15:39	WG	3	X														
Chris Wood 11/16/17																				
SPECIAL INSTRUCTIONS/COMMENTS Metals						TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day ____ 2 day ____ 3 day 4 day ____ 5 day X Standard REQUESTED REPORT DATE _____						REPORT REQUIREMENTS I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) X III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data Edata X Yes ____ No						INVOICE INFORMATION PO # BILL TO: See Contract		
See QAPP ☐																				
STATE WHERE SAMPLES WERE COLLECTED																				
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY						
Signature Chris Wood		Signature Samuel Wood		Signature		Signature		Signature		Signature		Signature		Signature						
Printed Name Chris Wood		Printed Name Samuel Wood		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name						
Firm EEPC		Firm ALS		Firm		Firm		Firm		Firm		Firm		Firm						
Date/Time 11/16/17 16:20		Date/Time 11/16/17 16:20		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time						

R1710784 **5**
 Ecology And Environment, Incorporated
 Davis Howland Oil Company Site




Cooler Receipt and Preservation Check Form

R1710784 **5**
Ecology And Environment, Incorporated
Davis Howland Oil Company Site

Project/Client Ecology + Environment Folder Number _____Cooler received on 11/16/17 by: GBCOURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <u>N</u>
2	Custody papers properly completed (ink, signed)?	Y <u>N</u>
3	Did all bottles arrive in good condition (unbroken)?	Y <u>N</u>
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	Y <u>N</u>

5a	Perchlorate samples have required headspace?	Y <u>N</u> NA
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y <u>N</u> NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	<u>NA</u>

8. Temperature Readings Date: 11/16/17 Time: 1625 ID: IR#7 IR#9 From: Temp Blank Sample Bottle

Observed Temp (°C)							2.2	
Correction Factor (°C)							-	
Corrected Temp (°C)							2.2	
Temp from: Type of bottle							5	
Within 0-6°C?	Y N	Y N	Y N	Y N	Y N	Y N	Y <u>N</u>	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by @ on 11/16/17 at 1630
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown: Date: 11/17/17 Time: 1533 by: @

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
 10. Did all bottle labels and tags agree with custody papers? YES NO
 11. Were correct containers used for the tests indicated? YES NO
 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
 13. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated NA

pH	Lot of test paper	Reagent	Preserved?	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12		NaOH	Yes No						
≤2		HNO ₃							
≤2		H ₂ SO ₄							
<4		NaHSO ₄							
Residual Chlorine (-)		For CN Phenol and 522		If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃	- -						
		ZnAcetate	- -						
		HCl	** **						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Bottle lot numbers: 7-144-003
Explain all Discrepancies/ Other Comments: _____

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: @

PC Secondary Review: _____

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*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

10/11/17

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Internal Chain of Custody Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1710784-001.01					
		11/14/2017	1132	SMO / DWARD	
		11/14/2017	1132	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-001.02					
	624				
		11/14/2017	1132	R-001 / DWARD	
		11/14/2017	1132	SMO / DWARD	
		11/17/2017	1645	In Lab / KRUEST	
		11/19/2017	1017	R-001-S12 / KRUEST	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-001.03					
		11/14/2017	1132	SMO / DWARD	
		11/14/2017	1132	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-002.01					
	624				
		11/14/2017	1132	SMO / DWARD	
		11/14/2017	1132	R-001 / DWARD	
		11/17/2017	1645	In Lab / KRUEST	
		11/19/2017	1017	R-001-S12 / KRUEST	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-002.02					
		11/14/2017	1132	SMO / DWARD	
		11/14/2017	1132	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-002.03					
		11/14/2017	1132	SMO / DWARD	
		11/14/2017	1132	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-003.01					
	624				
		11/15/2017	0927	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/17/2017	1645	In Lab / KRUEST	
		11/19/2017	1017	R-001-S12 / KRUEST	
		11/20/2017	1059	R-001 / GESMERIAN	

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Internal Chain of Custody Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1710784-003.02					
		11/15/2017	0927	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-003.03					
		11/15/2017	0927	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-004.01					
	624				
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/17/2017	1645	In Lab / KRUEST	
		11/19/2017	1017	R-001-S12 / KRUEST	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-004.02					
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-004.03					
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-005.01					
	624				
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/17/2017	1645	In Lab / KRUEST	
		11/19/2017	1018	R-001-S12 / KRUEST	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-005.02					
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-005.03					

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Internal Chain of Custody Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-006.01					
	624				
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/17/2017	1645	In Lab / KRUEST	
		11/19/2017	1018	R-001-S12 / KRUEST	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-006.02					
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-006.03					
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-007.01					
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-007.02					
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-007.03					
		11/15/2017	0928	SMO / JJANSON	
		11/15/2017	1130	R-001 / DWARD	
		11/19/2017	1018	R-001-S12 / KRUEST	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-007.04					
		11/15/2017	1130	SMO / DWARD	
		11/15/2017	1130	R-001 / DWARD	

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Internal Chain of Custody Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1710784-007.05		11/20/2017	1059	R-001 / GESMERIAN	
		11/15/2017	1130	R-001 / DWARD	
		11/15/2017	1130	SMO / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-007.06	624	11/15/2017	1130	SMO / DWARD	
		11/15/2017	1130	R-001 / DWARD	
		11/17/2017	1645	In Lab / KRUEST	
		11/19/2017	1018	R-001-S12 / KRUEST	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-007.07		11/15/2017	1130	SMO / DWARD	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-007.08		11/15/2017	1130	SMO / DWARD	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-007.09		11/15/2017	1130	SMO / DWARD	
		11/15/2017	1130	R-001 / DWARD	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-008.01	624	11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/20/2017	1337	In Lab / FNAEGLER	
		11/20/2017	1513	R-001-S08 / FNAEGLER	
R1710784-008.02		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	

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Internal Chain of Custody Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1710784-008.03					
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-009.01					
	624,624				
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/20/2017	1337	In Lab / FNAEGLER	
		11/20/2017	1513	R-001-S08 / FNAEGLER	
		11/21/2017	1432	In Lab / FNAEGLER	
		11/21/2017	1510	R-001-S08 / FNAEGLER	
R1710784-009.02					
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-009.03					
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-010.01					
	624,624				
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/20/2017	1337	In Lab / FNAEGLER	
		11/20/2017	1513	R-001-S08 / FNAEGLER	
		11/21/2017	1433	In Lab / FNAEGLER	
		11/21/2017	1510	R-001-S08 / FNAEGLER	
R1710784-010.02					
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-010.03					
		11/16/2017	2031	SMO / DWARD	

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Internal Chain of Custody Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-011.01					
	624,624				
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/20/2017	1337	In Lab / FNAEGLER	
		11/20/2017	1513	R-001-S08 / FNAEGLER	
		11/21/2017	1433	In Lab / FNAEGLER	
		11/21/2017	1510	R-001-S08 / FNAEGLER	
R1710784-011.02					
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-011.03					
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-012.01					
	624				
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/20/2017	1337	In Lab / FNAEGLER	
		11/20/2017	1513	R-001-S08 / FNAEGLER	
R1710784-012.02					
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-012.03					
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-013.01					

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Internal Chain of Custody Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
	624	11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/20/2017	1337	In Lab / FNAEGLER	
		11/20/2017	1513	R-001-S08 / FNAEGLER	
		R1710784-013.02			
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-013.03					
		11/16/2017	2031	SMO / DWARD	
		11/17/2017	1536	R-001 / GESMERIAN	
		11/20/2017	1059	R-001 / GESMERIAN	
R1710784-014.01					
	624	11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/20/2017	1350	In Lab / FNAEGLER	
		11/20/2017	1513	R-001-S08 / FNAEGLER	
		11/21/2017	1323	R-001 / GLAFORCE	
		R1710784-014.02			
		11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-014.03					
		11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-015.01					
	624	11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/20/2017	1350	In Lab / FNAEGLER	
		11/20/2017	1513	R-001-S08 / FNAEGLER	
		11/21/2017	1323	R-001 / GLAFORCE	
		11/21/2017	1433	In Lab / FNAEGLER	

ALS Group USA, Corp.
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Internal Chain of Custody Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1710784-015.02	624	11/21/2017	1510	R-001-S08 / FNAEGLER	
		11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-015.03		11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-016.01	624	11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/20/2017	1350	In Lab / FNAEGLER	
		11/20/2017	1513	R-001-S08 / FNAEGLER	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-016.02		11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-016.03		11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-017.01	624	11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/20/2017	1350	In Lab / FNAEGLER	
		11/20/2017	1513	R-001-S08 / FNAEGLER	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-017.02		11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/21/2017	1323	R-001 / GLAFORCE	

ALS Group USA, Corp.
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Internal Chain of Custody Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1710784-017.03					
		11/17/2017	1854	SMO / GLAFORCE	
		11/20/2017	1059	R-001 / GESMERIAN	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-018.01					
	624				
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
		11/22/2017	1505	In Lab / FNAEGLER	
		11/22/2017	1510	R-001-S08 / FNAEGLER	
R1710784-018.02					
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-018.03					
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-019.01					
	624				
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
		11/21/2017	1434	In Lab / FNAEGLER	
		11/21/2017	1510	R-001-S08 / FNAEGLER	
R1710784-019.02					
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-019.03					
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-020.01					
	624				
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
		11/22/2017	1505	In Lab / FNAEGLER	
		11/22/2017	1510	R-001-S08 / FNAEGLER	
R1710784-020.02					

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Internal Chain of Custody Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-020.03					
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-021.01					
	624	11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
		11/21/2017	1434	In Lab / FNAEGLER	
		11/21/2017	1510	R-001-S08 / FNAEGLER	
R1710784-021.02					
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-021.03					
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-022.01					
	624	11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
		11/21/2017	1434	In Lab / FNAEGLER	
		11/21/2017	1510	R-001-S08 / FNAEGLER	
R1710784-022.02					
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-022.03					
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
R1710784-023.01					
	624	11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
		11/21/2017	1434	In Lab / FNAEGLER	
		11/21/2017	1510	R-001-S08 / FNAEGLER	

ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
	624	11/22/2017	1505	In Lab / FNAEGLER	
		11/22/2017	1510	R-001-S08 / FNAEGLER	
		R1710784-023.02			
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
		R1710784-023.03			
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
		R1710784-024.01			
	624	11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
		11/21/2017	1434	In Lab / FNAEGLER	
		11/21/2017	1510	R-001-S08 / FNAEGLER	
		R1710784-024.02			
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	
		R1710784-024.03			
		11/21/2017	0914	SMO / GLAFORCE	
		11/21/2017	1323	R-001 / GLAFORCE	



Miscellaneous Forms

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

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REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.	+	Correlation coefficient for MSA is <0.995.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).	N	Inorganics- Matrix spike recovery was outside laboratory limits.
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.	N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.	S	Concentration has been determined using Method of Standard Additions (MSA).
E	Organics- Concentration has exceeded the calibration range for that specific analysis.	W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.	P	Concentration >40% difference between the two GC columns.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.	C	Confirmed by GC/MS
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.	Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (100% Difference between two GC columns).
#	Spike was diluted out.	X	See Case Narrative for discussion.
		MRL	Method Reporting Limit. Also known as:
		LOQ	Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
		MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
		LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
		ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.



Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID #
Delaware Approved	New Jersey ID # NY004	294100 A/B
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Analyst Summary report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Sample Name: Trip Blank-20171113
Lab Code: R1710784-001
Sample Matrix: Water

Date Collected: 11/13/17**Date Received:** 11/13/17

Analysis Method
624

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: MW-9S-17NOV
Lab Code: R1710784-002
Sample Matrix: Water

Date Collected: 11/13/17**Date Received:** 11/13/17

Analysis Method
624

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: Trip Blank-20171114
Lab Code: R1710784-003
Sample Matrix: Water

Date Collected: 11/14/17**Date Received:** 11/14/17

Analysis Method
624

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: MW-2S-17NOV
Lab Code: R1710784-004
Sample Matrix: Water

Date Collected: 11/14/17**Date Received:** 11/14/17

Analysis Method
624

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: MW-2S-17NOV-Q
Lab Code: R1710784-005
Sample Matrix: Water

Date Collected: 11/14/17**Date Received:** 11/14/17

Analysis Method
624

Extracted/Digested By

Analyzed By
KRUEST

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Sample Name: MW-14S-17NOV
Lab Code: R1710784-006
Sample Matrix: Water

Date Collected: 11/14/17**Date Received:** 11/14/17

Analysis Method
624

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: MW-1S-17NOV
Lab Code: R1710784-007
Sample Matrix: Water

Date Collected: 11/14/17**Date Received:** 11/14/17

Analysis Method
624

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: Trip Blank-20171115
Lab Code: R1710784-008
Sample Matrix: Water

Date Collected: 11/15/17**Date Received:** 11/16/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: MW-5R-17NOV
Lab Code: R1710784-009
Sample Matrix: Water

Date Collected: 11/15/17**Date Received:** 11/16/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: MW-8R-17NOV
Lab Code: R1710784-010
Sample Matrix: Water

Date Collected: 11/16/17**Date Received:** 11/16/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

ALS Group USA, Corp.

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Analyst Summary report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Sample Name: MW-2R-17NOV
Lab Code: R1710784-011
Sample Matrix: Water

Date Collected: 11/16/17**Date Received:** 11/16/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: MW-14R-17NOV
Lab Code: R1710784-012
Sample Matrix: Water

Date Collected: 11/16/17**Date Received:** 11/16/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: PZ-03-17NOV
Lab Code: R1710784-013
Sample Matrix: Water

Date Collected: 11/16/17**Date Received:** 11/16/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: Trip Blank-20171117
Lab Code: R1710784-014
Sample Matrix: Water

Date Collected: 11/17/17**Date Received:** 11/17/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: MW-16R-17NOV
Lab Code: R1710784-015
Sample Matrix: Water

Date Collected: 11/17/17**Date Received:** 11/17/17

Analysis Method
624

Extracted/Digested By

Analyzed By
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Analyst Summary report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Sample Name: PZ-04-17NOV
Lab Code: R1710784-016
Sample Matrix: Water

Date Collected: 11/17/17**Date Received:** 11/17/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: PZ-02-17NOV
Lab Code: R1710784-017
Sample Matrix: Water

Date Collected: 11/17/17**Date Received:** 11/17/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: Trip Blank-20172011
Lab Code: R1710784-018
Sample Matrix: Water

Date Collected: 11/20/17**Date Received:** 11/20/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: MW-10R-17NOV
Lab Code: R1710784-019
Sample Matrix: Water

Date Collected: 11/20/17**Date Received:** 11/20/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: RB-20172011
Lab Code: R1710784-020
Sample Matrix: Water

Date Collected: 11/20/17**Date Received:** 11/20/17

Analysis Method
624

Extracted/Digested By

Analyzed By
FNAEGLER

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Analyst Summary report

Client: Ecology And Environment, Inc.**Service Request:** R1710784**Project:** Davis Howland Oil Company Site/10C3074.0012.08**Sample Name:** P-2-17NOV
Lab Code: R1710784-021
Sample Matrix: Water**Date Collected:** 11/20/17**Date Received:** 11/20/17**Analysis Method**
624**Extracted/Digested By****Analyzed By**
FNAEGLER**Sample Name:** PW-1-17NOV
Lab Code: R1710784-022
Sample Matrix: Water**Date Collected:** 11/20/17**Date Received:** 11/20/17**Analysis Method**
624**Extracted/Digested By****Analyzed By**
FNAEGLER**Sample Name:** P-3-17NOV
Lab Code: R1710784-023
Sample Matrix: Water**Date Collected:** 11/20/17**Date Received:** 11/20/17**Analysis Method**
624**Extracted/Digested By****Analyzed By**
FNAEGLER**Sample Name:** PW-2-17NOV
Lab Code: R1710784-024
Sample Matrix: Water**Date Collected:** 11/20/17**Date Received:** 11/20/17**Analysis Method**
624**Extracted/Digested By****Analyzed By**
FNAEGLER



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.



Sample Results

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

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Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/13/17 11:00
Date Received: 11/13/17 15:50

Sample Name: Trip Blank-20171113
Lab Code: R1710784-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/17/17 22:21	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/17/17 22:21	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/17/17 22:21	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/17/17 22:21	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/17/17 22:21	
Acetone	5.0 U	5.0	2.8	1	11/17/17 22:21	
Benzene	1.0 U	1.0	0.20	1	11/17/17 22:21	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
Bromoform	1.0 U	1.0	0.20	1	11/17/17 22:21	
Bromomethane	1.0 U	1.0	0.44	1	11/17/17 22:21	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/17/17 22:21	
Chlorobenzene	1.0 U	1.0	0.20	1	11/17/17 22:21	
Chloroethane	1.0 U	1.0	0.24	1	11/17/17 22:21	
Chloroform	1.0 U	1.0	0.20	1	11/17/17 22:21	
Chloromethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
Methylene Chloride	1.0 U	1.0	0.20	1	11/17/17 22:21	
Ethylbenzene	1.0 U	1.0	0.20	1	11/17/17 22:21	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/17/17 22:21	
Toluene	1.0 U	1.0	0.20	1	11/17/17 22:21	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/17/17 22:21	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/17/17 22:21	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/17/17 22:21	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 22:21	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 22:21	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/17/17 22:21	
o-Xylene	1.0 U	1.0	0.20	1	11/17/17 22:21	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 22:21	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 22:21	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Trip Blank-20171113
Lab Code: R1710784-001

Service Request: R1710784
Date Collected: 11/13/17 11:00
Date Received: 11/13/17 15:50
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	81 - 127	11/17/17 22:21	
4-Bromofluorobenzene	98	79 - 123	11/17/17 22:21	
Toluene-d8	101	83 - 120	11/17/17 22:21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/13/17 14:59
Date Received: 11/13/17 15:50

Sample Name: MW-9S-17NOV
Lab Code: R1710784-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.3	1.0	0.20	1	11/17/17 23:05	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
1,1-Dichloroethane (1,1-DCA)	9.2	1.0	0.21	1	11/17/17 23:05	
1,1-Dichloroethene (1,1-DCE)	0.49 J	1.0	0.20	1	11/17/17 23:05	
1,2-Dichlorobenzene	6.5	1.0	0.25	1	11/17/17 23:05	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/17/17 23:05	
1,3-Dichlorobenzene	0.33 J	1.0	0.22	1	11/17/17 23:05	
1,4-Dichlorobenzene	0.76 BJ	1.0	0.20	1	11/17/17 23:05	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/17/17 23:05	
Acetone	5.0 U	5.0	2.8	1	11/17/17 23:05	
Benzene	1.0 U	1.0	0.20	1	11/17/17 23:05	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
Bromoform	1.0 U	1.0	0.20	1	11/17/17 23:05	
Bromomethane	1.0 U	1.0	0.44	1	11/17/17 23:05	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/17/17 23:05	
Chlorobenzene	1.0 U	1.0	0.20	1	11/17/17 23:05	
Chloroethane	1.0 U	1.0	0.24	1	11/17/17 23:05	
Chloroform	0.45 J	1.0	0.20	1	11/17/17 23:05	
Chloromethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
Methylene Chloride	1.0 U	1.0	0.20	1	11/17/17 23:05	
Ethylbenzene	1.0 U	1.0	0.20	1	11/17/17 23:05	
Tetrachloroethene (PCE)	39	1.0	0.20	1	11/17/17 23:05	
Toluene	1.0 U	1.0	0.20	1	11/17/17 23:05	
Trichloroethene (TCE)	33	1.0	0.20	1	11/17/17 23:05	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/17/17 23:05	
Vinyl Chloride	2.5	1.0	0.20	1	11/17/17 23:05	
cis-1,2-Dichloroethene	26	1.0	0.20	1	11/17/17 23:05	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:05	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/17/17 23:05	
o-Xylene	1.0 U	1.0	0.20	1	11/17/17 23:05	
trans-1,2-Dichloroethene	2.6	1.0	0.20	1	11/17/17 23:05	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:05	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: MW-9S-17NOV
Lab Code: R1710784-002

Service Request: R1710784
Date Collected: 11/13/17 14:59
Date Received: 11/13/17 15:50

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	81 - 127	11/17/17 23:05	
4-Bromofluorobenzene	99	79 - 123	11/17/17 23:05	
Toluene-d8	100	83 - 120	11/17/17 23:05	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/14/17 10:00
Date Received: 11/14/17 16:05

Sample Name: Trip Blank-20171114
Lab Code: R1710784-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/17/17 22:43	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/17/17 22:43	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/17/17 22:43	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/17/17 22:43	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/17/17 22:43	
Acetone	5.0 U	5.0	2.8	1	11/17/17 22:43	
Benzene	1.0 U	1.0	0.20	1	11/17/17 22:43	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
Bromoform	1.0 U	1.0	0.20	1	11/17/17 22:43	
Bromomethane	1.0 U	1.0	0.44	1	11/17/17 22:43	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/17/17 22:43	
Chlorobenzene	1.0 U	1.0	0.20	1	11/17/17 22:43	
Chloroethane	1.0 U	1.0	0.24	1	11/17/17 22:43	
Chloroform	1.0 U	1.0	0.20	1	11/17/17 22:43	
Chloromethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
Methylene Chloride	1.0 U	1.0	0.20	1	11/17/17 22:43	
Ethylbenzene	1.0 U	1.0	0.20	1	11/17/17 22:43	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/17/17 22:43	
Toluene	1.0 U	1.0	0.20	1	11/17/17 22:43	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/17/17 22:43	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/17/17 22:43	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/17/17 22:43	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 22:43	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 22:43	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/17/17 22:43	
o-Xylene	1.0 U	1.0	0.20	1	11/17/17 22:43	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 22:43	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 22:43	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Trip Blank-20171114
Lab Code: R1710784-003

Service Request: R1710784
Date Collected: 11/14/17 10:00
Date Received: 11/14/17 16:05
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	100	81 - 127	11/17/17 22:43	
4-Bromofluorobenzene	101	79 - 123	11/17/17 22:43	
Toluene-d8	99	83 - 120	11/17/17 22:43	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/14/17 11:08
Date Received: 11/14/17 16:05

Sample Name: MW-2S-17NOV
Lab Code: R1710784-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,1-Dichloroethane (1,1-DCA)	1.2	1.0	0.21	1	11/17/17 23:26	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/17/17 23:26	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/17/17 23:26	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/17/17 23:26	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/17/17 23:26	
Acetone	5.0 U	5.0	2.8	1	11/17/17 23:26	
Benzene	1.0 U	1.0	0.20	1	11/17/17 23:26	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
Bromoform	1.0 U	1.0	0.20	1	11/17/17 23:26	
Bromomethane	1.0 U	1.0	0.44	1	11/17/17 23:26	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/17/17 23:26	
Chlorobenzene	1.0 U	1.0	0.20	1	11/17/17 23:26	
Chloroethane	1.0 U	1.0	0.24	1	11/17/17 23:26	
Chloroform	1.0 U	1.0	0.20	1	11/17/17 23:26	
Chloromethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
Methylene Chloride	1.0 U	1.0	0.20	1	11/17/17 23:26	
Ethylbenzene	1.0 U	1.0	0.20	1	11/17/17 23:26	
Tetrachloroethene (PCE)	0.40 J	1.0	0.20	1	11/17/17 23:26	
Toluene	1.0 U	1.0	0.20	1	11/17/17 23:26	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/17/17 23:26	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/17/17 23:26	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/17/17 23:26	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 23:26	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:26	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/17/17 23:26	
o-Xylene	1.0 U	1.0	0.20	1	11/17/17 23:26	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 23:26	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:26	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-2S-17NOV
Lab Code: R1710784-004

Service Request: R1710784
Date Collected: 11/14/17 11:08
Date Received: 11/14/17 16:05
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81 - 127	11/17/17 23:26	
4-Bromofluorobenzene	97	79 - 123	11/17/17 23:26	
Toluene-d8	97	83 - 120	11/17/17 23:26	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/14/17 11:08
Date Received: 11/14/17 16:05

Sample Name: MW-2S-17NOV-Q
Lab Code: R1710784-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,1-Dichloroethane (1,1-DCA)	1.3	1.0	0.21	1	11/17/17 23:48	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/17/17 23:48	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/17/17 23:48	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/17/17 23:48	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/17/17 23:48	
Acetone	5.0 U	5.0	2.8	1	11/17/17 23:48	
Benzene	1.0 U	1.0	0.20	1	11/17/17 23:48	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
Bromoform	1.0 U	1.0	0.20	1	11/17/17 23:48	
Bromomethane	1.0 U	1.0	0.44	1	11/17/17 23:48	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/17/17 23:48	
Chlorobenzene	1.0 U	1.0	0.20	1	11/17/17 23:48	
Chloroethane	1.0 U	1.0	0.24	1	11/17/17 23:48	
Chloroform	1.0 U	1.0	0.20	1	11/17/17 23:48	
Chloromethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
Methylene Chloride	1.0 U	1.0	0.20	1	11/17/17 23:48	
Ethylbenzene	1.0 U	1.0	0.20	1	11/17/17 23:48	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/17/17 23:48	
Toluene	1.0 U	1.0	0.20	1	11/17/17 23:48	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/17/17 23:48	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/17/17 23:48	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/17/17 23:48	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 23:48	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:48	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/17/17 23:48	
o-Xylene	1.0 U	1.0	0.20	1	11/17/17 23:48	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 23:48	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:48	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-2S-17NOV-Q
Lab Code: R1710784-005

Service Request: R1710784
Date Collected: 11/14/17 11:08
Date Received: 11/14/17 16:05
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	103	81 - 127	11/17/17 23:48	
4-Bromofluorobenzene	94	79 - 123	11/17/17 23:48	
Toluene-d8	96	83 - 120	11/17/17 23:48	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/14/17 13:45
Date Received: 11/14/17 16:05

Sample Name: MW-14S-17NOV
Lab Code: R1710784-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/18/17 00:10	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/18/17 00:10	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/18/17 00:10	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/18/17 00:10	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/18/17 00:10	
Acetone	5.0 U	5.0	2.8	1	11/18/17 00:10	
Benzene	1.0 U	1.0	0.20	1	11/18/17 00:10	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
Bromoform	1.0 U	1.0	0.20	1	11/18/17 00:10	
Bromomethane	1.0 U	1.0	0.44	1	11/18/17 00:10	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/18/17 00:10	
Chlorobenzene	1.0 U	1.0	0.20	1	11/18/17 00:10	
Chloroethane	1.0 U	1.0	0.24	1	11/18/17 00:10	
Chloroform	1.0 U	1.0	0.20	1	11/18/17 00:10	
Chloromethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
Methylene Chloride	1.0 U	1.0	0.20	1	11/18/17 00:10	
Ethylbenzene	1.0 U	1.0	0.20	1	11/18/17 00:10	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/18/17 00:10	
Toluene	1.0 U	1.0	0.20	1	11/18/17 00:10	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/18/17 00:10	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/18/17 00:10	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/18/17 00:10	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/18/17 00:10	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/18/17 00:10	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/18/17 00:10	
o-Xylene	1.0 U	1.0	0.20	1	11/18/17 00:10	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/18/17 00:10	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/18/17 00:10	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-14S-17NOV
Lab Code: R1710784-006

Service Request: R1710784
Date Collected: 11/14/17 13:45
Date Received: 11/14/17 16:05
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81 - 127	11/18/17 00:10	
4-Bromofluorobenzene	94	79 - 123	11/18/17 00:10	
Toluene-d8	95	83 - 120	11/18/17 00:10	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/14/17 15:15
Date Received: 11/14/17 16:05

Sample Name: MW-1S-17NOV
Lab Code: R1710784-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.3	1.0	0.20	1	11/18/17 00:32	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
1,1-Dichloroethane (1,1-DCA)	0.70 J	1.0	0.21	1	11/18/17 00:32	
1,1-Dichloroethene (1,1-DCE)	0.50 J	1.0	0.20	1	11/18/17 00:32	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/18/17 00:32	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/18/17 00:32	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/18/17 00:32	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/18/17 00:32	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/18/17 00:32	
Acetone	5.0 U	5.0	2.8	1	11/18/17 00:32	
Benzene	1.0 U	1.0	0.20	1	11/18/17 00:32	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
Bromoform	1.0 U	1.0	0.20	1	11/18/17 00:32	
Bromomethane	1.0 U	1.0	0.44	1	11/18/17 00:32	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/18/17 00:32	
Chlorobenzene	1.0 U	1.0	0.20	1	11/18/17 00:32	
Chloroethane	1.0 U	1.0	0.24	1	11/18/17 00:32	
Chloroform	1.0 U	1.0	0.20	1	11/18/17 00:32	
Chloromethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
Methylene Chloride	1.0 U	1.0	0.20	1	11/18/17 00:32	
Ethylbenzene	1.0 U	1.0	0.20	1	11/18/17 00:32	
Tetrachloroethene (PCE)	2.3	1.0	0.20	1	11/18/17 00:32	
Toluene	1.0 U	1.0	0.20	1	11/18/17 00:32	
Trichloroethene (TCE)	12	1.0	0.20	1	11/18/17 00:32	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/18/17 00:32	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/18/17 00:32	
cis-1,2-Dichloroethene	15	1.0	0.20	1	11/18/17 00:32	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/18/17 00:32	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/18/17 00:32	
o-Xylene	1.0 U	1.0	0.20	1	11/18/17 00:32	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/18/17 00:32	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/18/17 00:32	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-1S-17NOV
Lab Code: R1710784-007

Service Request: R1710784
Date Collected: 11/14/17 15:15
Date Received: 11/14/17 16:05
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	102	81 - 127	11/18/17 00:32	
4-Bromofluorobenzene	95	79 - 123	11/18/17 00:32	
Toluene-d8	96	83 - 120	11/18/17 00:32	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/15/17 09:00
Date Received: 11/16/17 16:20

Sample Name: Trip Blank-20171115
Lab Code: R1710784-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/21/17 00:15	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 00:15	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 00:15	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:15	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 00:15	
Acetone	5.0 U	5.0	2.8	1	11/21/17 00:15	
Benzene	1.0 U	1.0	0.20	1	11/21/17 00:15	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 00:15	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 00:15	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 00:15	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 00:15	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:15	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 00:15	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 00:15	
Chloromethane	0.29 BJ	1.0	0.20	1	11/21/17 00:15	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 00:15	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 00:15	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 00:15	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/21/17 00:15	
Toluene	1.0 U	1.0	0.20	1	11/21/17 00:15	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/21/17 00:15	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 00:15	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/21/17 00:15	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 00:15	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:15	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 00:15	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 00:15	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 00:15	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:15	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Trip Blank-20171115
Lab Code: R1710784-008

Service Request: R1710784
Date Collected: 11/15/17 09:00
Date Received: 11/16/17 16:20
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	81 - 127	11/21/17 00:15	
4-Bromofluorobenzene	96	79 - 123	11/21/17 00:15	
Toluene-d8	96	83 - 120	11/21/17 00:15	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/15/17 11:05
Date Received: 11/16/17 16:20

Sample Name: MW-5R-17NOV
Lab Code: R1710784-009

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
1,1,2,2-Tetrachloroethane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
1,1,2-Trichloroethane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
1,1-Dichloroethane (1,1-DCA)	45	2.5	0.53	2.5	11/21/17 02:06	
1,1-Dichloroethene (1,1-DCE)	6.7	2.5	0.50	2.5	11/21/17 02:06	
1,2-Dichlorobenzene	2.5 U	2.5	0.63	2.5	11/21/17 02:06	
1,2-Dichloroethane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
1,2-Dichloropropane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
1,3-Dichlorobenzene	2.5 U	2.5	0.55	2.5	11/21/17 02:06	
1,4-Dichlorobenzene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
2-Chloroethyl Vinyl Ether	25 U	25	1.5	2.5	11/21/17 02:06	
Acetone	13 U	13	6.9	2.5	11/21/17 02:06	
Benzene	12	2.5	0.50	2.5	11/21/17 02:06	
Bromodichloromethane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Bromoform	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Bromomethane	2.5 U	2.5	1.1	2.5	11/21/17 02:06	
Carbon Tetrachloride	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Chlorobenzene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Chloroethane	2.5 U	2.5	0.60	2.5	11/21/17 02:06	
Chloroform	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Chloromethane	0.58 BJ	2.5	0.50	2.5	11/21/17 02:06	
Dibromochloromethane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Methylene Chloride	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Ethylbenzene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Tetrachloroethene (PCE)	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Toluene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Trichloroethene (TCE)	8.7	2.5	0.50	2.5	11/21/17 02:06	
Trichlorofluoromethane (CFC 11)	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Vinyl Chloride	170	2.5	0.50	2.5	11/21/17 02:06	
cis-1,2-Dichloroethene	550 D	5.0	1.0	5	11/21/17 14:47	
cis-1,3-Dichloropropene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
m,p-Xylenes	5.0 U	5.0	0.65	2.5	11/21/17 02:06	
o-Xylene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
trans-1,2-Dichloroethene	5.5	2.5	0.50	2.5	11/21/17 02:06	
trans-1,3-Dichloropropene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: MW-5R-17NOV
Lab Code: R1710784-009

Service Request: R1710784
Date Collected: 11/15/17 11:05
Date Received: 11/16/17 16:20

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	81 - 127	11/21/17 02:06	
4-Bromofluorobenzene	93	79 - 123	11/21/17 02:06	
Toluene-d8	94	83 - 120	11/21/17 02:06	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/16/17 14:00
Date Received: 11/16/17 16:20

Sample Name: MW-8R-17NOV
Lab Code: R1710784-010

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	25 U	25	5.0	25	11/21/17 02:28	
1,1,2,2-Tetrachloroethane	25 U	25	5.0	25	11/21/17 02:28	
1,1,2-Trichloroethane	25 U	25	5.0	25	11/21/17 02:28	
1,1-Dichloroethane (1,1-DCA)	140	25	5.3	25	11/21/17 02:28	
1,1-Dichloroethene (1,1-DCE)	64	25	5.0	25	11/21/17 02:28	
1,2-Dichlorobenzene	25 U	25	6.3	25	11/21/17 02:28	
1,2-Dichloroethane	25 U	25	5.0	25	11/21/17 02:28	
1,2-Dichloropropane	25 U	25	5.0	25	11/21/17 02:28	
1,3-Dichlorobenzene	25 U	25	5.5	25	11/21/17 02:28	
1,4-Dichlorobenzene	25 U	25	5.0	25	11/21/17 02:28	
2-Chloroethyl Vinyl Ether	250 U	250	15	25	11/21/17 02:28	
Acetone	130 U	130	69	25	11/21/17 02:28	
Benzene	25 U	25	5.0	25	11/21/17 02:28	
Bromodichloromethane	25 U	25	5.0	25	11/21/17 02:28	
Bromoform	25 U	25	5.0	25	11/21/17 02:28	
Bromomethane	25 U	25	11	25	11/21/17 02:28	
Carbon Tetrachloride	25 U	25	5.0	25	11/21/17 02:28	
Chlorobenzene	25 U	25	5.0	25	11/21/17 02:28	
Chloroethane	25 U	25	6.0	25	11/21/17 02:28	
Chloroform	25 U	25	5.0	25	11/21/17 02:28	
Chloromethane	6.0 J	25	5.0	25	11/21/17 02:28	
Dibromochloromethane	25 U	25	5.0	25	11/21/17 02:28	
Methylene Chloride	25 U	25	5.0	25	11/21/17 02:28	
Ethylbenzene	25 U	25	5.0	25	11/21/17 02:28	
Tetrachloroethene (PCE)	25 U	25	5.0	25	11/21/17 02:28	
Toluene	25 U	25	5.0	25	11/21/17 02:28	
Trichloroethene (TCE)	8.0 J	25	5.0	25	11/21/17 02:28	
Trichlorofluoromethane (CFC 11)	25 U	25	5.0	25	11/21/17 02:28	
Vinyl Chloride	650	25	5.0	25	11/21/17 02:28	
cis-1,2-Dichloroethene	5300 D	50	10	50	11/21/17 15:09	
cis-1,3-Dichloropropene	25 U	25	5.0	25	11/21/17 02:28	
m,p-Xylenes	50 U	50	6.5	25	11/21/17 02:28	
o-Xylene	25 U	25	5.0	25	11/21/17 02:28	
trans-1,2-Dichloroethene	7.3 J	25	5.0	25	11/21/17 02:28	
trans-1,3-Dichloropropene	25 U	25	5.0	25	11/21/17 02:28	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: MW-8R-17NOV
Lab Code: R1710784-010

Service Request: R1710784
Date Collected: 11/16/17 14:00
Date Received: 11/16/17 16:20

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	81 - 127	11/21/17 02:28	
4-Bromofluorobenzene	95	79 - 123	11/21/17 02:28	
Toluene-d8	94	83 - 120	11/21/17 02:28	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/16/17 11:40
Date Received: 11/16/17 16:20

Sample Name: MW-2R-17NOV
Lab Code: R1710784-011

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	10 U	10	2.0	10	11/21/17 02:50	
1,1,2,2-Tetrachloroethane	10 U	10	2.0	10	11/21/17 02:50	
1,1,2-Trichloroethane	10 U	10	2.0	10	11/21/17 02:50	
1,1-Dichloroethane (1,1-DCA)	68	10	2.1	10	11/21/17 02:50	
1,1-Dichloroethene (1,1-DCE)	24	10	2.0	10	11/21/17 02:50	
1,2-Dichlorobenzene	10 U	10	2.5	10	11/21/17 02:50	
1,2-Dichloroethane	10 U	10	2.0	10	11/21/17 02:50	
1,2-Dichloropropane	10 U	10	2.0	10	11/21/17 02:50	
1,3-Dichlorobenzene	10 U	10	2.2	10	11/21/17 02:50	
1,4-Dichlorobenzene	10 U	10	2.0	10	11/21/17 02:50	
2-Chloroethyl Vinyl Ether	100 U	100	6.0	10	11/21/17 02:50	
Acetone	50 U	50	28	10	11/21/17 02:50	
Benzene	10 U	10	2.0	10	11/21/17 02:50	
Bromodichloromethane	10 U	10	2.0	10	11/21/17 02:50	
Bromoform	10 U	10	2.0	10	11/21/17 02:50	
Bromomethane	10 U	10	4.4	10	11/21/17 02:50	
Carbon Tetrachloride	10 U	10	2.0	10	11/21/17 02:50	
Chlorobenzene	10 U	10	2.0	10	11/21/17 02:50	
Chloroethane	10 U	10	2.4	10	11/21/17 02:50	
Chloroform	10 U	10	2.0	10	11/21/17 02:50	
Chloromethane	2.8 J	10	2.0	10	11/21/17 02:50	
Dibromochloromethane	10 U	10	2.0	10	11/21/17 02:50	
Methylene Chloride	10 U	10	2.0	10	11/21/17 02:50	
Ethylbenzene	10 U	10	2.0	10	11/21/17 02:50	
Tetrachloroethene (PCE)	10 U	10	2.0	10	11/21/17 02:50	
Toluene	10 U	10	2.0	10	11/21/17 02:50	
Trichloroethene (TCE)	10 U	10	2.0	10	11/21/17 02:50	
Trichlorofluoromethane (CFC 11)	10 U	10	2.0	10	11/21/17 02:50	
Vinyl Chloride	370	10	2.0	10	11/21/17 02:50	
cis-1,2-Dichloroethene	2200 D	25	5.0	25	11/21/17 15:32	
cis-1,3-Dichloropropene	10 U	10	2.0	10	11/21/17 02:50	
m,p-Xylenes	20 U	20	2.6	10	11/21/17 02:50	
o-Xylene	10 U	10	2.0	10	11/21/17 02:50	
trans-1,2-Dichloroethene	5.3 J	10	2.0	10	11/21/17 02:50	
trans-1,3-Dichloropropene	10 U	10	2.0	10	11/21/17 02:50	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-2R-17NOV
Lab Code: R1710784-011

Service Request: R1710784
Date Collected: 11/16/17 11:40
Date Received: 11/16/17 16:20
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81 - 127	11/21/17 02:50	
4-Bromofluorobenzene	95	79 - 123	11/21/17 02:50	
Toluene-d8	95	83 - 120	11/21/17 02:50	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/16/17 14:45
Date Received: 11/16/17 16:20

Sample Name: MW-14R-17NOV
Lab Code: R1710784-012

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/21/17 00:59	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 00:59	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:59	
1,1-Dichloroethane (1,1-DCA)	0.77 J	1.0	0.21	1	11/21/17 00:59	
1,1-Dichloroethene (1,1-DCE)	0.55 J	1.0	0.20	1	11/21/17 00:59	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 00:59	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:59	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 00:59	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 00:59	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:59	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 00:59	
Acetone	5.0 U	5.0	2.8	1	11/21/17 00:59	
Benzene	1.0 U	1.0	0.20	1	11/21/17 00:59	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 00:59	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 00:59	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 00:59	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 00:59	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:59	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 00:59	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 00:59	
Chloromethane	0.25 BJ	1.0	0.20	1	11/21/17 00:59	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 00:59	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 00:59	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 00:59	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/21/17 00:59	
Toluene	1.0 U	1.0	0.20	1	11/21/17 00:59	
Trichloroethene (TCE)	22	1.0	0.20	1	11/21/17 00:59	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 00:59	
Vinyl Chloride	1.7	1.0	0.20	1	11/21/17 00:59	
cis-1,2-Dichloroethene	14	1.0	0.20	1	11/21/17 00:59	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:59	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 00:59	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 00:59	
trans-1,2-Dichloroethene	3.8	1.0	0.20	1	11/21/17 00:59	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:59	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-14R-17NOV
Lab Code: R1710784-012

Service Request: R1710784
Date Collected: 11/16/17 14:45
Date Received: 11/16/17 16:20
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81 - 127	11/21/17 00:59	
4-Bromofluorobenzene	102	79 - 123	11/21/17 00:59	
Toluene-d8	101	83 - 120	11/21/17 00:59	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/16/17 15:39
Date Received: 11/16/17 16:20

Sample Name: PZ-03-17NOV
Lab Code: R1710784-013

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	0.96 J	1.0	0.20	1	11/21/17 01:22	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 01:22	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 01:22	
1,1-Dichloroethane (1,1-DCA)	6.4	1.0	0.21	1	11/21/17 01:22	
1,1-Dichloroethene (1,1-DCE)	0.23 J	1.0	0.20	1	11/21/17 01:22	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 01:22	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 01:22	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 01:22	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 01:22	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 01:22	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 01:22	
Acetone	5.0 U	5.0	2.8	1	11/21/17 01:22	
Benzene	1.0 U	1.0	0.20	1	11/21/17 01:22	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 01:22	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 01:22	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 01:22	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 01:22	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 01:22	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 01:22	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 01:22	
Chloromethane	0.25 BJ	1.0	0.20	1	11/21/17 01:22	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 01:22	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 01:22	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 01:22	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/21/17 01:22	
Toluene	1.0 U	1.0	0.20	1	11/21/17 01:22	
Trichloroethene (TCE)	2.0	1.0	0.20	1	11/21/17 01:22	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 01:22	
Vinyl Chloride	0.84 J	1.0	0.20	1	11/21/17 01:22	
cis-1,2-Dichloroethene	9.3	1.0	0.20	1	11/21/17 01:22	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 01:22	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 01:22	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 01:22	
trans-1,2-Dichloroethene	0.36 J	1.0	0.20	1	11/21/17 01:22	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 01:22	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: PZ-03-17NOV
Lab Code: R1710784-013

Service Request: R1710784
Date Collected: 11/16/17 15:39
Date Received: 11/16/17 16:20
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81 - 127	11/21/17 01:22	
4-Bromofluorobenzene	100	79 - 123	11/21/17 01:22	
Toluene-d8	100	83 - 120	11/21/17 01:22	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/17/17 09:30
Date Received: 11/17/17 14:45

Sample Name: Trip Blank-20171117
Lab Code: R1710784-014

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/21/17 00:37	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 00:37	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 00:37	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:37	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 00:37	
Acetone	5.0 U	5.0	2.8	1	11/21/17 00:37	
Benzene	1.0 U	1.0	0.20	1	11/21/17 00:37	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 00:37	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 00:37	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 00:37	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 00:37	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:37	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 00:37	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 00:37	
Chloromethane	0.25 BJ	1.0	0.20	1	11/21/17 00:37	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 00:37	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 00:37	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 00:37	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/21/17 00:37	
Toluene	1.0 U	1.0	0.20	1	11/21/17 00:37	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/21/17 00:37	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 00:37	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/21/17 00:37	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 00:37	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:37	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 00:37	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 00:37	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 00:37	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:37	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Trip Blank-20171117
Lab Code: R1710784-014

Service Request: R1710784
Date Collected: 11/17/17 09:30
Date Received: 11/17/17 14:45
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	81 - 127	11/21/17 00:37	
4-Bromofluorobenzene	97	79 - 123	11/21/17 00:37	
Toluene-d8	96	83 - 120	11/21/17 00:37	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/17/17 11:05
Date Received: 11/17/17 14:45

Sample Name: MW-16R-17NOV
Lab Code: R1710784-015

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/21/17 15:54	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 15:54	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 15:54	
1,1-Dichloroethane (1,1-DCA)	6.5	1.0	0.21	1	11/21/17 15:54	
1,1-Dichloroethene (1,1-DCE)	1.9	1.0	0.20	1	11/21/17 15:54	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 15:54	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 15:54	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 15:54	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 15:54	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 15:54	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 15:54	
Acetone	5.0 U	5.0	2.8	1	11/21/17 15:54	
Benzene	1.0 U	1.0	0.20	1	11/21/17 15:54	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 15:54	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 15:54	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 15:54	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 15:54	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 15:54	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 15:54	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 15:54	
Chloromethane	0.23 BJ	1.0	0.20	1	11/21/17 15:54	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 15:54	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 15:54	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 15:54	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/21/17 15:54	
Toluene	1.0 U	1.0	0.20	1	11/21/17 15:54	
Trichloroethene (TCE)	0.22 J	1.0	0.20	1	11/21/17 15:54	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 15:54	
Vinyl Chloride	64	1.0	0.20	1	11/21/17 15:54	
cis-1,2-Dichloroethene	130	1.0	0.20	1	11/21/17 15:54	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 15:54	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 15:54	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 15:54	
trans-1,2-Dichloroethene	0.60 J	1.0	0.20	1	11/21/17 15:54	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 15:54	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-16R-17NOV
Lab Code: R1710784-015

Service Request: R1710784
Date Collected: 11/17/17 11:05
Date Received: 11/17/17 14:45
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81 - 127	11/21/17 15:54	
4-Bromofluorobenzene	94	79 - 123	11/21/17 15:54	
Toluene-d8	94	83 - 120	11/21/17 15:54	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/17/17 13:05
Date Received: 11/17/17 14:45

Sample Name: PZ-04-17NOV
Lab Code: R1710784-016

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	11	2.0	0.40	2	11/21/17 03:35	
1,1,2,2-Tetrachloroethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
1,1,2-Trichloroethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
1,1-Dichloroethane (1,1-DCA)	6.0	2.0	0.42	2	11/21/17 03:35	
1,1-Dichloroethene (1,1-DCE)	2.0	2.0	0.40	2	11/21/17 03:35	
1,2-Dichlorobenzene	2.0 U	2.0	0.50	2	11/21/17 03:35	
1,2-Dichloroethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
1,2-Dichloropropane	2.0 U	2.0	0.40	2	11/21/17 03:35	
1,3-Dichlorobenzene	2.0 U	2.0	0.44	2	11/21/17 03:35	
1,4-Dichlorobenzene	2.0 U	2.0	0.40	2	11/21/17 03:35	
2-Chloroethyl Vinyl Ether	20 U	20	1.2	2	11/21/17 03:35	
Acetone	10 U	10	5.6	2	11/21/17 03:35	
Benzene	2.0 U	2.0	0.40	2	11/21/17 03:35	
Bromodichloromethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
Bromoform	2.0 U	2.0	0.40	2	11/21/17 03:35	
Bromomethane	2.0 U	2.0	0.88	2	11/21/17 03:35	
Carbon Tetrachloride	2.0 U	2.0	0.40	2	11/21/17 03:35	
Chlorobenzene	2.0 U	2.0	0.40	2	11/21/17 03:35	
Chloroethane	2.0 U	2.0	0.48	2	11/21/17 03:35	
Chloroform	2.0 U	2.0	0.40	2	11/21/17 03:35	
Chloromethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
Dibromochloromethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
Methylene Chloride	2.0 U	2.0	0.40	2	11/21/17 03:35	
Ethylbenzene	2.0 U	2.0	0.40	2	11/21/17 03:35	
Tetrachloroethene (PCE)	8.3	2.0	0.40	2	11/21/17 03:35	
Toluene	2.0 U	2.0	0.40	2	11/21/17 03:35	
Trichloroethene (TCE)	170	2.0	0.40	2	11/21/17 03:35	
Trichlorofluoromethane (CFC 11)	2.0 U	2.0	0.40	2	11/21/17 03:35	
Vinyl Chloride	11	2.0	0.40	2	11/21/17 03:35	
cis-1,2-Dichloroethene	190	2.0	0.40	2	11/21/17 03:35	
cis-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 03:35	
m,p-Xylenes	4.0 U	4.0	0.52	2	11/21/17 03:35	
o-Xylene	2.0 U	2.0	0.40	2	11/21/17 03:35	
trans-1,2-Dichloroethene	2.1	2.0	0.40	2	11/21/17 03:35	
trans-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 03:35	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: PZ-04-17NOV
Lab Code: R1710784-016

Service Request: R1710784
Date Collected: 11/17/17 13:05
Date Received: 11/17/17 14:45

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81 - 127	11/21/17 03:35	
4-Bromofluorobenzene	94	79 - 123	11/21/17 03:35	
Toluene-d8	93	83 - 120	11/21/17 03:35	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/17/17 14:05
Date Received: 11/17/17 14:45

Sample Name: PZ-02-17NOV
Lab Code: R1710784-017

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	0.73 J	1.0	0.20	1	11/21/17 01:44	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 01:44	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 01:44	
1,1-Dichloroethane (1,1-DCA)	0.32 J	1.0	0.21	1	11/21/17 01:44	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/21/17 01:44	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 01:44	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 01:44	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 01:44	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 01:44	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 01:44	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 01:44	
Acetone	5.0 U	5.0	2.8	1	11/21/17 01:44	
Benzene	1.0 U	1.0	0.20	1	11/21/17 01:44	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 01:44	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 01:44	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 01:44	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 01:44	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 01:44	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 01:44	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 01:44	
Chloromethane	0.26 BJ	1.0	0.20	1	11/21/17 01:44	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 01:44	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 01:44	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 01:44	
Tetrachloroethene (PCE)	0.78 J	1.0	0.20	1	11/21/17 01:44	
Toluene	1.0 U	1.0	0.20	1	11/21/17 01:44	
Trichloroethene (TCE)	1.6	1.0	0.20	1	11/21/17 01:44	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 01:44	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/21/17 01:44	
cis-1,2-Dichloroethene	1.2	1.0	0.20	1	11/21/17 01:44	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 01:44	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 01:44	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 01:44	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 01:44	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 01:44	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: PZ-02-17NOV
Lab Code: R1710784-017

Service Request: R1710784
Date Collected: 11/17/17 14:05
Date Received: 11/17/17 14:45
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	100	81 - 127	11/21/17 01:44	
4-Bromofluorobenzene	99	79 - 123	11/21/17 01:44	
Toluene-d8	98	83 - 120	11/21/17 01:44	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 09:00
Date Received: 11/20/17 14:40

Sample Name: Trip Blank-20172011
Lab Code: R1710784-018

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/22/17 15:18	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/22/17 15:18	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/22/17 15:18	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/22/17 15:18	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/22/17 15:18	
Acetone	5.0 U	5.0	2.8	1	11/22/17 15:18	
Benzene	1.0 U	1.0	0.20	1	11/22/17 15:18	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
Bromoform	1.0 U	1.0	0.20	1	11/22/17 15:18	
Bromomethane	1.0 U	1.0	0.44	1	11/22/17 15:18	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/22/17 15:18	
Chlorobenzene	1.0 U	1.0	0.20	1	11/22/17 15:18	
Chloroethane	1.0 U	1.0	0.24	1	11/22/17 15:18	
Chloroform	1.0 U	1.0	0.20	1	11/22/17 15:18	
Chloromethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
Methylene Chloride	0.32 BJ	1.0	0.20	1	11/22/17 15:18	
Ethylbenzene	1.0 U	1.0	0.20	1	11/22/17 15:18	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/22/17 15:18	
Toluene	1.0 U	1.0	0.20	1	11/22/17 15:18	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/22/17 15:18	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/22/17 15:18	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/22/17 15:18	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/22/17 15:18	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/22/17 15:18	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/22/17 15:18	
o-Xylene	1.0 U	1.0	0.20	1	11/22/17 15:18	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/22/17 15:18	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/22/17 15:18	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Trip Blank-20172011
Lab Code: R1710784-018

Service Request: R1710784
Date Collected: 11/20/17 09:00
Date Received: 11/20/17 14:40
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	81 - 127	11/22/17 15:18	
4-Bromofluorobenzene	93	79 - 123	11/22/17 15:18	
Toluene-d8	96	83 - 120	11/22/17 15:18	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 11:20
Date Received: 11/20/17 14:40

Sample Name: MW-10R-17NOV
Lab Code: R1710784-019

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	3.6 J	10	2.0	10	11/21/17 20:21	
1,1,2,2-Tetrachloroethane	10 U	10	2.0	10	11/21/17 20:21	
1,1,2-Trichloroethane	10 U	10	2.0	10	11/21/17 20:21	
1,1-Dichloroethane (1,1-DCA)	4.5 J	10	2.1	10	11/21/17 20:21	
1,1-Dichloroethene (1,1-DCE)	12	10	2.0	10	11/21/17 20:21	
1,2-Dichlorobenzene	10 U	10	2.5	10	11/21/17 20:21	
1,2-Dichloroethane	10 U	10	2.0	10	11/21/17 20:21	
1,2-Dichloropropane	10 U	10	2.0	10	11/21/17 20:21	
1,3-Dichlorobenzene	10 U	10	2.2	10	11/21/17 20:21	
1,4-Dichlorobenzene	10 U	10	2.0	10	11/21/17 20:21	
2-Chloroethyl Vinyl Ether	100 U	100	6.0	10	11/21/17 20:21	
Acetone	50 U	50	28	10	11/21/17 20:21	
Benzene	10 U	10	2.0	10	11/21/17 20:21	
Bromodichloromethane	10 U	10	2.0	10	11/21/17 20:21	
Bromoform	10 U	10	2.0	10	11/21/17 20:21	
Bromomethane	10 U	10	4.4	10	11/21/17 20:21	
Carbon Tetrachloride	10 U	10	2.0	10	11/21/17 20:21	
Chlorobenzene	10 U	10	2.0	10	11/21/17 20:21	
Chloroethane	10 U	10	2.4	10	11/21/17 20:21	
Chloroform	10 U	10	2.0	10	11/21/17 20:21	
Chloromethane	2.3 BJ	10	2.0	10	11/21/17 20:21	
Dibromochloromethane	10 U	10	2.0	10	11/21/17 20:21	
Methylene Chloride	10 U	10	2.0	10	11/21/17 20:21	
Ethylbenzene	10 U	10	2.0	10	11/21/17 20:21	
Tetrachloroethene (PCE)	2.8 J	10	2.0	10	11/21/17 20:21	
Toluene	10 U	10	2.0	10	11/21/17 20:21	
Trichloroethene (TCE)	860	10	2.0	10	11/21/17 20:21	
Trichlorofluoromethane (CFC 11)	10 U	10	2.0	10	11/21/17 20:21	
Vinyl Chloride	10 U	10	2.0	10	11/21/17 20:21	
cis-1,2-Dichloroethene	60	10	2.0	10	11/21/17 20:21	
cis-1,3-Dichloropropene	10 U	10	2.0	10	11/21/17 20:21	
m,p-Xylenes	20 U	20	2.6	10	11/21/17 20:21	
o-Xylene	10 U	10	2.0	10	11/21/17 20:21	
trans-1,2-Dichloroethene	8.0 J	10	2.0	10	11/21/17 20:21	
trans-1,3-Dichloropropene	10 U	10	2.0	10	11/21/17 20:21	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-10R-17NOV
Lab Code: R1710784-019

Service Request: R1710784
Date Collected: 11/20/17 11:20
Date Received: 11/20/17 14:40
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	81 - 127	11/21/17 20:21	
4-Bromofluorobenzene	98	79 - 123	11/21/17 20:21	
Toluene-d8	98	83 - 120	11/21/17 20:21	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 11:45
Date Received: 11/20/17 14:40

Sample Name: RB-20172011
Lab Code: R1710784-020

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/22/17 15:40	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/22/17 15:40	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/22/17 15:40	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/22/17 15:40	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/22/17 15:40	
Acetone	5.0 U	5.0	2.8	1	11/22/17 15:40	
Benzene	1.0 U	1.0	0.20	1	11/22/17 15:40	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
Bromoform	1.0 U	1.0	0.20	1	11/22/17 15:40	
Bromomethane	1.0 U	1.0	0.44	1	11/22/17 15:40	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/22/17 15:40	
Chlorobenzene	1.0 U	1.0	0.20	1	11/22/17 15:40	
Chloroethane	1.0 U	1.0	0.24	1	11/22/17 15:40	
Chloroform	1.0 U	1.0	0.20	1	11/22/17 15:40	
Chloromethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
Methylene Chloride	0.37 BJ	1.0	0.20	1	11/22/17 15:40	
Ethylbenzene	1.0 U	1.0	0.20	1	11/22/17 15:40	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/22/17 15:40	
Toluene	1.0 U	1.0	0.20	1	11/22/17 15:40	
Trichloroethene (TCE)	2.6	1.0	0.20	1	11/22/17 15:40	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/22/17 15:40	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/22/17 15:40	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/22/17 15:40	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/22/17 15:40	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/22/17 15:40	
o-Xylene	1.0 U	1.0	0.20	1	11/22/17 15:40	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/22/17 15:40	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/22/17 15:40	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: RB-20172011
Lab Code: R1710784-020

Service Request: R1710784
Date Collected: 11/20/17 11:45
Date Received: 11/20/17 14:40

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	102	81 - 127	11/22/17 15:40	
4-Bromofluorobenzene	96	79 - 123	11/22/17 15:40	
Toluene-d8	97	83 - 120	11/22/17 15:40	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 12:50
Date Received: 11/20/17 14:40

Sample Name: P-2-17NOV
Lab Code: R1710784-021

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	2.9	2.0	0.40	2	11/21/17 19:14	
1,1,2,2-Tetrachloroethane	2.0 U	2.0	0.40	2	11/21/17 19:14	
1,1,2-Trichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:14	
1,1-Dichloroethane (1,1-DCA)	23	2.0	0.42	2	11/21/17 19:14	
1,1-Dichloroethene (1,1-DCE)	2.6	2.0	0.40	2	11/21/17 19:14	
1,2-Dichlorobenzene	2.0 U	2.0	0.50	2	11/21/17 19:14	
1,2-Dichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:14	
1,2-Dichloropropane	2.0 U	2.0	0.40	2	11/21/17 19:14	
1,3-Dichlorobenzene	2.0 U	2.0	0.44	2	11/21/17 19:14	
1,4-Dichlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:14	
2-Chloroethyl Vinyl Ether	20 U	20	1.2	2	11/21/17 19:14	
Acetone	10 U	10	5.6	2	11/21/17 19:14	
Benzene	0.55 J	2.0	0.40	2	11/21/17 19:14	
Bromodichloromethane	2.0 U	2.0	0.40	2	11/21/17 19:14	
Bromoform	2.0 U	2.0	0.40	2	11/21/17 19:14	
Bromomethane	2.0 U	2.0	0.88	2	11/21/17 19:14	
Carbon Tetrachloride	2.0 U	2.0	0.40	2	11/21/17 19:14	
Chlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:14	
Chloroethane	0.54 J	2.0	0.48	2	11/21/17 19:14	
Chloroform	2.0 U	2.0	0.40	2	11/21/17 19:14	
Chloromethane	0.51 BJ	2.0	0.40	2	11/21/17 19:14	
Dibromochloromethane	2.0 U	2.0	0.40	2	11/21/17 19:14	
Methylene Chloride	2.0 U	2.0	0.40	2	11/21/17 19:14	
Ethylbenzene	2.0 U	2.0	0.40	2	11/21/17 19:14	
Tetrachloroethene (PCE)	3.2	2.0	0.40	2	11/21/17 19:14	
Toluene	2.0 U	2.0	0.40	2	11/21/17 19:14	
Trichloroethene (TCE)	23	2.0	0.40	2	11/21/17 19:14	
Trichlorofluoromethane (CFC 11)	2.0 U	2.0	0.40	2	11/21/17 19:14	
Vinyl Chloride	35	2.0	0.40	2	11/21/17 19:14	
cis-1,2-Dichloroethene	250	2.0	0.40	2	11/21/17 19:14	
cis-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:14	
m,p-Xylenes	4.0 U	4.0	0.52	2	11/21/17 19:14	
o-Xylene	2.0 U	2.0	0.40	2	11/21/17 19:14	
trans-1,2-Dichloroethene	2.9	2.0	0.40	2	11/21/17 19:14	
trans-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:14	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: P-2-17NOV
Lab Code: R1710784-021

Service Request: R1710784
Date Collected: 11/20/17 12:50
Date Received: 11/20/17 14:40

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81 - 127	11/21/17 19:14	
4-Bromofluorobenzene	100	79 - 123	11/21/17 19:14	
Toluene-d8	98	83 - 120	11/21/17 19:14	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 13:00
Date Received: 11/20/17 14:40

Sample Name: PW-1-17NOV
Lab Code: R1710784-022

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	2.0 U	2.0	0.40	2	11/21/17 19:36	
1,1,2,2-Tetrachloroethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
1,1,2-Trichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
1,1-Dichloroethane (1,1-DCA)	11	2.0	0.42	2	11/21/17 19:36	
1,1-Dichloroethene (1,1-DCE)	2.8	2.0	0.40	2	11/21/17 19:36	
1,2-Dichlorobenzene	2.0 U	2.0	0.50	2	11/21/17 19:36	
1,2-Dichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
1,2-Dichloropropane	2.0 U	2.0	0.40	2	11/21/17 19:36	
1,3-Dichlorobenzene	2.0 U	2.0	0.44	2	11/21/17 19:36	
1,4-Dichlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:36	
2-Chloroethyl Vinyl Ether	20 U	20	1.2	2	11/21/17 19:36	
Acetone	10 U	10	5.6	2	11/21/17 19:36	
Benzene	0.59 J	2.0	0.40	2	11/21/17 19:36	
Bromodichloromethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
Bromoform	2.0 U	2.0	0.40	2	11/21/17 19:36	
Bromomethane	2.0 U	2.0	0.88	2	11/21/17 19:36	
Carbon Tetrachloride	2.0 U	2.0	0.40	2	11/21/17 19:36	
Chlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:36	
Chloroethane	2.0 U	2.0	0.48	2	11/21/17 19:36	
Chloroform	2.0 U	2.0	0.40	2	11/21/17 19:36	
Chloromethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
Dibromochloromethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
Methylene Chloride	2.0 U	2.0	0.40	2	11/21/17 19:36	
Ethylbenzene	2.0 U	2.0	0.40	2	11/21/17 19:36	
Tetrachloroethene (PCE)	2.0 U	2.0	0.40	2	11/21/17 19:36	
Toluene	2.0 U	2.0	0.40	2	11/21/17 19:36	
Trichloroethene (TCE)	13	2.0	0.40	2	11/21/17 19:36	
Trichlorofluoromethane (CFC 11)	2.0 U	2.0	0.40	2	11/21/17 19:36	
Vinyl Chloride	39	2.0	0.40	2	11/21/17 19:36	
cis-1,2-Dichloroethene	210	2.0	0.40	2	11/21/17 19:36	
cis-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:36	
m,p-Xylenes	4.0 U	4.0	0.52	2	11/21/17 19:36	
o-Xylene	2.0 U	2.0	0.40	2	11/21/17 19:36	
trans-1,2-Dichloroethene	2.2	2.0	0.40	2	11/21/17 19:36	
trans-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:36	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: PW-1-17NOV
Lab Code: R1710784-022

Service Request: R1710784
Date Collected: 11/20/17 13:00
Date Received: 11/20/17 14:40
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	81 - 127	11/21/17 19:36	
4-Bromofluorobenzene	100	79 - 123	11/21/17 19:36	
Toluene-d8	99	83 - 120	11/21/17 19:36	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 13:05
Date Received: 11/20/17 14:40

Sample Name: P-3-17NOV
Lab Code: R1710784-023

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	8.1	2.5	0.50	2.5	11/22/17 16:03	
1,1,2,2-Tetrachloroethane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
1,1,2-Trichloroethane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
1,1-Dichloroethane (1,1-DCA)	44	2.5	0.53	2.5	11/22/17 16:03	
1,1-Dichloroethene (1,1-DCE)	1.7 J	2.5	0.50	2.5	11/22/17 16:03	
1,2-Dichlorobenzene	2.5 U	2.5	0.63	2.5	11/22/17 16:03	
1,2-Dichloroethane	0.51 J	2.5	0.50	2.5	11/22/17 16:03	
1,2-Dichloropropane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
1,3-Dichlorobenzene	2.5 U	2.5	0.55	2.5	11/22/17 16:03	
1,4-Dichlorobenzene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
2-Chloroethyl Vinyl Ether	25 U	25	1.5	2.5	11/22/17 16:03	
Acetone	13 U	13	6.9	2.5	11/22/17 16:03	
Benzene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Bromodichloromethane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Bromoform	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Bromomethane	2.5 U	2.5	1.1	2.5	11/22/17 16:03	
Carbon Tetrachloride	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Chlorobenzene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Chloroethane	1.1 J	2.5	0.60	2.5	11/22/17 16:03	
Chloroform	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Chloromethane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Dibromochloromethane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Methylene Chloride	0.81 BJ	2.5	0.50	2.5	11/22/17 16:03	
Ethylbenzene	0.77 J	2.5	0.50	2.5	11/22/17 16:03	
Tetrachloroethene (PCE)	9.6	2.5	0.50	2.5	11/22/17 16:03	
Toluene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Trichloroethene (TCE)	38	2.5	0.50	2.5	11/22/17 16:03	
Trichlorofluoromethane (CFC 11)	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Vinyl Chloride	24	2.5	0.50	2.5	11/22/17 16:03	
cis-1,2-Dichloroethene	310	2.5	0.50	2.5	11/22/17 16:03	
cis-1,3-Dichloropropene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
m,p-Xylenes	5.0 U	5.0	0.65	2.5	11/22/17 16:03	
o-Xylene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
trans-1,2-Dichloroethene	3.9	2.5	0.50	2.5	11/22/17 16:03	
trans-1,3-Dichloropropene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: P-3-17NOV
Lab Code: R1710784-023

Service Request: R1710784
Date Collected: 11/20/17 13:05
Date Received: 11/20/17 14:40
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	102	81 - 127	11/22/17 16:03	
4-Bromofluorobenzene	97	79 - 123	11/22/17 16:03	
Toluene-d8	97	83 - 120	11/22/17 16:03	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 13:15
Date Received: 11/20/17 14:40

Sample Name: PW-2-17NOV
Lab Code: R1710784-024

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	0.75 J	2.0	0.40	2	11/21/17 19:59	
1,1,2,2-Tetrachloroethane	2.0 U	2.0	0.40	2	11/21/17 19:59	
1,1,2-Trichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:59	
1,1-Dichloroethane (1,1-DCA)	14	2.0	0.42	2	11/21/17 19:59	
1,1-Dichloroethene (1,1-DCE)	2.3	2.0	0.40	2	11/21/17 19:59	
1,2-Dichlorobenzene	2.0 U	2.0	0.50	2	11/21/17 19:59	
1,2-Dichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:59	
1,2-Dichloropropane	2.0 U	2.0	0.40	2	11/21/17 19:59	
1,3-Dichlorobenzene	2.0 U	2.0	0.44	2	11/21/17 19:59	
1,4-Dichlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:59	
2-Chloroethyl Vinyl Ether	20 U	20	1.2	2	11/21/17 19:59	
Acetone	10 U	10	5.6	2	11/21/17 19:59	
Benzene	2.0 U	2.0	0.40	2	11/21/17 19:59	
Bromodichloromethane	2.0 U	2.0	0.40	2	11/21/17 19:59	
Bromoform	2.0 U	2.0	0.40	2	11/21/17 19:59	
Bromomethane	2.0 U	2.0	0.88	2	11/21/17 19:59	
Carbon Tetrachloride	2.0 U	2.0	0.40	2	11/21/17 19:59	
Chlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:59	
Chloroethane	2.0 U	2.0	0.48	2	11/21/17 19:59	
Chloroform	2.0 U	2.0	0.40	2	11/21/17 19:59	
Chloromethane	0.41 BJ	2.0	0.40	2	11/21/17 19:59	
Dibromochloromethane	2.0 U	2.0	0.40	2	11/21/17 19:59	
Methylene Chloride	2.0 U	2.0	0.40	2	11/21/17 19:59	
Ethylbenzene	2.0 U	2.0	0.40	2	11/21/17 19:59	
Tetrachloroethene (PCE)	1.1 J	2.0	0.40	2	11/21/17 19:59	
Toluene	2.0 U	2.0	0.40	2	11/21/17 19:59	
Trichloroethene (TCE)	11	2.0	0.40	2	11/21/17 19:59	
Trichlorofluoromethane (CFC 11)	2.0 U	2.0	0.40	2	11/21/17 19:59	
Vinyl Chloride	11	2.0	0.40	2	11/21/17 19:59	
cis-1,2-Dichloroethene	200	2.0	0.40	2	11/21/17 19:59	
cis-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:59	
m,p-Xylenes	4.0 U	4.0	0.52	2	11/21/17 19:59	
o-Xylene	2.0 U	2.0	0.40	2	11/21/17 19:59	
trans-1,2-Dichloroethene	1.0 J	2.0	0.40	2	11/21/17 19:59	
trans-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:59	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: PW-2-17NOV
Lab Code: R1710784-024

Service Request: R1710784
Date Collected: 11/20/17 13:15
Date Received: 11/20/17 14:40
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81 - 127	11/21/17 19:59	
4-Bromofluorobenzene	92	79 - 123	11/21/17 19:59	
Toluene-d8	94	83 - 120	11/21/17 19:59	



QC Summary Forms

ALS Environmental—Rochester Laboratory

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Volatile Organic Compounds by GC/MS

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Extraction Method: EPA 5030C

Sample Name	Lab Code	1,2-Dichloroethane-d4	4-Bromofluorobenzene	Toluene-d8
		81 - 127	79 - 123	83 - 120
Trip Blank-20171113	R1710784-001	104	98	101
MW-9S-17NOV	R1710784-002	104	99	100
Trip Blank-20171114	R1710784-003	100	101	99
MW-2S-17NOV	R1710784-004	101	97	97
MW-2S-17NOV-Q	R1710784-005	103	94	96
MW-14S-17NOV	R1710784-006	101	94	95
MW-1S-17NOV	R1710784-007	102	95	96
Trip Blank-20171115	R1710784-008	97	96	96
MW-5R-17NOV	R1710784-009	97	93	94
MW-8R-17NOV	R1710784-010	96	95	94
MW-2R-17NOV	R1710784-011	95	95	95
MW-14R-17NOV	R1710784-012	101	102	101
PZ-03-17NOV	R1710784-013	101	100	100
Trip Blank-20171117	R1710784-014	98	97	96
MW-16R-17NOV	R1710784-015	95	94	94
PZ-04-17NOV	R1710784-016	95	94	93
PZ-02-17NOV	R1710784-017	100	99	98
Trip Blank-20172011	R1710784-018	99	93	96
MW-10R-17NOV	R1710784-019	97	98	98
RB-20172011	R1710784-020	102	96	97
P-2-17NOV	R1710784-021	101	100	98
PW-1-17NOV	R1710784-022	99	100	99
P-3-17NOV	R1710784-023	102	97	97
PW-2-17NOV	R1710784-024	95	92	94
Lab Control Sample	RQ1711970-03	103	101	99
Duplicate Lab Control Sample	RQ1711970-04	105	96	100
Method Blank	RQ1711970-05	102	97	99
MW-1S-17NOV MS	RQ1711970-06	104	95	97
MW-1S-17NOV DMS	RQ1711970-07	105	97	100
Lab Control Sample	RQ1712201-03	104	110	104
Method Blank	RQ1712201-04	96	94	95
Lab Control Sample	RQ1712266-03	95	104	97
Method Blank	RQ1712266-04	95	97	94
Lab Control Sample	RQ1712279-03	99	100	98
Method Blank	RQ1712279-04	100	96	96

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/14/17
Date Received: 11/14/17
Date Analyzed: 11/18/17
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: MW-1S-17NOV
Lab Code: R1710784-007
Analysis Method: 624
Prep Method: EPA 5030C

Units: ug/L
Basis: NA

Analyte Name	Matrix Spike RQ17111970-06				Duplicate Matrix Spike RQ17111970-07				RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits		
1,1,1-Trichloroethane (TCA)	1.3	57.7	50.0	113	56.1	50.0	110	52-162	3	30
1,1,2,2-Tetrachloroethane	1.0 U	49.7	50.0	99	50.9	50.0	102	46-157	2	30
1,1,2-Trichloroethane	1.0 U	52.6	50.0	105	50.2	50.0	100	52-150	5	30
1,1-Dichloroethane (1,1-DCA)	0.70 J	55.6	50.0	110	56.2	50.0	111	59-155	1	30
1,1-Dichloroethene (1,1-DCE)	0.50 J	51.2	50.0	101	54.2	50.0	107	10-234	6	30
1,2-Dichlorobenzene	1.0 U	52.3	50.0	105	53.5	50.0	107	18-190	2	30
1,2-Dichloroethane	1.0 U	51.6	50.0	103	52.4	50.0	105	49-155	2	30
1,2-Dichloropropane	1.0 U	47.8	50.0	96	50.5	50.0	101	10-210	5	30
1,3-Dichlorobenzene	1.0 U	50.8	50.0	102	53.5	50.0	107	59-156	5	30
1,4-Dichlorobenzene	1.0 U	50.9	50.0	102	53.4	50.0	107	18-190	5	30
2-Chloroethyl Vinyl Ether	10 U	39.7	50.0	79	35.8	50.0	72	10-305	11	30
Acetone	5.0 U	42.6	50.0	85	43.8	50.0	88	55-130	3	30
Benzene	1.0 U	49.4	50.0	99	50.7	50.0	101	37-151	3	30
Bromodichloromethane	1.0 U	57.2	50.0	114	57.4	50.0	115	35-155	<1	30
Bromoform	1.0 U	51.6	50.0	103	53.7	50.0	107	45-169	4	30
Bromomethane	1.0 U	66.1	50.0	132	57.2	50.0	114	10-242	15	30
Carbon Tetrachloride	1.0 U	52.4	50.0	105	52.8	50.0	106	70-140	<1	30
Chlorobenzene	1.0 U	51.8	50.0	104	51.6	50.0	103	37-160	<1	30
Chloroethane	1.0 U	57.3	50.0	115	57.1	50.0	114	14-230	<1	30
Chloroform	1.0 U	53.0	50.0	106	54.3	50.0	109	51-138	2	30
Chloromethane	1.0 U	53.1	50.0	106	52.4	50.0	105	10-273	1	30
Dibromochloromethane	1.0 U	53.3	50.0	107	52.1	50.0	104	53-149	2	30
Methylene Chloride	1.0 U	51.4	50.0	103	53.2	50.0	106	10-221	3	30
Ethylbenzene	1.0 U	51.2	50.0	102	50.8	50.0	102	37-162	<1	30
Tetrachloroethene (PCE)	2.3	52.4	50.0	100	51.9	50.0	99	64-148	<1	30
Toluene	1.0 U	50.6	50.0	101	50.6	50.0	101	47-150	<1	30
Trichloroethene (TCE)	12	63.6	50.0	103	64.1	50.0	104	71-157	<1	30
Trichlorofluoromethane (CFC 11)	1.0 U	53.8	50.0	108	56.5	50.0	113	17-181	5	30
Vinyl Chloride	1.0 U	53.0	50.0	106	56.4	50.0	113	10-251	6	30
cis-1,2-Dichloroethene	15	67.3	50.0	104	66.8	50.0	103	72-125	<1	30
cis-1,3-Dichloropropene	1.0 U	49.0	50.0	98	48.7	50.0	97	10-227	<1	30
m,p-Xylenes	2.0 U	105	100	105	102	100	102	76-131	3	30
o-Xylene	1.0 U	52.1	50.0	104	48.9	50.0	98	78-127	6	30
trans-1,2-Dichloroethene	1.0 U	54.3	50.0	109	54.0	50.0	108	54-156	<1	30
trans-1,3-Dichloropropene	1.0 U	48.9	50.0	98	48.9	50.0	98	17-183	<1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/17/17 21:59
Date Extracted:

Method Blank Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: Method Blank **Instrument ID:** R-MS-12
Lab Code: RQ1711970-05 **File ID:** I:\ACQUDATA\msvoa12\Data\111717\P14087.D\
Analysis Method: 624 **Analysis Lot:** 570532
Prep Method: EPA 5030C

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ1711970-03	I:\ACQUDATA\msvoa12\Data\111717\P14084.D\	11/17/17 20:54
Duplicate Lab Control Sample	RQ1711970-04	I:\ACQUDATA\msvoa12\Data\111717\P14085.D\	11/17/17 21:16
Trip Blank-20171113	R1710784-001	I:\ACQUDATA\msvoa12\Data\111717\P14088.D\	11/17/17 22:21
Trip Blank-20171114	R1710784-003	I:\ACQUDATA\msvoa12\Data\111717\P14089.D\	11/17/17 22:43
MW-9S-17NOV	R1710784-002	I:\ACQUDATA\msvoa12\Data\111717\P14090.D\	11/17/17 23:05
MW-2S-17NOV	R1710784-004	I:\ACQUDATA\msvoa12\Data\111717\P14091.D\	11/17/17 23:26
MW-2S-17NOV-Q	R1710784-005	I:\ACQUDATA\msvoa12\Data\111717\P14092.D\	11/17/17 23:48
MW-14S-17NOV	R1710784-006	I:\ACQUDATA\msvoa12\Data\111717\P14093.D\	11/18/17 00:10
MW-1S-17NOV	R1710784-007	I:\ACQUDATA\msvoa12\Data\111717\P14094.D\	11/18/17 00:32
MW-1S-17NOV	RQ1711970-06	I:\ACQUDATA\msvoa12\Data\111717\P14104.D\	11/18/17 04:09
MW-1S-17NOV	RQ1711970-07	I:\ACQUDATA\msvoa12\Data\111717\P14105.D\	11/18/17 04:30

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/20/17 22:46
Date Extracted:

Method Blank Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: Method Blank **Instrument ID:** R-MS-14
Lab Code: RQ1712201-04 **File ID:** I:\ACQUDATA\MSVOA14\Data\112017\C3153.D\
Analysis Method: 624 **Analysis Lot:** 570743
Prep Method: EPA 5030C

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ1712201-03	I:\ACQUDATA\MSVOA14\Data\112017\C3151.D\	11/20/17 22:01
Trip Blank-20171115	R1710784-008	I:\ACQUDATA\MSVOA14\Data\112017\C3157.D\	11/21/17 00:15
Trip Blank-20171117	R1710784-014	I:\ACQUDATA\MSVOA14\Data\112017\C3158.D\	11/21/17 00:37
MW-14R-17NOV	R1710784-012	I:\ACQUDATA\MSVOA14\Data\112017\C3159.D\	11/21/17 00:59
PZ-03-17NOV	R1710784-013	I:\ACQUDATA\MSVOA14\Data\112017\C3160.D\	11/21/17 01:22
PZ-02-17NOV	R1710784-017	I:\ACQUDATA\MSVOA14\Data\112017\C3161.D\	11/21/17 01:44
MW-5R-17NOV	R1710784-009	I:\ACQUDATA\MSVOA14\Data\112017\C3162.D\	11/21/17 02:06
MW-8R-17NOV	R1710784-010	I:\ACQUDATA\MSVOA14\Data\112017\C3163.D\	11/21/17 02:28
MW-2R-17NOV	R1710784-011	I:\ACQUDATA\MSVOA14\Data\112017\C3164.D\	11/21/17 02:50
PZ-04-17NOV	R1710784-016	I:\ACQUDATA\MSVOA14\Data\112017\C3166.D\	11/21/17 03:35

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/21/17 12:11
Date Extracted:

Method Blank Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: Method Blank
Lab Code: RQ1712266-04
Analysis Method: 624
Prep Method: EPA 5030C

Instrument ID: R-MS-14
File ID: I:\ACQUDATA\MSVOA14\Data\112117\C3181.D\
Analysis Lot: 570946

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ1712266-03	I:\ACQUDATA\MSVOA14\Data\112117\C3179.D\	11/21/17 11:27
MW-5R-17NOV	R1710784-009	I:\ACQUDATA\MSVOA14\Data\112117\C3188.D\	11/21/17 14:47
MW-8R-17NOV	R1710784-010	I:\ACQUDATA\MSVOA14\Data\112117\C3189.D\	11/21/17 15:09
MW-2R-17NOV	R1710784-011	I:\ACQUDATA\MSVOA14\Data\112117\C3190.D\	11/21/17 15:32
MW-16R-17NOV	R1710784-015	I:\ACQUDATA\MSVOA14\Data\112117\C3191.D\	11/21/17 15:54
P-2-17NOV	R1710784-021	I:\ACQUDATA\MSVOA14\Data\112117\C3200.D\	11/21/17 19:14
PW-1-17NOV	R1710784-022	I:\ACQUDATA\MSVOA14\Data\112117\C3201.D\	11/21/17 19:36
PW-2-17NOV	R1710784-024	I:\ACQUDATA\MSVOA14\Data\112117\C3202.D\	11/21/17 19:59
MW-10R-17NOV	R1710784-019	I:\ACQUDATA\MSVOA14\Data\112117\C3203.D\	11/21/17 20:21

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/22/17 12:37
Date Extracted:

Method Blank Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: Method Blank **Instrument ID:** R-MS-14
Lab Code: RQ1712279-04 **File ID:** I:\ACQUDATA\MSVOA14\Data\112217\C3242.D\
Analysis Method: 624 **Analysis Lot:** 571161
Prep Method: EPA 5030C

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ1712279-03	I:\ACQUDATA\MSVOA14\Data\112217\C3240.D\ \C3240.D\	11/22/17 11:53
Trip Blank-20172011	R1710784-018	I:\ACQUDATA\MSVOA14\Data\112217\C3249.D\ \C3249.D\	11/22/17 15:18
RB-20172011	R1710784-020	I:\ACQUDATA\MSVOA14\Data\112217\C3250.D\ \C3250.D\	11/22/17 15:40
P-3-17NOV	R1710784-023	I:\ACQUDATA\MSVOA14\Data\112217\C3251.D\ \C3251.D\	11/22/17 16:03

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: RQ1711970-05

Service Request: R1710784
Date Collected: NA
Date Received: NA

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/17/17 21:59	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/17/17 21:59	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/17/17 21:59	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/17/17 21:59	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/17/17 21:59	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/17/17 21:59	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/17/17 21:59	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/17/17 21:59	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/17/17 21:59	
1,4-Dichlorobenzene	0.22 J	1.0	0.20	1	11/17/17 21:59	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/17/17 21:59	
Acetone	5.0 U	5.0	2.8	1	11/17/17 21:59	
Benzene	1.0 U	1.0	0.20	1	11/17/17 21:59	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/17/17 21:59	
Bromoform	1.0 U	1.0	0.20	1	11/17/17 21:59	
Bromomethane	1.0 U	1.0	0.44	1	11/17/17 21:59	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/17/17 21:59	
Chlorobenzene	1.0 U	1.0	0.20	1	11/17/17 21:59	
Chloroethane	1.0 U	1.0	0.24	1	11/17/17 21:59	
Chloroform	1.0 U	1.0	0.20	1	11/17/17 21:59	
Chloromethane	1.0 U	1.0	0.20	1	11/17/17 21:59	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/17/17 21:59	
Methylene Chloride	1.0 U	1.0	0.20	1	11/17/17 21:59	
Ethylbenzene	1.0 U	1.0	0.20	1	11/17/17 21:59	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/17/17 21:59	
Toluene	1.0 U	1.0	0.20	1	11/17/17 21:59	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/17/17 21:59	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/17/17 21:59	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/17/17 21:59	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 21:59	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 21:59	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/17/17 21:59	
o-Xylene	1.0 U	1.0	0.20	1	11/17/17 21:59	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 21:59	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 21:59	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: RQ1711970-05

Service Request: R1710784
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	102	81 - 127	11/17/17 21:59	
4-Bromofluorobenzene	97	79 - 123	11/17/17 21:59	
Toluene-d8	99	83 - 120	11/17/17 21:59	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1712201-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/20/17 22:46	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/20/17 22:46	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/20/17 22:46	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/20/17 22:46	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/20/17 22:46	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/20/17 22:46	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/20/17 22:46	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/20/17 22:46	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/20/17 22:46	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/20/17 22:46	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/20/17 22:46	
Acetone	5.0 U	5.0	2.8	1	11/20/17 22:46	
Benzene	1.0 U	1.0	0.20	1	11/20/17 22:46	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/20/17 22:46	
Bromoform	1.0 U	1.0	0.20	1	11/20/17 22:46	
Bromomethane	1.0 U	1.0	0.44	1	11/20/17 22:46	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/20/17 22:46	
Chlorobenzene	1.0 U	1.0	0.20	1	11/20/17 22:46	
Chloroethane	1.0 U	1.0	0.24	1	11/20/17 22:46	
Chloroform	1.0 U	1.0	0.20	1	11/20/17 22:46	
Chloromethane	0.25 J	1.0	0.20	1	11/20/17 22:46	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/20/17 22:46	
Methylene Chloride	1.0 U	1.0	0.20	1	11/20/17 22:46	
Ethylbenzene	1.0 U	1.0	0.20	1	11/20/17 22:46	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/20/17 22:46	
Toluene	1.0 U	1.0	0.20	1	11/20/17 22:46	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/20/17 22:46	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/20/17 22:46	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/20/17 22:46	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/20/17 22:46	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/20/17 22:46	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/20/17 22:46	
o-Xylene	1.0 U	1.0	0.20	1	11/20/17 22:46	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/20/17 22:46	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/20/17 22:46	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: RQ1712201-04

Service Request: R1710784
Date Collected: NA
Date Received: NA

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	81 - 127	11/20/17 22:46	
4-Bromofluorobenzene	94	79 - 123	11/20/17 22:46	
Toluene-d8	95	83 - 120	11/20/17 22:46	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: RQ1712266-04

Service Request: R1710784
Date Collected: NA
Date Received: NA

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/21/17 12:11	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 12:11	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 12:11	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/21/17 12:11	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/21/17 12:11	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 12:11	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 12:11	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 12:11	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 12:11	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 12:11	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 12:11	
Acetone	5.0 U	5.0	2.8	1	11/21/17 12:11	
Benzene	1.0 U	1.0	0.20	1	11/21/17 12:11	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 12:11	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 12:11	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 12:11	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 12:11	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 12:11	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 12:11	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 12:11	
Chloromethane	0.30 J	1.0	0.20	1	11/21/17 12:11	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 12:11	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 12:11	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 12:11	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/21/17 12:11	
Toluene	1.0 U	1.0	0.20	1	11/21/17 12:11	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/21/17 12:11	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 12:11	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/21/17 12:11	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 12:11	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 12:11	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 12:11	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 12:11	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 12:11	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 12:11	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: RQ1712266-04

Service Request: R1710784
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81 - 127	11/21/17 12:11	
4-Bromofluorobenzene	97	79 - 123	11/21/17 12:11	
Toluene-d8	94	83 - 120	11/21/17 12:11	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: RQ1712279-04

Service Request: R1710784
Date Collected: NA
Date Received: NA

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/22/17 12:37	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/22/17 12:37	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/22/17 12:37	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/22/17 12:37	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/22/17 12:37	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/22/17 12:37	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/22/17 12:37	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/22/17 12:37	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/22/17 12:37	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/22/17 12:37	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/22/17 12:37	
Acetone	5.0 U	5.0	2.8	1	11/22/17 12:37	
Benzene	1.0 U	1.0	0.20	1	11/22/17 12:37	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/22/17 12:37	
Bromoform	1.0 U	1.0	0.20	1	11/22/17 12:37	
Bromomethane	1.0 U	1.0	0.44	1	11/22/17 12:37	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/22/17 12:37	
Chlorobenzene	1.0 U	1.0	0.20	1	11/22/17 12:37	
Chloroethane	1.0 U	1.0	0.24	1	11/22/17 12:37	
Chloroform	1.0 U	1.0	0.20	1	11/22/17 12:37	
Chloromethane	1.0 U	1.0	0.20	1	11/22/17 12:37	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/22/17 12:37	
Methylene Chloride	0.29 J	1.0	0.20	1	11/22/17 12:37	
Ethylbenzene	1.0 U	1.0	0.20	1	11/22/17 12:37	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/22/17 12:37	
Toluene	1.0 U	1.0	0.20	1	11/22/17 12:37	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/22/17 12:37	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/22/17 12:37	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/22/17 12:37	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/22/17 12:37	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/22/17 12:37	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/22/17 12:37	
o-Xylene	1.0 U	1.0	0.20	1	11/22/17 12:37	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/22/17 12:37	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/22/17 12:37	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: RQ1712279-04

Service Request: R1710784
Date Collected: NA
Date Received: NA

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	100	81 - 127	11/22/17 12:37	
4-Bromofluorobenzene	96	79 - 123	11/22/17 12:37	
Toluene-d8	96	83 - 120	11/22/17 12:37	

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/17/17 20:54
Date Extracted:

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: Lab Control Sample **Instrument ID:** R-MS-12
Lab Code: RQ1711970-03 **File ID:** I:\ACQUDATA\msvoa12\Data\111717\P14084.D\
Analysis Method: 624 **Analysis Lot:** 570532
Prep Method: EPA 5030C

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Duplicate Lab Control Sample	RQ1711970-04	I:\ACQUDATA\msvoa12\Data\111717\P14085.D\	11/17/17 21:16
Method Blank	RQ1711970-05	I:\ACQUDATA\msvoa12\Data\111717\P14087.D\	11/17/17 21:59
Trip Blank-20171113	R1710784-001	I:\ACQUDATA\msvoa12\Data\111717\P14088.D\	11/17/17 22:21
Trip Blank-20171114	R1710784-003	I:\ACQUDATA\msvoa12\Data\111717\P14089.D\	11/17/17 22:43
MW-9S-17NOV	R1710784-002	I:\ACQUDATA\msvoa12\Data\111717\P14090.D\	11/17/17 23:05
MW-2S-17NOV	R1710784-004	I:\ACQUDATA\msvoa12\Data\111717\P14091.D\	11/17/17 23:26
MW-2S-17NOV-Q	R1710784-005	I:\ACQUDATA\msvoa12\Data\111717\P14092.D\	11/17/17 23:48
MW-14S-17NOV	R1710784-006	I:\ACQUDATA\msvoa12\Data\111717\P14093.D\	11/18/17 00:10
MW-1S-17NOV	R1710784-007	I:\ACQUDATA\msvoa12\Data\111717\P14094.D\	11/18/17 00:32
MW-1S-17NOV	RQ1711970-06	I:\ACQUDATA\msvoa12\Data\111717\P14104.D\	11/18/17 04:09
MW-1S-17NOV	RQ1711970-07	I:\ACQUDATA\msvoa12\Data\111717\P14105.D\	11/18/17 04:30

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/20/17 22:01
Date Extracted:

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: Lab Control Sample **Instrument ID:** R-MS-14
Lab Code: RQ1712201-03 **File ID:** I:\ACQUDATA\MSVOA14\Data\112017\C3151.D\
Analysis Method: 624 **Analysis Lot:** 570743
Prep Method: EPA 5030C

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ1712201-04	I:\ACQUDATA\MSVOA14\Data\112017\C3153.D\	11/20/17 22:46
Trip Blank-20171115	R1710784-008	I:\ACQUDATA\MSVOA14\Data\112017\C3157.D\	11/21/17 00:15
Trip Blank-20171117	R1710784-014	I:\ACQUDATA\MSVOA14\Data\112017\C3158.D\	11/21/17 00:37
MW-14R-17NOV	R1710784-012	I:\ACQUDATA\MSVOA14\Data\112017\C3159.D\	11/21/17 00:59
PZ-03-17NOV	R1710784-013	I:\ACQUDATA\MSVOA14\Data\112017\C3160.D\	11/21/17 01:22
PZ-02-17NOV	R1710784-017	I:\ACQUDATA\MSVOA14\Data\112017\C3161.D\	11/21/17 01:44
MW-5R-17NOV	R1710784-009	I:\ACQUDATA\MSVOA14\Data\112017\C3162.D\	11/21/17 02:06
MW-8R-17NOV	R1710784-010	I:\ACQUDATA\MSVOA14\Data\112017\C3163.D\	11/21/17 02:28
MW-2R-17NOV	R1710784-011	I:\ACQUDATA\MSVOA14\Data\112017\C3164.D\	11/21/17 02:50
PZ-04-17NOV	R1710784-016	I:\ACQUDATA\MSVOA14\Data\112017\C3166.D\	11/21/17 03:35

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/21/17 11:27
Date Extracted:

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: Lab Control Sample **Instrument ID:** R-MS-14
Lab Code: RQ1712266-03 **File ID:** I:\ACQUDATA\MSVOA14\Data\112117\C3179.D\
Analysis Method: 624 **Analysis Lot:** 570946
Prep Method: EPA 5030C

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ1712266-04	I:\ACQUDATA\MSVOA14\Data\112117\C3181.D\	11/21/17 12:11
MW-5R-17NOV	R1710784-009	I:\ACQUDATA\MSVOA14\Data\112117\C3188.D\	11/21/17 14:47
MW-8R-17NOV	R1710784-010	I:\ACQUDATA\MSVOA14\Data\112117\C3189.D\	11/21/17 15:09
MW-2R-17NOV	R1710784-011	I:\ACQUDATA\MSVOA14\Data\112117\C3190.D\	11/21/17 15:32
MW-16R-17NOV	R1710784-015	I:\ACQUDATA\MSVOA14\Data\112117\C3191.D\	11/21/17 15:54
P-2-17NOV	R1710784-021	I:\ACQUDATA\MSVOA14\Data\112117\C3200.D\	11/21/17 19:14
PW-1-17NOV	R1710784-022	I:\ACQUDATA\MSVOA14\Data\112117\C3201.D\	11/21/17 19:36
PW-2-17NOV	R1710784-024	I:\ACQUDATA\MSVOA14\Data\112117\C3202.D\	11/21/17 19:59
MW-10R-17NOV	R1710784-019	I:\ACQUDATA\MSVOA14\Data\112117\C3203.D\	11/21/17 20:21

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/22/17 11:53
Date Extracted:

Lab Control Sample Summary

Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name:	Lab Control Sample	Instrument ID:	R-MS-14
Lab Code:	RQ1712279-03	File ID:	I:\ACQUDATA\MSVOA14\Data\112217\C3240.D\
Analysis Method:	624	Analysis Lot:	571161
Prep Method:	EPA 5030C		

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ1712279-04	I:\ACQUDATA\MSVOA14\Data\112217\C3242.D\	11/22/17 12:37
Trip Blank-20172011	R1710784-018	I:\ACQUDATA\MSVOA14\Data\112217\C3249.D\	11/22/17 15:18
RB-20172011	R1710784-020	I:\ACQUDATA\MSVOA14\Data\112217\C3250.D\	11/22/17 15:40
P-3-17NOV	R1710784-023	I:\ACQUDATA\MSVOA14\Data\112217\C3251.D\	11/22/17 16:03

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dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/20/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Units:ug/L
Basis:NA

Lab Control Sample
RQ1712201-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	624	20.7	20.0	104	52-162
1,1,2,2-Tetrachloroethane	624	23.5	20.0	117	46-157
1,1,2-Trichloroethane	624	23.1	20.0	115	52-150
1,1-Dichloroethane (1,1-DCA)	624	20.7	20.0	104	59-155
1,1-Dichloroethene (1,1-DCE)	624	20.5	20.0	103	10-234
1,2-Dichlorobenzene	624	22.3	20.0	111	18-190
1,2-Dichloroethane	624	22.0	20.0	110	49-155
1,2-Dichloropropane	624	20.7	20.0	103	10-210
1,3-Dichlorobenzene	624	21.6	20.0	108	59-156
1,4-Dichlorobenzene	624	21.6	20.0	108	18-190
2-Chloroethyl Vinyl Ether	624	12.8	20.0	64	10-305
Acetone	624	22.2	20.0	111	55-130
Benzene	624	21.3	20.0	107	37-151
Bromodichloromethane	624	21.7	20.0	109	35-155
Bromoform	624	23.3	20.0	116	45-169
Bromomethane	624	22.8	20.0	114	10-242
Carbon Tetrachloride	624	20.5	20.0	103	70-140
Chlorobenzene	624	21.1	20.0	106	37-160
Chloroethane	624	18.9	20.0	95	14-230
Chloroform	624	22.0	20.0	110	51-138
Chloromethane	624	19.8	20.0	99	10-273
Dibromochloromethane	624	21.8	20.0	109	53-149
Methylene Chloride	624	22.2	20.0	111	10-221
Ethylbenzene	624	20.2	20.0	101	37-162
Tetrachloroethene (PCE)	624	19.4	20.0	97	64-148
Toluene	624	21.1	20.0	106	47-150
Trichloroethene (TCE)	624	21.0	20.0	105	71-157
Trichlorofluoromethane (CFC 11)	624	19.2	20.0	96	17-181
Vinyl Chloride	624	19.6	20.0	98	10-251
cis-1,2-Dichloroethene	624	21.8	20.0	109	72-125
cis-1,3-Dichloropropene	624	21.1	20.0	105	10-227
m,p-Xylenes	624	41.1	40.0	103	76-131
o-Xylene	624	20.5	20.0	103	78-127

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/20/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Units:ug/L**Basis:**NA**Lab Control Sample**

RQ1712201-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	624	21.6	20.0	108	54-156
trans-1,3-Dichloropropene	624	21.1	20.0	105	17-183

ALS Group USA, Corp.
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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/21/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Units:ug/L
Basis:NA

Lab Control Sample
RQ1712266-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	624	16.3	20.0	82	52-162
1,1,2,2-Tetrachloroethane	624	21.6	20.0	108	46-157
1,1,2-Trichloroethane	624	20.4	20.0	102	52-150
1,1-Dichloroethane (1,1-DCA)	624	17.0	20.0	85	59-155
1,1-Dichloroethene (1,1-DCE)	624	16.2	20.0	81	10-234
1,2-Dichlorobenzene	624	19.0	20.0	95	18-190
1,2-Dichloroethane	624	19.2	20.0	96	49-155
1,2-Dichloropropane	624	17.8	20.0	89	10-210
1,3-Dichlorobenzene	624	18.6	20.0	93	59-156
1,4-Dichlorobenzene	624	18.6	20.0	93	18-190
2-Chloroethyl Vinyl Ether	624	11.9	20.0	59	10-305
Acetone	624	19.4	20.0	97	55-130
Benzene	624	17.5	20.0	87	37-151
Bromodichloromethane	624	19.0	20.0	95	35-155
Bromoform	624	20.1	20.0	101	45-169
Bromomethane	624	20.1	20.0	101	10-242
Carbon Tetrachloride	624	15.7	20.0	79	70-140
Chlorobenzene	624	18.0	20.0	90	37-160
Chloroethane	624	15.6	20.0	78	14-230
Chloroform	624	18.6	20.0	93	51-138
Chloromethane	624	16.5	20.0	82	10-273
Dibromochloromethane	624	19.9	20.0	100	53-149
Methylene Chloride	624	18.8	20.0	94	10-221
Ethylbenzene	624	16.3	20.0	81	37-162
Tetrachloroethene (PCE)	624	15.6	20.0	78	64-148
Toluene	624	17.1	20.0	85	47-150
Trichloroethene (TCE)	624	15.2	20.0	76	71-157
Trichlorofluoromethane (CFC 11)	624	14.6	20.0	73	17-181
Vinyl Chloride	624	14.8	20.0	74	10-251
cis-1,2-Dichloroethene	624	18.8	20.0	94	72-125
cis-1,3-Dichloropropene	624	20.2	20.0	101	10-227
m,p-Xylenes	624	33.2	40.0	83	76-131
o-Xylene	624	17.0	20.0	85	78-127

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dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/21/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Units:ug/L
Basis:NA

Lab Control Sample
RQ1712266-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	624	17.9	20.0	90	54-156
trans-1,3-Dichloropropene	624	20.2	20.0	101	17-183

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/22/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Units:ug/L
Basis:NA

Lab Control Sample
RQ1712279-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	624	19.6	20.0	98	52-162
1,1,2,2-Tetrachloroethane	624	21.0	20.0	105	46-157
1,1,2-Trichloroethane	624	20.3	20.0	101	52-150
1,1-Dichloroethane (1,1-DCA)	624	18.8	20.0	94	59-155
1,1-Dichloroethene (1,1-DCE)	624	19.0	20.0	95	10-234
1,2-Dichlorobenzene	624	21.8	20.0	109	18-190
1,2-Dichloroethane	624	19.8	20.0	99	49-155
1,2-Dichloropropane	624	18.8	20.0	94	10-210
1,3-Dichlorobenzene	624	21.3	20.0	106	59-156
1,4-Dichlorobenzene	624	21.4	20.0	107	18-190
2-Chloroethyl Vinyl Ether	624	11.7	20.0	59	10-305
Acetone	624	19.7	20.0	99	55-130
Benzene	624	19.7	20.0	98	37-151
Bromodichloromethane	624	19.8	20.0	99	35-155
Bromoform	624	20.9	20.0	104	45-169
Bromomethane	624	21.9	20.0	110	10-242
Carbon Tetrachloride	624	20.2	20.0	101	70-140
Chlorobenzene	624	20.2	20.0	101	37-160
Chloroethane	624	17.2	20.0	86	14-230
Chloroform	624	19.9	20.0	100	51-138
Chloromethane	624	17.5	20.0	87	10-273
Dibromochloromethane	624	20.7	20.0	103	53-149
Methylene Chloride	624	19.6	20.0	98	10-221
Ethylbenzene	624	20.4	20.0	102	37-162
Tetrachloroethene (PCE)	624	20.5	20.0	102	64-148
Toluene	624	19.8	20.0	99	47-150
Trichloroethene (TCE)	624	18.3	20.0	92	71-157
Trichlorofluoromethane (CFC 11)	624	18.4	20.0	92	17-181
Vinyl Chloride	624	17.4	20.0	87	10-251
cis-1,2-Dichloroethene	624	19.6	20.0	98	72-125
cis-1,3-Dichloropropene	624	20.1	20.0	100	10-227
m,p-Xylenes	624	41.2	40.0	103	76-131
o-Xylene	624	20.5	20.0	103	78-127

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/22/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Units:ug/L
Basis:NA

Lab Control Sample
RQ1712279-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	624	19.6	20.0	98	54-156
trans-1,3-Dichloropropene	624	20.1	20.0	100	17-183

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/17/17

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Units:ug/L
Basis:NA

Analyte Name	Lab Control Sample RQ1711970-03				Duplicate Lab Control Sample RQ1711970-04					
	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	624	22.8	20.0	114	21.8	20.0	109	52-162	4	30
1,1,2,2-Tetrachloroethane	624	21.1	20.0	106	19.9	20.0	99	46-157	6	30
1,1,2-Trichloroethane	624	22.7	20.0	113	21.1	20.0	105	52-150	7	30
1,1-Dichloroethane (1,1-DCA)	624	22.6	20.0	113	21.8	20.0	109	59-155	4	30
1,1-Dichloroethene (1,1-DCE)	624	19.9	20.0	99	20.5	20.0	102	10-234	3	30
1,2-Dichlorobenzene	624	21.8	20.0	109	21.7	20.0	109	18-190	<1	30
1,2-Dichloroethane	624	21.8	20.0	109	21.2	20.0	106	49-155	3	30
1,2-Dichloropropane	624	20.4	20.0	102	20.2	20.0	101	10-210	1	30
1,3-Dichlorobenzene	624	20.7	20.0	104	20.3	20.0	101	59-156	2	30
1,4-Dichlorobenzene	624	22.2	20.0	111	21.9	20.0	109	18-190	1	30
2-Chloroethyl Vinyl Ether	624	15.8	20.0	79	15.2	20.0	76	10-305	4	30
Acetone	624	17.2	20.0	86	22.1	20.0	110	55-130	25	30
Benzene	624	20.0	20.0	100	19.8	20.0	99	37-151	<1	30
Bromodichloromethane	624	22.6	20.0	113	22.4	20.0	112	35-155	<1	30
Bromoform	624	20.6	20.0	103	22.8	20.0	114	45-169	10	30
Bromomethane	624	19.0	20.0	95	18.5	20.0	93	10-242	2	30
Carbon Tetrachloride	624	20.3	20.0	102	21.3	20.0	106	70-140	5	30
Chlorobenzene	624	21.5	20.0	107	20.9	20.0	105	37-160	3	30
Chloroethane	624	23.4	20.0	117	21.9	20.0	110	14-230	7	30
Chloroform	624	21.3	20.0	106	21.5	20.0	108	51-138	1	30
Chloromethane	624	21.0	20.0	105	21.3	20.0	106	10-273	1	30
Dibromochloromethane	624	20.6	20.0	103	20.4	20.0	102	53-149	<1	30
Methylene Chloride	624	21.7	20.0	109	20.3	20.0	102	10-221	7	30
Ethylbenzene	624	20.8	20.0	104	19.7	20.0	98	37-162	6	30
Tetrachloroethene (PCE)	624	20.5	20.0	102	19.4	20.0	97	64-148	6	30
Toluene	624	20.6	20.0	103	20.6	20.0	103	47-150	<1	30
Trichloroethene (TCE)	624	20.8	20.0	104	20.4	20.0	102	71-157	2	30
Trichlorofluoromethane (CFC 11)	624	21.4	20.0	107	20.9	20.0	105	17-181	2	30
Vinyl Chloride	624	22.2	20.0	111	21.6	20.0	108	10-251	2	30
cis-1,2-Dichloroethene	624	21.2	20.0	106	20.3	20.0	101	72-125	5	30
cis-1,3-Dichloropropene	624	20.8	20.0	104	19.2	20.0	96	10-227	8	30
m,p-Xylenes	624	41.5	40.0	104	40.3	40.0	101	76-131	3	30
o-Xylene	624	21.6	20.0	108	19.9	20.0	99	78-127	8	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Analyzed: 11/17/17

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Units:ug/L
Basis:NA

Analyte Name	Lab Control Sample RQ1711970-03				Duplicate Lab Control Sample RQ1711970-04					
	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	624	22.9	20.0	114	21.4	20.0	107	54-156	6	30
trans-1,3-Dichloropropene	624	20.3	20.0	101	22.4	20.0	112	17-183	10	30

ALS Group USA, Corp.
dba ALS Environmental

QC/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/17/17 10:09

Tune Summary
Volatile Organic Compounds by GC/MS, Unpreserved

File ID: I:\ACQUDATA\msvoa12\Data\111717\P14056.D\
Instrument ID: R-MS-12

Analytical Method: 624
Analysis Lot: 570532

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	27.67	38491	Pass
75	95	30	60	48.50	67456	Pass
95	95	100	100	100.00	139085	Pass
96	95	5	9	6.42	8933	Pass
173	174	0	2	0.00	0	Pass
174	95	50	120	78.21	108784	Pass
175	174	5	9	6.48	7051	Pass
176	174	95	101	95.49	103883	Pass
177	176	5	9	7.71	8011	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	RQ1711970-02	I:\ACQUDATA\msvoa12\Data\111717\P14084.D\	11/17/17 20:54	
Lab Control Sample	RQ1711970-03	I:\ACQUDATA\msvoa12\Data\111717\P14084.D\	11/17/17 20:54	
Duplicate Lab Control Sample	RQ1711970-04	I:\ACQUDATA\msvoa12\Data\111717\P14085.D\	11/17/17 21:16	
Method Blank	RQ1711970-05	I:\ACQUDATA\msvoa12\Data\111717\P14087.D\	11/17/17 21:59	
Trip Blank-20171113	R1710784-001	I:\ACQUDATA\msvoa12\Data\111717\P14088.D\	11/17/17 22:21	
Trip Blank-20171114	R1710784-003	I:\ACQUDATA\msvoa12\Data\111717\P14089.D\	11/17/17 22:43	
MW-9S-17NOV	R1710784-002	I:\ACQUDATA\msvoa12\Data\111717\P14090.D\	11/17/17 23:05	
MW-2S-17NOV	R1710784-004	I:\ACQUDATA\msvoa12\Data\111717\P14091.D\	11/17/17 23:26	
MW-2S-17NOV-Q	R1710784-005	I:\ACQUDATA\msvoa12\Data\111717\P14092.D\	11/17/17 23:48	
MW-14S-17NOV	R1710784-006	I:\ACQUDATA\msvoa12\Data\111717\P14093.D\	11/18/17 00:10	
MW-1S-17NOV	R1710784-007	I:\ACQUDATA\msvoa12\Data\111717\P14094.D\	11/18/17 00:32	
MW-1S-17NOV	RQ1711970-06	I:\ACQUDATA\msvoa12\Data\111717\P14104.D\	11/18/17 04:09	
MW-1S-17NOV	RQ1711970-07	I:\ACQUDATA\msvoa12\Data\111717\P14105.D\	11/18/17 04:30	

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QC/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/20/17 09:41

Tune Summary
Volatile Organic Compounds by GC/MS, Unpreserved

File ID: I:\ACQUDATA\MSVOA14\Data\112017\C3121.D\
Instrument ID: R-MS-14

Analytical Method: 624
Analysis Lot: 570743

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	23.18	17449	Pass
75	95	30	60	54.02	40659	Pass
95	95	100	100	100.00	75261	Pass
96	95	5	9	6.93	5213	Pass
173	174	0	2	0.00	0	Pass
174	95	50	120	84.54	63629	Pass
175	174	5	9	7.78	4949	Pass
176	174	95	101	97.20	61848	Pass
177	176	5	9	6.43	3978	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	RQ1712201-02	I:\ACQUDATA\MSVOA14\Data\112017\C3151.D\	11/20/17 22:01	
Lab Control Sample	RQ1712201-03	I:\ACQUDATA\MSVOA14\Data\112017\C3151.D\	11/20/17 22:01	
Method Blank	RQ1712201-04	I:\ACQUDATA\MSVOA14\Data\112017\C3153.D\	11/20/17 22:46	
Trip Blank-20171115	R1710784-008	I:\ACQUDATA\MSVOA14\Data\112017\C3157.D\	11/21/17 00:15	
Trip Blank-20171117	R1710784-014	I:\ACQUDATA\MSVOA14\Data\112017\C3158.D\	11/21/17 00:37	
MW-14R-17NOV	R1710784-012	I:\ACQUDATA\MSVOA14\Data\112017\C3159.D\	11/21/17 00:59	
PZ-03-17NOV	R1710784-013	I:\ACQUDATA\MSVOA14\Data\112017\C3160.D\	11/21/17 01:22	
PZ-02-17NOV	R1710784-017	I:\ACQUDATA\MSVOA14\Data\112017\C3161.D\	11/21/17 01:44	
MW-5R-17NOV	R1710784-009	I:\ACQUDATA\MSVOA14\Data\112017\C3162.D\	11/21/17 02:06	
MW-8R-17NOV	R1710784-010	I:\ACQUDATA\MSVOA14\Data\112017\C3163.D\	11/21/17 02:28	
MW-2R-17NOV	R1710784-011	I:\ACQUDATA\MSVOA14\Data\112017\C3164.D\	11/21/17 02:50	
PZ-04-17NOV	R1710784-016	I:\ACQUDATA\MSVOA14\Data\112017\C3166.D\	11/21/17 03:35	

ALS Group USA, Corp.
dba ALS Environmental

QC/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/21/17 09:47

Tune Summary
Volatile Organic Compounds by GC/MS, Unpreserved

File ID: I:\ACQUDATA\MSVOA14\Data\112117\C3176.D\
Instrument ID: R-MS-14

Analytical Method: 624
Analysis Lot: 570946

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	23.03	16035	Pass
75	95	30	60	54.99	38277	Pass
95	95	100	100	100.00	69613	Pass
96	95	5	9	7.07	4921	Pass
173	174	0	2	0.00	0	Pass
174	95	50	120	83.64	58227	Pass
175	174	5	9	8.25	4802	Pass
176	174	95	101	98.70	57472	Pass
177	176	5	9	6.51	3742	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	RQ1712266-02	I:\ACQUDATA\MSVOA14\Data\112117\C3177.D\	11/21/17 10:27	
Lab Control Sample	RQ1712266-03	I:\ACQUDATA\MSVOA14\Data\112117\C3179.D\	11/21/17 11:27	
Method Blank	RQ1712266-04	I:\ACQUDATA\MSVOA14\Data\112117\C3181.D\	11/21/17 12:11	
MW-5R-17NOV	R1710784-009	I:\ACQUDATA\MSVOA14\Data\112117\C3188.D\	11/21/17 14:47	
MW-8R-17NOV	R1710784-010	I:\ACQUDATA\MSVOA14\Data\112117\C3189.D\	11/21/17 15:09	
MW-2R-17NOV	R1710784-011	I:\ACQUDATA\MSVOA14\Data\112117\C3190.D\	11/21/17 15:32	
MW-16R-17NOV	R1710784-015	I:\ACQUDATA\MSVOA14\Data\112117\C3191.D\	11/21/17 15:54	
P-2-17NOV	R1710784-021	I:\ACQUDATA\MSVOA14\Data\112117\C3200.D\	11/21/17 19:14	
PW-1-17NOV	R1710784-022	I:\ACQUDATA\MSVOA14\Data\112117\C3201.D\	11/21/17 19:36	
PW-2-17NOV	R1710784-024	I:\ACQUDATA\MSVOA14\Data\112117\C3202.D\	11/21/17 19:59	
MW-10R-17NOV	R1710784-019	I:\ACQUDATA\MSVOA14\Data\112117\C3203.D\	11/21/17 20:21	

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QC/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/22/17 10:57

Tune Summary
Volatile Organic Compounds by GC/MS, Unpreserved

File ID: I:\ACQUDATA\MSVOA14\Data\112217\C3238.D\
Instrument ID: R-MS-14

Analytical Method: 624
Analysis Lot: 571161

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	23.32	15133	Pass
75	95	30	60	54.88	35607	Pass
95	95	100	100	100.00	64885	Pass
96	95	5	9	6.78	4402	Pass
173	174	0	2	0.00	0	Pass
174	95	50	120	83.75	54339	Pass
175	174	5	9	8.12	4414	Pass
176	174	95	101	97.09	52757	Pass
177	176	5	9	6.79	3583	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	RQ1712279-02	I:\ACQUDATA\MSVOA14\Data\112217\C3239.D\	11/22/17 11:24	
Lab Control Sample	RQ1712279-03	I:\ACQUDATA\MSVOA14\Data\112217\C3240.D\	11/22/17 11:53	
Method Blank	RQ1712279-04	I:\ACQUDATA\MSVOA14\Data\112217\C3242.D\	11/22/17 12:37	
Trip Blank-20172011	R1710784-018	I:\ACQUDATA\MSVOA14\Data\112217\C3249.D\	11/22/17 15:18	
RB-20172011	R1710784-020	I:\ACQUDATA\MSVOA14\Data\112217\C3250.D\	11/22/17 15:40	
P-3-17NOV	R1710784-023	I:\ACQUDATA\MSVOA14\Data\112217\C3251.D\	11/22/17 16:03	

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/17/17 20:54

Internal Standard Area and RT Summary
Volatile Organic Compounds by GC/MS, Unpreserved

File ID: I:\ACQUDATA\msvoa12\Data\111717\P14084.D\
Instrument ID: R-MS-12
Analytical Method: 624

Lab Code: RQ1711970-02
Analysis Lot: 570532
Signal ID: 1

		1,4-Difluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
Results ==>		393,799	6.47	360,387	9.78	181,633	11.84
Upper Limit ==>		787,598	6.97	720,774	10.28	363,266	12.34
Lower Limit ==>		196,900	5.97	180,194	9.28	90,817	11.34
ICAL Result ==>		398,163	6.48	358,323	9.79	181,619	11.84
Associated Analyses							
Lab Control Sample	RQ1711970-03	393,799	6.47	360,387	9.78	181,633	11.84
Duplicate Lab Control Sample	RQ1711970-04	387,236	6.47	353,728	9.78	181,401	11.84
Method Blank	RQ1711970-05	388,695	6.47	358,730	9.78	179,521	11.84
Trip Blank-20171113	R1710784-001	381,608	6.47	353,780	9.78	180,792	11.84
Trip Blank-20171114	R1710784-003	384,838	6.47	352,055	9.78	178,446	11.84
MW-9S-17NOV	R1710784-002	393,204	6.47	363,896	9.78	178,452	11.84
MW-2S-17NOV	R1710784-004	393,365	6.47	363,084	9.78	177,192	11.84
MW-2S-17NOV-Q	R1710784-005	406,310	6.47	366,800	9.78	186,006	11.84
MW-14S-17NOV	R1710784-006	391,401	6.47	342,958	9.78	174,275	11.84
MW-1S-17NOV	R1710784-007	407,125	6.47	364,765	9.78	180,380	11.84
MW-1S-17NOVMS	RQ1711970-06	395,101	6.47	358,581	9.78	185,934	11.84
MW-1S-17NOVDMS	RQ1711970-07	394,747	6.47	369,597	9.78	183,757	11.84

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/20/17 22:01

Internal Standard Area and RT Summary
Volatile Organic Compounds by GC/MS, Unpreserved

File ID: I:\ACQUDATA\MSVOA14\Data\112017\C3151.D\
Instrument ID: R-MS-14
Analytical Method: 624

Lab Code: RQ1712201-02
Analysis Lot: 570743
Signal ID: 1

		1,4-Difluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
Results ==>		213,013	5.94	198,909	9.58	112,276	11.74
Upper Limit ==>		426,026	6.44	397,818	10.08	224,552	12.24
Lower Limit ==>		106,507	5.44	99,455	9.08	56,138	11.24
ICAL Result ==>		214,398	5.94	197,215	9.58	109,184	11.74
Associated Analyses							
Lab Control Sample	RQ1712201-03	213,013	5.94	198,909	9.58	112,276	11.74
Method Blank	RQ1712201-04	212,779	5.94	195,050	9.58	106,211	11.74
Trip Blank-20171115	R1710784-008	210,268	5.94	193,233	9.58	105,670	11.74
Trip Blank-20171117	R1710784-014	207,857	5.94	192,570	9.58	106,210	11.74
MW-14R-17NOV	R1710784-012	208,093	5.94	194,676	9.58	105,099	11.74
PZ-03-17NOV	R1710784-013	207,529	5.94	192,675	9.58	104,784	11.74
PZ-02-17NOV	R1710784-017	203,950	5.94	192,985	9.58	103,424	11.74
MW-5R-17NOV	R1710784-009	203,596	5.94	188,758	9.58	103,326	11.74
MW-8R-17NOV	R1710784-010	209,858	5.94	195,700	9.58	105,010	11.74
MW-2R-17NOV	R1710784-011	207,055	5.94	197,020	9.58	105,097	11.74
PZ-04-17NOV	R1710784-016	207,816	5.94	194,716	9.58	103,716	11.74

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/21/17 10:27

Internal Standard Area and RT Summary
Volatile Organic Compounds by GC/MS, Unpreserved

File ID: I:\ACQUDATA\MSVOA14\Data\112117\C3177.D\
Instrument ID: R-MS-14
Analytical Method: 624

Lab Code: RQ1712266-02
Analysis Lot: 570946
Signal ID: 1

		1,4-Difluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
Results ==>		226,413	5.94	217,414	9.58	126,930	11.74
Upper Limit ==>		452,826	6.44	434,828	10.08	253,860	12.24
Lower Limit ==>		113,207	5.44	108,707	9.08	63,465	11.24
ICAL Result ==>		214,398	5.94	197,215	9.58	109,184	11.74
Associated Analyses							
Lab Control Sample	RQ1712266-03	226,888	5.94	213,336	9.58	122,984	11.74
Method Blank	RQ1712266-04	218,488	5.94	202,060	9.58	111,059	11.74
MW-5R-17NOV	R1710784-009	207,121	5.94	193,113	9.58	104,721	11.74
MW-8R-17NOV	R1710784-010	210,927	5.94	196,833	9.58	105,031	11.74
MW-2R-17NOV	R1710784-011	210,394	5.94	198,599	9.58	109,018	11.74
MW-16R-17NOV	R1710784-015	211,039	5.94	195,901	9.58	104,766	11.74
P-2-17NOV	R1710784-021	199,089	5.94	185,356	9.58	101,340	11.74
PW-1-17NOV	R1710784-022	204,857	5.94	191,908	9.58	101,829	11.74
PW-2-17NOV	R1710784-024	203,672	5.94	189,562	9.58	103,742	11.74
MW-10R-17NOV	R1710784-019	197,194	5.94	185,711	9.58	101,112	11.74

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/22/17 11:24

Internal Standard Area and RT Summary
Volatile Organic Compounds by GC/MS, Unpreserved

File ID: I:\ACQUDATA\MSVOA14\Data\112217\C3239.D\
Instrument ID: R-MS-14
Analytical Method: 624

Lab Code: RQ1712279-02
Analysis Lot: 571161
Signal ID: 1

		1,4-Difluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
Results ==>		222,521	5.94	204,093	9.58	119,897	11.74
Upper Limit ==>		445,042	6.44	408,186	10.08	239,794	12.24
Lower Limit ==>		111,261	5.44	102,047	9.08	59,949	11.24
ICAL Result ==>		214,398	5.94	197,215	9.58	109,184	11.74
Associated Analyses							
Lab Control Sample	RQ1712279-03	226,434	5.94	202,583	9.58	116,934	11.74
Method Blank	RQ1712279-04	207,777	5.94	186,764	9.58	103,453	11.74
Trip Blank-20172011	R1710784-018	205,845	5.94	184,650	9.58	100,612	11.74
RB-20172011	R1710784-020	201,780	5.94	180,857	9.58	101,652	11.74
P-3-17NOV	R1710784-023	201,775	5.94	182,358	9.58	98,589	11.74

Results flagged with an asterisk (*) indicate values outside control criteria.



Raw Data

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Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/13/17 11:00
Date Received: 11/13/17 15:50

Sample Name: Trip Blank-20171113
Lab Code: R1710784-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/17/17 22:21	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/17/17 22:21	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/17/17 22:21	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/17/17 22:21	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/17/17 22:21	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/17/17 22:21	
Acetone	5.0 U	5.0	2.8	1	11/17/17 22:21	
Benzene	1.0 U	1.0	0.20	1	11/17/17 22:21	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
Bromoform	1.0 U	1.0	0.20	1	11/17/17 22:21	
Bromomethane	1.0 U	1.0	0.44	1	11/17/17 22:21	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/17/17 22:21	
Chlorobenzene	1.0 U	1.0	0.20	1	11/17/17 22:21	
Chloroethane	1.0 U	1.0	0.24	1	11/17/17 22:21	
Chloroform	1.0 U	1.0	0.20	1	11/17/17 22:21	
Chloromethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/17/17 22:21	
Methylene Chloride	1.0 U	1.0	0.20	1	11/17/17 22:21	
Ethylbenzene	1.0 U	1.0	0.20	1	11/17/17 22:21	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/17/17 22:21	
Toluene	1.0 U	1.0	0.20	1	11/17/17 22:21	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/17/17 22:21	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/17/17 22:21	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/17/17 22:21	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 22:21	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 22:21	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/17/17 22:21	
o-Xylene	1.0 U	1.0	0.20	1	11/17/17 22:21	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 22:21	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 22:21	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Trip Blank-20171113
Lab Code: R1710784-001

Service Request: R1710784
Date Collected: 11/13/17 11:00
Date Received: 11/13/17 15:50
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	81 - 127	11/17/17 22:21	
4-Bromofluorobenzene	98	79 - 123	11/17/17 22:21	
Toluene-d8	101	83 - 120	11/17/17 22:21	

ALS Group USA, Corp.
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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/13/17 14:59
Date Received: 11/13/17 15:50

Sample Name: MW-9S-17NOV
Lab Code: R1710784-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.3	1.0	0.20	1	11/17/17 23:05	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
1,1-Dichloroethane (1,1-DCA)	9.2	1.0	0.21	1	11/17/17 23:05	
1,1-Dichloroethene (1,1-DCE)	0.49 J	1.0	0.20	1	11/17/17 23:05	
1,2-Dichlorobenzene	6.5	1.0	0.25	1	11/17/17 23:05	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/17/17 23:05	
1,3-Dichlorobenzene	0.33 J	1.0	0.22	1	11/17/17 23:05	
1,4-Dichlorobenzene	0.76 BJ	1.0	0.20	1	11/17/17 23:05	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/17/17 23:05	
Acetone	5.0 U	5.0	2.8	1	11/17/17 23:05	
Benzene	1.0 U	1.0	0.20	1	11/17/17 23:05	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
Bromoform	1.0 U	1.0	0.20	1	11/17/17 23:05	
Bromomethane	1.0 U	1.0	0.44	1	11/17/17 23:05	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/17/17 23:05	
Chlorobenzene	1.0 U	1.0	0.20	1	11/17/17 23:05	
Chloroethane	1.0 U	1.0	0.24	1	11/17/17 23:05	
Chloroform	0.45 J	1.0	0.20	1	11/17/17 23:05	
Chloromethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/17/17 23:05	
Methylene Chloride	1.0 U	1.0	0.20	1	11/17/17 23:05	
Ethylbenzene	1.0 U	1.0	0.20	1	11/17/17 23:05	
Tetrachloroethene (PCE)	39	1.0	0.20	1	11/17/17 23:05	
Toluene	1.0 U	1.0	0.20	1	11/17/17 23:05	
Trichloroethene (TCE)	33	1.0	0.20	1	11/17/17 23:05	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/17/17 23:05	
Vinyl Chloride	2.5	1.0	0.20	1	11/17/17 23:05	
cis-1,2-Dichloroethene	26	1.0	0.20	1	11/17/17 23:05	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:05	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/17/17 23:05	
o-Xylene	1.0 U	1.0	0.20	1	11/17/17 23:05	
trans-1,2-Dichloroethene	2.6	1.0	0.20	1	11/17/17 23:05	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:05	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: MW-9S-17NOV
Lab Code: R1710784-002

Service Request: R1710784
Date Collected: 11/13/17 14:59
Date Received: 11/13/17 15:50

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	81 - 127	11/17/17 23:05	
4-Bromofluorobenzene	99	79 - 123	11/17/17 23:05	
Toluene-d8	100	83 - 120	11/17/17 23:05	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/14/17 10:00
Date Received: 11/14/17 16:05

Sample Name: Trip Blank-20171114
Lab Code: R1710784-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/17/17 22:43	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/17/17 22:43	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/17/17 22:43	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/17/17 22:43	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/17/17 22:43	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/17/17 22:43	
Acetone	5.0 U	5.0	2.8	1	11/17/17 22:43	
Benzene	1.0 U	1.0	0.20	1	11/17/17 22:43	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
Bromoform	1.0 U	1.0	0.20	1	11/17/17 22:43	
Bromomethane	1.0 U	1.0	0.44	1	11/17/17 22:43	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/17/17 22:43	
Chlorobenzene	1.0 U	1.0	0.20	1	11/17/17 22:43	
Chloroethane	1.0 U	1.0	0.24	1	11/17/17 22:43	
Chloroform	1.0 U	1.0	0.20	1	11/17/17 22:43	
Chloromethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/17/17 22:43	
Methylene Chloride	1.0 U	1.0	0.20	1	11/17/17 22:43	
Ethylbenzene	1.0 U	1.0	0.20	1	11/17/17 22:43	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/17/17 22:43	
Toluene	1.0 U	1.0	0.20	1	11/17/17 22:43	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/17/17 22:43	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/17/17 22:43	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/17/17 22:43	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 22:43	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 22:43	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/17/17 22:43	
o-Xylene	1.0 U	1.0	0.20	1	11/17/17 22:43	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 22:43	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 22:43	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Trip Blank-20171114
Lab Code: R1710784-003

Service Request: R1710784
Date Collected: 11/14/17 10:00
Date Received: 11/14/17 16:05
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	100	81 - 127	11/17/17 22:43	
4-Bromofluorobenzene	101	79 - 123	11/17/17 22:43	
Toluene-d8	99	83 - 120	11/17/17 22:43	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/14/17 11:08
Date Received: 11/14/17 16:05

Sample Name: MW-2S-17NOV
Lab Code: R1710784-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,1-Dichloroethane (1,1-DCA)	1.2	1.0	0.21	1	11/17/17 23:26	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/17/17 23:26	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/17/17 23:26	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/17/17 23:26	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/17/17 23:26	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/17/17 23:26	
Acetone	5.0 U	5.0	2.8	1	11/17/17 23:26	
Benzene	1.0 U	1.0	0.20	1	11/17/17 23:26	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
Bromoform	1.0 U	1.0	0.20	1	11/17/17 23:26	
Bromomethane	1.0 U	1.0	0.44	1	11/17/17 23:26	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/17/17 23:26	
Chlorobenzene	1.0 U	1.0	0.20	1	11/17/17 23:26	
Chloroethane	1.0 U	1.0	0.24	1	11/17/17 23:26	
Chloroform	1.0 U	1.0	0.20	1	11/17/17 23:26	
Chloromethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/17/17 23:26	
Methylene Chloride	1.0 U	1.0	0.20	1	11/17/17 23:26	
Ethylbenzene	1.0 U	1.0	0.20	1	11/17/17 23:26	
Tetrachloroethene (PCE)	0.40 J	1.0	0.20	1	11/17/17 23:26	
Toluene	1.0 U	1.0	0.20	1	11/17/17 23:26	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/17/17 23:26	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/17/17 23:26	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/17/17 23:26	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 23:26	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:26	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/17/17 23:26	
o-Xylene	1.0 U	1.0	0.20	1	11/17/17 23:26	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 23:26	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:26	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-2S-17NOV
Lab Code: R1710784-004

Service Request: R1710784
Date Collected: 11/14/17 11:08
Date Received: 11/14/17 16:05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81 - 127	11/17/17 23:26	
4-Bromofluorobenzene	97	79 - 123	11/17/17 23:26	
Toluene-d8	97	83 - 120	11/17/17 23:26	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/14/17 11:08
Date Received: 11/14/17 16:05

Sample Name: MW-2S-17NOV-Q
Lab Code: R1710784-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,1-Dichloroethane (1,1-DCA)	1.3	1.0	0.21	1	11/17/17 23:48	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/17/17 23:48	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/17/17 23:48	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/17/17 23:48	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/17/17 23:48	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/17/17 23:48	
Acetone	5.0 U	5.0	2.8	1	11/17/17 23:48	
Benzene	1.0 U	1.0	0.20	1	11/17/17 23:48	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
Bromoform	1.0 U	1.0	0.20	1	11/17/17 23:48	
Bromomethane	1.0 U	1.0	0.44	1	11/17/17 23:48	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/17/17 23:48	
Chlorobenzene	1.0 U	1.0	0.20	1	11/17/17 23:48	
Chloroethane	1.0 U	1.0	0.24	1	11/17/17 23:48	
Chloroform	1.0 U	1.0	0.20	1	11/17/17 23:48	
Chloromethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/17/17 23:48	
Methylene Chloride	1.0 U	1.0	0.20	1	11/17/17 23:48	
Ethylbenzene	1.0 U	1.0	0.20	1	11/17/17 23:48	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/17/17 23:48	
Toluene	1.0 U	1.0	0.20	1	11/17/17 23:48	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/17/17 23:48	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/17/17 23:48	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/17/17 23:48	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 23:48	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:48	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/17/17 23:48	
o-Xylene	1.0 U	1.0	0.20	1	11/17/17 23:48	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/17/17 23:48	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/17/17 23:48	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-2S-17NOV-Q
Lab Code: R1710784-005

Service Request: R1710784
Date Collected: 11/14/17 11:08
Date Received: 11/14/17 16:05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	103	81 - 127	11/17/17 23:48	
4-Bromofluorobenzene	94	79 - 123	11/17/17 23:48	
Toluene-d8	96	83 - 120	11/17/17 23:48	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/14/17 13:45
Date Received: 11/14/17 16:05

Sample Name: MW-14S-17NOV
Lab Code: R1710784-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/18/17 00:10	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/18/17 00:10	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/18/17 00:10	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/18/17 00:10	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/18/17 00:10	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/18/17 00:10	
Acetone	5.0 U	5.0	2.8	1	11/18/17 00:10	
Benzene	1.0 U	1.0	0.20	1	11/18/17 00:10	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
Bromoform	1.0 U	1.0	0.20	1	11/18/17 00:10	
Bromomethane	1.0 U	1.0	0.44	1	11/18/17 00:10	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/18/17 00:10	
Chlorobenzene	1.0 U	1.0	0.20	1	11/18/17 00:10	
Chloroethane	1.0 U	1.0	0.24	1	11/18/17 00:10	
Chloroform	1.0 U	1.0	0.20	1	11/18/17 00:10	
Chloromethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/18/17 00:10	
Methylene Chloride	1.0 U	1.0	0.20	1	11/18/17 00:10	
Ethylbenzene	1.0 U	1.0	0.20	1	11/18/17 00:10	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/18/17 00:10	
Toluene	1.0 U	1.0	0.20	1	11/18/17 00:10	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/18/17 00:10	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/18/17 00:10	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/18/17 00:10	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/18/17 00:10	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/18/17 00:10	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/18/17 00:10	
o-Xylene	1.0 U	1.0	0.20	1	11/18/17 00:10	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/18/17 00:10	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/18/17 00:10	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-14S-17NOV
Lab Code: R1710784-006

Service Request: R1710784
Date Collected: 11/14/17 13:45
Date Received: 11/14/17 16:05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81 - 127	11/18/17 00:10	
4-Bromofluorobenzene	94	79 - 123	11/18/17 00:10	
Toluene-d8	95	83 - 120	11/18/17 00:10	

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dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/14/17 15:15
Date Received: 11/14/17 16:05

Sample Name: MW-1S-17NOV
Lab Code: R1710784-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.3	1.0	0.20	1	11/18/17 00:32	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
1,1-Dichloroethane (1,1-DCA)	0.70 J	1.0	0.21	1	11/18/17 00:32	
1,1-Dichloroethene (1,1-DCE)	0.50 J	1.0	0.20	1	11/18/17 00:32	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/18/17 00:32	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/18/17 00:32	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/18/17 00:32	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/18/17 00:32	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/18/17 00:32	
Acetone	5.0 U	5.0	2.8	1	11/18/17 00:32	
Benzene	1.0 U	1.0	0.20	1	11/18/17 00:32	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
Bromoform	1.0 U	1.0	0.20	1	11/18/17 00:32	
Bromomethane	1.0 U	1.0	0.44	1	11/18/17 00:32	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/18/17 00:32	
Chlorobenzene	1.0 U	1.0	0.20	1	11/18/17 00:32	
Chloroethane	1.0 U	1.0	0.24	1	11/18/17 00:32	
Chloroform	1.0 U	1.0	0.20	1	11/18/17 00:32	
Chloromethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/18/17 00:32	
Methylene Chloride	1.0 U	1.0	0.20	1	11/18/17 00:32	
Ethylbenzene	1.0 U	1.0	0.20	1	11/18/17 00:32	
Tetrachloroethene (PCE)	2.3	1.0	0.20	1	11/18/17 00:32	
Toluene	1.0 U	1.0	0.20	1	11/18/17 00:32	
Trichloroethene (TCE)	12	1.0	0.20	1	11/18/17 00:32	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/18/17 00:32	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/18/17 00:32	
cis-1,2-Dichloroethene	15	1.0	0.20	1	11/18/17 00:32	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/18/17 00:32	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/18/17 00:32	
o-Xylene	1.0 U	1.0	0.20	1	11/18/17 00:32	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/18/17 00:32	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/18/17 00:32	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: MW-1S-17NOV
Lab Code: R1710784-007

Service Request: R1710784
Date Collected: 11/14/17 15:15
Date Received: 11/14/17 16:05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	102	81 - 127	11/18/17 00:32	
4-Bromofluorobenzene	95	79 - 123	11/18/17 00:32	
Toluene-d8	96	83 - 120	11/18/17 00:32	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/15/17 09:00
Date Received: 11/16/17 16:20

Sample Name: Trip Blank-20171115
Lab Code: R1710784-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/21/17 00:15	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 00:15	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 00:15	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 00:15	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:15	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 00:15	
Acetone	5.0 U	5.0	2.8	1	11/21/17 00:15	
Benzene	1.0 U	1.0	0.20	1	11/21/17 00:15	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 00:15	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 00:15	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 00:15	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 00:15	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:15	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 00:15	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 00:15	
Chloromethane	0.29 BJ	1.0	0.20	1	11/21/17 00:15	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 00:15	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 00:15	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 00:15	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/21/17 00:15	
Toluene	1.0 U	1.0	0.20	1	11/21/17 00:15	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/21/17 00:15	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 00:15	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/21/17 00:15	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 00:15	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:15	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 00:15	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 00:15	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 00:15	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:15	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Trip Blank-20171115
Lab Code: R1710784-008

Service Request: R1710784
Date Collected: 11/15/17 09:00
Date Received: 11/16/17 16:20
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	81 - 127	11/21/17 00:15	
4-Bromofluorobenzene	96	79 - 123	11/21/17 00:15	
Toluene-d8	96	83 - 120	11/21/17 00:15	

ALS Group USA, Corp.
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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/15/17 11:05
Date Received: 11/16/17 16:20

Sample Name: MW-5R-17NOV
Lab Code: R1710784-009

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
1,1,2,2-Tetrachloroethane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
1,1,2-Trichloroethane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
1,1-Dichloroethane (1,1-DCA)	45	2.5	0.53	2.5	11/21/17 02:06	
1,1-Dichloroethene (1,1-DCE)	6.7	2.5	0.50	2.5	11/21/17 02:06	
1,2-Dichlorobenzene	2.5 U	2.5	0.63	2.5	11/21/17 02:06	
1,2-Dichloroethane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
1,2-Dichloropropane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
1,3-Dichlorobenzene	2.5 U	2.5	0.55	2.5	11/21/17 02:06	
1,4-Dichlorobenzene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
2-Chloroethyl Vinyl Ether	25 U	25	1.5	2.5	11/21/17 02:06	
Acetone	13 U	13	6.9	2.5	11/21/17 02:06	
Benzene	12	2.5	0.50	2.5	11/21/17 02:06	
Bromodichloromethane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Bromoform	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Bromomethane	2.5 U	2.5	1.1	2.5	11/21/17 02:06	
Carbon Tetrachloride	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Chlorobenzene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Chloroethane	2.5 U	2.5	0.60	2.5	11/21/17 02:06	
Chloroform	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Chloromethane	0.58 BJ	2.5	0.50	2.5	11/21/17 02:06	
Dibromochloromethane	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Methylene Chloride	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Ethylbenzene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Tetrachloroethene (PCE)	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Toluene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Trichloroethene (TCE)	8.7	2.5	0.50	2.5	11/21/17 02:06	
Trichlorofluoromethane (CFC 11)	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
Vinyl Chloride	170	2.5	0.50	2.5	11/21/17 02:06	
cis-1,2-Dichloroethene	550 D	5.0	1.0	5	11/21/17 14:47	
cis-1,3-Dichloropropene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
m,p-Xylenes	5.0 U	5.0	0.65	2.5	11/21/17 02:06	
o-Xylene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	
trans-1,2-Dichloroethene	5.5	2.5	0.50	2.5	11/21/17 02:06	
trans-1,3-Dichloropropene	2.5 U	2.5	0.50	2.5	11/21/17 02:06	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-5R-17NOV
Lab Code: R1710784-009

Service Request: R1710784
Date Collected: 11/15/17 11:05
Date Received: 11/16/17 16:20
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	81 - 127	11/21/17 02:06	
4-Bromofluorobenzene	93	79 - 123	11/21/17 02:06	
Toluene-d8	94	83 - 120	11/21/17 02:06	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/16/17 14:00
Date Received: 11/16/17 16:20

Sample Name: MW-8R-17NOV
Lab Code: R1710784-010

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	25 U	25	5.0	25	11/21/17 02:28	
1,1,2,2-Tetrachloroethane	25 U	25	5.0	25	11/21/17 02:28	
1,1,2-Trichloroethane	25 U	25	5.0	25	11/21/17 02:28	
1,1-Dichloroethane (1,1-DCA)	140	25	5.3	25	11/21/17 02:28	
1,1-Dichloroethene (1,1-DCE)	64	25	5.0	25	11/21/17 02:28	
1,2-Dichlorobenzene	25 U	25	6.3	25	11/21/17 02:28	
1,2-Dichloroethane	25 U	25	5.0	25	11/21/17 02:28	
1,2-Dichloropropane	25 U	25	5.0	25	11/21/17 02:28	
1,3-Dichlorobenzene	25 U	25	5.5	25	11/21/17 02:28	
1,4-Dichlorobenzene	25 U	25	5.0	25	11/21/17 02:28	
2-Chloroethyl Vinyl Ether	250 U	250	15	25	11/21/17 02:28	
Acetone	130 U	130	69	25	11/21/17 02:28	
Benzene	25 U	25	5.0	25	11/21/17 02:28	
Bromodichloromethane	25 U	25	5.0	25	11/21/17 02:28	
Bromoform	25 U	25	5.0	25	11/21/17 02:28	
Bromomethane	25 U	25	11	25	11/21/17 02:28	
Carbon Tetrachloride	25 U	25	5.0	25	11/21/17 02:28	
Chlorobenzene	25 U	25	5.0	25	11/21/17 02:28	
Chloroethane	25 U	25	6.0	25	11/21/17 02:28	
Chloroform	25 U	25	5.0	25	11/21/17 02:28	
Chloromethane	6.0 J	25	5.0	25	11/21/17 02:28	
Dibromochloromethane	25 U	25	5.0	25	11/21/17 02:28	
Methylene Chloride	25 U	25	5.0	25	11/21/17 02:28	
Ethylbenzene	25 U	25	5.0	25	11/21/17 02:28	
Tetrachloroethene (PCE)	25 U	25	5.0	25	11/21/17 02:28	
Toluene	25 U	25	5.0	25	11/21/17 02:28	
Trichloroethene (TCE)	8.0 J	25	5.0	25	11/21/17 02:28	
Trichlorofluoromethane (CFC 11)	25 U	25	5.0	25	11/21/17 02:28	
Vinyl Chloride	650	25	5.0	25	11/21/17 02:28	
cis-1,2-Dichloroethene	5300 D	50	10	50	11/21/17 15:09	
cis-1,3-Dichloropropene	25 U	25	5.0	25	11/21/17 02:28	
m,p-Xylenes	50 U	50	6.5	25	11/21/17 02:28	
o-Xylene	25 U	25	5.0	25	11/21/17 02:28	
trans-1,2-Dichloroethene	7.3 J	25	5.0	25	11/21/17 02:28	
trans-1,3-Dichloropropene	25 U	25	5.0	25	11/21/17 02:28	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: MW-8R-17NOV
Lab Code: R1710784-010

Service Request: R1710784
Date Collected: 11/16/17 14:00
Date Received: 11/16/17 16:20

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	81 - 127	11/21/17 02:28	
4-Bromofluorobenzene	95	79 - 123	11/21/17 02:28	
Toluene-d8	94	83 - 120	11/21/17 02:28	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/16/17 11:40
Date Received: 11/16/17 16:20

Sample Name: MW-2R-17NOV
Lab Code: R1710784-011

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	10 U	10	2.0	10	11/21/17 02:50	
1,1,2,2-Tetrachloroethane	10 U	10	2.0	10	11/21/17 02:50	
1,1,2-Trichloroethane	10 U	10	2.0	10	11/21/17 02:50	
1,1-Dichloroethane (1,1-DCA)	68	10	2.1	10	11/21/17 02:50	
1,1-Dichloroethene (1,1-DCE)	24	10	2.0	10	11/21/17 02:50	
1,2-Dichlorobenzene	10 U	10	2.5	10	11/21/17 02:50	
1,2-Dichloroethane	10 U	10	2.0	10	11/21/17 02:50	
1,2-Dichloropropane	10 U	10	2.0	10	11/21/17 02:50	
1,3-Dichlorobenzene	10 U	10	2.2	10	11/21/17 02:50	
1,4-Dichlorobenzene	10 U	10	2.0	10	11/21/17 02:50	
2-Chloroethyl Vinyl Ether	100 U	100	6.0	10	11/21/17 02:50	
Acetone	50 U	50	28	10	11/21/17 02:50	
Benzene	10 U	10	2.0	10	11/21/17 02:50	
Bromodichloromethane	10 U	10	2.0	10	11/21/17 02:50	
Bromoform	10 U	10	2.0	10	11/21/17 02:50	
Bromomethane	10 U	10	4.4	10	11/21/17 02:50	
Carbon Tetrachloride	10 U	10	2.0	10	11/21/17 02:50	
Chlorobenzene	10 U	10	2.0	10	11/21/17 02:50	
Chloroethane	10 U	10	2.4	10	11/21/17 02:50	
Chloroform	10 U	10	2.0	10	11/21/17 02:50	
Chloromethane	2.8 J	10	2.0	10	11/21/17 02:50	
Dibromochloromethane	10 U	10	2.0	10	11/21/17 02:50	
Methylene Chloride	10 U	10	2.0	10	11/21/17 02:50	
Ethylbenzene	10 U	10	2.0	10	11/21/17 02:50	
Tetrachloroethene (PCE)	10 U	10	2.0	10	11/21/17 02:50	
Toluene	10 U	10	2.0	10	11/21/17 02:50	
Trichloroethene (TCE)	10 U	10	2.0	10	11/21/17 02:50	
Trichlorofluoromethane (CFC 11)	10 U	10	2.0	10	11/21/17 02:50	
Vinyl Chloride	370	10	2.0	10	11/21/17 02:50	
cis-1,2-Dichloroethene	2200 D	25	5.0	25	11/21/17 15:32	
cis-1,3-Dichloropropene	10 U	10	2.0	10	11/21/17 02:50	
m,p-Xylenes	20 U	20	2.6	10	11/21/17 02:50	
o-Xylene	10 U	10	2.0	10	11/21/17 02:50	
trans-1,2-Dichloroethene	5.3 J	10	2.0	10	11/21/17 02:50	
trans-1,3-Dichloropropene	10 U	10	2.0	10	11/21/17 02:50	

ALS Group USA, Corp.
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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: MW-2R-17NOV
Lab Code: R1710784-011

Service Request: R1710784
Date Collected: 11/16/17 11:40
Date Received: 11/16/17 16:20

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81 - 127	11/21/17 02:50	
4-Bromofluorobenzene	95	79 - 123	11/21/17 02:50	
Toluene-d8	95	83 - 120	11/21/17 02:50	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/16/17 14:45
Date Received: 11/16/17 16:20

Sample Name: MW-14R-17NOV
Lab Code: R1710784-012

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/21/17 00:59	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 00:59	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:59	
1,1-Dichloroethane (1,1-DCA)	0.77 J	1.0	0.21	1	11/21/17 00:59	
1,1-Dichloroethene (1,1-DCE)	0.55 J	1.0	0.20	1	11/21/17 00:59	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 00:59	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:59	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 00:59	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 00:59	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:59	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 00:59	
Acetone	5.0 U	5.0	2.8	1	11/21/17 00:59	
Benzene	1.0 U	1.0	0.20	1	11/21/17 00:59	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 00:59	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 00:59	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 00:59	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 00:59	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:59	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 00:59	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 00:59	
Chloromethane	0.25 BJ	1.0	0.20	1	11/21/17 00:59	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 00:59	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 00:59	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 00:59	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/21/17 00:59	
Toluene	1.0 U	1.0	0.20	1	11/21/17 00:59	
Trichloroethene (TCE)	22	1.0	0.20	1	11/21/17 00:59	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 00:59	
Vinyl Chloride	1.7	1.0	0.20	1	11/21/17 00:59	
cis-1,2-Dichloroethene	14	1.0	0.20	1	11/21/17 00:59	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:59	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 00:59	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 00:59	
trans-1,2-Dichloroethene	3.8	1.0	0.20	1	11/21/17 00:59	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:59	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-14R-17NOV
Lab Code: R1710784-012

Service Request: R1710784
Date Collected: 11/16/17 14:45
Date Received: 11/16/17 16:20

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81 - 127	11/21/17 00:59	
4-Bromofluorobenzene	102	79 - 123	11/21/17 00:59	
Toluene-d8	101	83 - 120	11/21/17 00:59	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/16/17 15:39
Date Received: 11/16/17 16:20

Sample Name: PZ-03-17NOV
Lab Code: R1710784-013

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	0.96 J	1.0	0.20	1	11/21/17 01:22	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 01:22	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 01:22	
1,1-Dichloroethane (1,1-DCA)	6.4	1.0	0.21	1	11/21/17 01:22	
1,1-Dichloroethene (1,1-DCE)	0.23 J	1.0	0.20	1	11/21/17 01:22	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 01:22	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 01:22	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 01:22	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 01:22	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 01:22	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 01:22	
Acetone	5.0 U	5.0	2.8	1	11/21/17 01:22	
Benzene	1.0 U	1.0	0.20	1	11/21/17 01:22	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 01:22	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 01:22	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 01:22	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 01:22	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 01:22	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 01:22	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 01:22	
Chloromethane	0.25 BJ	1.0	0.20	1	11/21/17 01:22	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 01:22	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 01:22	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 01:22	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/21/17 01:22	
Toluene	1.0 U	1.0	0.20	1	11/21/17 01:22	
Trichloroethene (TCE)	2.0	1.0	0.20	1	11/21/17 01:22	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 01:22	
Vinyl Chloride	0.84 J	1.0	0.20	1	11/21/17 01:22	
cis-1,2-Dichloroethene	9.3	1.0	0.20	1	11/21/17 01:22	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 01:22	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 01:22	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 01:22	
trans-1,2-Dichloroethene	0.36 J	1.0	0.20	1	11/21/17 01:22	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 01:22	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: PZ-03-17NOV
Lab Code: R1710784-013

Service Request: R1710784
Date Collected: 11/16/17 15:39
Date Received: 11/16/17 16:20

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81 - 127	11/21/17 01:22	
4-Bromofluorobenzene	100	79 - 123	11/21/17 01:22	
Toluene-d8	100	83 - 120	11/21/17 01:22	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/17/17 09:30
Date Received: 11/17/17 14:45

Sample Name: Trip Blank-20171117
Lab Code: R1710784-014

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/21/17 00:37	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 00:37	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 00:37	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 00:37	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:37	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 00:37	
Acetone	5.0 U	5.0	2.8	1	11/21/17 00:37	
Benzene	1.0 U	1.0	0.20	1	11/21/17 00:37	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 00:37	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 00:37	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 00:37	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 00:37	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 00:37	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 00:37	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 00:37	
Chloromethane	0.25 BJ	1.0	0.20	1	11/21/17 00:37	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 00:37	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 00:37	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 00:37	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/21/17 00:37	
Toluene	1.0 U	1.0	0.20	1	11/21/17 00:37	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/21/17 00:37	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 00:37	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/21/17 00:37	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 00:37	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:37	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 00:37	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 00:37	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 00:37	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 00:37	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Trip Blank-20171117
Lab Code: R1710784-014

Service Request: R1710784
Date Collected: 11/17/17 09:30
Date Received: 11/17/17 14:45
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	81 - 127	11/21/17 00:37	
4-Bromofluorobenzene	97	79 - 123	11/21/17 00:37	
Toluene-d8	96	83 - 120	11/21/17 00:37	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/17/17 11:05
Date Received: 11/17/17 14:45

Sample Name: MW-16R-17NOV
Lab Code: R1710784-015

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/21/17 15:54	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 15:54	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 15:54	
1,1-Dichloroethane (1,1-DCA)	6.5	1.0	0.21	1	11/21/17 15:54	
1,1-Dichloroethene (1,1-DCE)	1.9	1.0	0.20	1	11/21/17 15:54	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 15:54	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 15:54	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 15:54	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 15:54	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 15:54	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 15:54	
Acetone	5.0 U	5.0	2.8	1	11/21/17 15:54	
Benzene	1.0 U	1.0	0.20	1	11/21/17 15:54	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 15:54	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 15:54	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 15:54	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 15:54	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 15:54	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 15:54	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 15:54	
Chloromethane	0.23 BJ	1.0	0.20	1	11/21/17 15:54	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 15:54	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 15:54	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 15:54	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/21/17 15:54	
Toluene	1.0 U	1.0	0.20	1	11/21/17 15:54	
Trichloroethene (TCE)	0.22 J	1.0	0.20	1	11/21/17 15:54	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 15:54	
Vinyl Chloride	64	1.0	0.20	1	11/21/17 15:54	
cis-1,2-Dichloroethene	130	1.0	0.20	1	11/21/17 15:54	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 15:54	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 15:54	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 15:54	
trans-1,2-Dichloroethene	0.60 J	1.0	0.20	1	11/21/17 15:54	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 15:54	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-16R-17NOV
Lab Code: R1710784-015

Service Request: R1710784
Date Collected: 11/17/17 11:05
Date Received: 11/17/17 14:45
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81 - 127	11/21/17 15:54	
4-Bromofluorobenzene	94	79 - 123	11/21/17 15:54	
Toluene-d8	94	83 - 120	11/21/17 15:54	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/17/17 13:05
Date Received: 11/17/17 14:45

Sample Name: PZ-04-17NOV
Lab Code: R1710784-016

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	11	2.0	0.40	2	11/21/17 03:35	
1,1,2,2-Tetrachloroethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
1,1,2-Trichloroethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
1,1-Dichloroethane (1,1-DCA)	6.0	2.0	0.42	2	11/21/17 03:35	
1,1-Dichloroethene (1,1-DCE)	2.0	2.0	0.40	2	11/21/17 03:35	
1,2-Dichlorobenzene	2.0 U	2.0	0.50	2	11/21/17 03:35	
1,2-Dichloroethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
1,2-Dichloropropane	2.0 U	2.0	0.40	2	11/21/17 03:35	
1,3-Dichlorobenzene	2.0 U	2.0	0.44	2	11/21/17 03:35	
1,4-Dichlorobenzene	2.0 U	2.0	0.40	2	11/21/17 03:35	
2-Chloroethyl Vinyl Ether	20 U	20	1.2	2	11/21/17 03:35	
Acetone	10 U	10	5.6	2	11/21/17 03:35	
Benzene	2.0 U	2.0	0.40	2	11/21/17 03:35	
Bromodichloromethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
Bromoform	2.0 U	2.0	0.40	2	11/21/17 03:35	
Bromomethane	2.0 U	2.0	0.88	2	11/21/17 03:35	
Carbon Tetrachloride	2.0 U	2.0	0.40	2	11/21/17 03:35	
Chlorobenzene	2.0 U	2.0	0.40	2	11/21/17 03:35	
Chloroethane	2.0 U	2.0	0.48	2	11/21/17 03:35	
Chloroform	2.0 U	2.0	0.40	2	11/21/17 03:35	
Chloromethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
Dibromochloromethane	2.0 U	2.0	0.40	2	11/21/17 03:35	
Methylene Chloride	2.0 U	2.0	0.40	2	11/21/17 03:35	
Ethylbenzene	2.0 U	2.0	0.40	2	11/21/17 03:35	
Tetrachloroethene (PCE)	8.3	2.0	0.40	2	11/21/17 03:35	
Toluene	2.0 U	2.0	0.40	2	11/21/17 03:35	
Trichloroethene (TCE)	170	2.0	0.40	2	11/21/17 03:35	
Trichlorofluoromethane (CFC 11)	2.0 U	2.0	0.40	2	11/21/17 03:35	
Vinyl Chloride	11	2.0	0.40	2	11/21/17 03:35	
cis-1,2-Dichloroethene	190	2.0	0.40	2	11/21/17 03:35	
cis-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 03:35	
m,p-Xylenes	4.0 U	4.0	0.52	2	11/21/17 03:35	
o-Xylene	2.0 U	2.0	0.40	2	11/21/17 03:35	
trans-1,2-Dichloroethene	2.1	2.0	0.40	2	11/21/17 03:35	
trans-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 03:35	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: PZ-04-17NOV
Lab Code: R1710784-016

Service Request: R1710784
Date Collected: 11/17/17 13:05
Date Received: 11/17/17 14:45
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81 - 127	11/21/17 03:35	
4-Bromofluorobenzene	94	79 - 123	11/21/17 03:35	
Toluene-d8	93	83 - 120	11/21/17 03:35	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/17/17 14:05
Date Received: 11/17/17 14:45

Sample Name: PZ-02-17NOV
Lab Code: R1710784-017

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	0.73 J	1.0	0.20	1	11/21/17 01:44	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/21/17 01:44	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/21/17 01:44	
1,1-Dichloroethane (1,1-DCA)	0.32 J	1.0	0.21	1	11/21/17 01:44	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/21/17 01:44	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/21/17 01:44	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/21/17 01:44	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/21/17 01:44	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/21/17 01:44	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/21/17 01:44	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/21/17 01:44	
Acetone	5.0 U	5.0	2.8	1	11/21/17 01:44	
Benzene	1.0 U	1.0	0.20	1	11/21/17 01:44	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/21/17 01:44	
Bromoform	1.0 U	1.0	0.20	1	11/21/17 01:44	
Bromomethane	1.0 U	1.0	0.44	1	11/21/17 01:44	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/21/17 01:44	
Chlorobenzene	1.0 U	1.0	0.20	1	11/21/17 01:44	
Chloroethane	1.0 U	1.0	0.24	1	11/21/17 01:44	
Chloroform	1.0 U	1.0	0.20	1	11/21/17 01:44	
Chloromethane	0.26 BJ	1.0	0.20	1	11/21/17 01:44	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/21/17 01:44	
Methylene Chloride	1.0 U	1.0	0.20	1	11/21/17 01:44	
Ethylbenzene	1.0 U	1.0	0.20	1	11/21/17 01:44	
Tetrachloroethene (PCE)	0.78 J	1.0	0.20	1	11/21/17 01:44	
Toluene	1.0 U	1.0	0.20	1	11/21/17 01:44	
Trichloroethene (TCE)	1.6	1.0	0.20	1	11/21/17 01:44	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/21/17 01:44	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/21/17 01:44	
cis-1,2-Dichloroethene	1.2	1.0	0.20	1	11/21/17 01:44	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 01:44	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/21/17 01:44	
o-Xylene	1.0 U	1.0	0.20	1	11/21/17 01:44	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/21/17 01:44	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/21/17 01:44	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: PZ-02-17NOV
Lab Code: R1710784-017

Service Request: R1710784
Date Collected: 11/17/17 14:05
Date Received: 11/17/17 14:45

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	100	81 - 127	11/21/17 01:44	
4-Bromofluorobenzene	99	79 - 123	11/21/17 01:44	
Toluene-d8	98	83 - 120	11/21/17 01:44	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 09:00
Date Received: 11/20/17 14:40

Sample Name: Trip Blank-20172011
Lab Code: R1710784-018

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/22/17 15:18	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/22/17 15:18	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/22/17 15:18	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/22/17 15:18	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/22/17 15:18	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/22/17 15:18	
Acetone	5.0 U	5.0	2.8	1	11/22/17 15:18	
Benzene	1.0 U	1.0	0.20	1	11/22/17 15:18	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
Bromoform	1.0 U	1.0	0.20	1	11/22/17 15:18	
Bromomethane	1.0 U	1.0	0.44	1	11/22/17 15:18	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/22/17 15:18	
Chlorobenzene	1.0 U	1.0	0.20	1	11/22/17 15:18	
Chloroethane	1.0 U	1.0	0.24	1	11/22/17 15:18	
Chloroform	1.0 U	1.0	0.20	1	11/22/17 15:18	
Chloromethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/22/17 15:18	
Methylene Chloride	0.32 BJ	1.0	0.20	1	11/22/17 15:18	
Ethylbenzene	1.0 U	1.0	0.20	1	11/22/17 15:18	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/22/17 15:18	
Toluene	1.0 U	1.0	0.20	1	11/22/17 15:18	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	11/22/17 15:18	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/22/17 15:18	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/22/17 15:18	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/22/17 15:18	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/22/17 15:18	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/22/17 15:18	
o-Xylene	1.0 U	1.0	0.20	1	11/22/17 15:18	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/22/17 15:18	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/22/17 15:18	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: Trip Blank-20172011
Lab Code: R1710784-018

Service Request: R1710784
Date Collected: 11/20/17 09:00
Date Received: 11/20/17 14:40
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	81 - 127	11/22/17 15:18	
4-Bromofluorobenzene	93	79 - 123	11/22/17 15:18	
Toluene-d8	96	83 - 120	11/22/17 15:18	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 11:20
Date Received: 11/20/17 14:40

Sample Name: MW-10R-17NOV
Lab Code: R1710784-019

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	3.6 J	10	2.0	10	11/21/17 20:21	
1,1,2,2-Tetrachloroethane	10 U	10	2.0	10	11/21/17 20:21	
1,1,2-Trichloroethane	10 U	10	2.0	10	11/21/17 20:21	
1,1-Dichloroethane (1,1-DCA)	4.5 J	10	2.1	10	11/21/17 20:21	
1,1-Dichloroethene (1,1-DCE)	12	10	2.0	10	11/21/17 20:21	
1,2-Dichlorobenzene	10 U	10	2.5	10	11/21/17 20:21	
1,2-Dichloroethane	10 U	10	2.0	10	11/21/17 20:21	
1,2-Dichloropropane	10 U	10	2.0	10	11/21/17 20:21	
1,3-Dichlorobenzene	10 U	10	2.2	10	11/21/17 20:21	
1,4-Dichlorobenzene	10 U	10	2.0	10	11/21/17 20:21	
2-Chloroethyl Vinyl Ether	100 U	100	6.0	10	11/21/17 20:21	
Acetone	50 U	50	28	10	11/21/17 20:21	
Benzene	10 U	10	2.0	10	11/21/17 20:21	
Bromodichloromethane	10 U	10	2.0	10	11/21/17 20:21	
Bromoform	10 U	10	2.0	10	11/21/17 20:21	
Bromomethane	10 U	10	4.4	10	11/21/17 20:21	
Carbon Tetrachloride	10 U	10	2.0	10	11/21/17 20:21	
Chlorobenzene	10 U	10	2.0	10	11/21/17 20:21	
Chloroethane	10 U	10	2.4	10	11/21/17 20:21	
Chloroform	10 U	10	2.0	10	11/21/17 20:21	
Chloromethane	2.3 BJ	10	2.0	10	11/21/17 20:21	
Dibromochloromethane	10 U	10	2.0	10	11/21/17 20:21	
Methylene Chloride	10 U	10	2.0	10	11/21/17 20:21	
Ethylbenzene	10 U	10	2.0	10	11/21/17 20:21	
Tetrachloroethene (PCE)	2.8 J	10	2.0	10	11/21/17 20:21	
Toluene	10 U	10	2.0	10	11/21/17 20:21	
Trichloroethene (TCE)	860	10	2.0	10	11/21/17 20:21	
Trichlorofluoromethane (CFC 11)	10 U	10	2.0	10	11/21/17 20:21	
Vinyl Chloride	10 U	10	2.0	10	11/21/17 20:21	
cis-1,2-Dichloroethene	60	10	2.0	10	11/21/17 20:21	
cis-1,3-Dichloropropene	10 U	10	2.0	10	11/21/17 20:21	
m,p-Xylenes	20 U	20	2.6	10	11/21/17 20:21	
o-Xylene	10 U	10	2.0	10	11/21/17 20:21	
trans-1,2-Dichloroethene	8.0 J	10	2.0	10	11/21/17 20:21	
trans-1,3-Dichloropropene	10 U	10	2.0	10	11/21/17 20:21	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: MW-10R-17NOV
Lab Code: R1710784-019

Service Request: R1710784
Date Collected: 11/20/17 11:20
Date Received: 11/20/17 14:40
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	81 - 127	11/21/17 20:21	
4-Bromofluorobenzene	98	79 - 123	11/21/17 20:21	
Toluene-d8	98	83 - 120	11/21/17 20:21	

ALS Group USA, Corp.
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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 11:45
Date Received: 11/20/17 14:40

Sample Name: RB-20172011
Lab Code: R1710784-020

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.21	1	11/22/17 15:40	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,2-Dichlorobenzene	1.0 U	1.0	0.25	1	11/22/17 15:40	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	11/22/17 15:40	
1,3-Dichlorobenzene	1.0 U	1.0	0.22	1	11/22/17 15:40	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	11/22/17 15:40	
2-Chloroethyl Vinyl Ether	10 U	10	0.60	1	11/22/17 15:40	
Acetone	5.0 U	5.0	2.8	1	11/22/17 15:40	
Benzene	1.0 U	1.0	0.20	1	11/22/17 15:40	
Bromodichloromethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
Bromoform	1.0 U	1.0	0.20	1	11/22/17 15:40	
Bromomethane	1.0 U	1.0	0.44	1	11/22/17 15:40	
Carbon Tetrachloride	1.0 U	1.0	0.20	1	11/22/17 15:40	
Chlorobenzene	1.0 U	1.0	0.20	1	11/22/17 15:40	
Chloroethane	1.0 U	1.0	0.24	1	11/22/17 15:40	
Chloroform	1.0 U	1.0	0.20	1	11/22/17 15:40	
Chloromethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
Dibromochloromethane	1.0 U	1.0	0.20	1	11/22/17 15:40	
Methylene Chloride	0.37 BJ	1.0	0.20	1	11/22/17 15:40	
Ethylbenzene	1.0 U	1.0	0.20	1	11/22/17 15:40	
Tetrachloroethene (PCE)	1.0 U	1.0	0.20	1	11/22/17 15:40	
Toluene	1.0 U	1.0	0.20	1	11/22/17 15:40	
Trichloroethene (TCE)	2.6	1.0	0.20	1	11/22/17 15:40	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.20	1	11/22/17 15:40	
Vinyl Chloride	1.0 U	1.0	0.20	1	11/22/17 15:40	
cis-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/22/17 15:40	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/22/17 15:40	
m,p-Xylenes	2.0 U	2.0	0.26	1	11/22/17 15:40	
o-Xylene	1.0 U	1.0	0.20	1	11/22/17 15:40	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	11/22/17 15:40	
trans-1,3-Dichloropropene	1.0 U	1.0	0.20	1	11/22/17 15:40	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Sample Name: RB-20172011
Lab Code: R1710784-020

Service Request: R1710784
Date Collected: 11/20/17 11:45
Date Received: 11/20/17 14:40

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	102	81 - 127	11/22/17 15:40	
4-Bromofluorobenzene	96	79 - 123	11/22/17 15:40	
Toluene-d8	97	83 - 120	11/22/17 15:40	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 12:50
Date Received: 11/20/17 14:40

Sample Name: P-2-17NOV
Lab Code: R1710784-021

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	2.9	2.0	0.40	2	11/21/17 19:14	
1,1,2,2-Tetrachloroethane	2.0 U	2.0	0.40	2	11/21/17 19:14	
1,1,2-Trichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:14	
1,1-Dichloroethane (1,1-DCA)	23	2.0	0.42	2	11/21/17 19:14	
1,1-Dichloroethene (1,1-DCE)	2.6	2.0	0.40	2	11/21/17 19:14	
1,2-Dichlorobenzene	2.0 U	2.0	0.50	2	11/21/17 19:14	
1,2-Dichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:14	
1,2-Dichloropropane	2.0 U	2.0	0.40	2	11/21/17 19:14	
1,3-Dichlorobenzene	2.0 U	2.0	0.44	2	11/21/17 19:14	
1,4-Dichlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:14	
2-Chloroethyl Vinyl Ether	20 U	20	1.2	2	11/21/17 19:14	
Acetone	10 U	10	5.6	2	11/21/17 19:14	
Benzene	0.55 J	2.0	0.40	2	11/21/17 19:14	
Bromodichloromethane	2.0 U	2.0	0.40	2	11/21/17 19:14	
Bromoform	2.0 U	2.0	0.40	2	11/21/17 19:14	
Bromomethane	2.0 U	2.0	0.88	2	11/21/17 19:14	
Carbon Tetrachloride	2.0 U	2.0	0.40	2	11/21/17 19:14	
Chlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:14	
Chloroethane	0.54 J	2.0	0.48	2	11/21/17 19:14	
Chloroform	2.0 U	2.0	0.40	2	11/21/17 19:14	
Chloromethane	0.51 BJ	2.0	0.40	2	11/21/17 19:14	
Dibromochloromethane	2.0 U	2.0	0.40	2	11/21/17 19:14	
Methylene Chloride	2.0 U	2.0	0.40	2	11/21/17 19:14	
Ethylbenzene	2.0 U	2.0	0.40	2	11/21/17 19:14	
Tetrachloroethene (PCE)	3.2	2.0	0.40	2	11/21/17 19:14	
Toluene	2.0 U	2.0	0.40	2	11/21/17 19:14	
Trichloroethene (TCE)	23	2.0	0.40	2	11/21/17 19:14	
Trichlorofluoromethane (CFC 11)	2.0 U	2.0	0.40	2	11/21/17 19:14	
Vinyl Chloride	35	2.0	0.40	2	11/21/17 19:14	
cis-1,2-Dichloroethene	250	2.0	0.40	2	11/21/17 19:14	
cis-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:14	
m,p-Xylenes	4.0 U	4.0	0.52	2	11/21/17 19:14	
o-Xylene	2.0 U	2.0	0.40	2	11/21/17 19:14	
trans-1,2-Dichloroethene	2.9	2.0	0.40	2	11/21/17 19:14	
trans-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:14	

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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: P-2-17NOV
Lab Code: R1710784-021

Service Request: R1710784
Date Collected: 11/20/17 12:50
Date Received: 11/20/17 14:40
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81 - 127	11/21/17 19:14	
4-Bromofluorobenzene	100	79 - 123	11/21/17 19:14	
Toluene-d8	98	83 - 120	11/21/17 19:14	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 13:00
Date Received: 11/20/17 14:40

Sample Name: PW-1-17NOV
Lab Code: R1710784-022

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	2.0 U	2.0	0.40	2	11/21/17 19:36	
1,1,2,2-Tetrachloroethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
1,1,2-Trichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
1,1-Dichloroethane (1,1-DCA)	11	2.0	0.42	2	11/21/17 19:36	
1,1-Dichloroethene (1,1-DCE)	2.8	2.0	0.40	2	11/21/17 19:36	
1,2-Dichlorobenzene	2.0 U	2.0	0.50	2	11/21/17 19:36	
1,2-Dichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
1,2-Dichloropropane	2.0 U	2.0	0.40	2	11/21/17 19:36	
1,3-Dichlorobenzene	2.0 U	2.0	0.44	2	11/21/17 19:36	
1,4-Dichlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:36	
2-Chloroethyl Vinyl Ether	20 U	20	1.2	2	11/21/17 19:36	
Acetone	10 U	10	5.6	2	11/21/17 19:36	
Benzene	0.59 J	2.0	0.40	2	11/21/17 19:36	
Bromodichloromethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
Bromoform	2.0 U	2.0	0.40	2	11/21/17 19:36	
Bromomethane	2.0 U	2.0	0.88	2	11/21/17 19:36	
Carbon Tetrachloride	2.0 U	2.0	0.40	2	11/21/17 19:36	
Chlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:36	
Chloroethane	2.0 U	2.0	0.48	2	11/21/17 19:36	
Chloroform	2.0 U	2.0	0.40	2	11/21/17 19:36	
Chloromethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
Dibromochloromethane	2.0 U	2.0	0.40	2	11/21/17 19:36	
Methylene Chloride	2.0 U	2.0	0.40	2	11/21/17 19:36	
Ethylbenzene	2.0 U	2.0	0.40	2	11/21/17 19:36	
Tetrachloroethene (PCE)	2.0 U	2.0	0.40	2	11/21/17 19:36	
Toluene	2.0 U	2.0	0.40	2	11/21/17 19:36	
Trichloroethene (TCE)	13	2.0	0.40	2	11/21/17 19:36	
Trichlorofluoromethane (CFC 11)	2.0 U	2.0	0.40	2	11/21/17 19:36	
Vinyl Chloride	39	2.0	0.40	2	11/21/17 19:36	
cis-1,2-Dichloroethene	210	2.0	0.40	2	11/21/17 19:36	
cis-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:36	
m,p-Xylenes	4.0 U	4.0	0.52	2	11/21/17 19:36	
o-Xylene	2.0 U	2.0	0.40	2	11/21/17 19:36	
trans-1,2-Dichloroethene	2.2	2.0	0.40	2	11/21/17 19:36	
trans-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:36	

ALS Group USA, Corp.
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Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: PW-1-17NOV
Lab Code: R1710784-022

Service Request: R1710784
Date Collected: 11/20/17 13:00
Date Received: 11/20/17 14:40
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	81 - 127	11/21/17 19:36	
4-Bromofluorobenzene	100	79 - 123	11/21/17 19:36	
Toluene-d8	99	83 - 120	11/21/17 19:36	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 13:05
Date Received: 11/20/17 14:40

Sample Name: P-3-17NOV
Lab Code: R1710784-023

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	8.1	2.5	0.50	2.5	11/22/17 16:03	
1,1,2,2-Tetrachloroethane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
1,1,2-Trichloroethane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
1,1-Dichloroethane (1,1-DCA)	44	2.5	0.53	2.5	11/22/17 16:03	
1,1-Dichloroethene (1,1-DCE)	1.7 J	2.5	0.50	2.5	11/22/17 16:03	
1,2-Dichlorobenzene	2.5 U	2.5	0.63	2.5	11/22/17 16:03	
1,2-Dichloroethane	0.51 J	2.5	0.50	2.5	11/22/17 16:03	
1,2-Dichloropropane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
1,3-Dichlorobenzene	2.5 U	2.5	0.55	2.5	11/22/17 16:03	
1,4-Dichlorobenzene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
2-Chloroethyl Vinyl Ether	25 U	25	1.5	2.5	11/22/17 16:03	
Acetone	13 U	13	6.9	2.5	11/22/17 16:03	
Benzene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Bromodichloromethane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Bromoform	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Bromomethane	2.5 U	2.5	1.1	2.5	11/22/17 16:03	
Carbon Tetrachloride	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Chlorobenzene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Chloroethane	1.1 J	2.5	0.60	2.5	11/22/17 16:03	
Chloroform	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Chloromethane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Dibromochloromethane	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Methylene Chloride	0.81 BJ	2.5	0.50	2.5	11/22/17 16:03	
Ethylbenzene	0.77 J	2.5	0.50	2.5	11/22/17 16:03	
Tetrachloroethene (PCE)	9.6	2.5	0.50	2.5	11/22/17 16:03	
Toluene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Trichloroethene (TCE)	38	2.5	0.50	2.5	11/22/17 16:03	
Trichlorofluoromethane (CFC 11)	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
Vinyl Chloride	24	2.5	0.50	2.5	11/22/17 16:03	
cis-1,2-Dichloroethene	310	2.5	0.50	2.5	11/22/17 16:03	
cis-1,3-Dichloropropene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
m,p-Xylenes	5.0 U	5.0	0.65	2.5	11/22/17 16:03	
o-Xylene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	
trans-1,2-Dichloroethene	3.9	2.5	0.50	2.5	11/22/17 16:03	
trans-1,3-Dichloropropene	2.5 U	2.5	0.50	2.5	11/22/17 16:03	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: P-3-17NOV
Lab Code: R1710784-023

Service Request: R1710784
Date Collected: 11/20/17 13:05
Date Received: 11/20/17 14:40

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	102	81 - 127	11/22/17 16:03	
4-Bromofluorobenzene	97	79 - 123	11/22/17 16:03	
Toluene-d8	97	83 - 120	11/22/17 16:03	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water

Service Request: R1710784
Date Collected: 11/20/17 13:15
Date Received: 11/20/17 14:40

Sample Name: PW-2-17NOV
Lab Code: R1710784-024

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	0.75 J	2.0	0.40	2	11/21/17 19:59	
1,1,2,2-Tetrachloroethane	2.0 U	2.0	0.40	2	11/21/17 19:59	
1,1,2-Trichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:59	
1,1-Dichloroethane (1,1-DCA)	14	2.0	0.42	2	11/21/17 19:59	
1,1-Dichloroethene (1,1-DCE)	2.3	2.0	0.40	2	11/21/17 19:59	
1,2-Dichlorobenzene	2.0 U	2.0	0.50	2	11/21/17 19:59	
1,2-Dichloroethane	2.0 U	2.0	0.40	2	11/21/17 19:59	
1,2-Dichloropropane	2.0 U	2.0	0.40	2	11/21/17 19:59	
1,3-Dichlorobenzene	2.0 U	2.0	0.44	2	11/21/17 19:59	
1,4-Dichlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:59	
2-Chloroethyl Vinyl Ether	20 U	20	1.2	2	11/21/17 19:59	
Acetone	10 U	10	5.6	2	11/21/17 19:59	
Benzene	2.0 U	2.0	0.40	2	11/21/17 19:59	
Bromodichloromethane	2.0 U	2.0	0.40	2	11/21/17 19:59	
Bromoform	2.0 U	2.0	0.40	2	11/21/17 19:59	
Bromomethane	2.0 U	2.0	0.88	2	11/21/17 19:59	
Carbon Tetrachloride	2.0 U	2.0	0.40	2	11/21/17 19:59	
Chlorobenzene	2.0 U	2.0	0.40	2	11/21/17 19:59	
Chloroethane	2.0 U	2.0	0.48	2	11/21/17 19:59	
Chloroform	2.0 U	2.0	0.40	2	11/21/17 19:59	
Chloromethane	0.41 BJ	2.0	0.40	2	11/21/17 19:59	
Dibromochloromethane	2.0 U	2.0	0.40	2	11/21/17 19:59	
Methylene Chloride	2.0 U	2.0	0.40	2	11/21/17 19:59	
Ethylbenzene	2.0 U	2.0	0.40	2	11/21/17 19:59	
Tetrachloroethene (PCE)	1.1 J	2.0	0.40	2	11/21/17 19:59	
Toluene	2.0 U	2.0	0.40	2	11/21/17 19:59	
Trichloroethene (TCE)	11	2.0	0.40	2	11/21/17 19:59	
Trichlorofluoromethane (CFC 11)	2.0 U	2.0	0.40	2	11/21/17 19:59	
Vinyl Chloride	11	2.0	0.40	2	11/21/17 19:59	
cis-1,2-Dichloroethene	200	2.0	0.40	2	11/21/17 19:59	
cis-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:59	
m,p-Xylenes	4.0 U	4.0	0.52	2	11/21/17 19:59	
o-Xylene	2.0 U	2.0	0.40	2	11/21/17 19:59	
trans-1,2-Dichloroethene	1.0 J	2.0	0.40	2	11/21/17 19:59	
trans-1,3-Dichloropropene	2.0 U	2.0	0.40	2	11/21/17 19:59	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08
Sample Matrix: Water
Sample Name: PW-2-17NOV
Lab Code: R1710784-024

Service Request: R1710784
Date Collected: 11/20/17 13:15
Date Received: 11/20/17 14:40

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81 - 127	11/21/17 19:59	
4-Bromofluorobenzene	92	79 - 123	11/21/17 19:59	
Toluene-d8	94	83 - 120	11/21/17 19:59	

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14088.D
 Acq On : 17 Nov 2017 10:21 pm
 Operator : K.Ruest
 Sample : R1710784-001|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 28 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 20 16:21:53 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

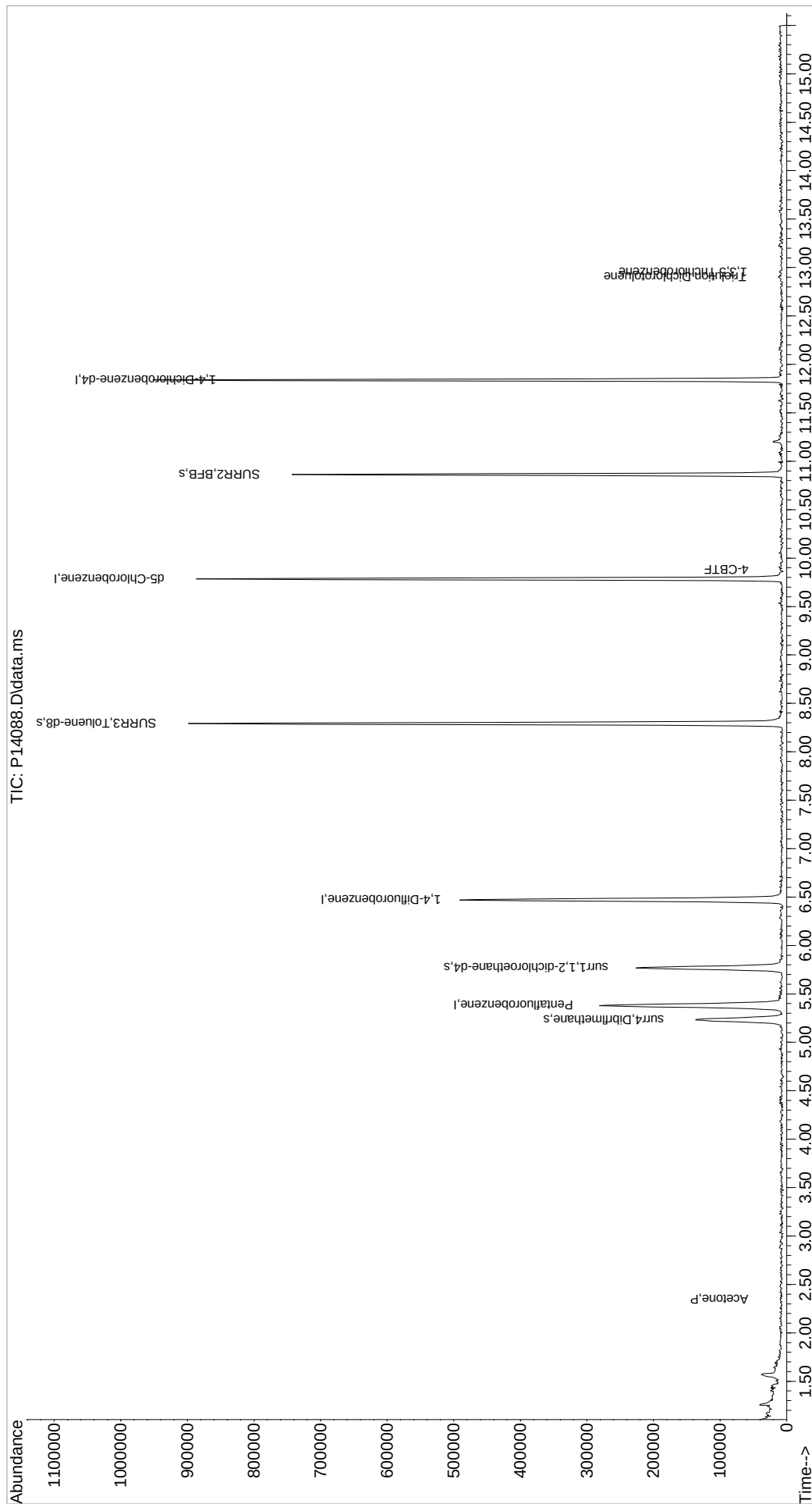
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.383	168	231719	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	381608	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	353780	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	180792	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.231	113	110127	51.75	ppb	-0.01
Spiked Amount	50.000	Range 89 - 119	Recovery	=	103.50%	
48) surr1,1,2-dichloroetha...	5.773	65	176112	51.92	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	103.84%	
65) SURR3,Toluene-d8	8.291	98	496828	50.52	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	101.04%	
70) SURR2,BFB	10.864	95	190012	49.15	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	98.30%	
Target Compounds						
15) Acetone	2.347	43	1309	0.46	ppb	Qvalue 78
80) 4-CBTF	9.882	180	702	0.21	ppb	# 67
112) Trielution Dichlorotol...	12.906	125	1615	0.27	ppb	# 66
113) 1,3,5 Trichlorobenzene	12.955	180	1194	0.26	ppb	# 40

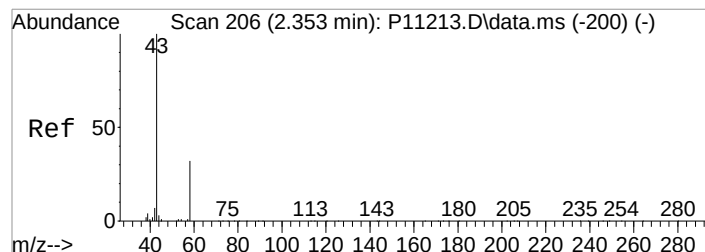
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14088.D
Acq On : 17 Nov 2017 10:21 pm
Operator : K.Ruest
Sample : R1710784-001|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 28 Sample Multiplier: 1

Inst : MSV0A-12

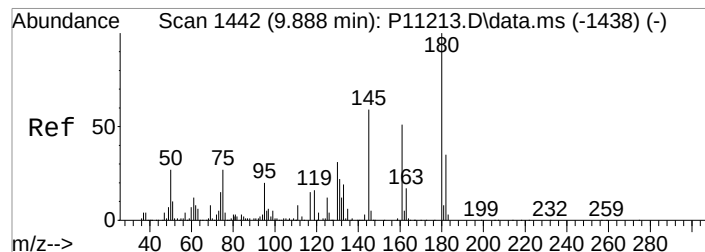
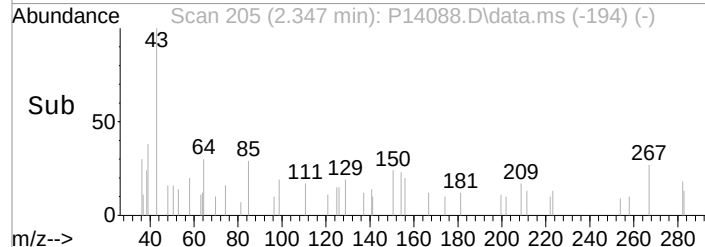
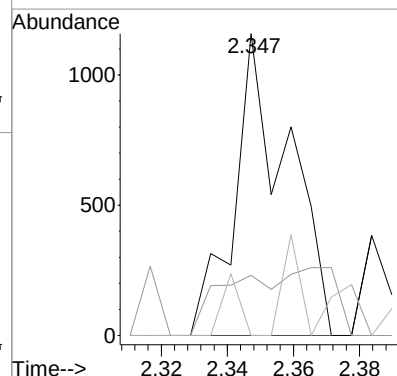
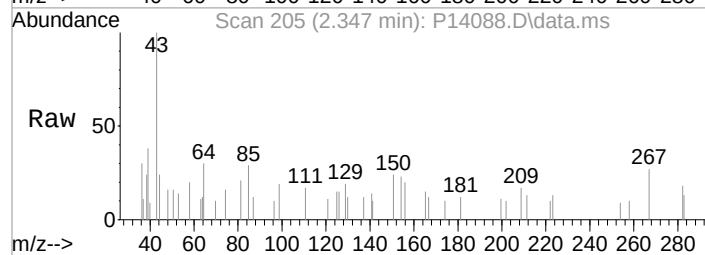
Quant Time: Nov 20 16:21:53 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
Qlast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration





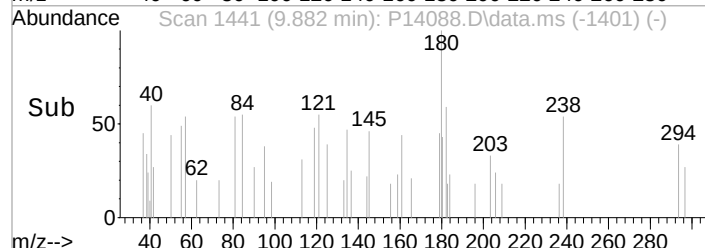
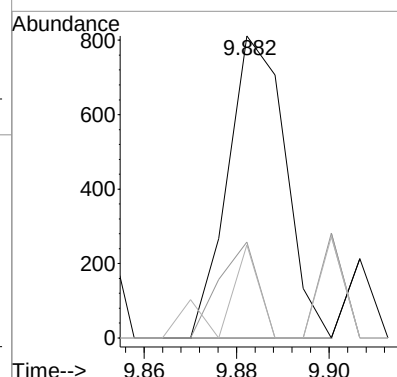
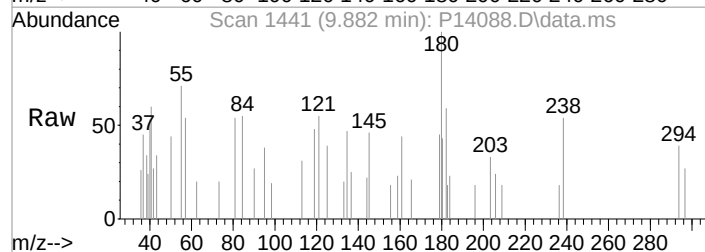
#15
Acetone
Concen: 0.46 ppb
RT: 2.347 min Scan# 205
Delta R.T. -0.010 min
Lab File: P14088.D
Acq: 17 Nov 2017 10:21 pm

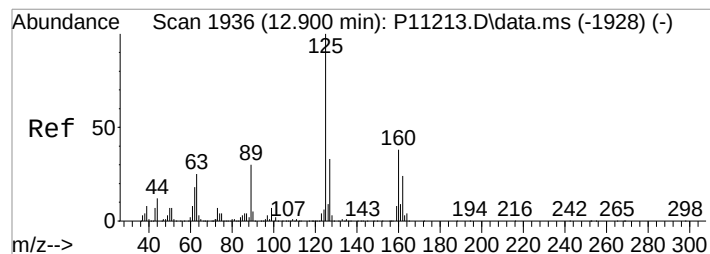
Tgt Ion	Ratio	Lower	Upper
43	100		
58	19.9	12.3	52.3
42	0.0	0.0	27.4



#80
4-CBTF
Concen: 0.21 ppb
RT: 9.882 min Scan# 1441
Delta R.T. -0.006 min
Lab File: P14088.D
Acq: 17 Nov 2017 10:21 pm

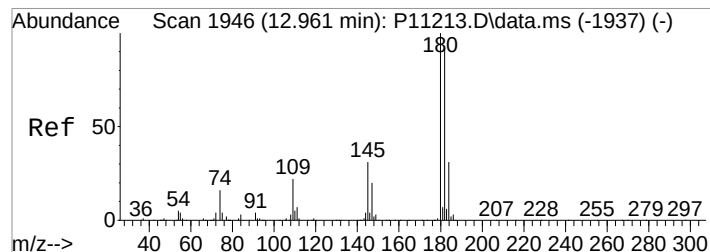
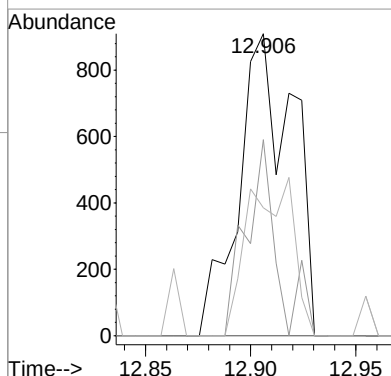
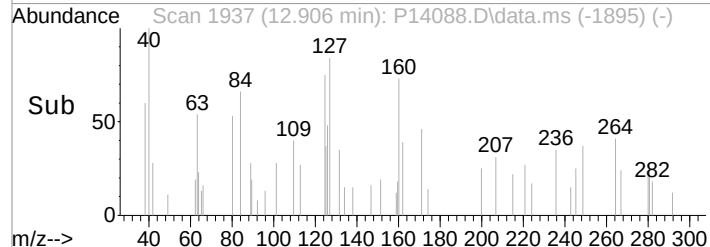
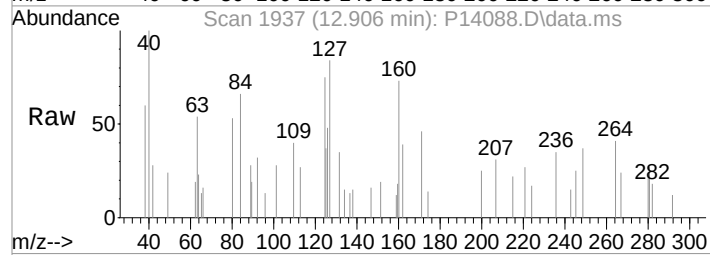
Tgt Ion	Ratio	Lower	Upper
180	100		
145	31.8	39.4	79.4#
161	30.8	30.8	70.8#





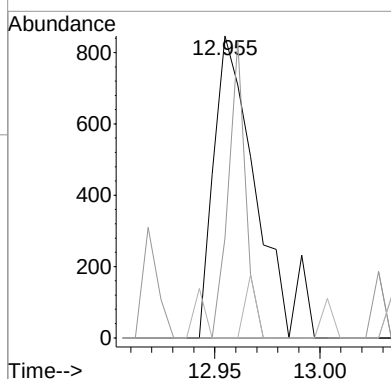
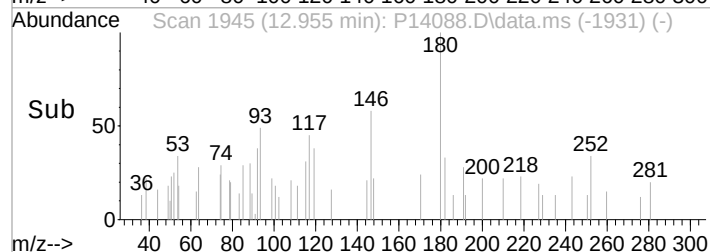
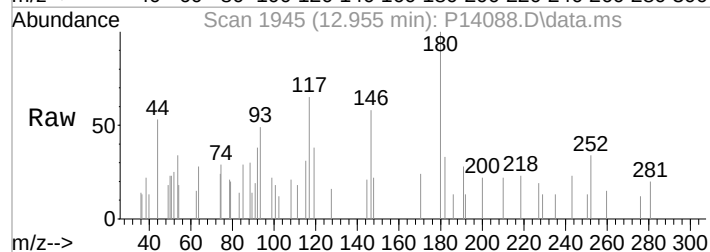
#112
 Trilution Dichlorotoluene
 Concen: 0.27 ppb
 RT: 12.906 min Scan# 1937
 Delta R.T. 0.004 min
 Lab File: P14088.D
 Acq: 17 Nov 2017 10:21 pm

Tgt Ion	Ratio	Resp	Lower	Upper
125	100	1615		
160	64.8	30.6	46.0#	
89	42.3	24.1	36.1#	



#113
 1,3,5 Trichlorobenzene
 Concen: 0.26 ppb
 RT: 12.955 min Scan# 1945
 Delta R.T. -0.002 min
 Lab File: P14088.D
 Acq: 17 Nov 2017 10:21 pm

Tgt Ion	Ratio	Resp	Lower	Upper
180	100	1194		
182	33.1	73.5	110.3#	
145	0.0	24.7	37.1#	



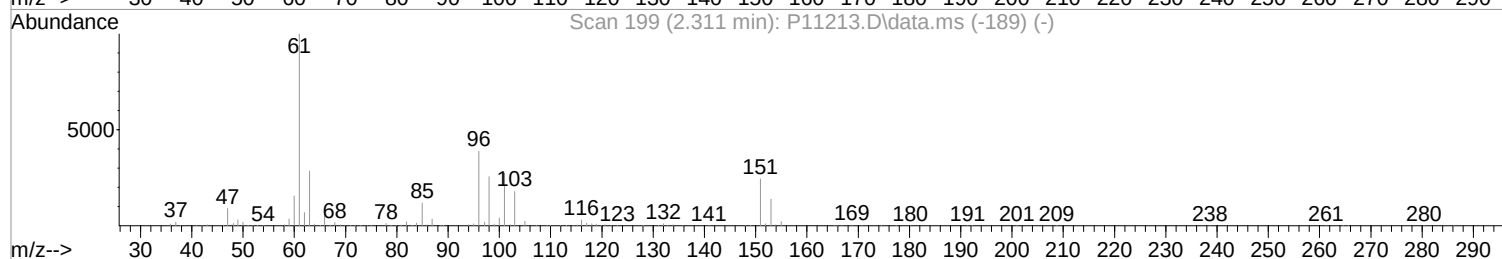
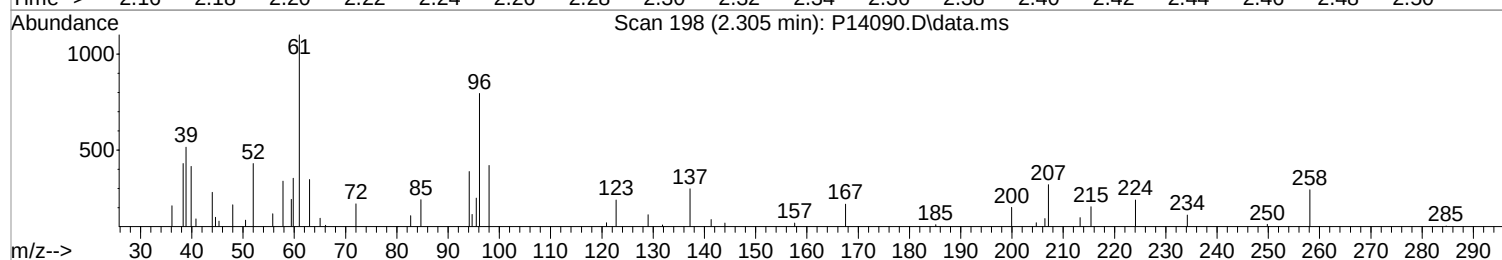
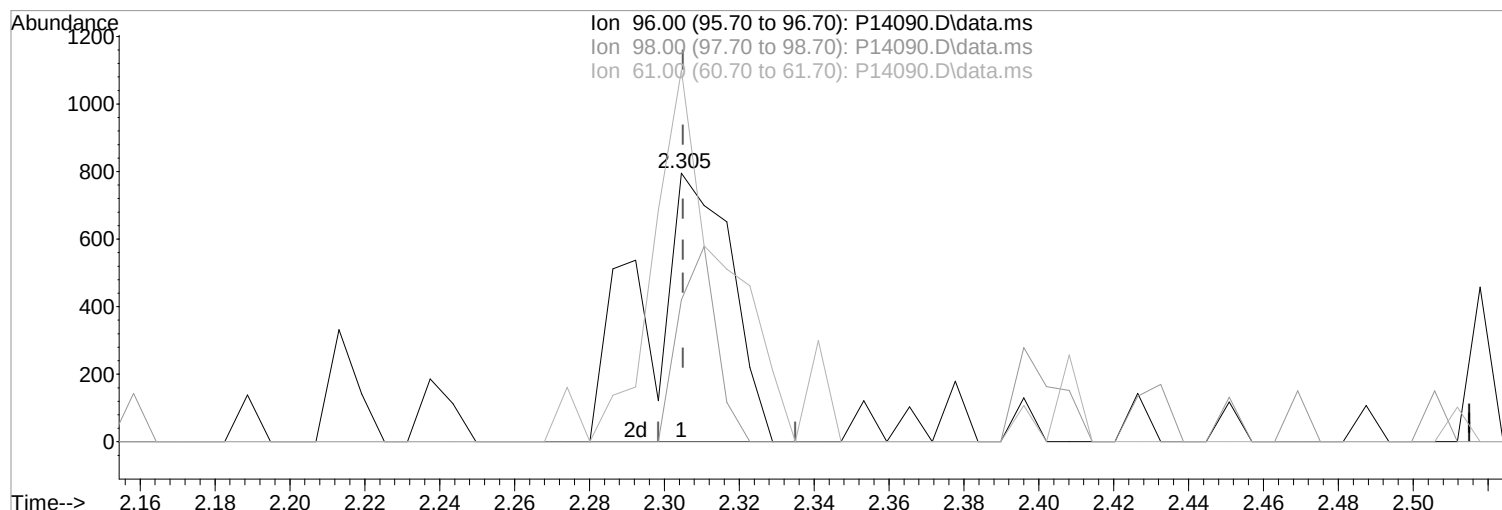
Quantitation Report (Qedit)

1st *102* 11/20/17
2nd *mmc* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14090.D
Acq On : 17 Nov 2017 11:05 pm
Operator : K.Ruest
Sample : R1710784-002|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:33:58 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14090.D\data.ms

(13) 1,1-Dicethylene (P)

2.305min (-0.000) 0.49 ppb m

response 1294

Ion	Exp%	Act%
96.00	100	100
98.00	66.10	52.83
61.00	258.00	138.36#
0.00	0.00	0.00

Manual Integration:

After

Split Peak

11/20/17

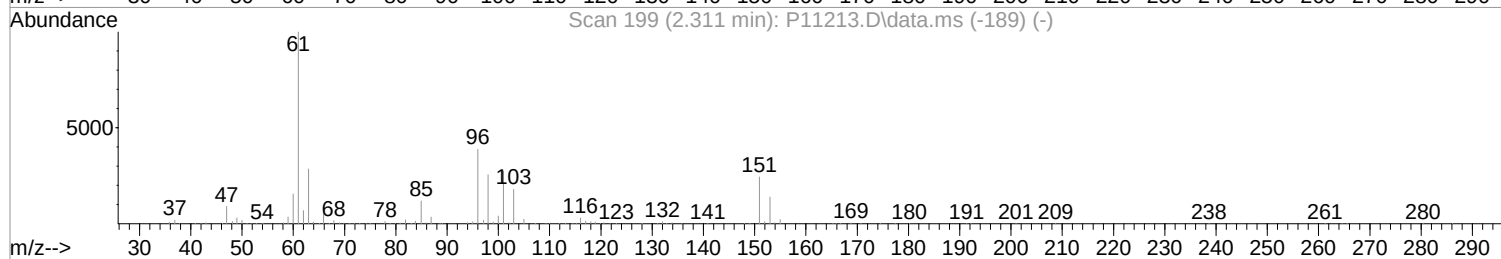
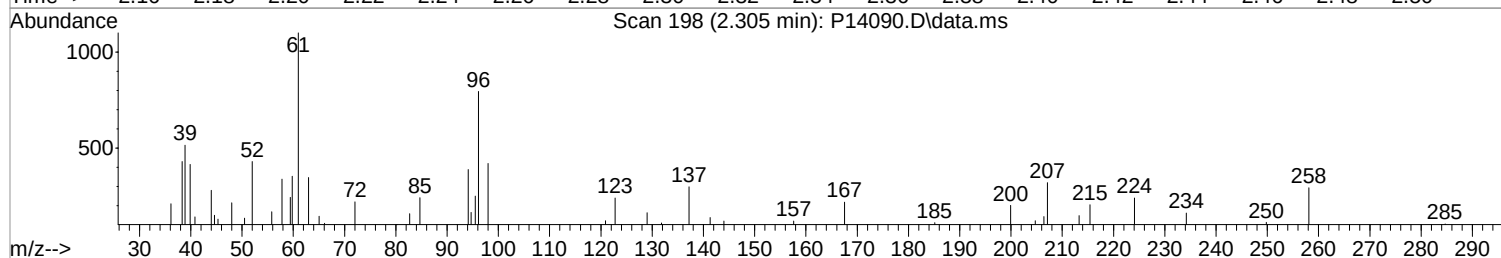
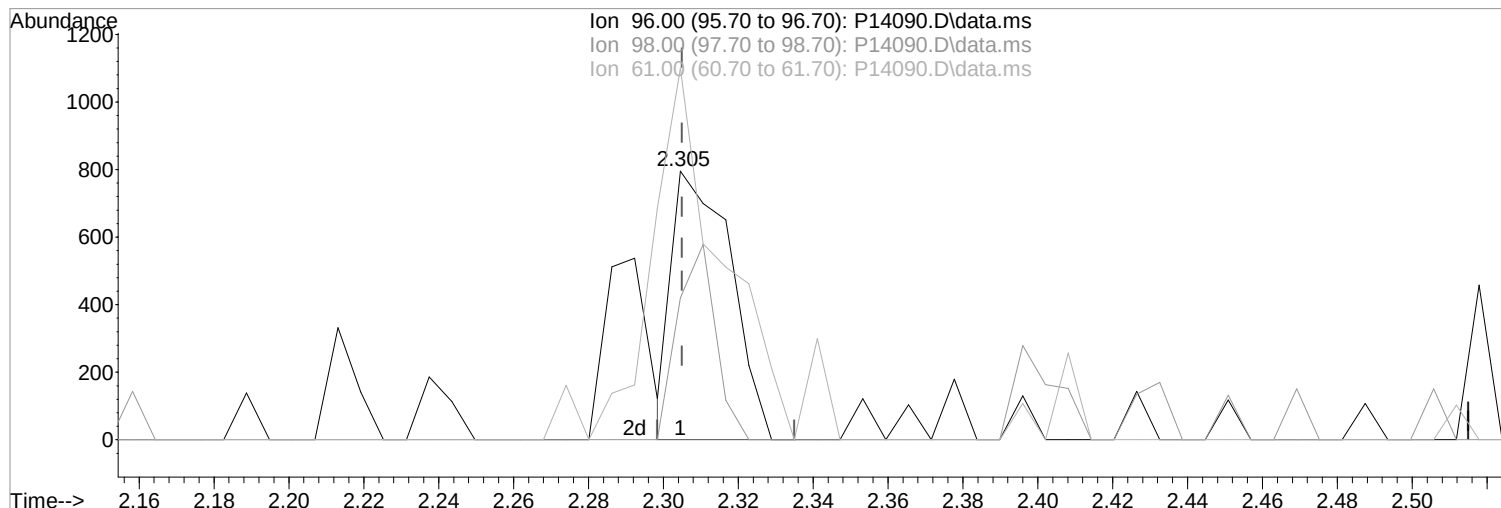
Quantitation Report (Qedit)

1st *102* 11/20/17
2nd *mmc* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14090.D
Acq On : 17 Nov 2017 11:05 pm
Operator : K.Ruest
Sample : R1710784-002|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:33:58 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14090.D\data.ms

(13) 1,1-Dicethylene (P)

Manual Integration:

2.305min (-0.000) 0.33 ppb

Before

response 866

Ion	Exp%	Act%
96.00	100	100
98.00	66.10	52.83
61.00	258.00	138.36#
0.00	0.00	0.00

11/20/17

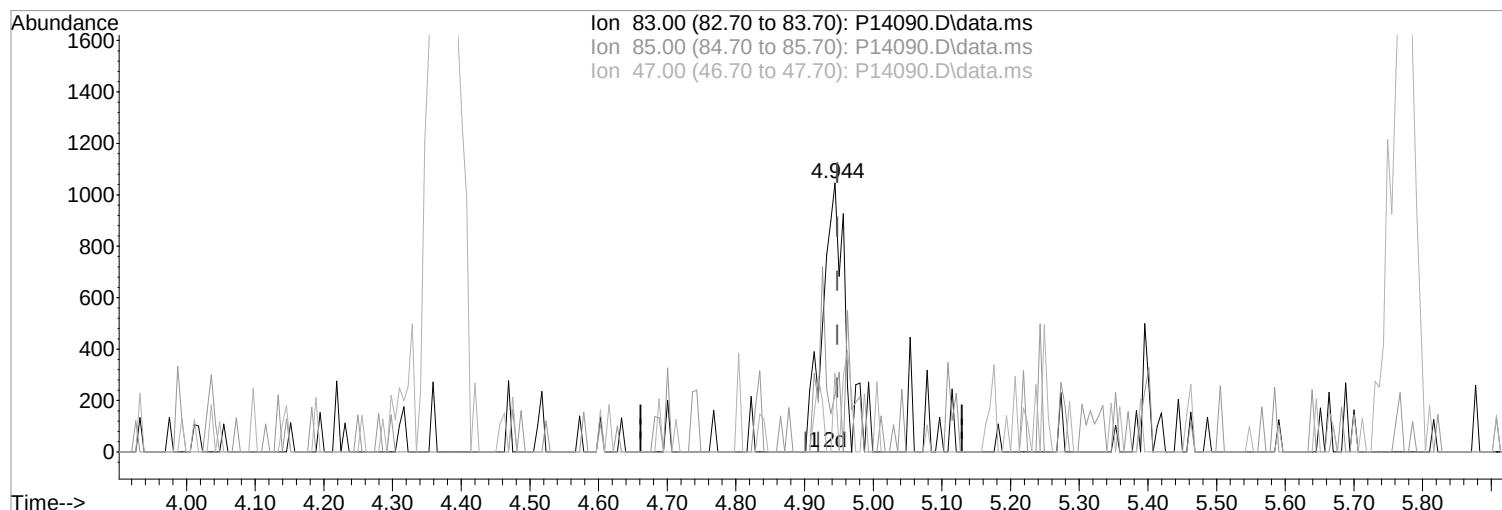
Quantitation Report (Qedit)

1st *MR* 11/20/17
2nd *MR* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14090.D
Acq On : 17 Nov 2017 11:05 pm
Operator : K.Ruest
Sample : R1710784-002|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:33:58 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



Quantitation Report (Qedit)

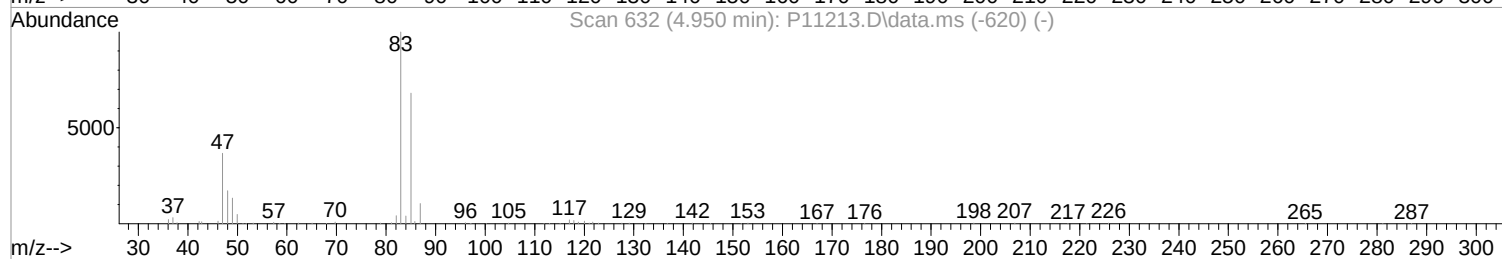
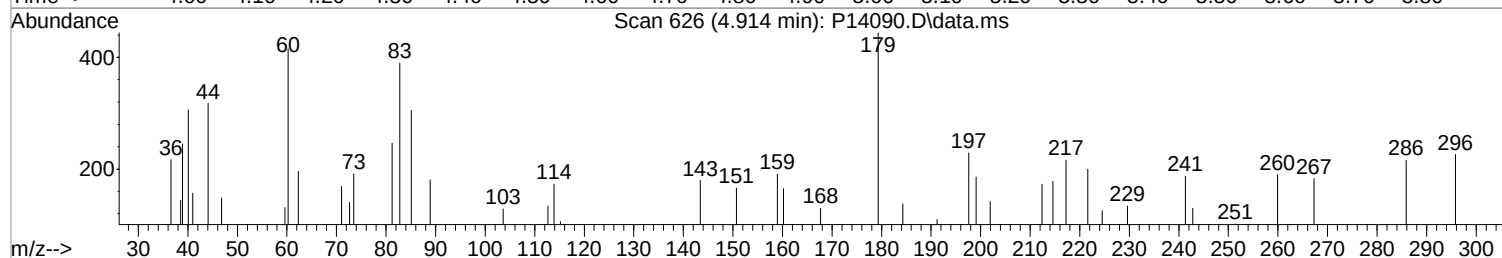
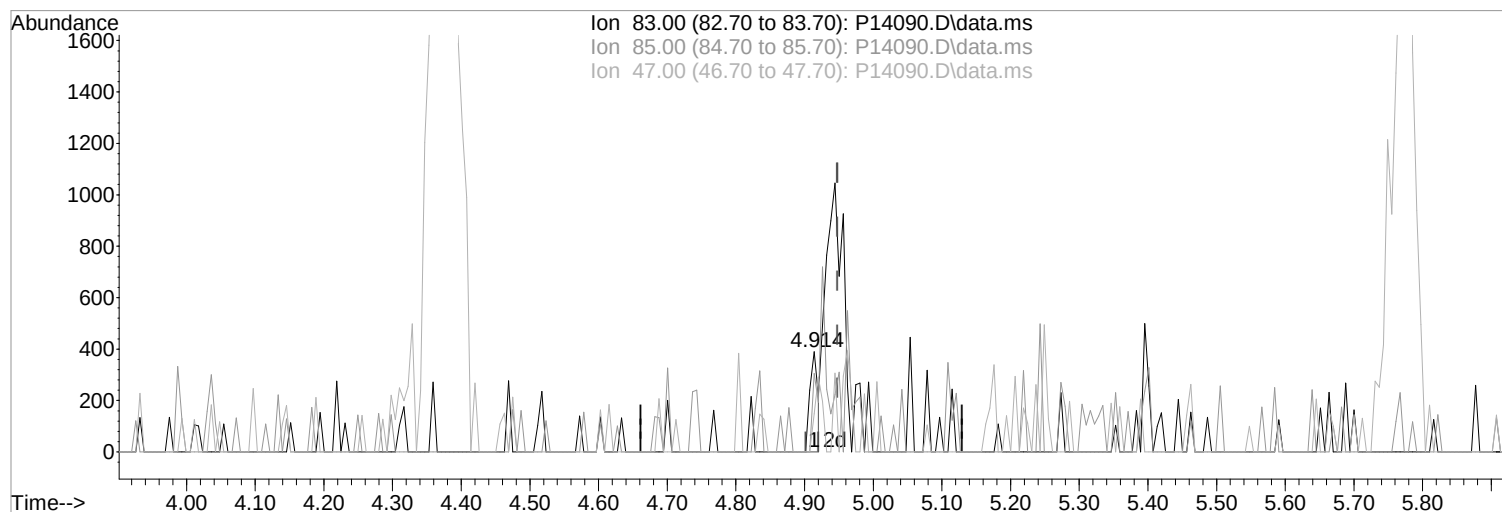
1st 11/20/17

2nd 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14090.D
Acq On : 17 Nov 2017 11:05 pm
Operator : K.Ruest
Sample : R1710784-002|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:33:58 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14090.D\data.ms

(40) Chloroform (P)

Manual Integration:

4.914min (-0.034) 0.06 ppb

Before

response 310

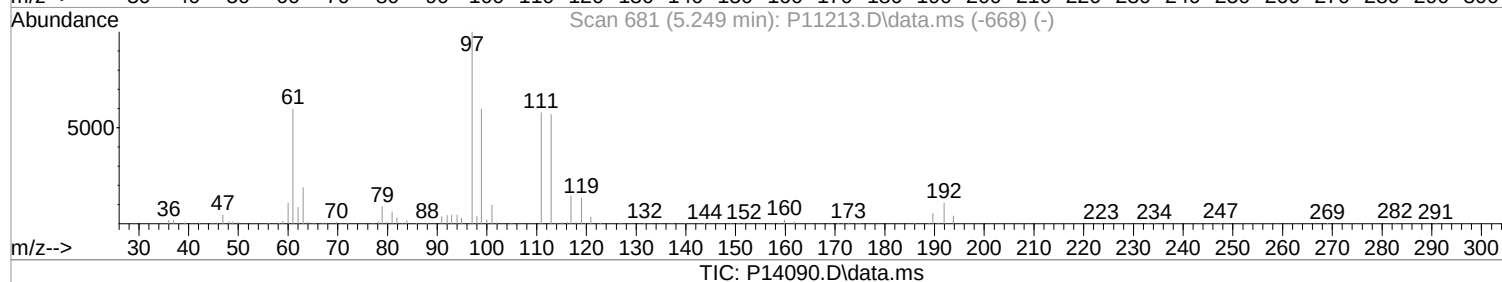
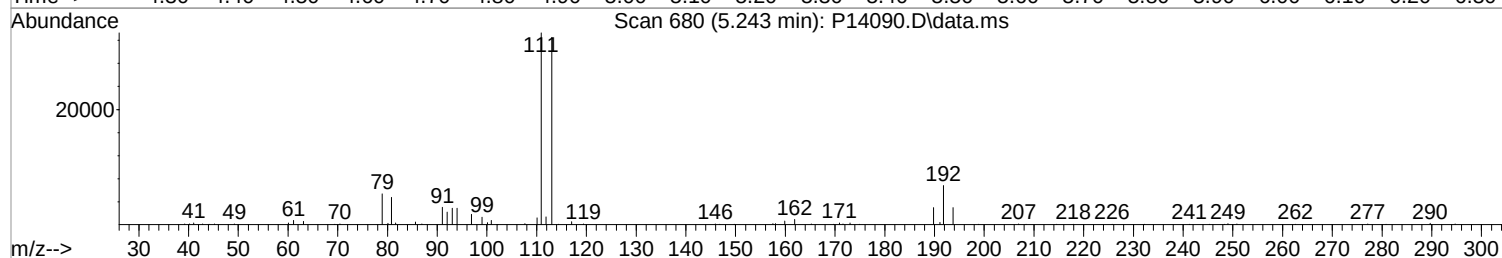
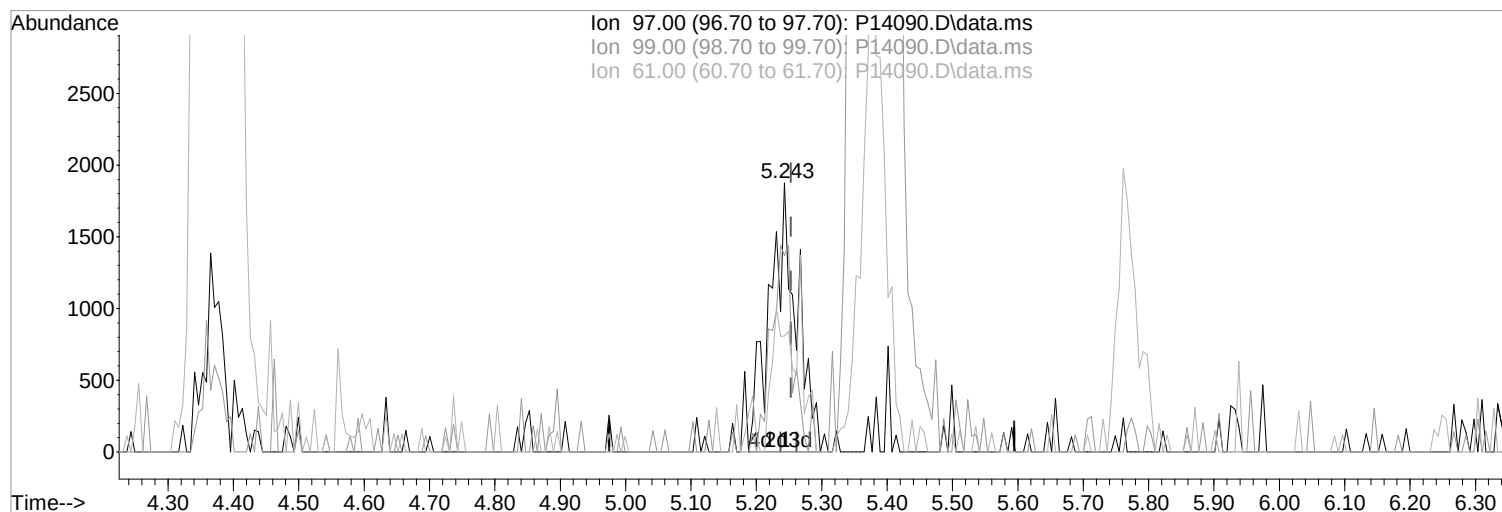
Ion	Exp%	Act%
83.00	100	100
85.00	68.00	78.21
47.00	36.70	37.95
0.00	0.00	0.00

11/20/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14090.D
Acq On : 17 Nov 2017 11:05 pm
Operator : K.Ruest
Sample : R1710784-002|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:33:58 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



(41) 1,1,1-Trichloroethane (P)

Manual Integration:

5.243min (-0.010) 1.32 ppb m

After

response 5400

Split Peak

Ion	Exp%	Act%
97.00	100	100
99.00	59.70	73.12
61.00	59.70	43.09
0.00	0.00	0.00

11/20/17

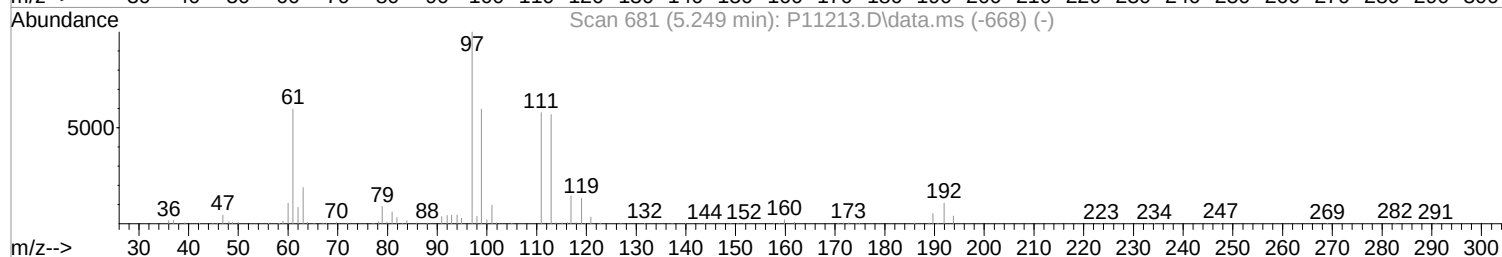
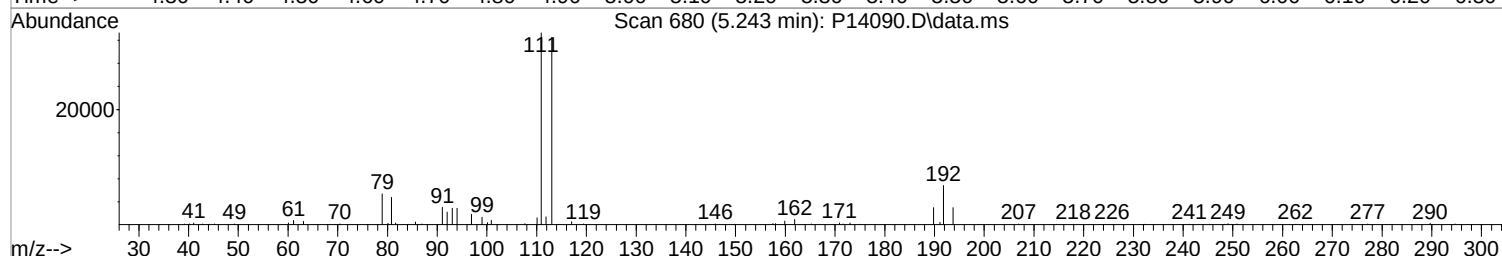
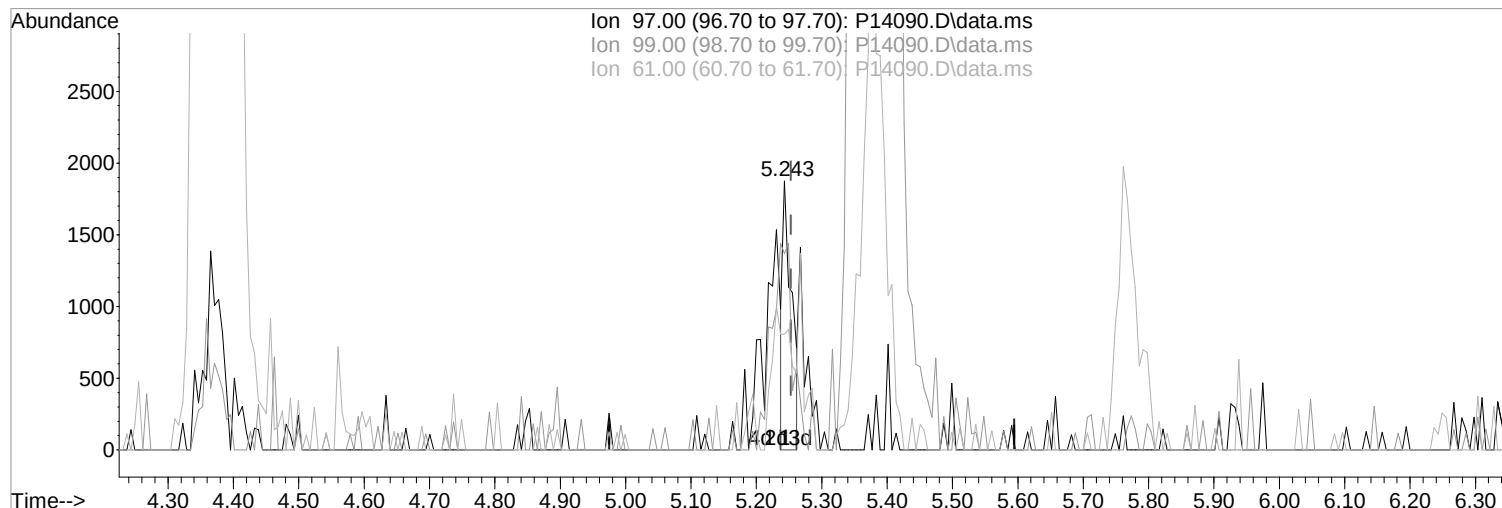
Quantitation Report (Qedit)

1st *MR* 11/20/17
2nd *MM* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14090.D
Acq On : 17 Nov 2017 11:05 pm
Operator : K.Ruest
Sample : R1710784-002|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:33:58 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14090.D\data.ms

(41) 1,1,1-Trichloroethane (P)

Manual Integration:

5.243min (-0.010) 0.43 ppb

Before

response 1763

Ion	Exp%	Act%
97.00	100	100
99.00	59.70	73.12
61.00	59.70	43.09
0.00	0.00	0.00

11/20/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14090.D
 Acq On : 17 Nov 2017 11:05 pm
 Operator : K.Ruest
 Sample : R1710784-002|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 20 16:26:03 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.377	168	240143	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	393204	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	363896	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	178452	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.237	113	112854	51.47	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	102.94%	
48) surr1,1,2-dichloroetha...	5.767	65	181842	52.03	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	104.06%	
65) SURR3,Toluene-d8	8.291	98	504257	49.76	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	99.52%	
70) SURR2,BFB	10.864	95	197582	49.60	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	99.20%	
Target Compounds						
						Qvalue
4) Vinyl Chloride	1.384	62	10331	2.52	ppb	85
13) 1,1-Diclethene	2.305	96	1294m	0.49	ppb	
26) trans-1,2-Dichloroethene	3.042	96	6988	2.59	ppb	# 68
28) 1,1-Diclethane	3.536	63	55372	9.15	ppb	91
34) cis-1,2-Dichloroethene	4.371	96	82647	26.13	ppb	# 57
40) Chloroform	4.944	83	2164m	0.45	ppb	
41) 1,1,1-Trichloroethane	5.243	97	5400m	1.32	ppb	
54) Trichloroethene	6.798	130	98834	33.03	ppb	94
72) Tetrachloroethene	8.962	164	88064	39.34	ppb	95
105) 1,3-Dclbenz	11.784	146	2040	0.33	ppb	# 62
106) 1,4-Dclbenz	11.858	146	4736	0.76	ppb	# 71
110) 1,2-Dclbenz	12.162	146	39261	6.51	ppb	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

```

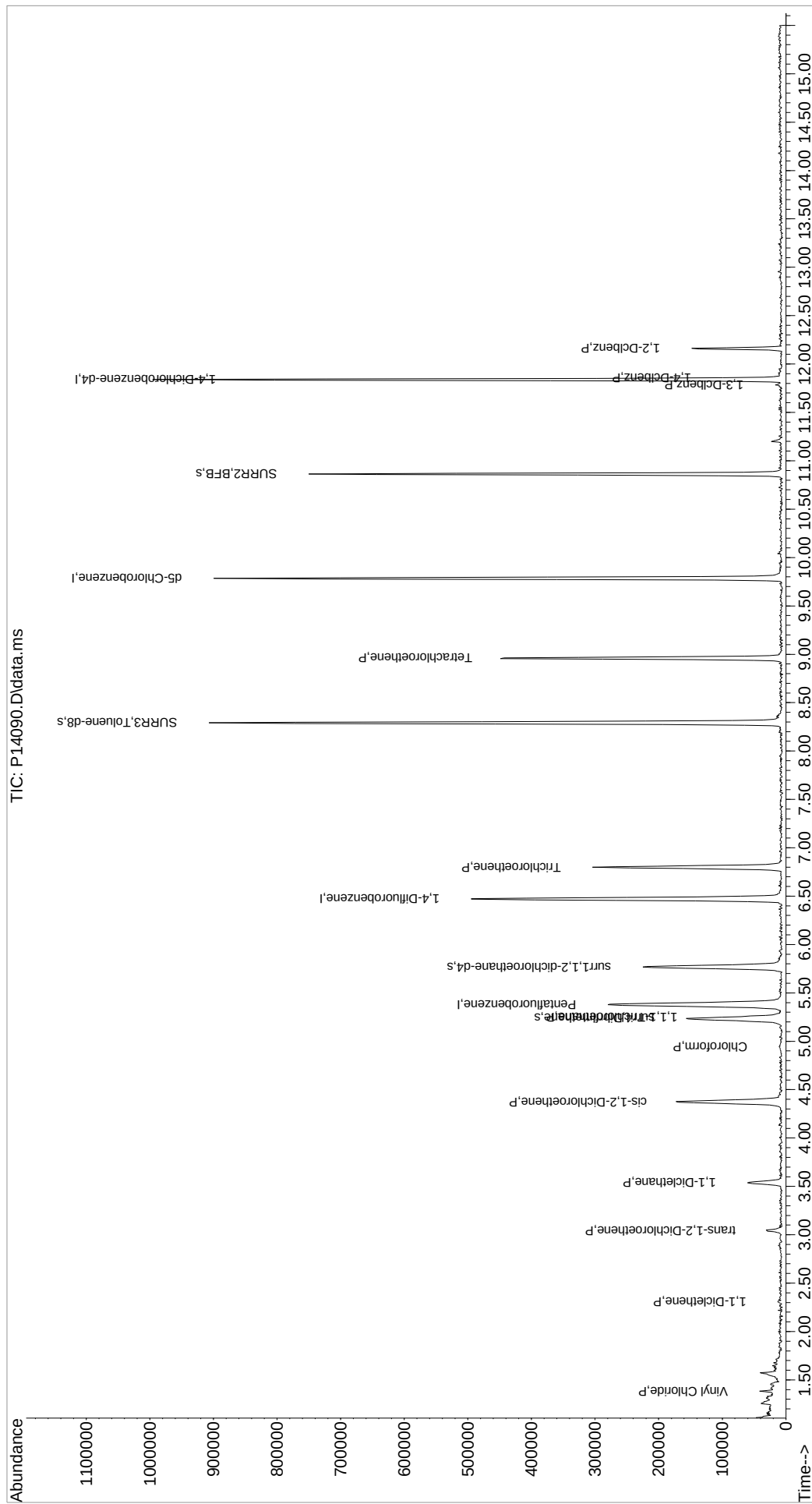
Data Path      : I:\ACQUDATA\msvoa12\Data\1111717\
Data File     : P14090.D
Acq On       : 17 Nov 2017  11:05 pm
Operator      : K.Ruest
Sample        : R1710784-002|1.0
Misc          : ECOLOGY 624 T2
ALS Vial      : 30 Sample Multiplier: 1

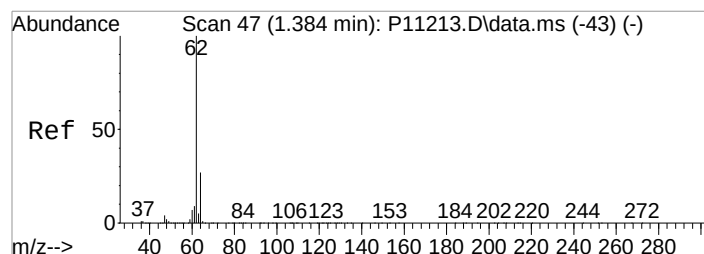
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Inst : MSVOA-12

ALS Vial : 30 Sample Multiplier: 1

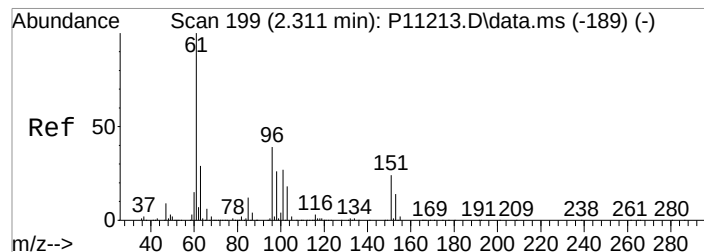
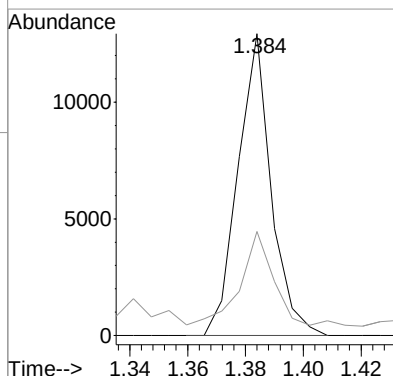
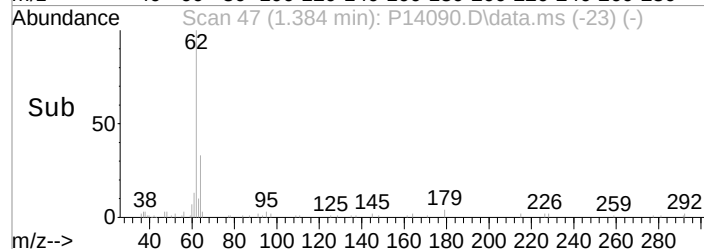
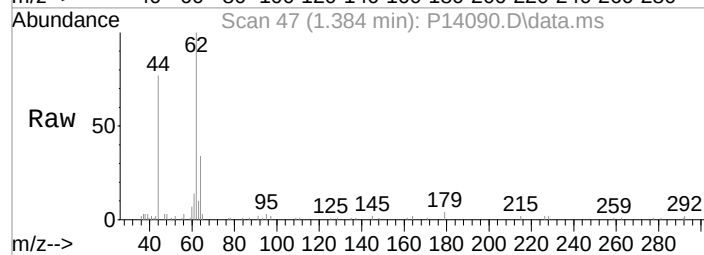
Quant Time: Nov 20 16:26:03 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration





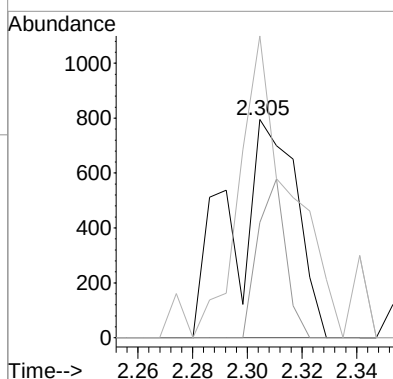
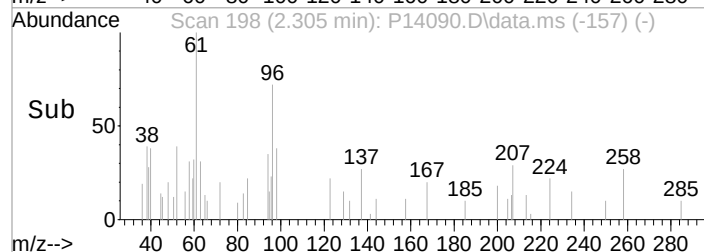
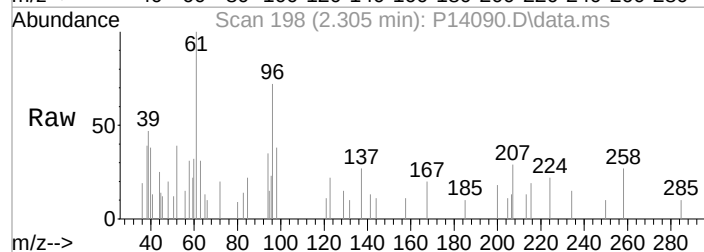
#4
 Vinyl Chloride
 Concen: 2.52 ppb
 RT: 1.384 min Scan# 47
 Delta R.T. 0.000 min
 Lab File: P14090.D
 Acq: 17 Nov 2017 11:05 pm

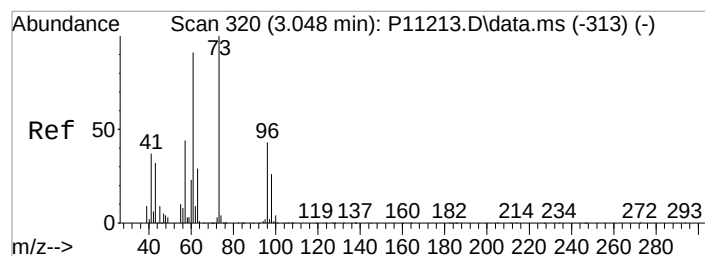
Tgt Ion: 62 Resp: 10331
 Ion Ratio Lower Upper
 62 100
 64 34.5 6.7 46.7



#13
 1,1-Dicethylene
 Concen: 0.49 ppb m
 RT: 2.305 min Scan# 198
 Delta R.T. -0.000 min
 Lab File: P14090.D
 Acq: 17 Nov 2017 11:05 pm

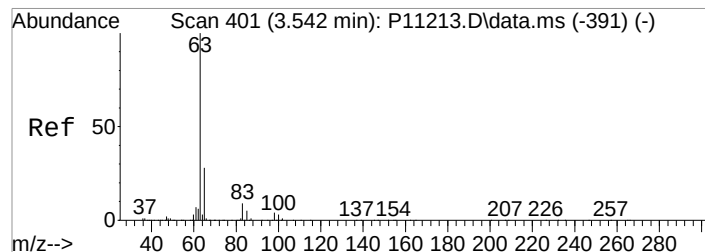
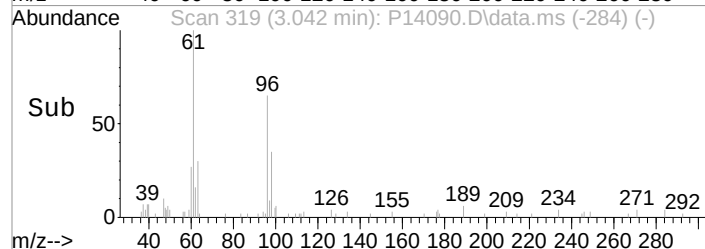
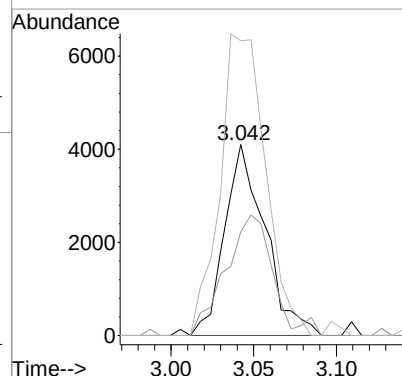
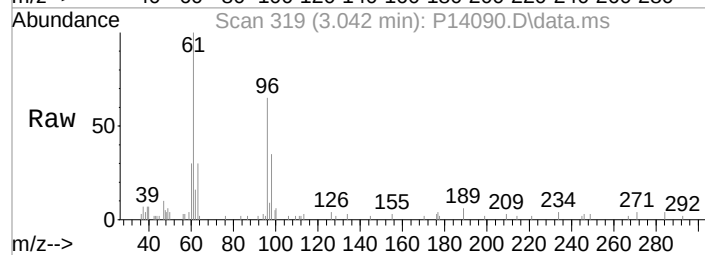
Tgt Ion: 96 Resp: 1294
 Ion Ratio Lower Upper
 96 100
 98 52.8 46.1 86.1
 61 138.4 238.0 278.0#





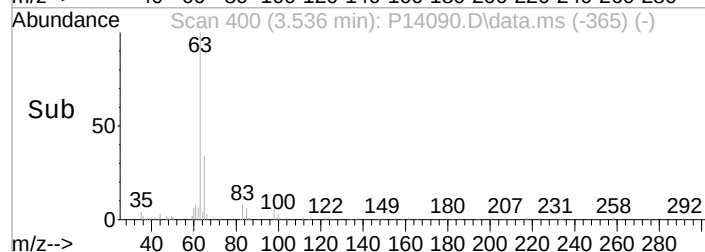
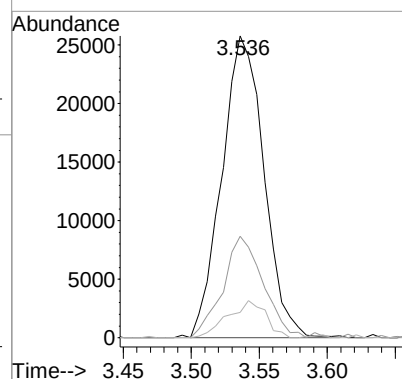
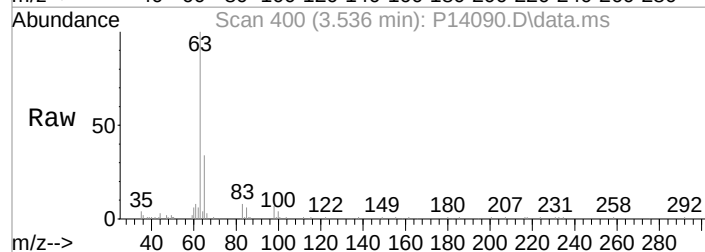
#26
trans-1,2-Dichloroethene
Concen: 2.59 ppb
RT: 3.042 min Scan# 319
Delta R.T. 0.002 min
Lab File: P14090.D
Acq: 17 Nov 2017 11:05 pm

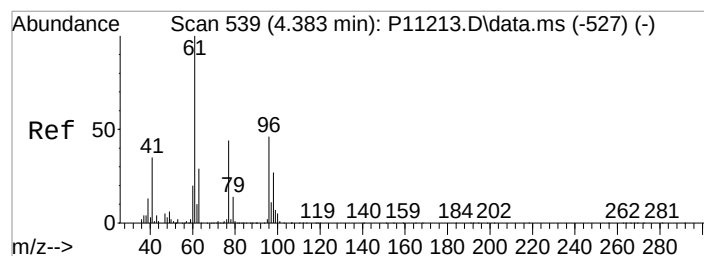
Tgt Ion	Ratio	Resp	Lower	Upper
96	100	6988		
98	54.2	41.8	81.8	
61	154.1	194.1	234.1#	



#28
1,1-Dicethane
Concen: 9.15 ppb
RT: 3.536 min Scan# 400
Delta R.T. -0.010 min
Lab File: P14090.D
Acq: 17 Nov 2017 11:05 pm

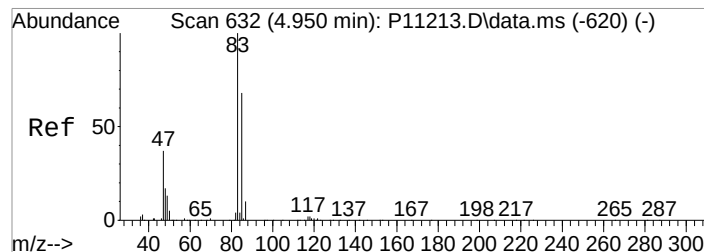
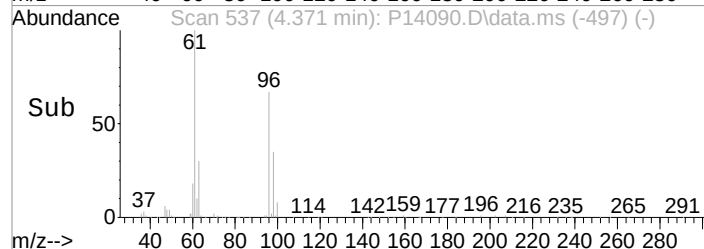
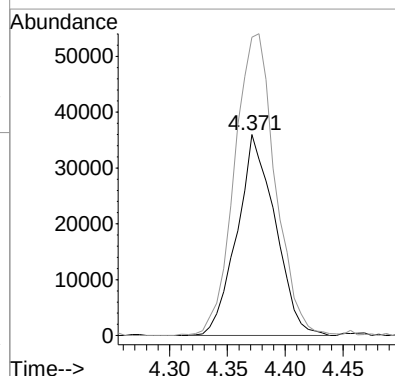
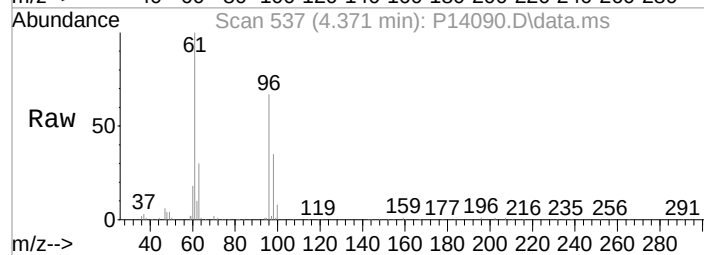
Tgt Ion	Ratio	Resp	Lower	Upper
63	100	55372		
65	33.6	8.0	48.0	
83	8.4	0.0	29.3	





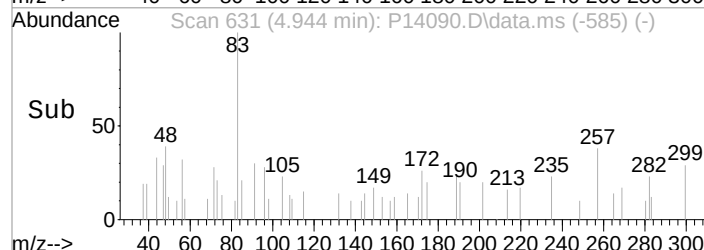
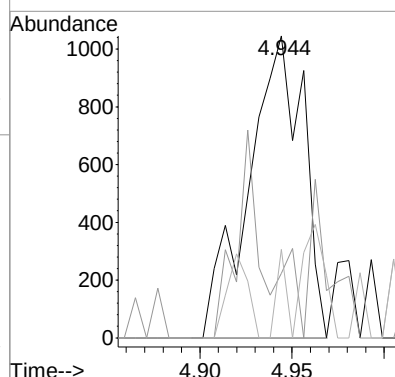
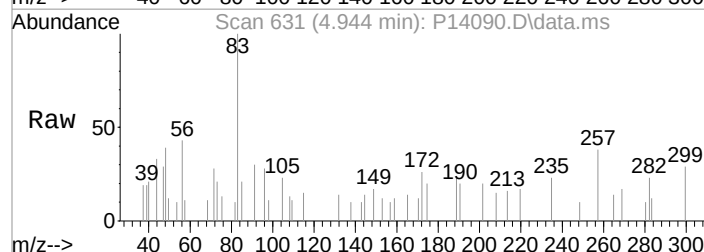
#34
 cis-1,2-Dichloroethene
 Concen: 26.13 ppb
 RT: 4.371 min Scan# 537
 Delta R.T. -0.014 min
 Lab File: P14090.D
 Acq: 17 Nov 2017 11:05 pm

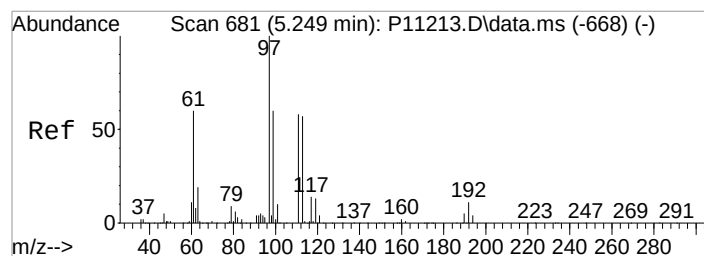
Tgt Ion: 96 Resp: 82647
 Ion Ratio Lower Upper
 96 100
 61 148.4 197.5 237.5#



#40
 Chloroform
 Concen: 0.45 ppb m
 RT: 4.944 min Scan# 631
 Delta R.T. -0.003 min
 Lab File: P14090.D
 Acq: 17 Nov 2017 11:05 pm

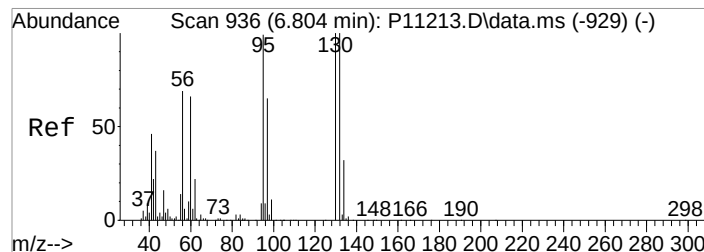
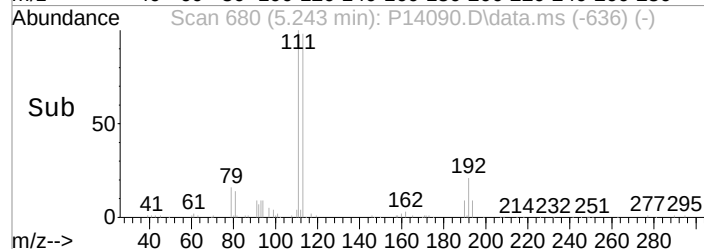
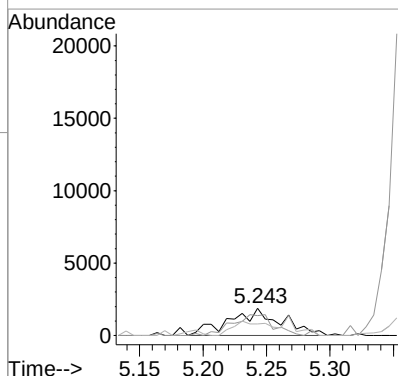
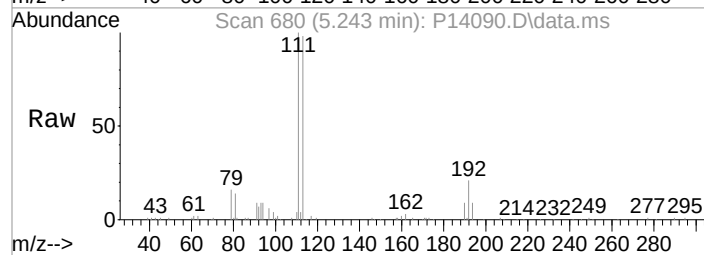
Tgt Ion: 83 Resp: 2164
 Ion Ratio Lower Upper
 83 100
 85 21.3 48.0 88.0#
 47 29.3 16.7 56.7





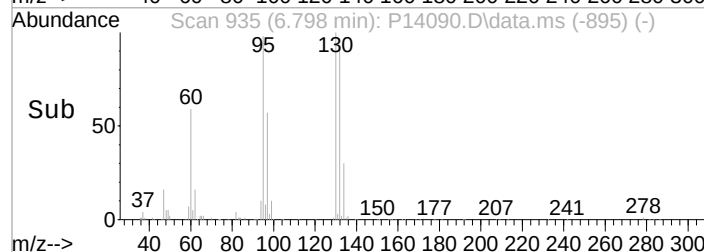
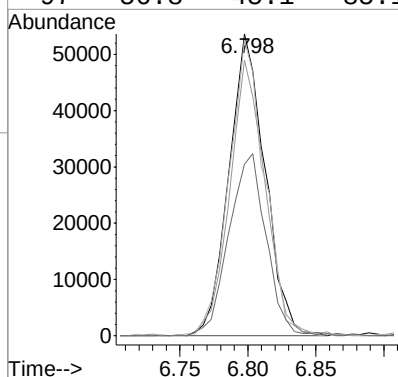
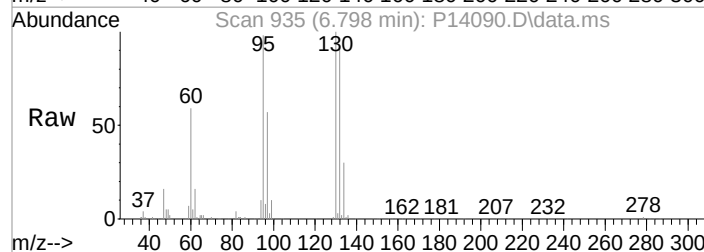
#41
1,1,1-Trichloroethane
Concen: 1.32 ppb m
RT: 5.243 min Scan# 680
Delta R.T. -0.010 min
Lab File: P14090.D
Acq: 17 Nov 2017 11:05 pm

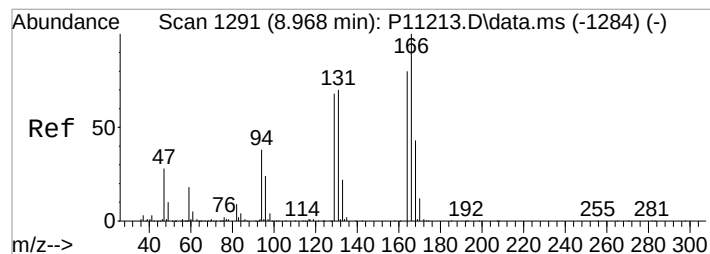
Tgt Ion	Ratio	Resp	Lower	Upper
97	100	5400		
99	73.1	39.7	79.7	
61	43.1	39.7	79.7	



#54
Trichloroethene
Concen: 33.03 ppb
RT: 6.798 min Scan# 935
Delta R.T. -0.006 min
Lab File: P14090.D
Acq: 17 Nov 2017 11:05 pm

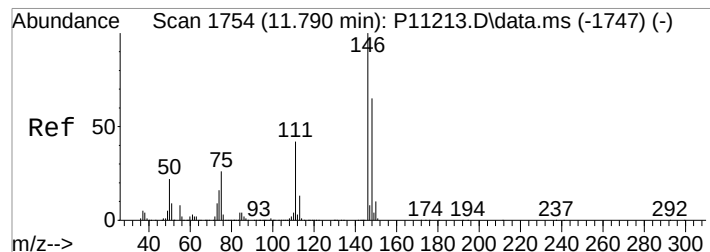
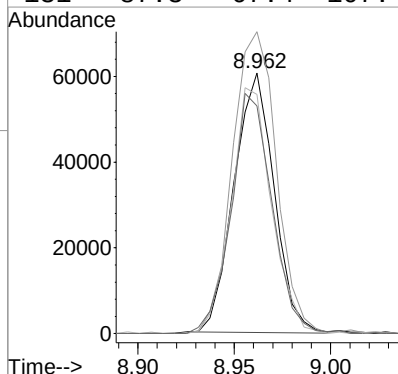
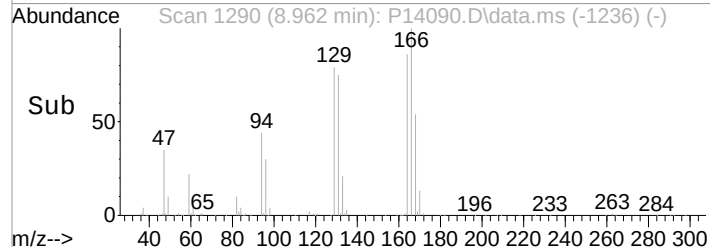
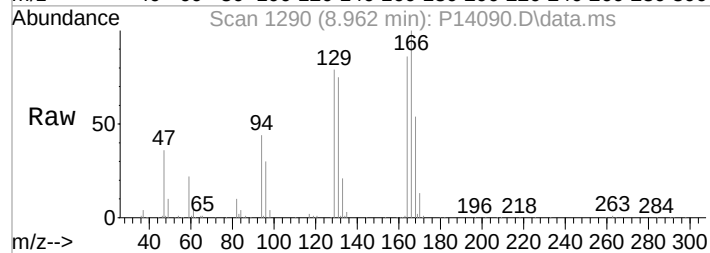
Tgt Ion	Ratio	Resp	Lower	Upper
130	100	98834		
132	91.3	80.0	120.0	
95	97.9	79.4	119.4	
97	56.8	45.1	85.1	





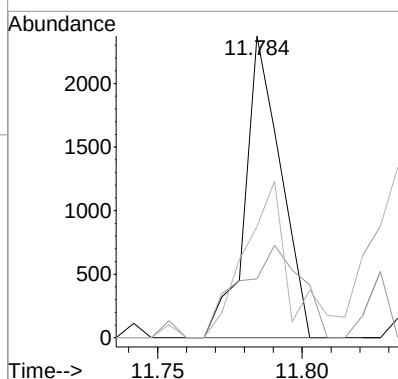
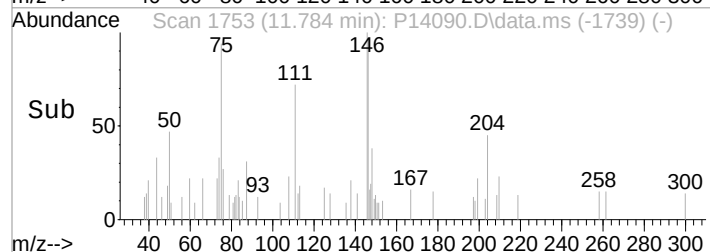
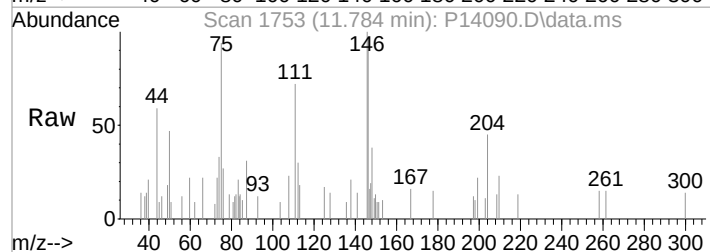
#72
Tetrachloroethene
Concen: 39.34 ppb
RT: 8.962 min Scan# 1290
Delta R.T. -0.000 min
Lab File: P14090.D
Acq: 17 Nov 2017 11:05 pm

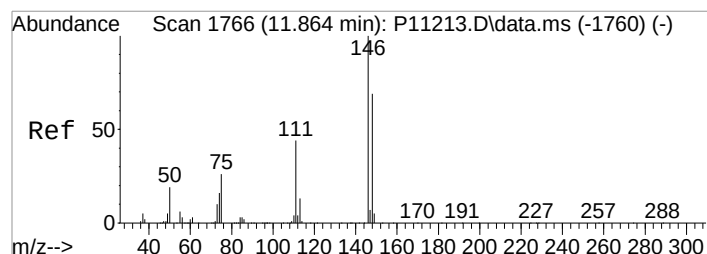
Tgt Ion	Ratio	Resp	Lower	Upper
164	100			
166	115.8	105.1	145.1	
129	91.7	65.3	105.3	
131	87.3	67.4	107.4	



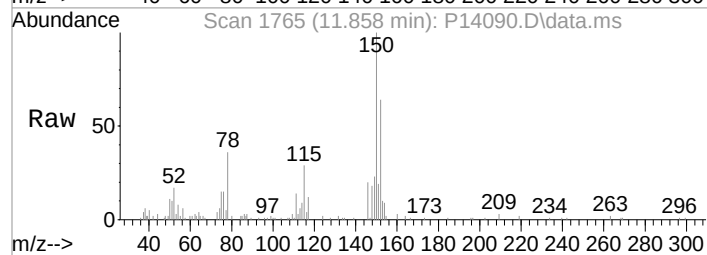
#105
1,3-Dichlorobenzene
Concen: 0.33 ppb
RT: 11.784 min Scan# 1753
Delta R.T. -0.001 min
Lab File: P14090.D
Acq: 17 Nov 2017 11:05 pm

Tgt Ion	Ratio	Resp	Lower	Upper
146	100			
148	19.5	44.5	84.5#	
111	36.8	21.8	61.8	

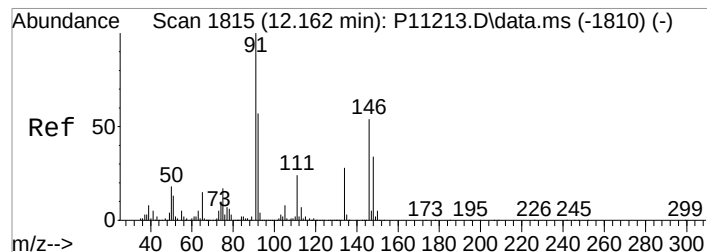
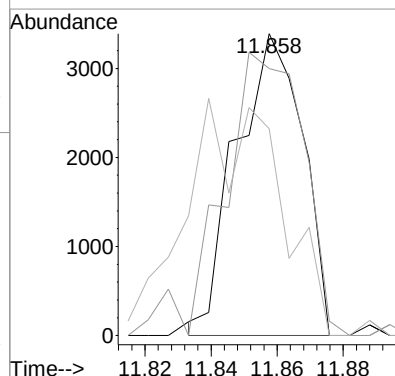
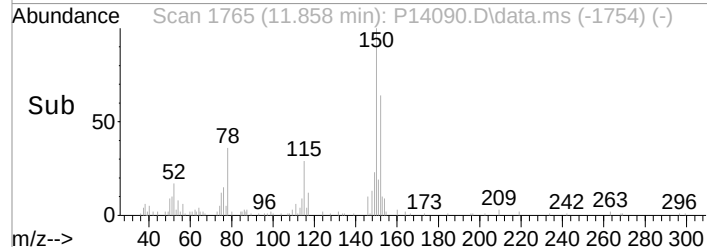




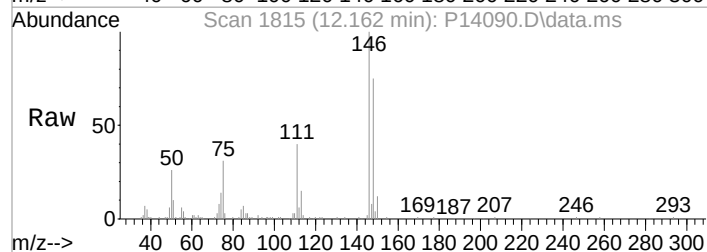
#106
1,4-Dichlorobenzene
Concen: 0.76 ppb
RT: 11.858 min Scan# 1765
Delta R.T. -0.002 min
Lab File: P14090.D
Acq: 17 Nov 2017 11:05 pm



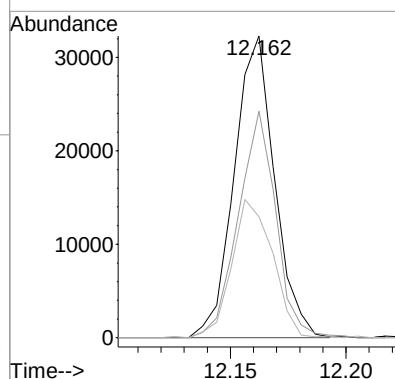
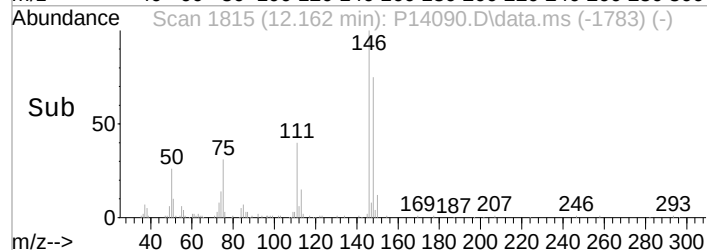
Tgt Ion	Ratio	Lower	Upper
146	100		
148	88.4	49.4	89.4
111	68.4	24.0	64.0



#110
1,2-Dichlorobenzene
Concen: 6.51 ppb
RT: 12.162 min Scan# 1815
Delta R.T. 0.000 min
Lab File: P14090.D
Acq: 17 Nov 2017 11:05 pm



Tgt Ion	Ratio	Lower	Upper
146	100		
148	75.0	42.6	82.6
111	40.0	23.8	63.8



Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14089.D
 Acq On : 17 Nov 2017 10:43 pm
 Operator : K.Ruest
 Sample : R1710784-003|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 29 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 20 16:23:38 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

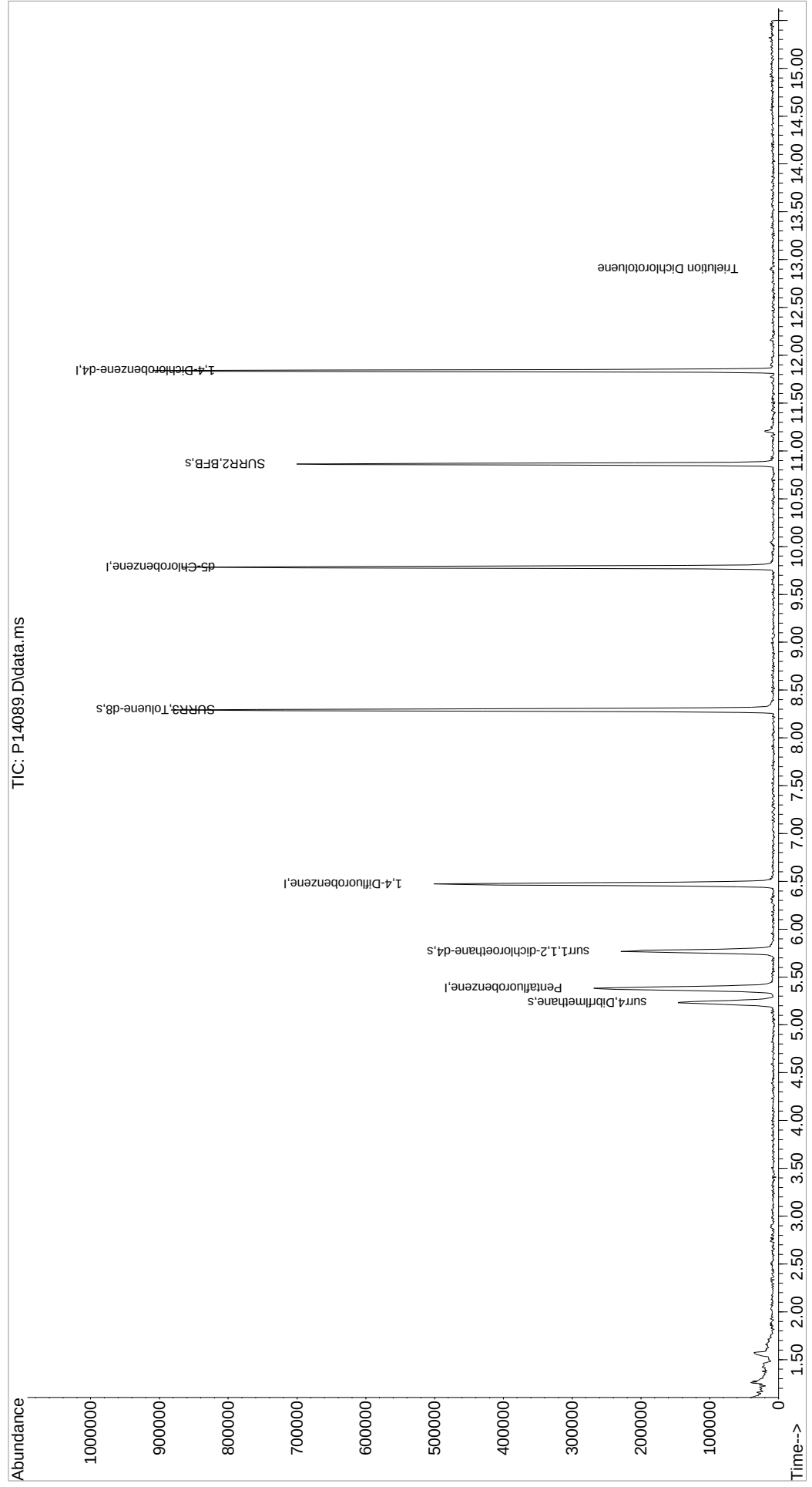
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

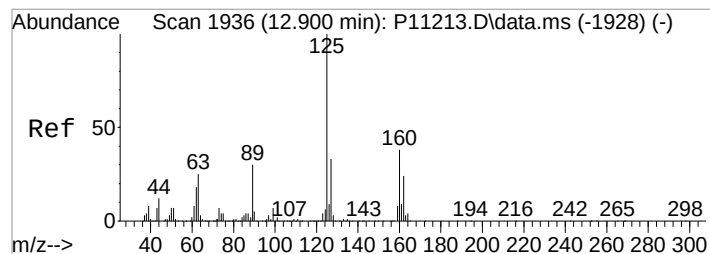
Internal Standards						
1) Pentafluorobenzene	5.383	168	230568	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	384838	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	352055	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	178446	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.231	113	111888	52.13	ppb	-0.01
Spiked Amount	50.000	Range 89 - 119	Recovery	=	104.26%	
48) surr1,1,2-dichloroetha...	5.767	65	170205	49.76	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	99.52%	
65) SURR3,Toluene-d8	8.291	98	493008	49.71	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	99.42%	
70) SURR2,BFB	10.864	95	196883	50.50	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	101.00%	
Target Compounds						
112) Trielution Dichlorotol...	12.900	125	1355	0.23	ppb	Qvalue # 28

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14089.D
Acq On : 17 Nov 2017 10:43 pm
Operator : K.Ruest
Sample : R1710784-003|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 29 Sample Multiplier: 1
Inst : MSV0A-12

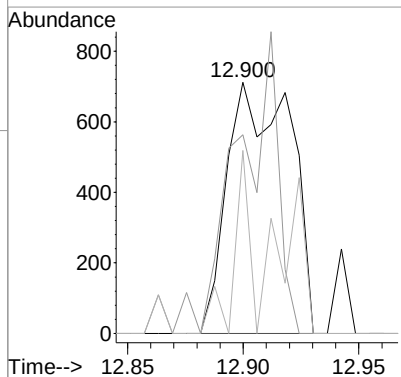
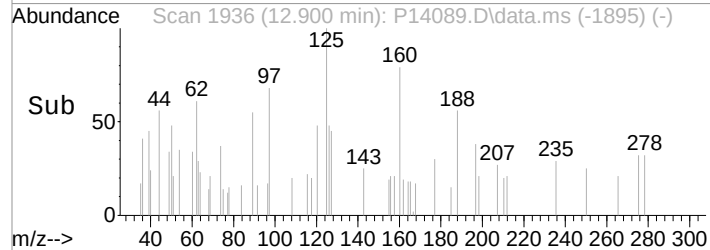
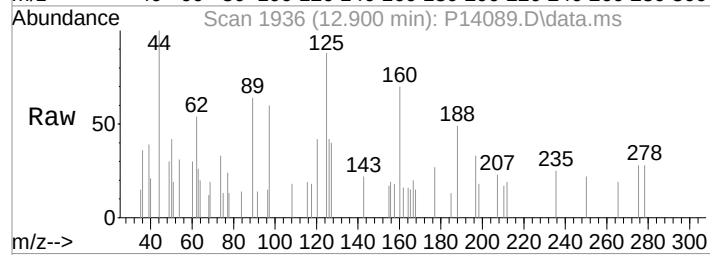
Quant Time: Nov 20 16:23:38 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration





#112
Trielution Dichlorotoluene
Concen: 0.23 ppb
RT: 12.900 min Scan# 1936
Delta R.T. -0.003 min
Lab File: P14089.D
Acq: 17 Nov 2017 10:43 pm

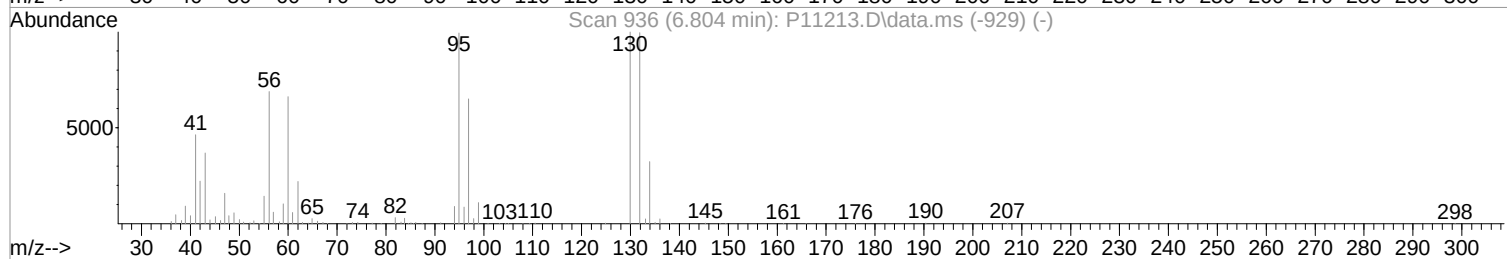
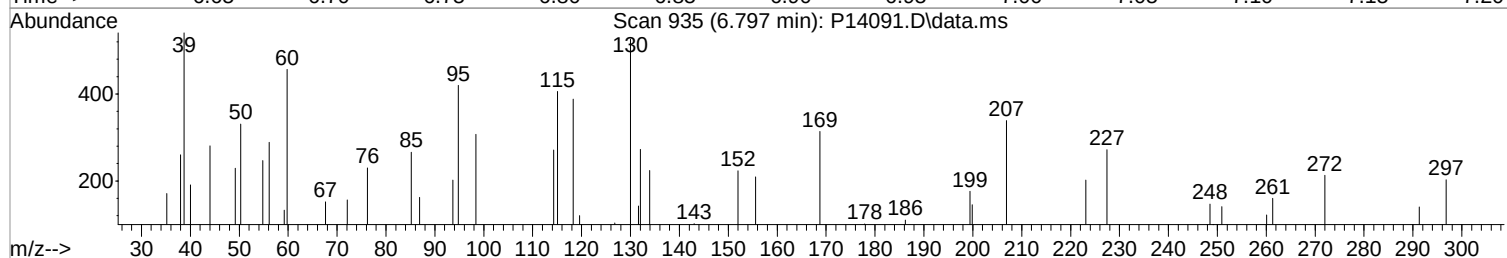
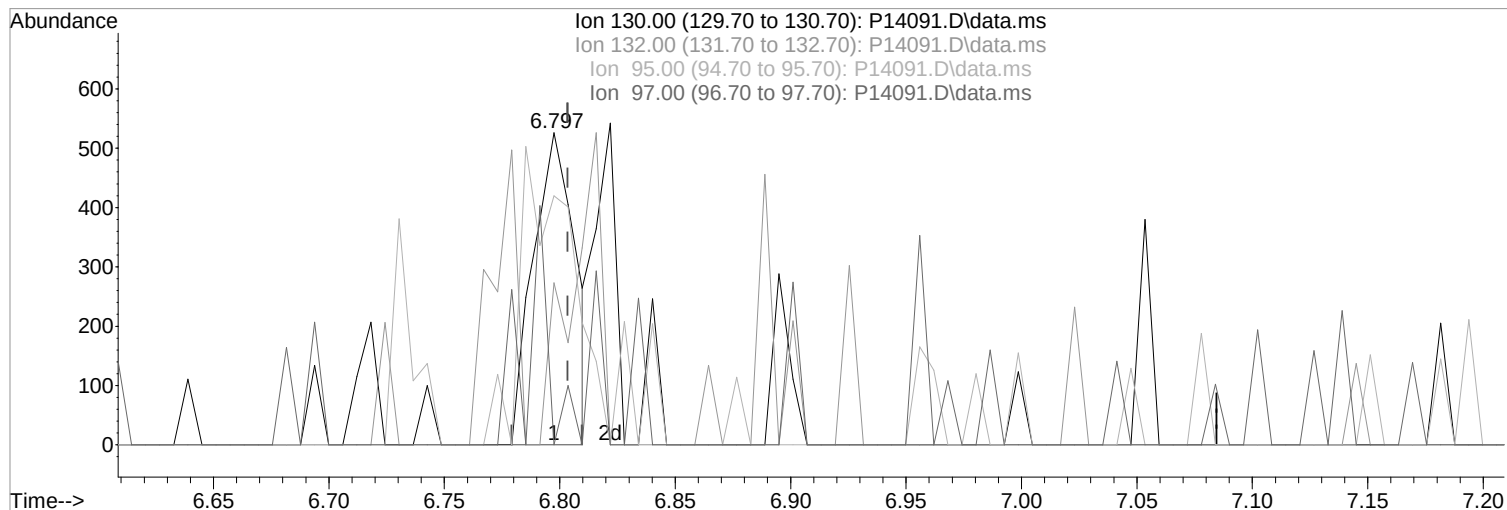
Tgt Ion:125 Resp: 1355
Ion Ratio Lower Upper
125 100
160 79.1 30.6 46.0#
89 72.9 24.1 36.1#



Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14091.D
Acq On : 17 Nov 2017 11:26 pm
Operator : K.Ruest
Sample : R1710784-004|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 31 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:36:24 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14091.D\data.ms

(54) Trichloroethene (P)

Manual Integration:

6.797min (-0.006) 0.22 ppb

Before

response 667

Ion	Exp%	Act%
130.00	100	100
132.00	100.00	51.90#
95.00	99.40	79.85
97.00	65.10	0.00#

11/20/17

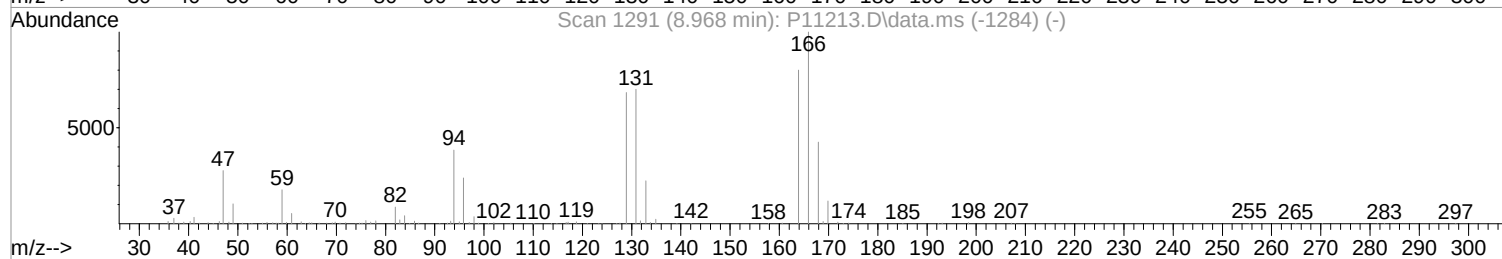
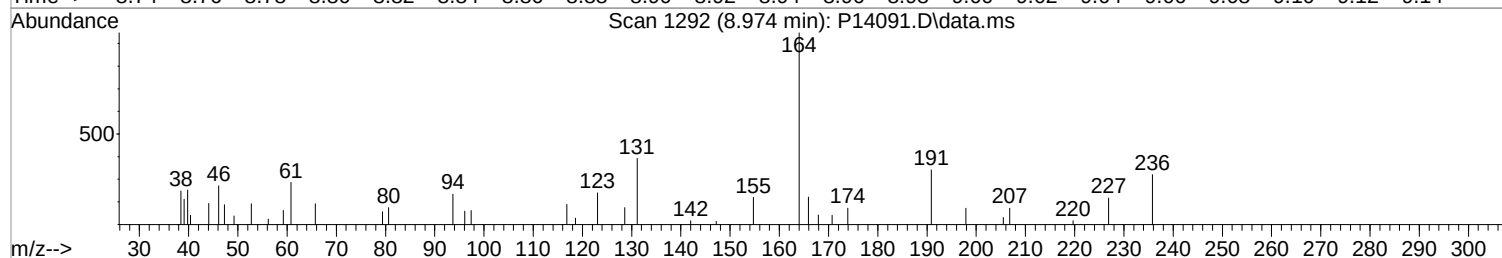
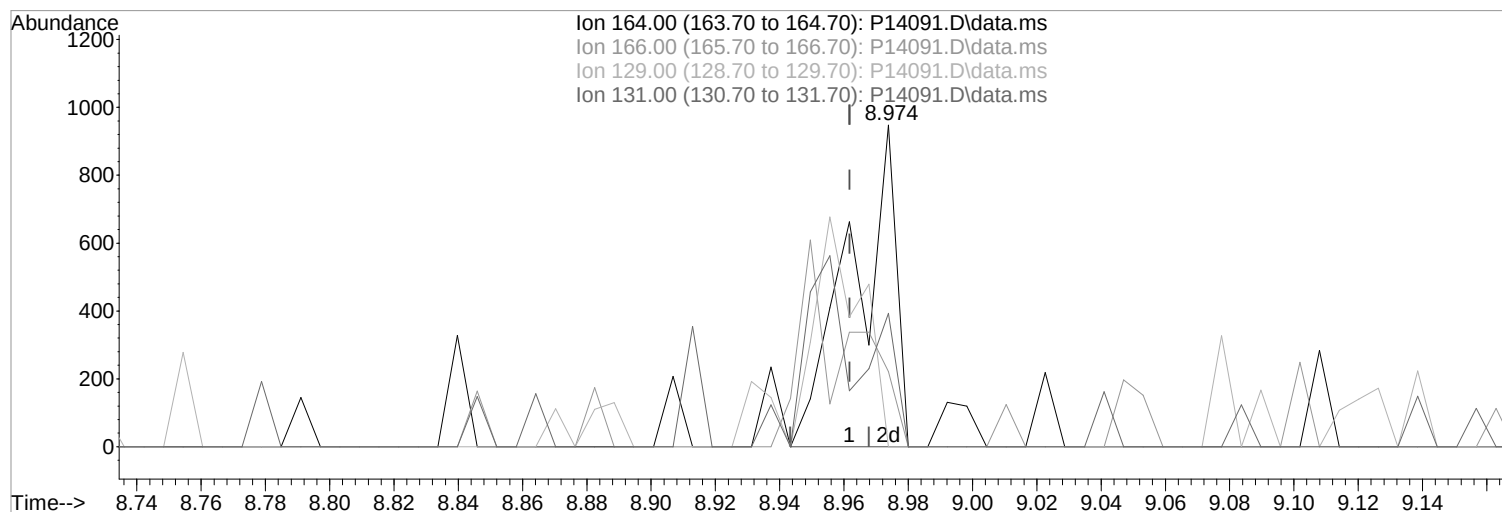
Quantitation Report (Qedit)

1st *MR* 11/20/17
2nd *MM* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14091.D
Acq On : 17 Nov 2017 11:26 pm
Operator : K.Ruest
Sample : R1710784-004|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 31 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:36:24 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14091.D\data.ms

(72) Tetrachloroethene (P)

8.974min (+0.012) 0.40 ppb m

response 900

Ion	Exp%	Act%
164.00	100	100
166.00	125.10	23.31#
129.00	85.30	0.00#
131.00	87.40	41.46#

Manual Integration:

After

Split Peak

11/20/17

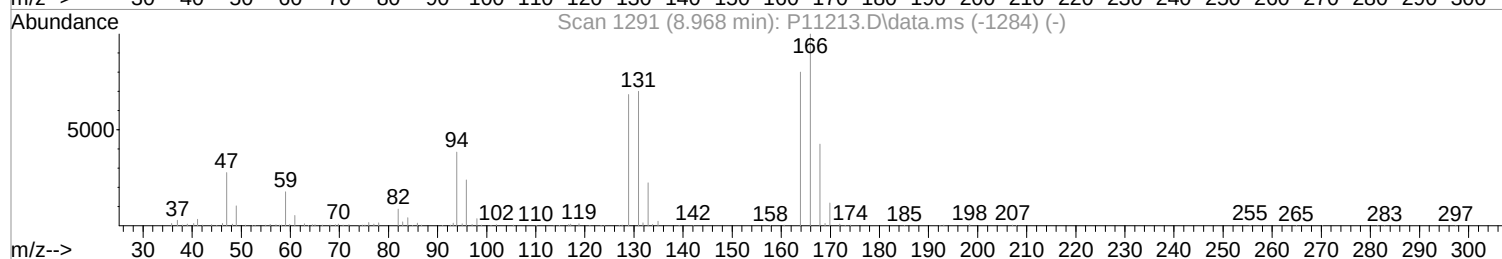
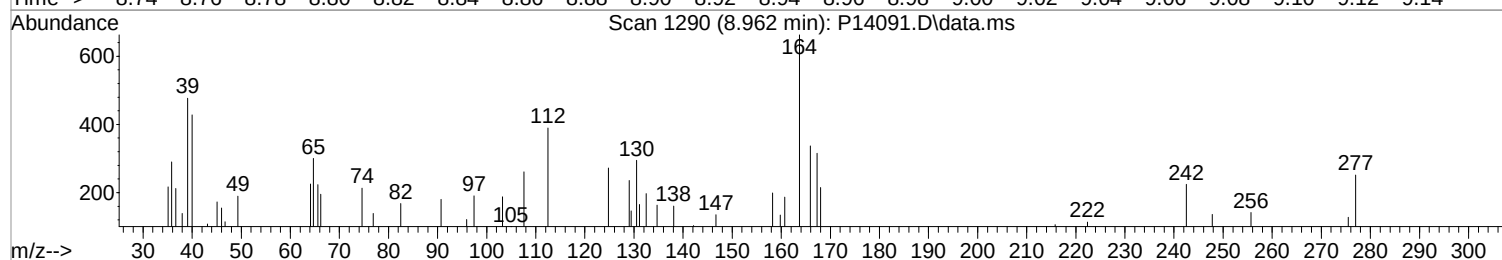
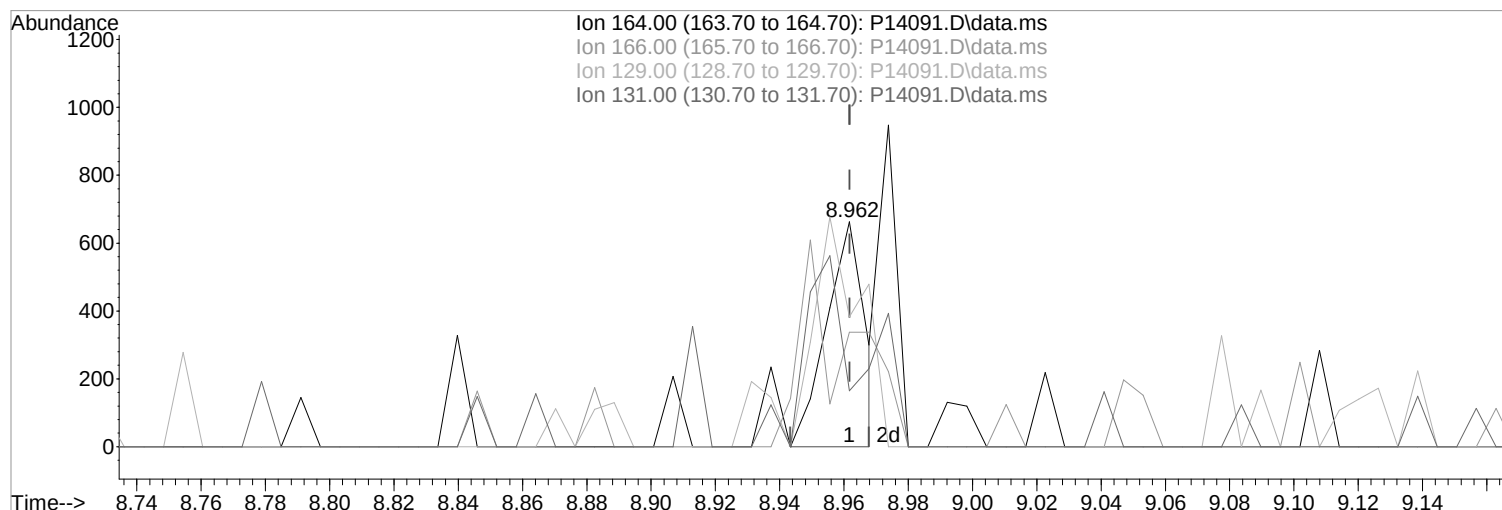
Quantitation Report (Qedit)

1st *MR* 11/20/17
2nd *MR* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14091.D
Acq On : 17 Nov 2017 11:26 pm
Operator : K.Ruest
Sample : R1710784-004|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 31 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:36:24 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



(72) Tetrachloroethene (P)

Manual Integration:

8.962min (-0.000) 0.25 ppb

Before

response 553

Ion	Exp%	Act%
164.00	100	100
166.00	125.10	50.83#
129.00	85.30	57.77#
131.00	87.40	24.89#

11/20/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14091.D
 Acq On : 17 Nov 2017 11:26 pm
 Operator : K.Ruest
 Sample : R1710784-004|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 31 Sample Multiplier: 1

Inst : MSVOA-12

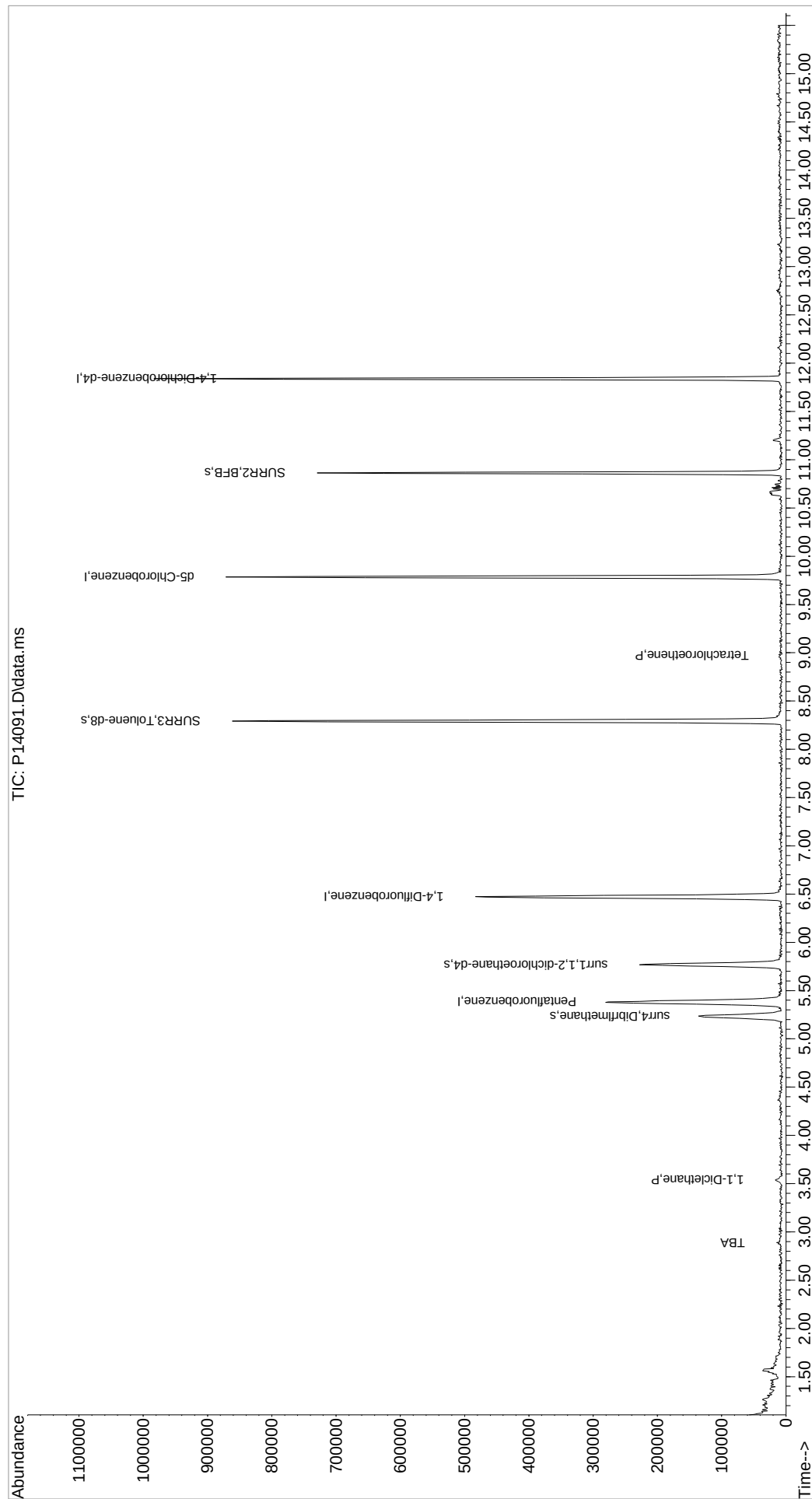
Quant Time: Nov 20 16:30:51 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

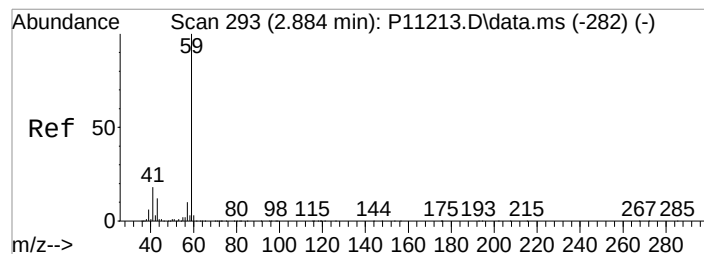
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.383	168	236667	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	393365	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	363084	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	177192	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.231	113	109087	49.73	ppb	-0.01
Spiked Amount	50.000	Range 89 - 119	Recovery	=	99.46%	
48) surr1,1,2-dichloroetha...	5.767	65	177270	50.70	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	101.40%	
65) SURR3,Toluene-d8	8.291	98	491741	48.51	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	97.02%	
70) SURR2,BFB	10.864	95	193755	48.62	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	97.24%	
Target Compounds						
23) TBA	2.890	59	2527	3.04	ppb	98
28) 1,1-Dicethane	3.542	63	6879	1.15	ppb	98
72) Tetrachloroethene	8.974	164	900m	0.40	ppb	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQDATA\msvoa12\Data\111717\
Data File : P14091.D
Acq On : 17 Nov 2017 11:26 pm
Operator : K.Ruest
Sample : R1710784-004|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 31 Sample Multiplier: 1
Inst : MSV0A-12

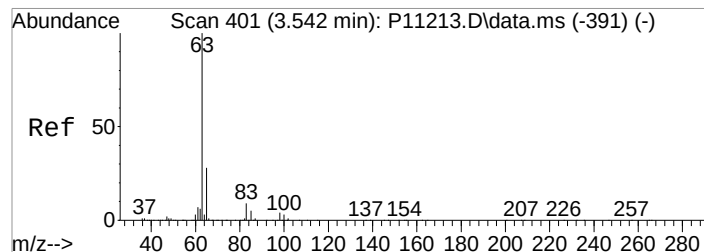
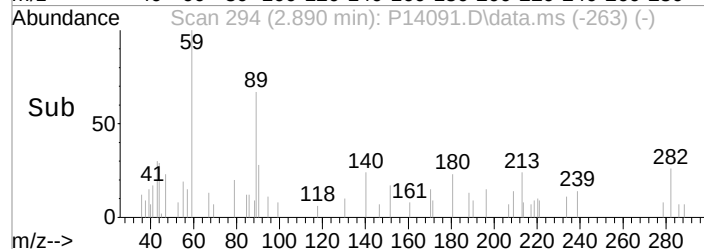
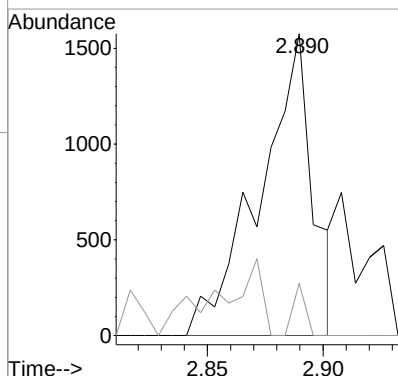
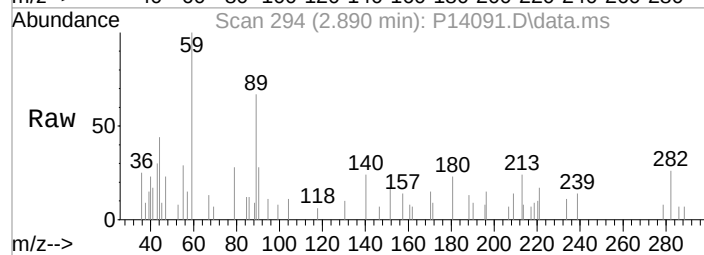
Quant Time: Nov 20 16:30:51 2017
Quant Method : I:\ACQDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration





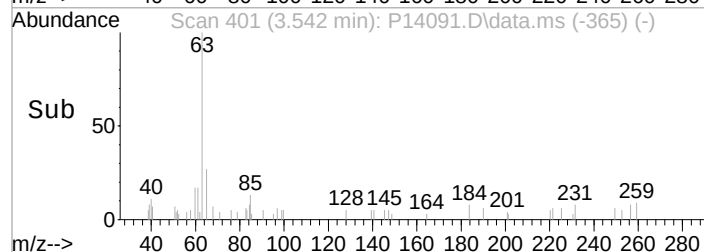
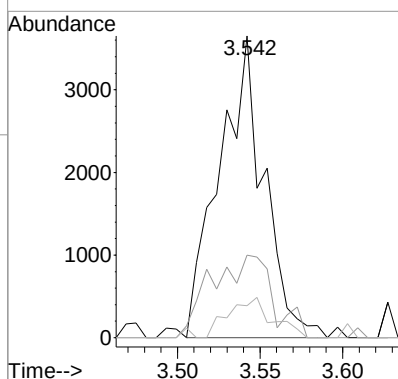
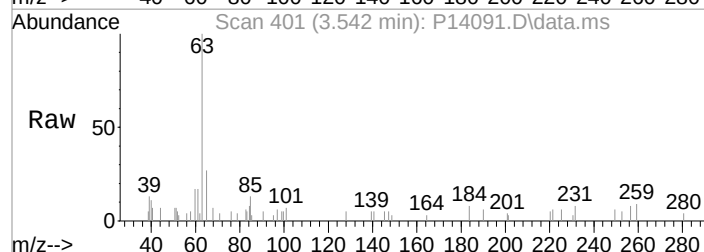
#23
TBA
Concen: 3.04 ppb
RT: 2.890 min Scan# 294
Delta R.T. 0.004 min
Lab File: P14091.D
Acq: 17 Nov 2017 11:26 pm

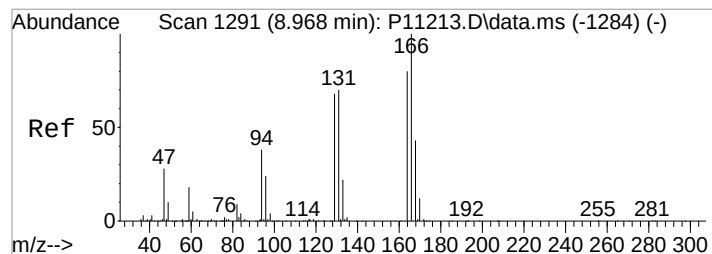
Tgt Ion: 59 Resp: 2527
Ion Ratio Lower Upper
59 100
41 17.3 0.0 38.3



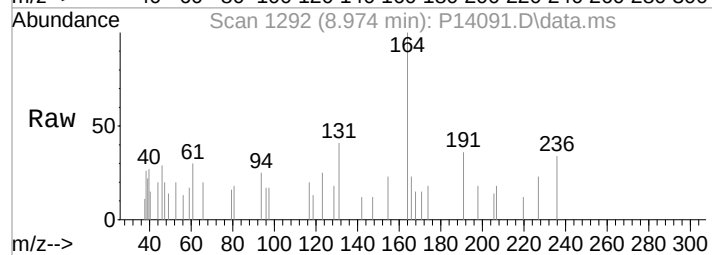
#28
1,1-Dicethane
Concen: 1.15 ppb
RT: 3.542 min Scan# 401
Delta R.T. -0.004 min
Lab File: P14091.D
Acq: 17 Nov 2017 11:26 pm

Tgt Ion: 63 Resp: 6879
Ion Ratio Lower Upper
63 100
65 27.4 8.0 48.0
83 10.6 0.0 29.3

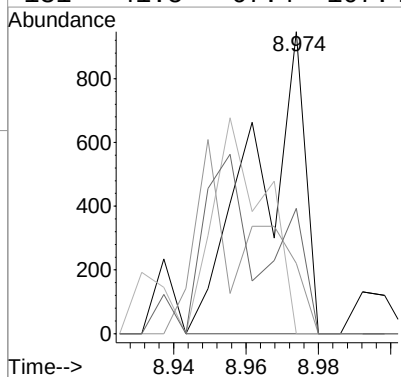
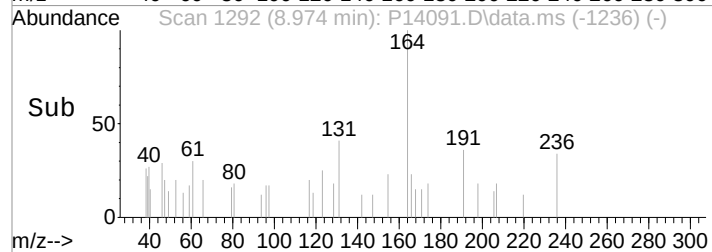




#72
Tetrachloroethene
Concen: 0.40 ppb m
RT: 8.974 min Scan# 1292
Delta R.T. 0.012 min
Lab File: P14091.D
Acq: 17 Nov 2017 11:26 pm



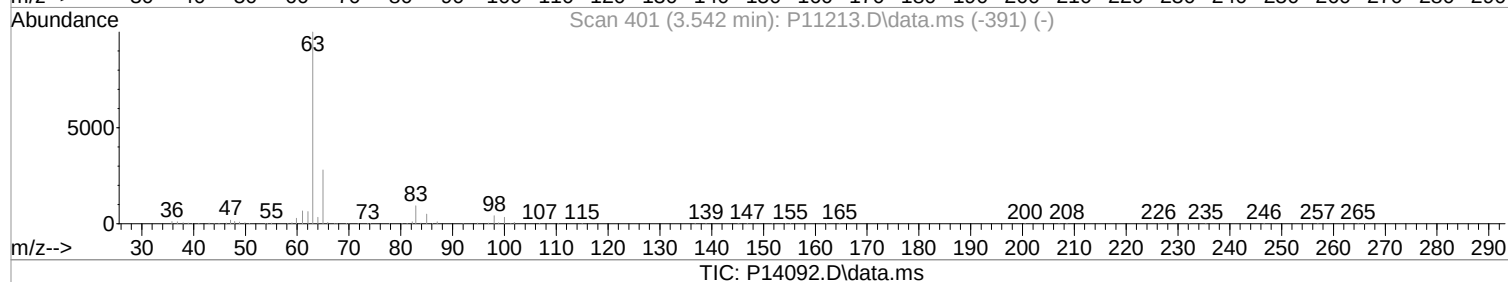
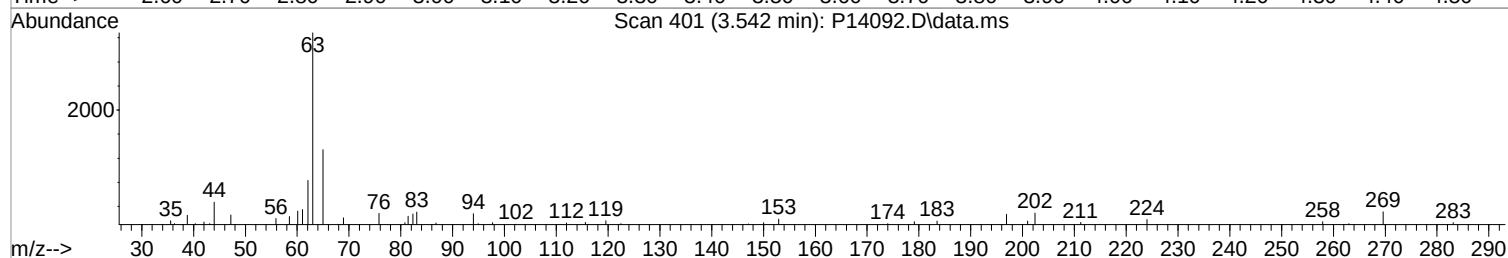
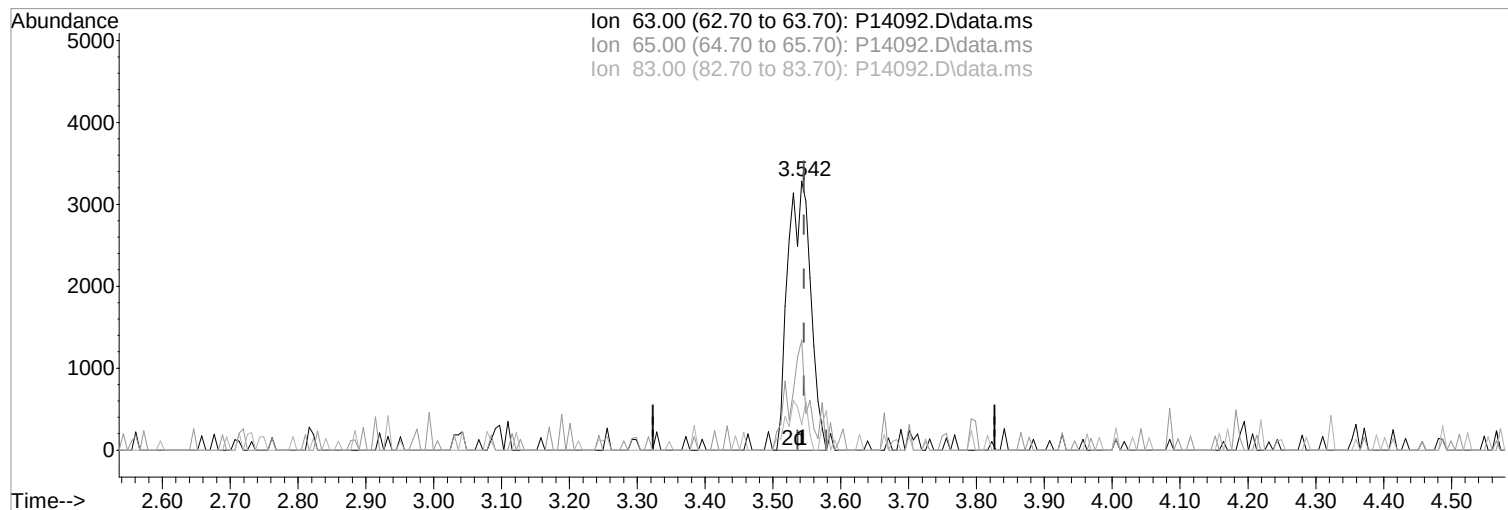
Tgt Ion	Ratio	Resp	Lower	Upper
164	100			
166	23.3	105.1	145.1#	
129	0.0	65.3	105.3#	
131	41.5	67.4	107.4#	



Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14092.D
Acq On : 17 Nov 2017 11:48 pm
Operator : K.Ruest
Sample : R1710784-005|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 32 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:36:53 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



(28) 1,1-Dicethane (P)

Manual Integration:

3.542min (-0.004) 1.29 ppb m

After

response 7659

Split Peak

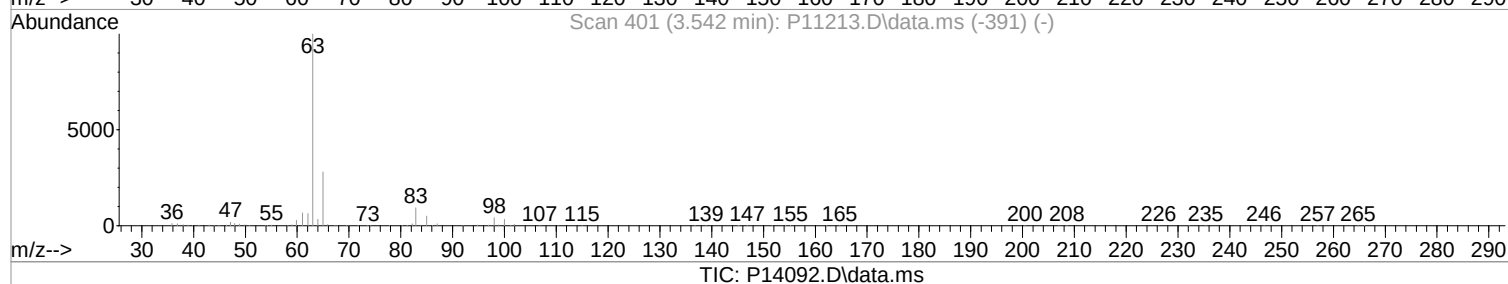
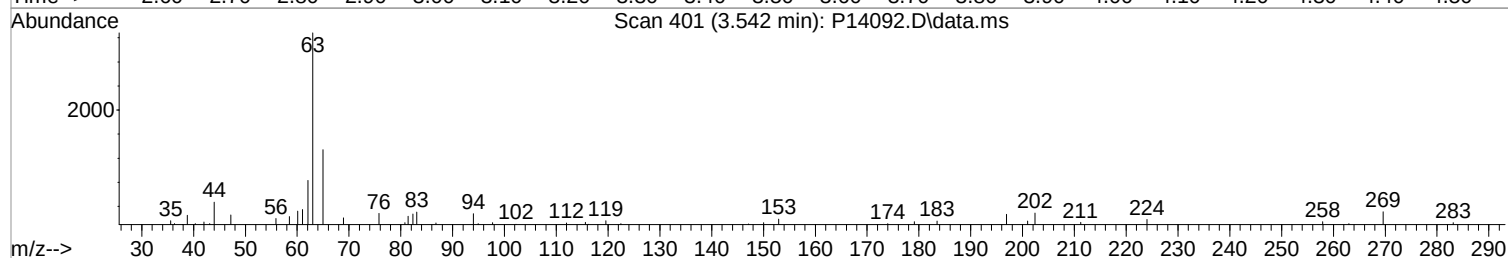
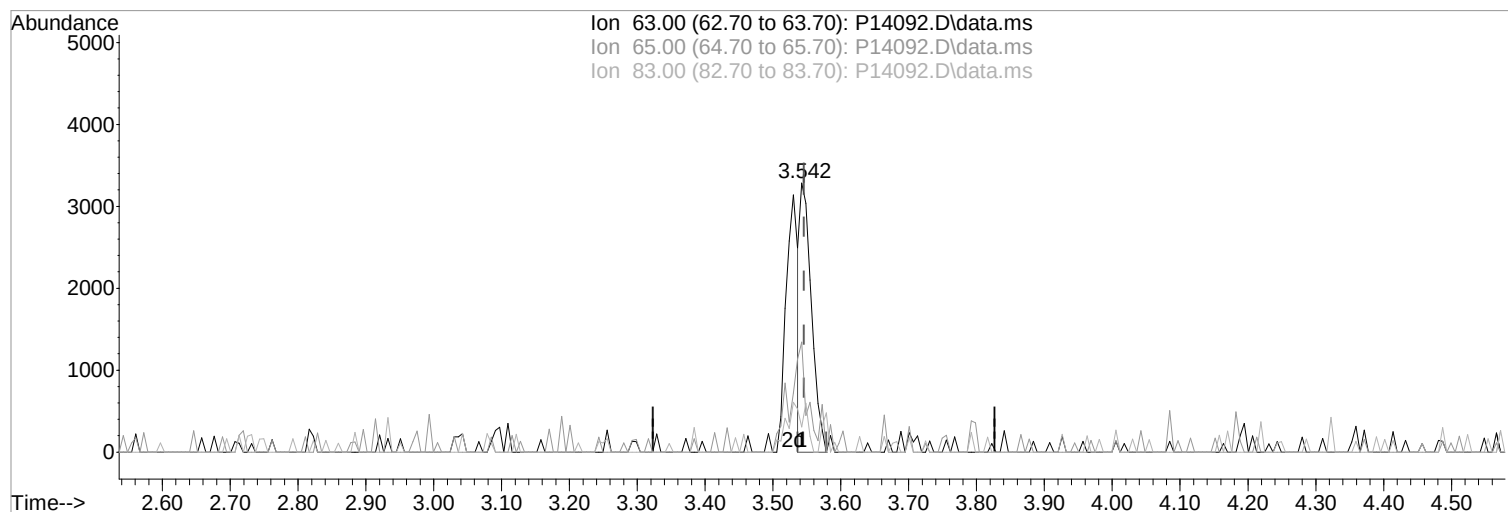
Ion	Exp%	Act%
63.00	100	100
65.00	28.00	40.83
83.00	9.30	9.32
0.00	0.00	0.00

11/20/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14092.D
Acq On : 17 Nov 2017 11:48 pm
Operator : K.Ruest
Sample : R1710784-005|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 32 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:36:53 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



(28) 1,1-Dicethane (P)

Manual Integration:

3.542min (-0.004) 0.65 ppb

Before

response 3859

Ion	Exp%	Act%
63.00	100	100
65.00	28.00	40.83
83.00	9.30	9.32
0.00	0.00	0.00

11/20/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14092.D
 Acq On : 17 Nov 2017 11:48 pm
 Operator : K.Ruest
 Sample : R1710784-005|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 32 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 20 16:32:04 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

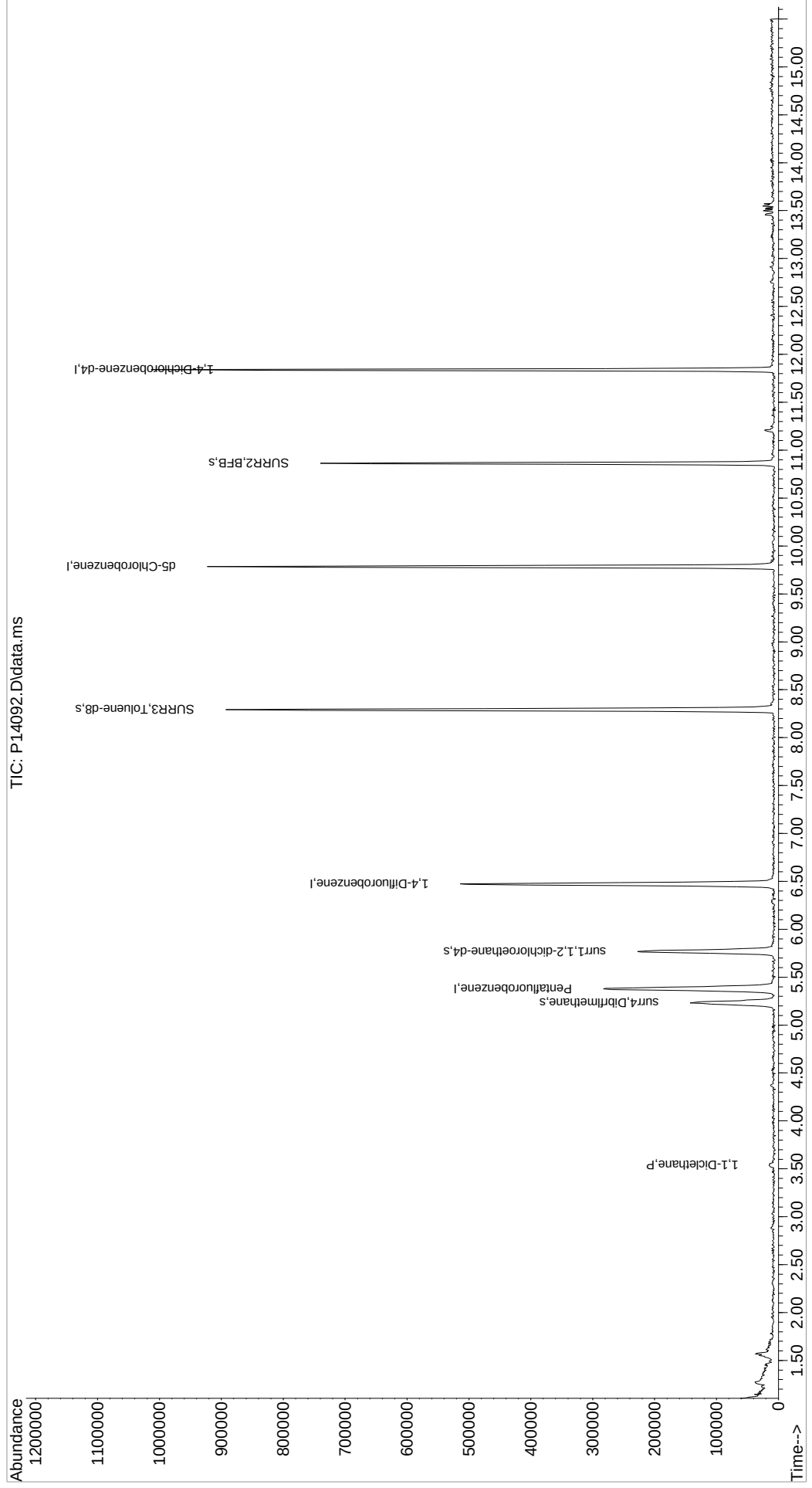
Internal Standards						
1) Pentafluorobenzene	5.377	168	236516	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	406310	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	366800	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	186006	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.231	113	114996	50.75	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	101.50%	
48) surr1,1,2-dichloroetha...	5.767	65	186256	51.57	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	103.14%	
65) SURR3,Toluene-d8	8.291	98	503439	48.08	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	96.16%	
70) SURR2,BFB	10.864	95	194008	47.13	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	94.26%	
Target Compounds						
28) 1,1-Dicethane	3.542	63	7659m	1.29	ppb	Qvalue

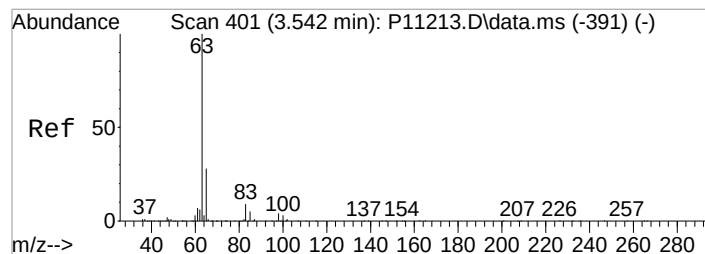
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14092.D
 Acq On : 17 Nov 2017 11:48 pm
 Operator : K.Ruest
 Sample : R1710784-005|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 32 Sample Multiplier: 1

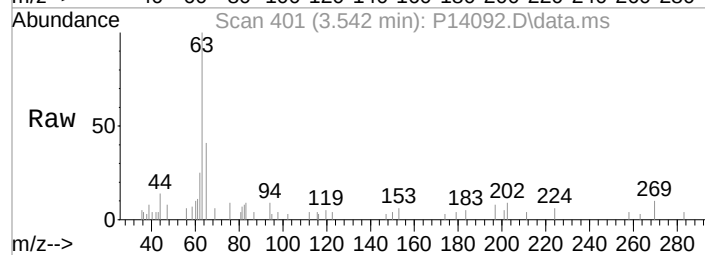
Inst : MSV0A-12

Quant Time: Nov 20 16:32:04 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 Qlast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

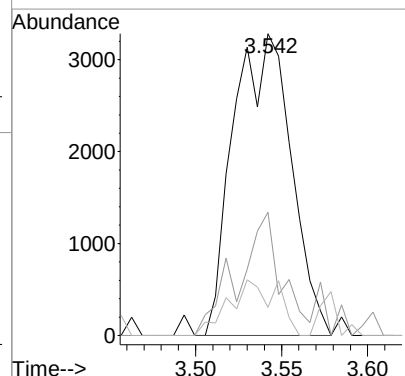
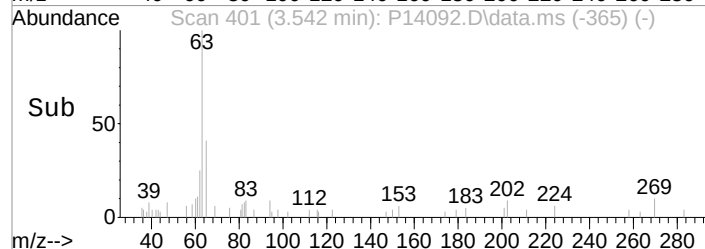




#28
 1,1-Dicloroethane
 Concen: 1.29 ppb m
 RT: 3.542 min Scan# 401
 Delta R.T. -0.004 min
 Lab File: P14092.D
 Acq: 17 Nov 2017 11:48 pm



Tgt Ion:	63	Resp:	7659
Ion Ratio	Lower	Upper	
63	100		
65	40.8	8.0	48.0
83	9.3	0.0	29.3



Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14093.D
 Acq On : 18 Nov 2017 12:10 am
 Operator : K.Ruest
 Sample : R1710784-006|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 33 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 20 16:33:37 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.383	168	228932	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	391401	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	342958	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	174275	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.237	113	107905	49.43	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	98.86%	
48) surr1,1,2-dichloroetha...	5.767	65	175133	50.34	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	100.68%	
65) SURR3,Toluene-d8	8.291	98	480569	47.65	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	95.30%	
70) SURR2,BFB	10.864	95	185388	46.75	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	93.50%	

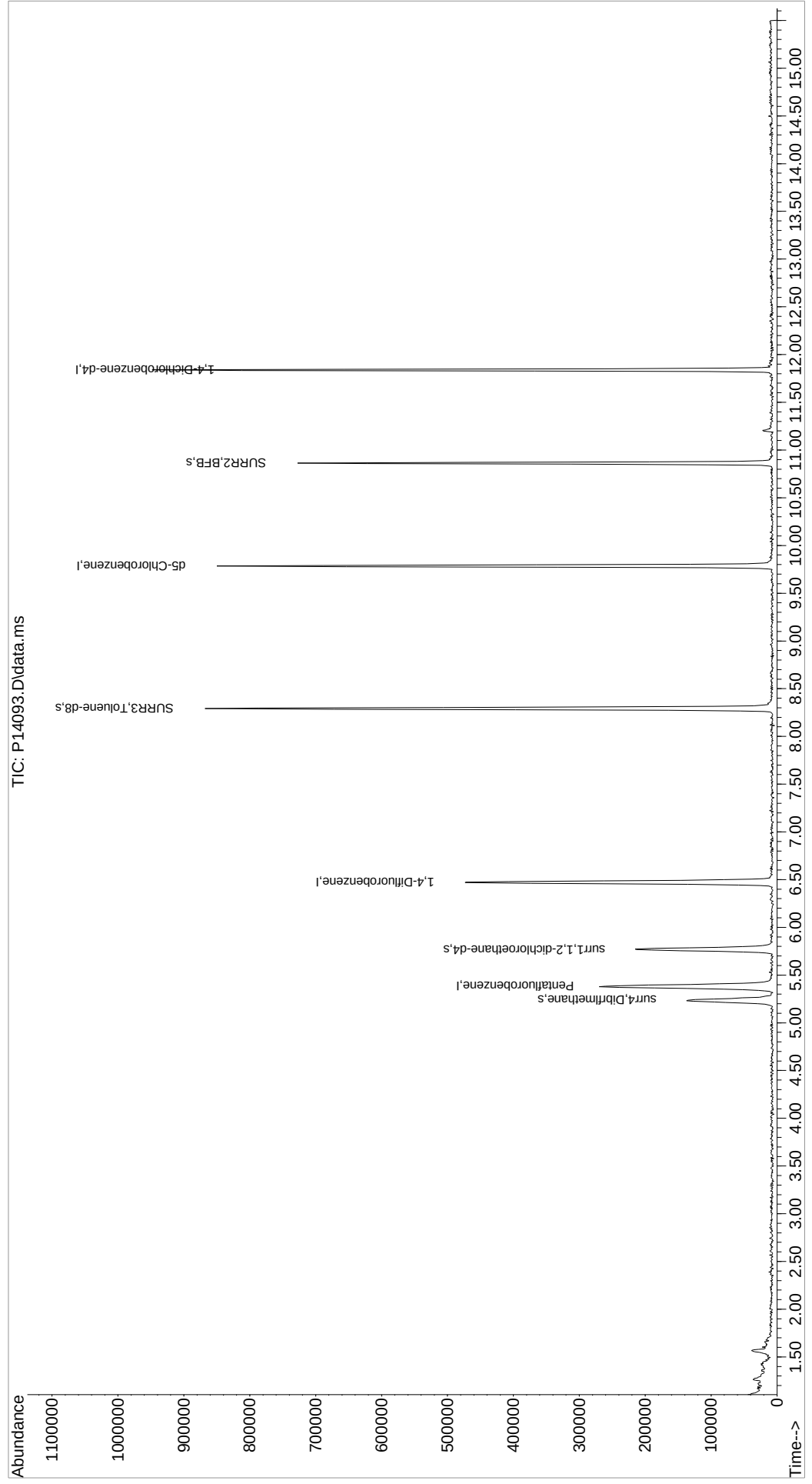
Target Compounds	Qvalue
-----	-----

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14093.D
 Acq On : 18 Nov 2017 12:10 am
 Operator : K.Ruest
 Sample : R1710784-006|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 33 Sample Multiplier: 1

Inst : MSV0A-12

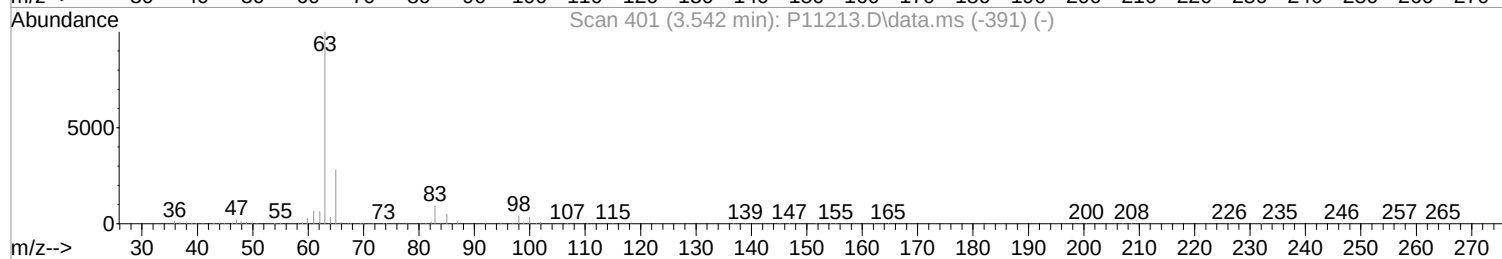
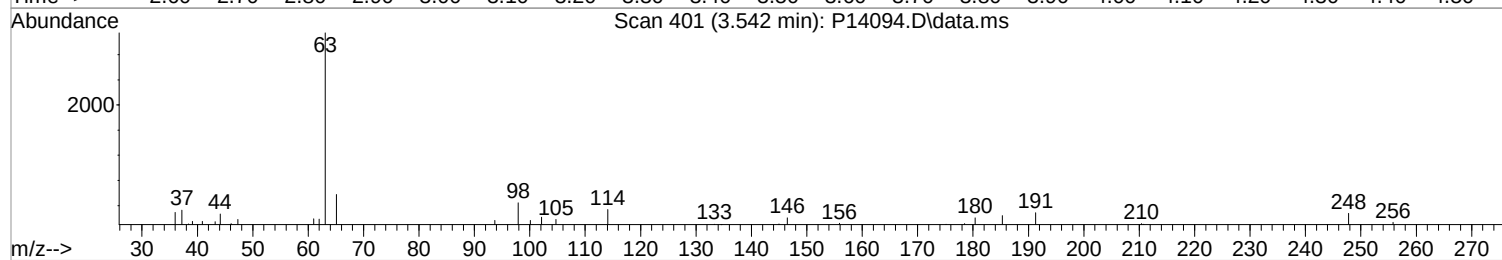
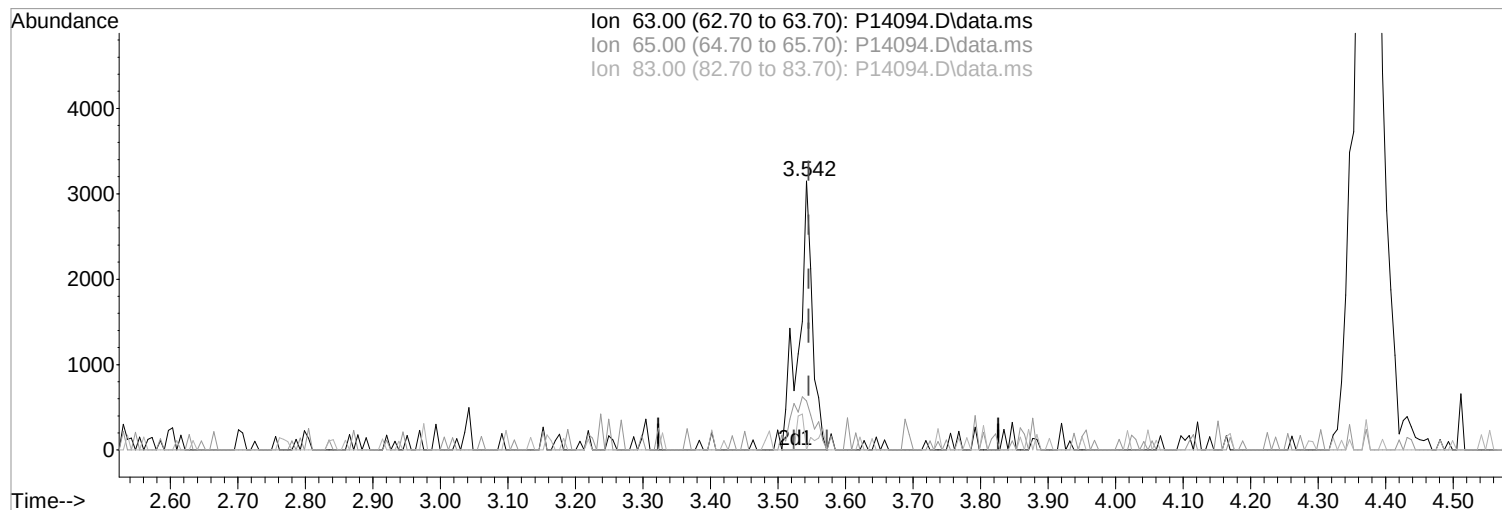
Quant Time: Nov 20 16:33:37 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 Qlast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14094.D
Acq On : 18 Nov 2017 12:32 am
Operator : K.Ruest
Sample : R1710784-007|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 34 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:37:18 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14094.D\data.ms

(28) 1,1-Dicethane (P)

3.542min (-0.004) 0.70 ppb m

response 4423

Ion	Exp%	Act%
63.00	100	100
65.00	28.00	18.29
83.00	9.30	0.00
0.00	0.00	0.00

Manual Integration:

After

Split Peak

11/20/17

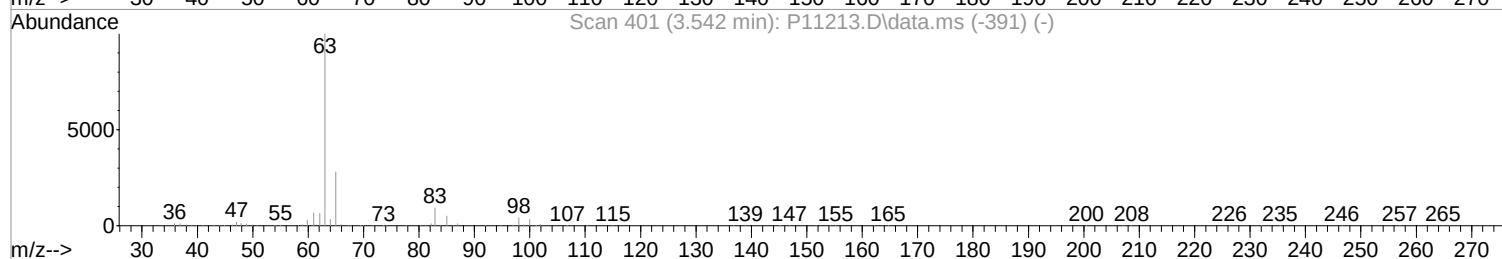
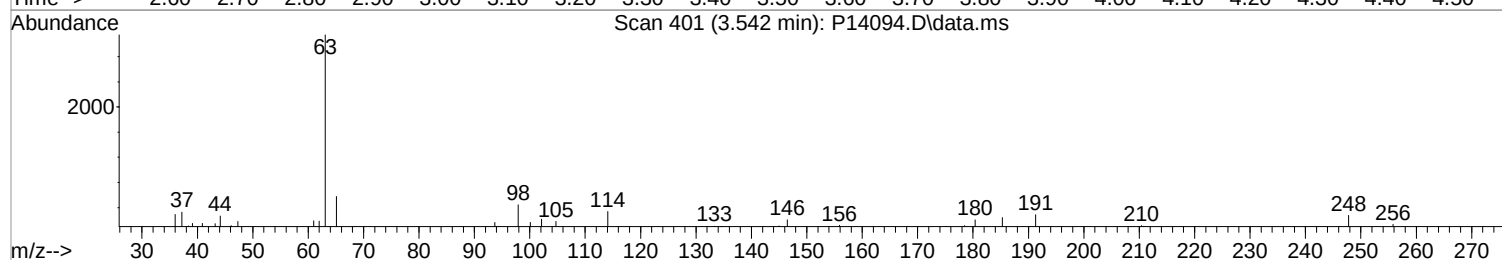
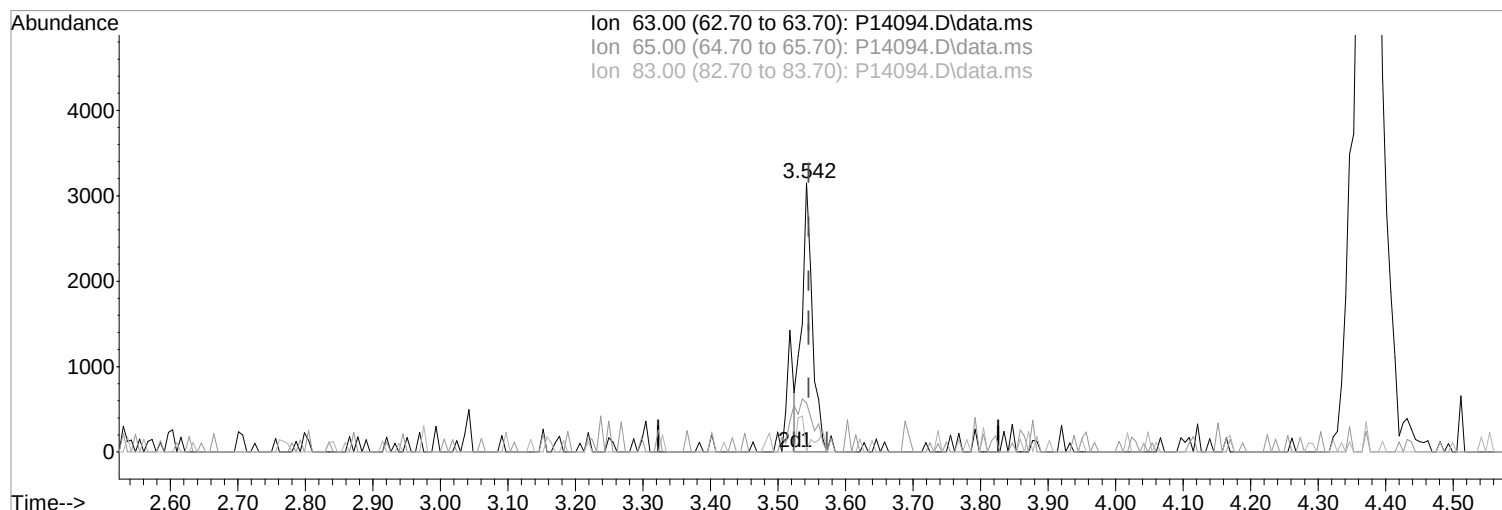
Quantitation Report (Qedit)

1st *MR* 11/20/17
2nd *MR* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14094.D
Acq On : 18 Nov 2017 12:32 am
Operator : K.Ruest
Sample : R1710784-007|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 34 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:37:18 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14094.D\data.ms

(28) 1,1-Dicethane (P)

Manual Integration:

3.542min (-0.004) 0.55 ppb

Before

response 3473

Ion	Exp%	Act%
63.00	100	100
65.00	28.00	18.29
83.00	9.30	0.00
0.00	0.00	0.00

11/20/17

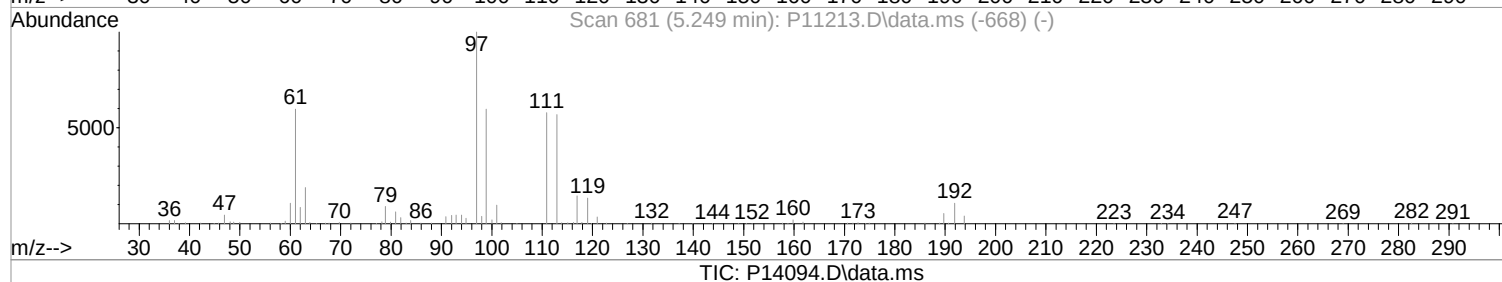
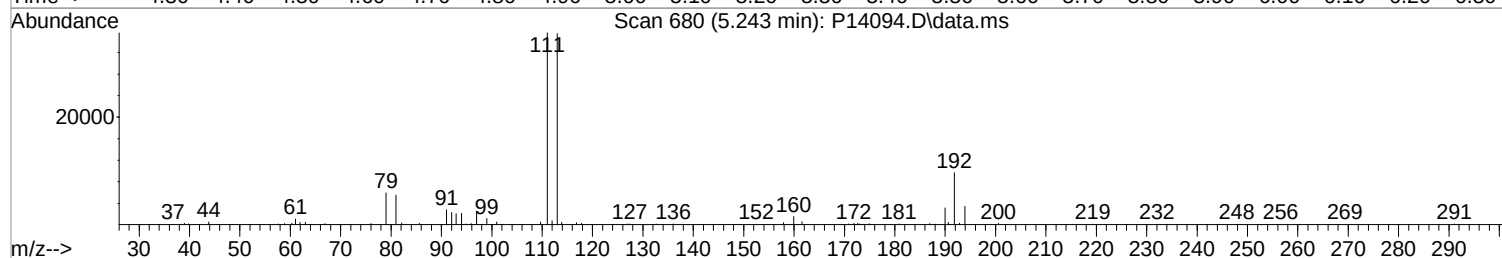
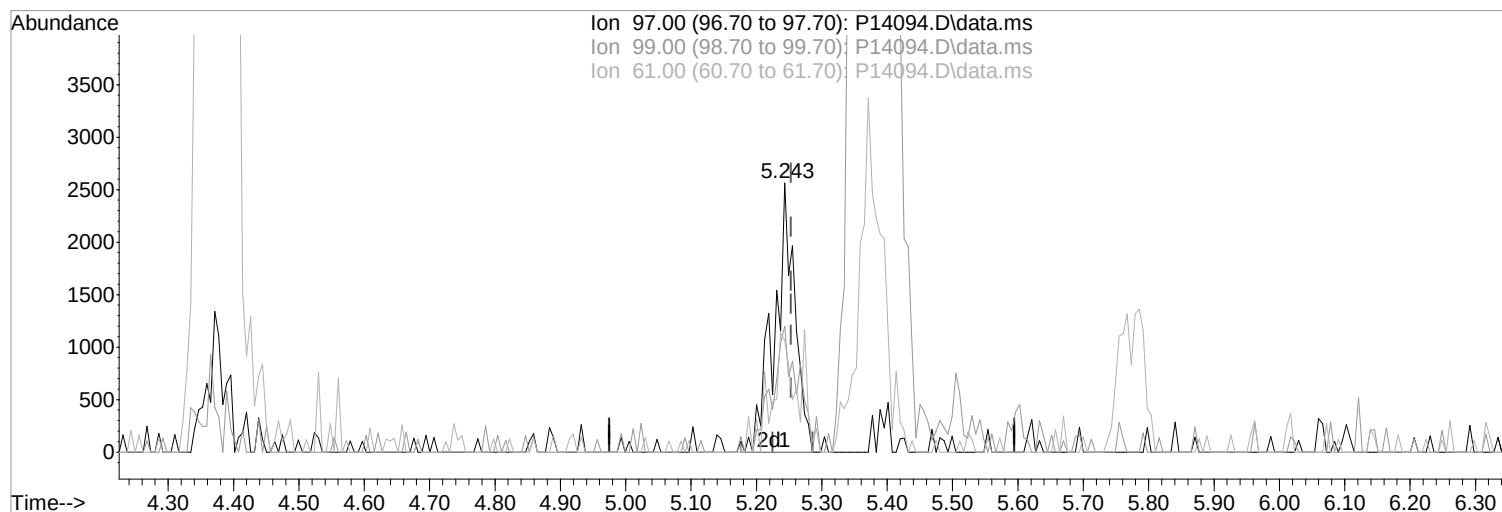
Quantitation Report (Qedit)

1st *MR* 11/20/172nd *MM* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14094.D
Acq On : 18 Nov 2017 12:32 am
Operator : K.Ruest
Sample : R1710784-007|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 34 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:37:18 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



(41) 1,1,1-Trichloroethane (P)

Manual Integration:

5.243min (-0.010) 1.31 ppb m

After

response 5580

Split Peak

Ion	Exp%	Act%
97.00	100	100
99.00	59.70	46.86
61.00	59.70	41.44
0.00	0.00	0.00

11/20/17

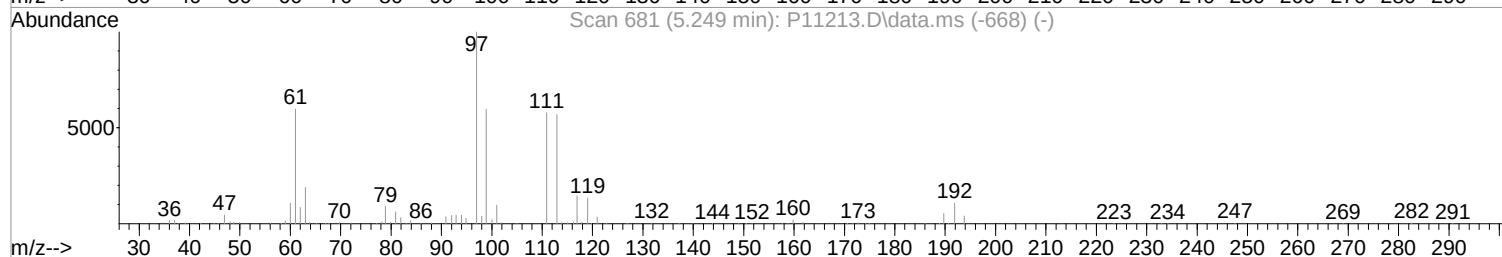
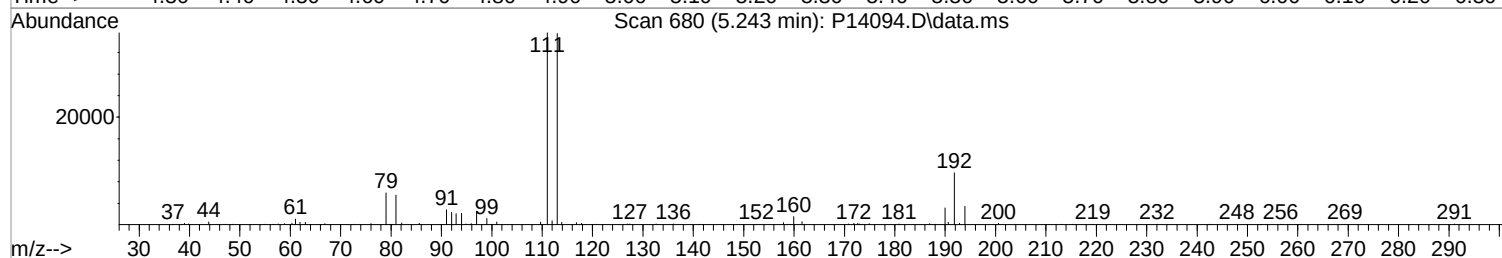
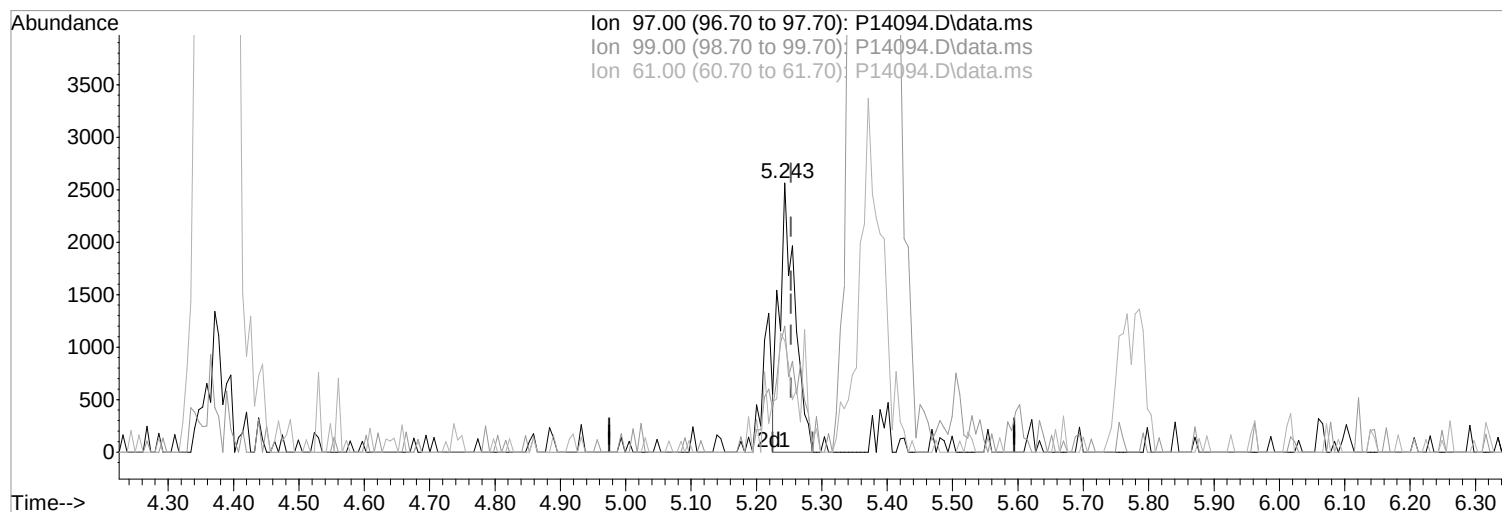
Quantitation Report (Qedit)

1st *MR* 11/20/17
2nd *MMW* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14094.D
Acq On : 18 Nov 2017 12:32 am
Operator : K.Ruest
Sample : R1710784-007|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 34 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:37:18 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14094.D\data.ms

(41) 1,1,1-Trichloroethane (P)

Manual Integration:

5.243min (-0.010) 0.98 ppb

Before

response 4199

Ion	Exp%	Act%
97.00	100	100
99.00	59.70	46.86
61.00	59.70	41.44
0.00	0.00	0.00

11/20/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14094.D
 Acq On : 18 Nov 2017 12:32 am
 Operator : K.Ruest
 Sample : R1710784-007|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 34 Sample Multiplier: 1

Inst : MSVOA-12

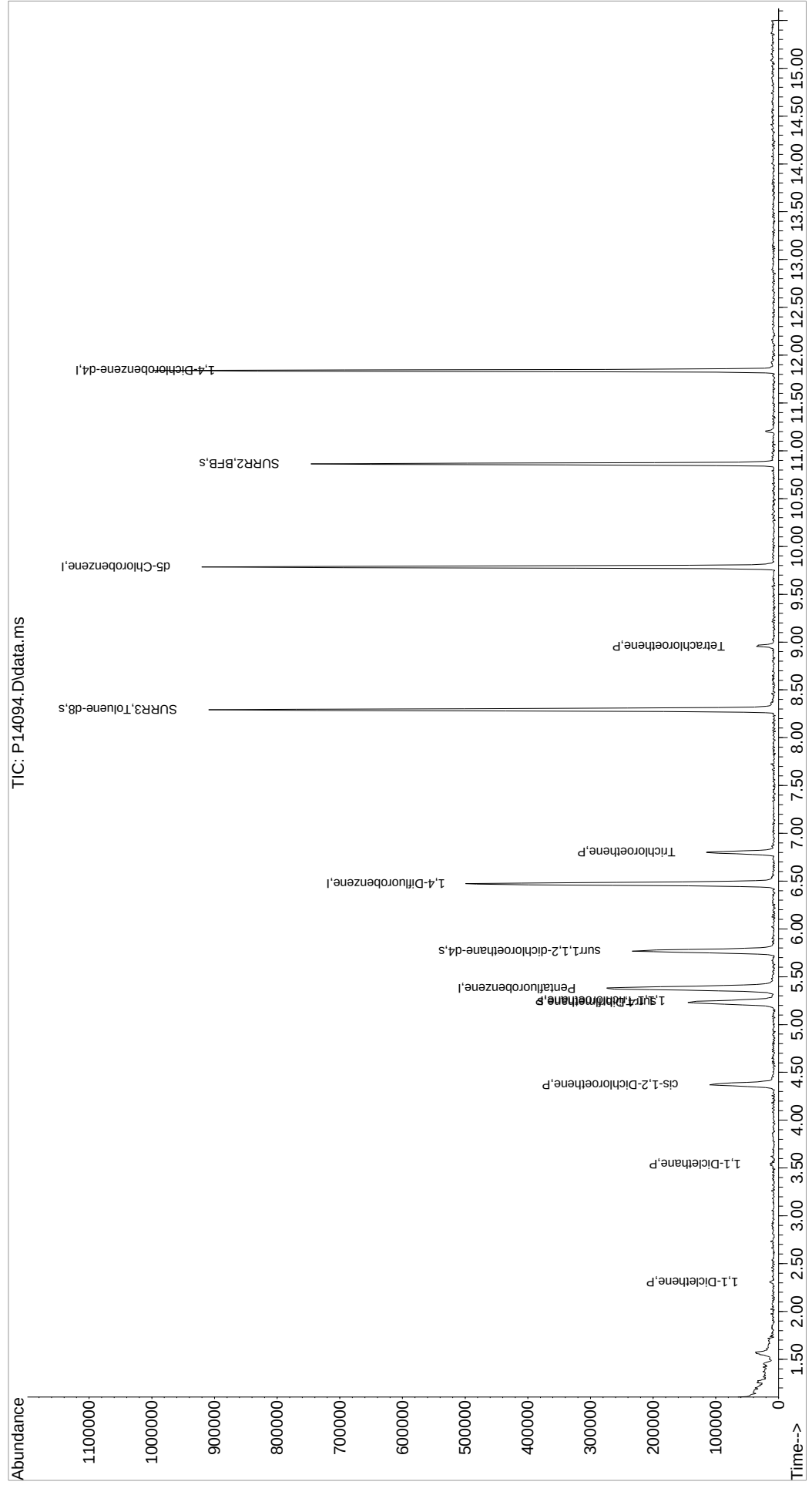
Quant Time: Nov 20 16:36:04 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

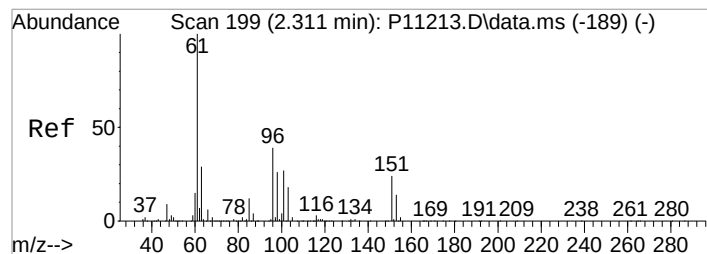
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.377	168	250502	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.468	114	407125	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	364765	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	180380	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.231	113	115769	50.99	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	101.98%	
48) surr1,1,2-dichloroetha...	5.767	65	185072	51.14	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	102.28%	
65) SURR3,Toluene-d8	8.291	98	503315	47.97	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	95.94%	
70) SURR2,BFB	10.864	95	196073	47.54	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	95.08%	
Target Compounds						
13) 1,1-Dicethene	2.305	96	1378	0.50	ppb	Qvalue # 47
28) 1,1-Dicethane	3.542	63	4423m	0.70	ppb	
34) cis-1,2-Dichloroethene	4.371	96	51068	15.48	ppb	# 69
41) 1,1,1-Trichloroethane	5.243	97	5580m	1.31	ppb	
54) Trichloroethene	6.804	130	36891	11.91	ppb	94
72) Tetrachloroethene	8.956	164	5101	2.27	ppb	# 83

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14094.D
Acq On : 18 Nov 2017 12:32 am
Operator : K.Ruest
Sample : R1710784-007|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 34 Sample Multiplier: 1
Inst : MSV0A-12

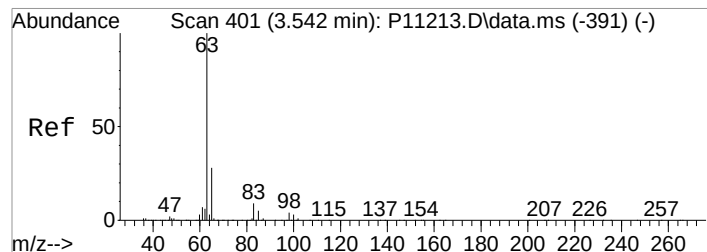
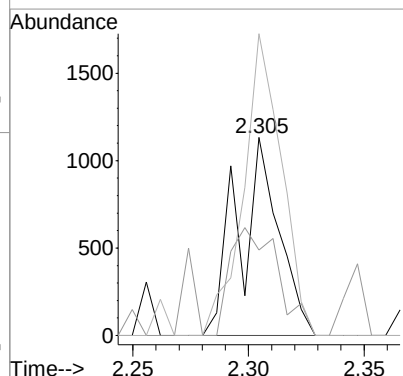
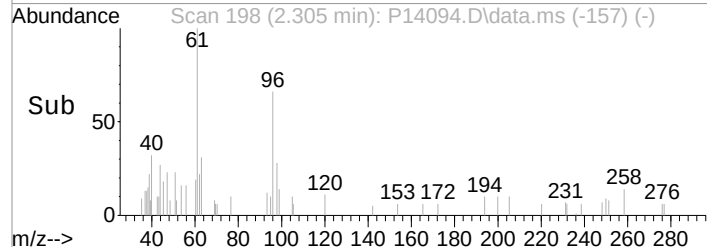
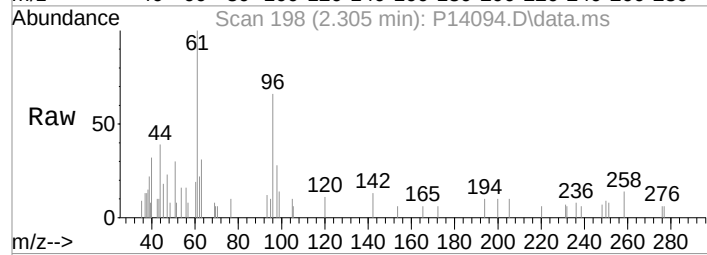
Quant Time: Nov 20 16:36:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration





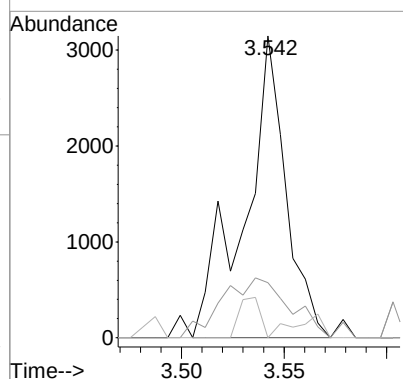
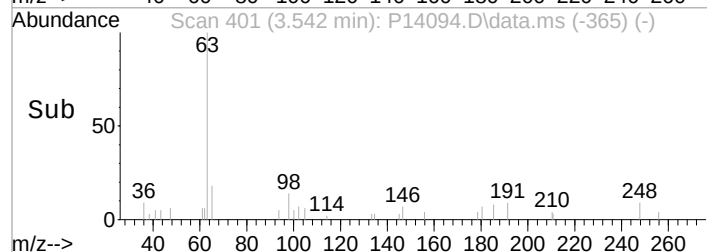
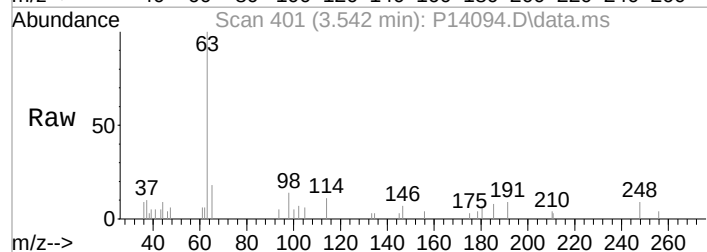
#13
1,1-Dicloroethene
Concen: 0.50 ppb
RT: 2.305 min Scan# 198
Delta R.T. -0.000 min
Lab File: P14094.D
Acq: 18 Nov 2017 12:32 am

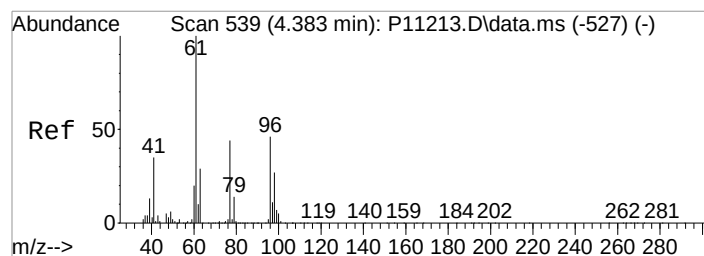
Tgt Ion	96	Resp	1378
Ion Ratio	Lower	Upper	
96	100		
98	43.1	46.1	86.1#
61	152.4	238.0	278.0#



#28
1,1-Dicloroethane
Concen: 0.70 ppb m
RT: 3.542 min Scan# 401
Delta R.T. -0.004 min
Lab File: P14094.D
Acq: 18 Nov 2017 12:32 am

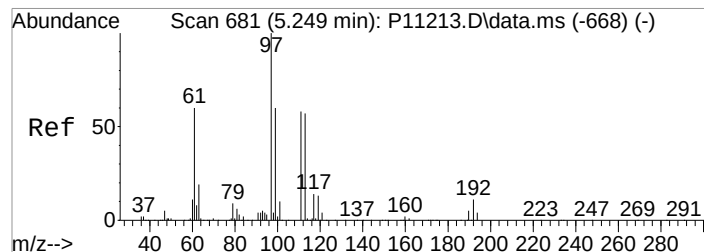
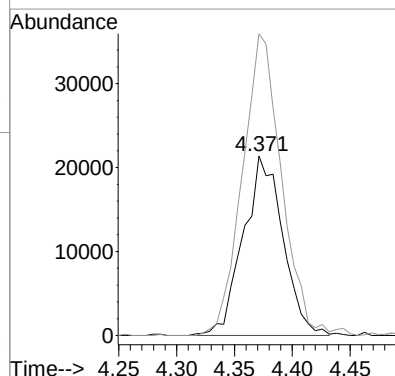
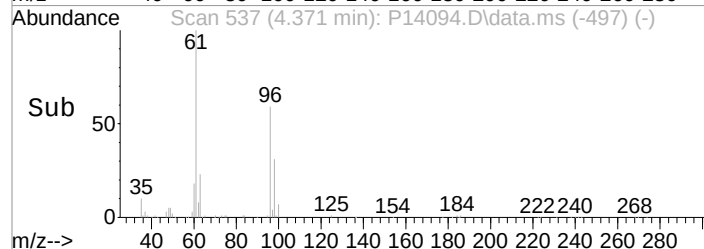
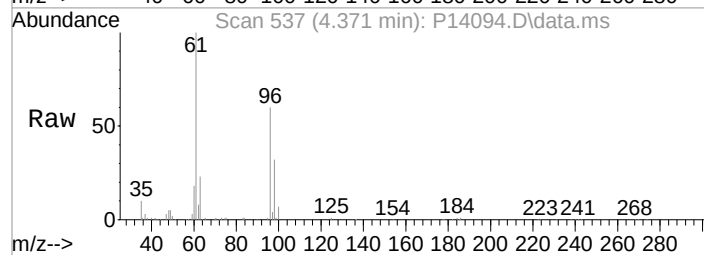
Tgt Ion	63	Resp	4423
Ion Ratio	Lower	Upper	
63	100		
65	18.3	8.0	48.0
83	0.0	0.0	29.3





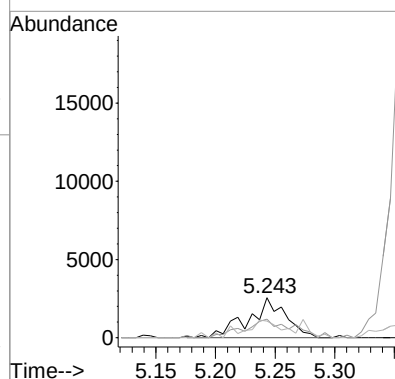
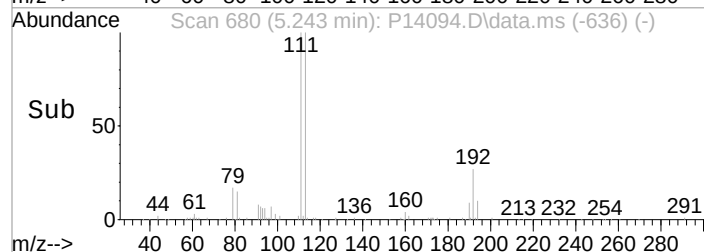
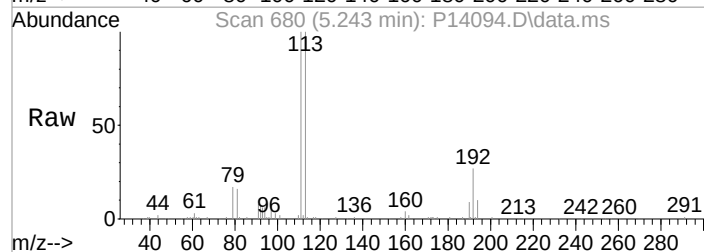
#34
cis-1,2-Dichloroethene
Concen: 15.48 ppb
RT: 4.371 min Scan# 537
Delta R.T. -0.014 min
Lab File: P14094.D
Acq: 18 Nov 2017 12:32 am

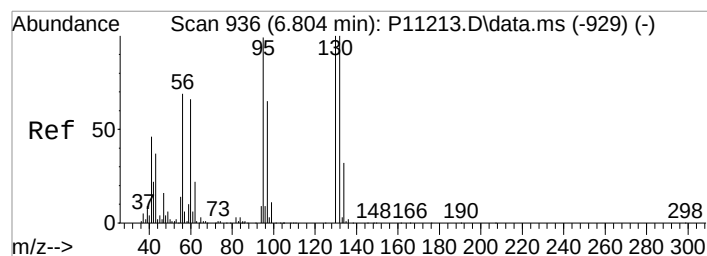
Tgt Ion:	96	Resp:	51068
Ion Ratio	Lower	Upper	
96	100		
61	168.0	197.5	237.5#



#41
1,1,1-Trichloroethane
Concen: 1.31 ppb m
RT: 5.243 min Scan# 680
Delta R.T. -0.010 min
Lab File: P14094.D
Acq: 18 Nov 2017 12:32 am

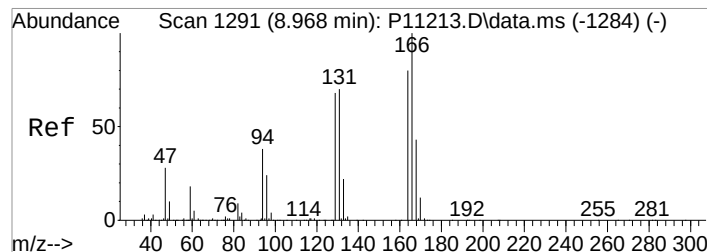
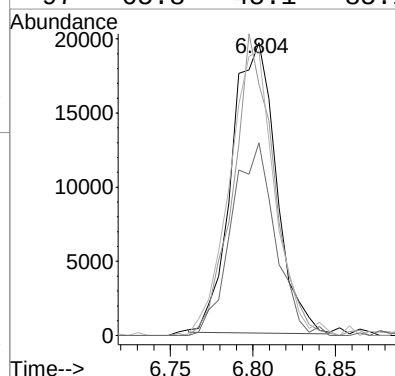
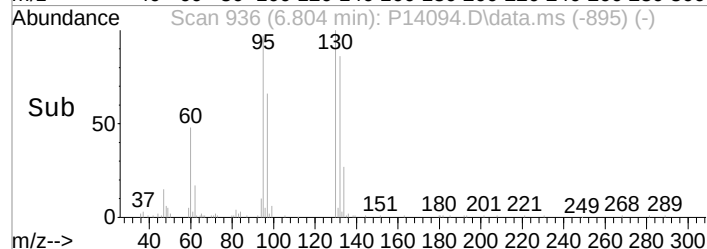
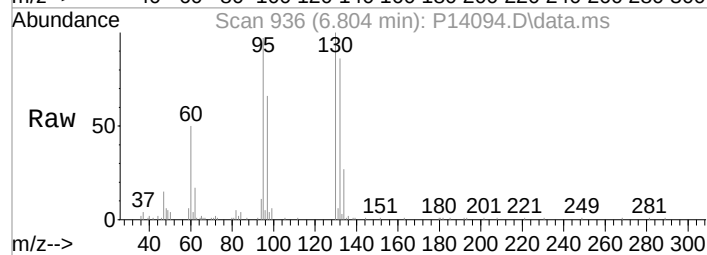
Tgt Ion:	97	Resp:	5580
Ion Ratio	Lower	Upper	
97	100		
99	46.9	39.7	79.7
61	41.4	39.7	79.7





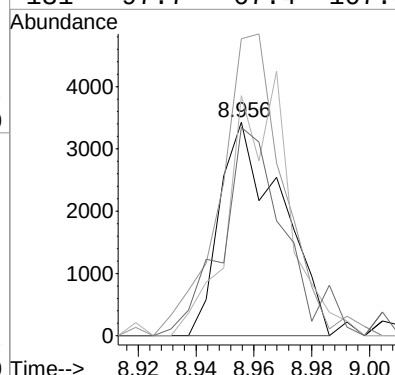
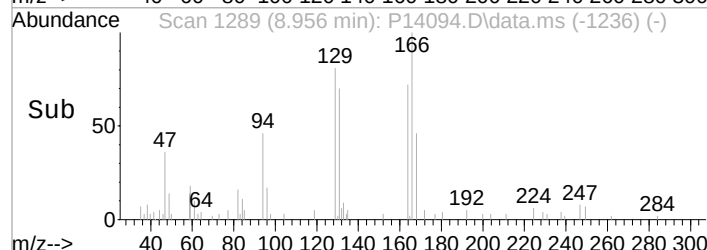
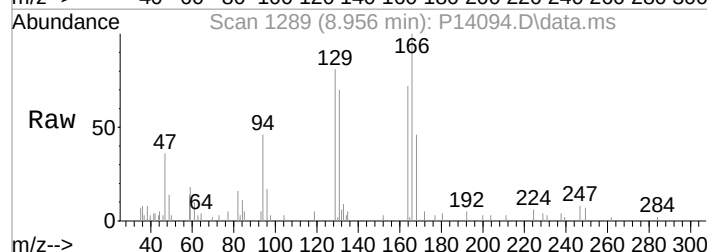
#54
 Trichloroethene
 Concen: 11.91 ppb
 RT: 6.804 min Scan# 936
 Delta R.T. 0.000 min
 Lab File: P14094.D
 Acq: 18 Nov 2017 12:32 am

Tgt Ion	130	Resp	36891
Ion Ratio	Lower	Upper	
130	100		
132	85.9	80.0	120.0
95	97.2	79.4	119.4
97	65.8	45.1	85.1



#72
 Tetrachloroethene
 Concen: 2.27 ppb
 RT: 8.956 min Scan# 1289
 Delta R.T. -0.006 min
 Lab File: P14094.D
 Acq: 18 Nov 2017 12:32 am

Tgt Ion	164	Resp	5101
Ion Ratio	Lower	Upper	
164	100		
166	139.2	105.1	145.1
129	112.5	65.3	105.3#
131	97.7	67.4	107.4



Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3157.D
 Acq On : 21 Nov 2017 12:15 am
 Operator : F. NAEGLER
 Sample : R1710784-008|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 34 Sample Multiplier: 1

Inst : MSVOA14

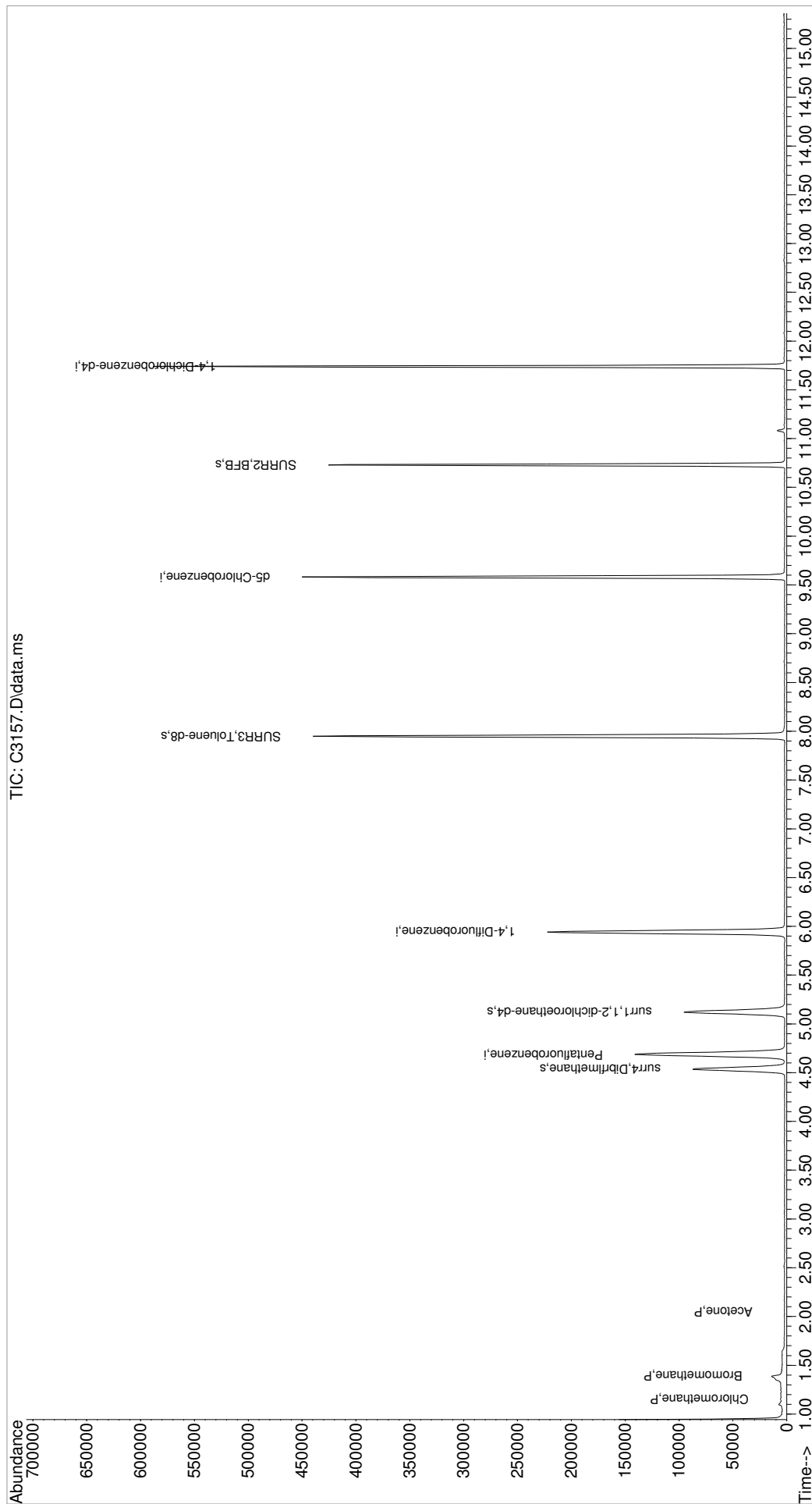
Quant Time: Nov 21 16:37:55 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

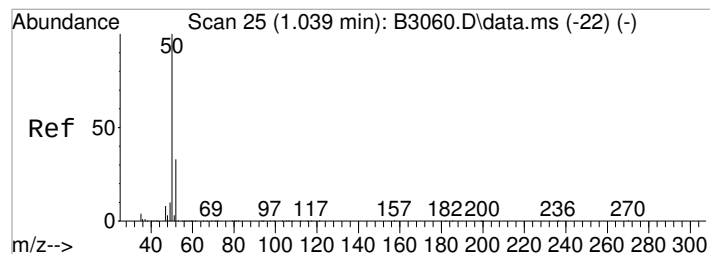
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.686	168	138205	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	210268	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.582	117	193233	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	105670	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	66434	47.05	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery =	94.10%		
47) surr1,1,2-dichloroetha...	5.119	65	92754	48.31	ug/L	0.00
Spiked Amount 50.000	Range 73 - 125		Recovery =	96.62%		
64) SURR3,Toluene-d8	7.948	98	266061	47.84	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery =	95.68%		
69) SURR2,BFB	10.728	95	101815	47.94	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery =	95.88%		
Target Compounds						
3) Chloromethane	1.150	50	570	0.29	ug/L	96
5) Bromomethane	1.394	94	289	0.26	ug/L	98
15) Acetone	2.053	43	286	0.30	ug/L	67

(#) = qualifier out of range (m) = manual integration (+) = signals summed

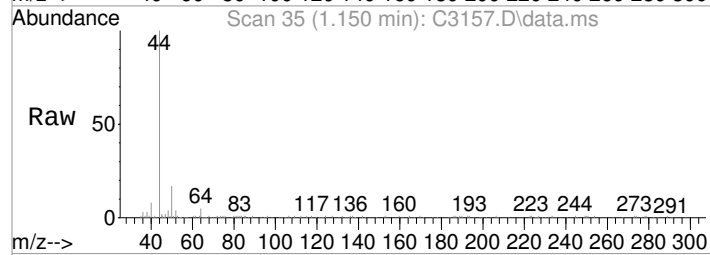
Data Path : I:\ACQUDATA\MSV0A14\Data\112017\
 Data File : C3157.D
 Acq On : 21 Nov 2017 12:15 am
 Operator : F. NAEGLER
 Sample : R1710784-008|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 34 Sample Multiplier: 1
 Inst : MSV0A14

Quant Time: Nov 21 16:37:55 2017
 Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

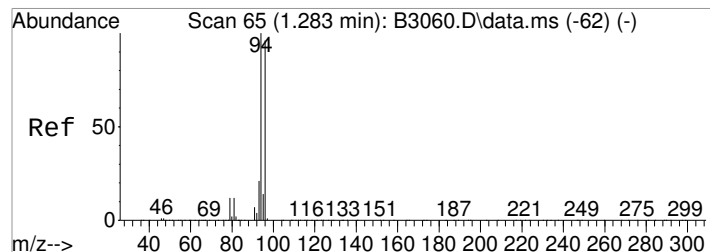
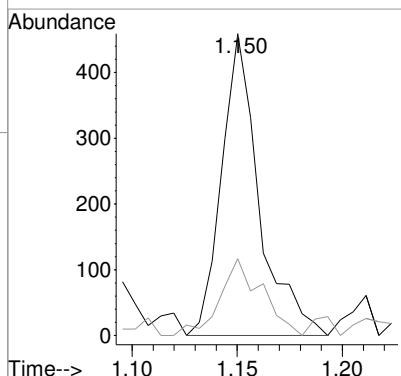
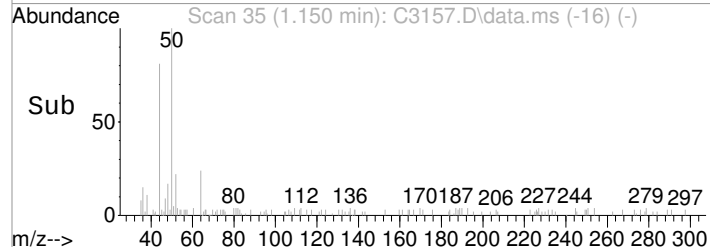




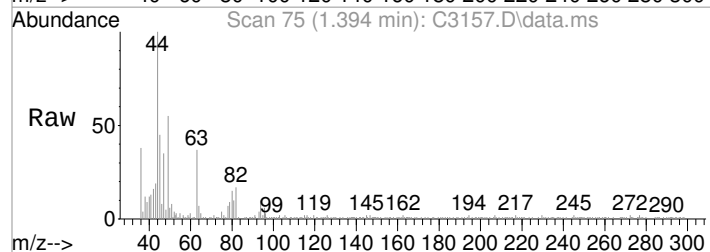
#3
 Chloromethane
 Concen: 0.29 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. 0.000 min
 Lab File: C3157.D
 Acq: 21 Nov 2017 12:15 am



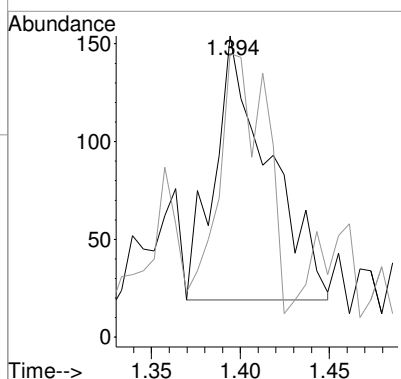
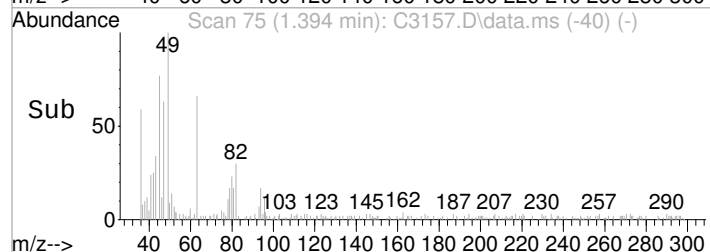
Tgt Ion: 50 Resp: 570
 Ion Ratio Lower Upper
 50 100
 52 29.6 12.1 52.1

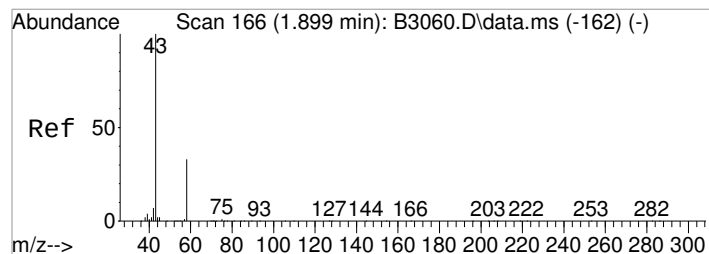


#5
 Bromomethane
 Concen: 0.26 ug/L
 RT: 1.394 min Scan# 75
 Delta R.T. -0.012 min
 Lab File: C3157.D
 Acq: 21 Nov 2017 12:15 am

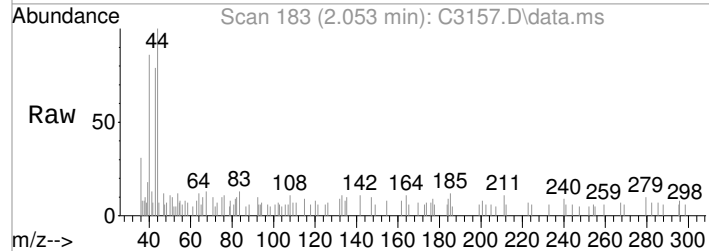


Tgt Ion: 94 Resp: 289
 Ion Ratio Lower Upper
 94 100
 96 94.2 72.2 112.2

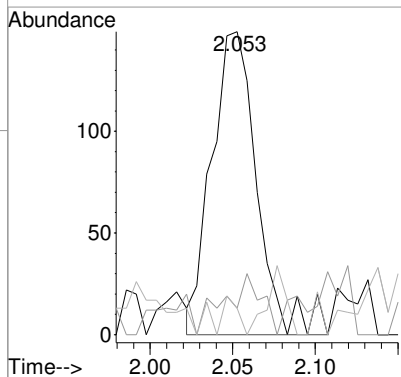
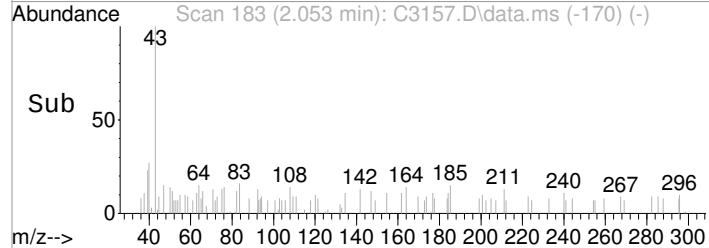




#15
 Acetone
 Concen: 0.30 ug/L
 RT: 2.053 min Scan# 183
 Delta R.T. 0.005 min
 Lab File: C3157.D
 Acq: 21 Nov 2017 12:15 am



Tgt Ion:	43	Resp:	286
Ion Ratio	Lower	Upper	
43	100		
58	8.7	8.6	48.6
42	8.7	0.0	25.7



Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3162.D
 Acq On : 21 Nov 2017 2:06 am
 Operator : F. NAEGLER
 Sample : R1710784-009|2.5
 Misc : ECOLOGY 16560 T2
 ALS Vial : 39 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:49:39 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

rpt 1/5

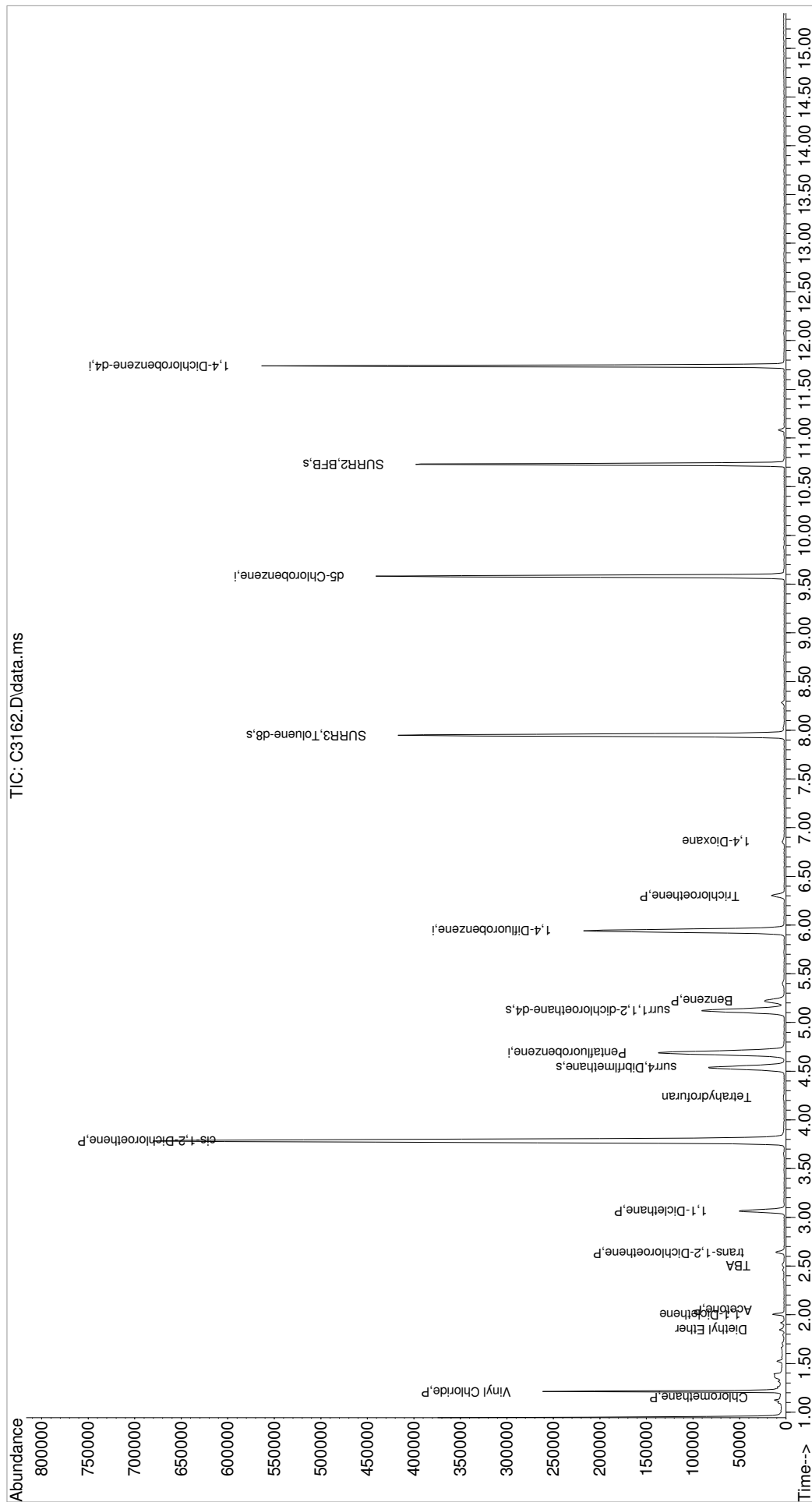
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	136867	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	203596	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	188758	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	103326	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	63747	46.63	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	93.26%	
47) surr1,1,2-dichloroetha...	5.125	65	89867	48.34	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	96.68%	
64) SURR3,Toluene-d8	7.948	98	252368	46.86	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	93.72%	
69) SURR2,BFB	10.728	95	95580	46.48	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	92.96%	
Target Compounds						
3) Chloromethane	1.150	50	442	0.23	ug/L	72
4) Vinyl Chloride	1.211	62	121337	69.45	ug/L	97
9) Diethyl Ether	1.845	59	1734	1.32	ug/L	84
13) 1,1-Dicethene	2.004	96	3163	2.69	ug/L	92
15) Acetone	2.052	43	415	0.44	ug/L	94
23) TBA	2.510	59	1398	6.21	ug/L	84
26) trans-1,2-Dichloroethene	2.638	96	2766	2.19	ug/L	89
27) 1,1-Dicethane	3.064	63	45328	18.12	ug/L	98
33) cis-1,2-Dichloroethene	3.784	96	334892	223.61	ug/L	93
38) Tetrahydrofuran	4.235	42	880	1.16	ug/L	88
48) Benzene	5.223	78	25739	4.87	ug/L	95
53) Trichloroethene	6.302	130	5098	3.47	ug/L #	86
57) 1,4-Dioxane	6.856	88	1872	67.90	ug/L	96

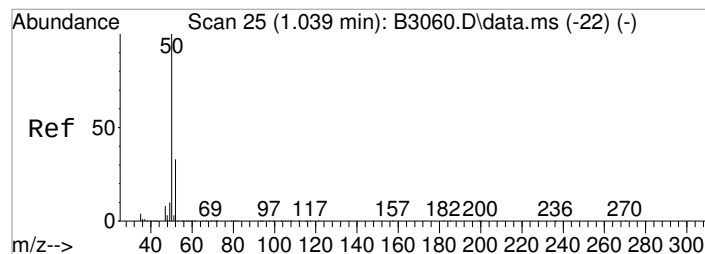
E-Over Calibration

(#) = qualifier out of range (m) = manual integration (+) = signals summed

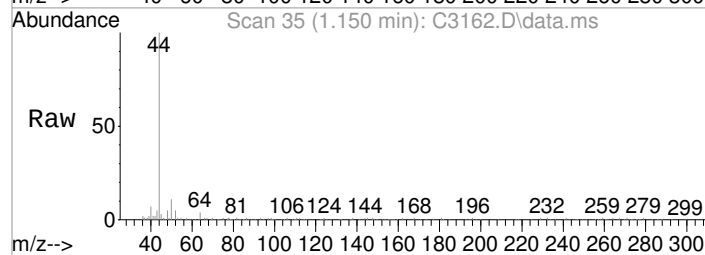
Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3162.D
Acq On : 21 Nov 2017 2:06 am
Operator : F. NAEGLER
Sample : R1710784-009|2.5
Misc : ECOLOGY 16560 T2
ALS Vial : 39 Sample Multiplier: 1
Inst : MSVOA14

Quant Time: Nov 21 16:49:39 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration

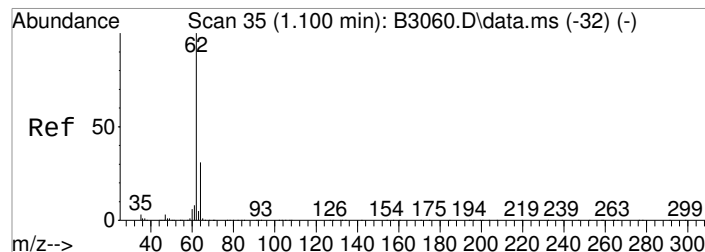
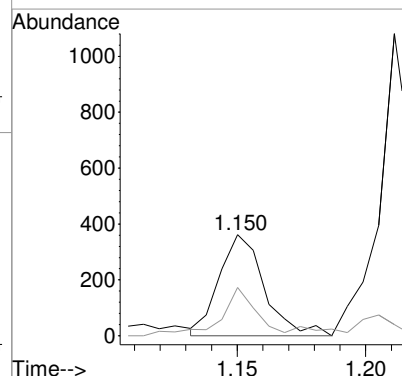
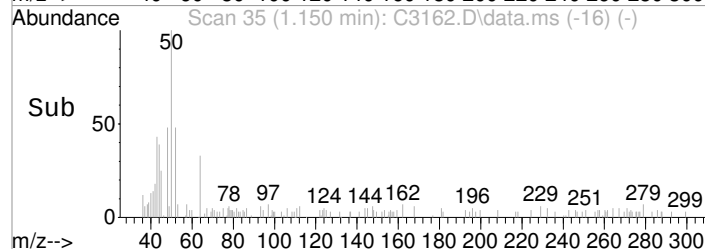




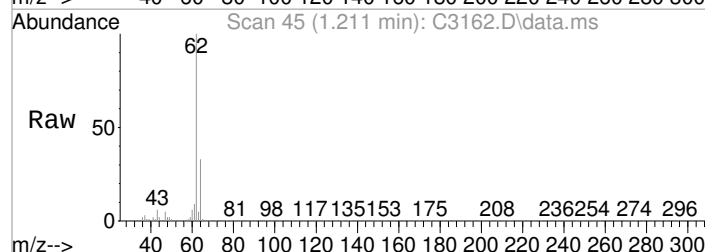
#3
 Chloromethane
 Concen: 0.23 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. -0.000 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am



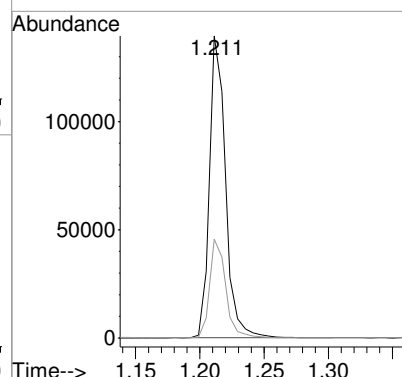
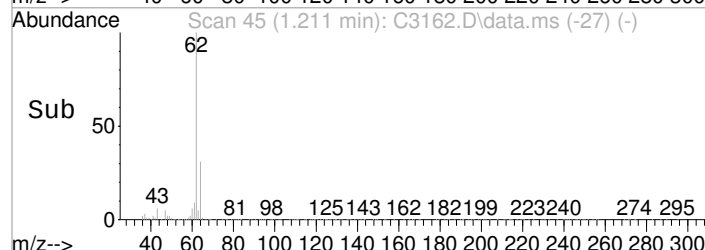
Tgt Ion: 50 Resp: 442
 Ion Ratio Lower Upper
 50 100
 52 47.8 12.1 52.1

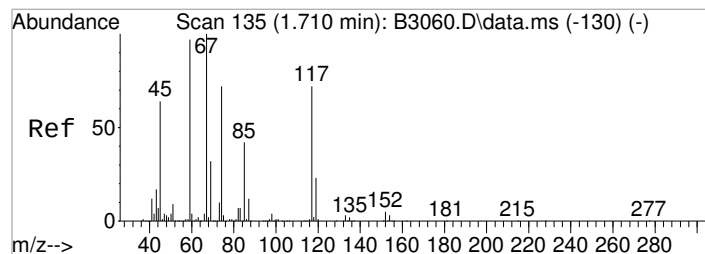


#4
 Vinyl Chloride
 Concen: 69.45 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am



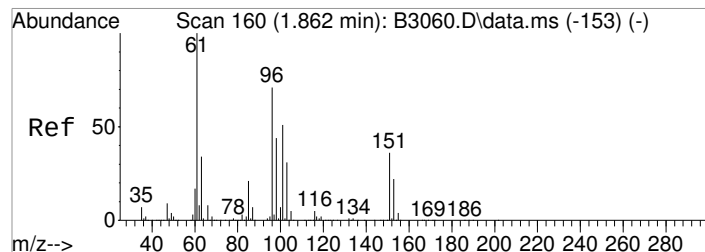
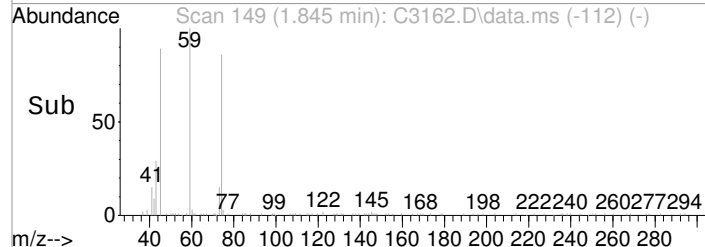
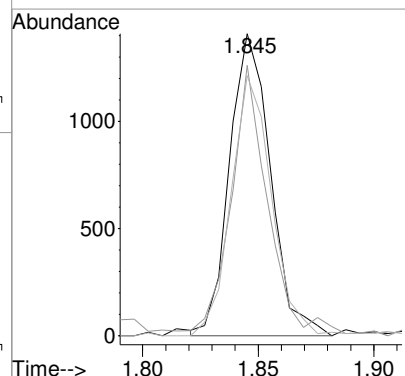
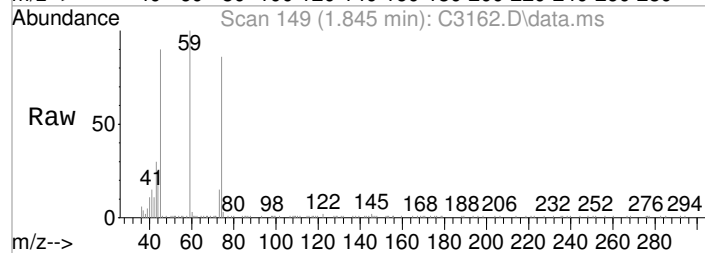
Tgt Ion: 62 Resp: 121337
 Ion Ratio Lower Upper
 62 100
 64 32.7 10.9 50.9





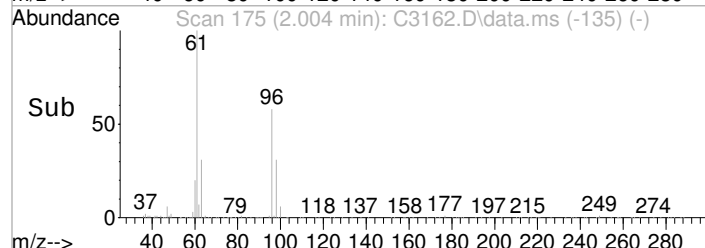
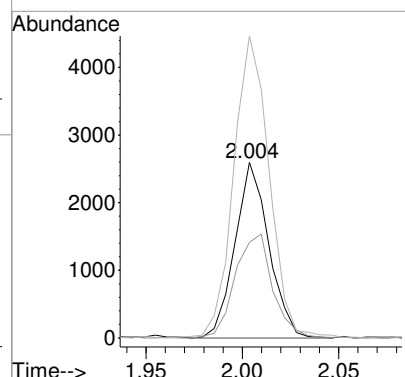
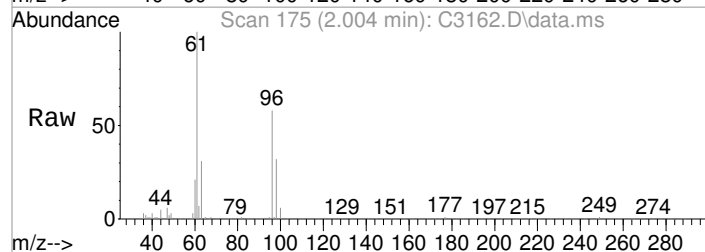
#9
 Diethyl Ether
 Concen: 1.32 ug/L
 RT: 1.845 min Scan# 149
 Delta R.T. -0.006 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am

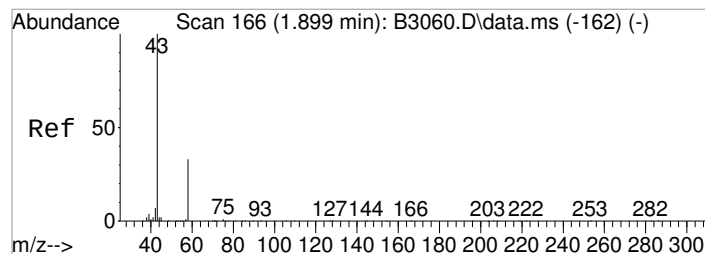
Tgt Ion	Ratio	Resp	Lower	Upper
59	100	1734		
45	89.6	52.4	92.4	
74	86.2	55.8	95.8	



#13
 1,1-Dicethene
 Concen: 2.69 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am

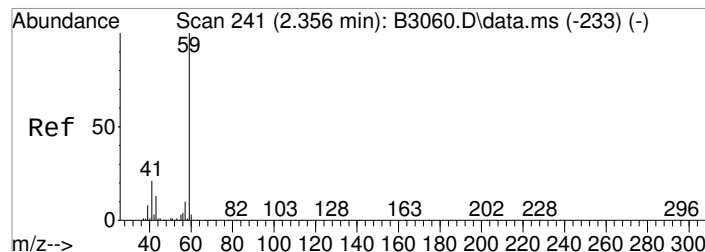
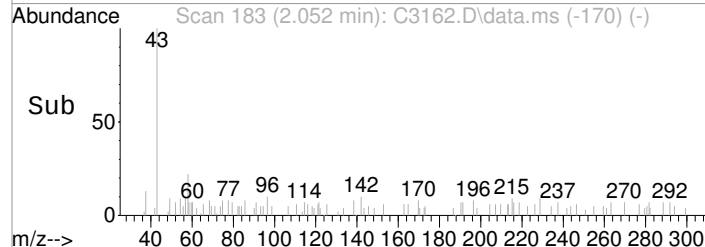
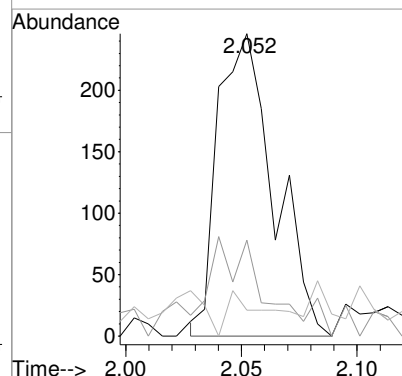
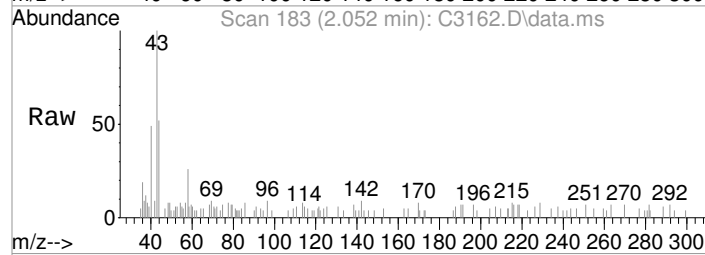
Tgt Ion	Ratio	Resp	Lower	Upper
96	100	3163		
98	54.5	47.9	87.9	
61	172.1	157.9	197.9	





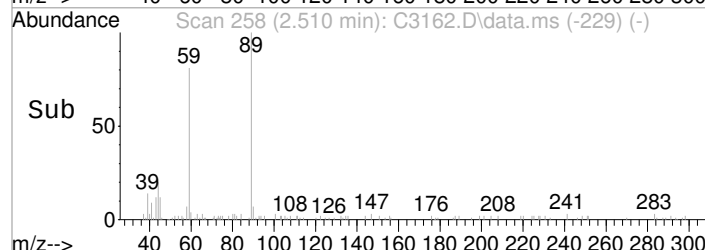
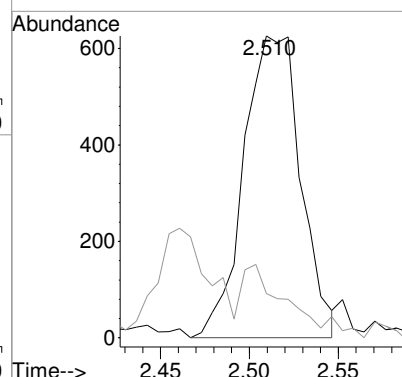
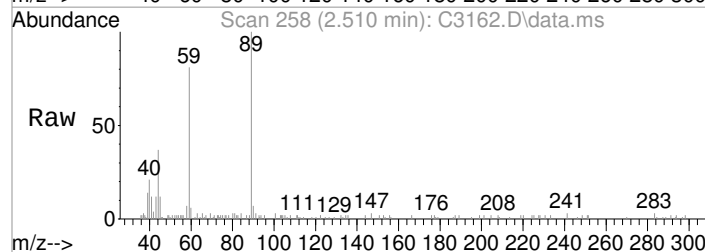
#15
 Acetone
 Concen: 0.44 ug/L
 RT: 2.052 min Scan# 183
 Delta R.T. 0.005 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am

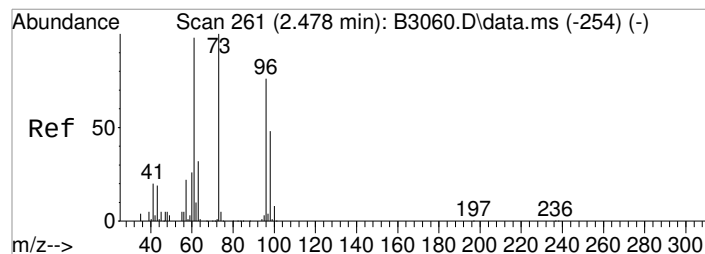
Tgt Ion: 43 Resp: 415
 Ion Ratio Lower Upper
 43 100
 58 31.7 8.6 48.6
 42 8.5 0.0 25.7



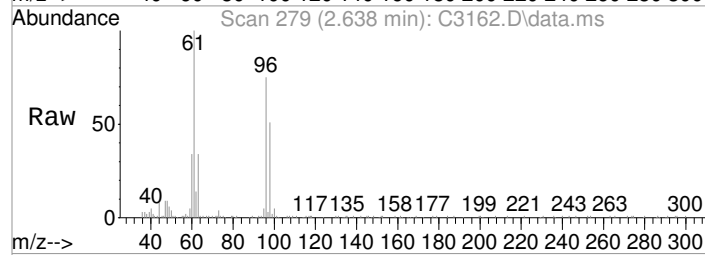
#23
 TBA
 Concen: 6.21 ug/L
 RT: 2.510 min Scan# 258
 Delta R.T. -0.007 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am

Tgt Ion: 59 Resp: 1398
 Ion Ratio Lower Upper
 59 100
 41 14.7 2.6 42.6

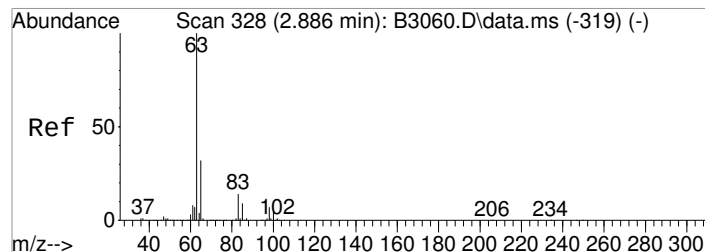
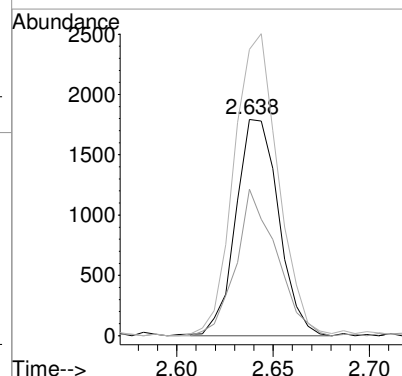
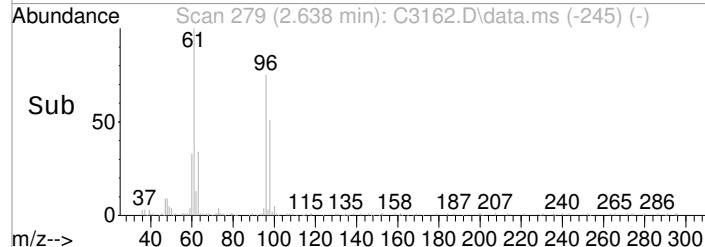




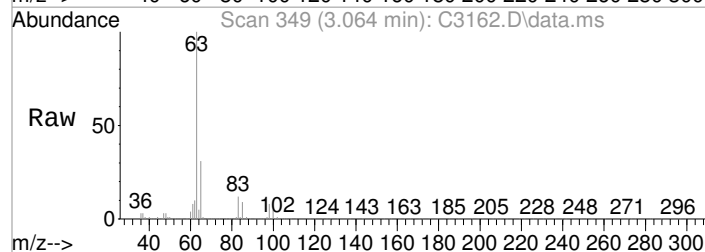
#26
 trans-1,2-Dichloroethene
 Concen: 2.19 ug/L
 RT: 2.638 min Scan# 279
 Delta R.T. -0.006 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am



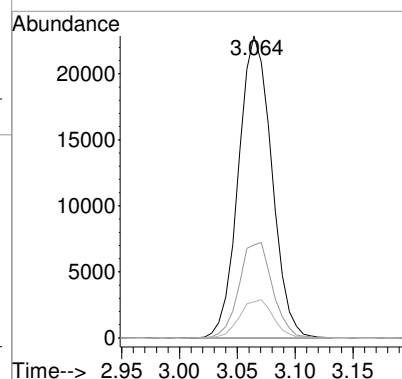
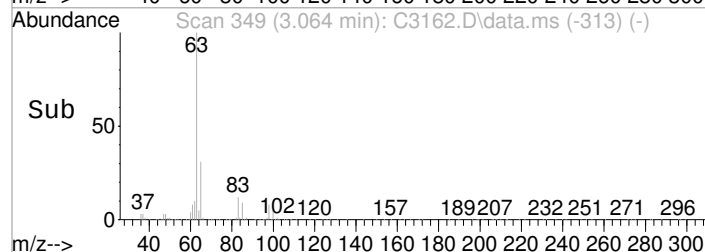
Tgt Ion: 96 Resp: 2766
 Ion Ratio Lower Upper
 96 100
 98 67.8 41.4 81.4
 61 132.5 127.1 167.1

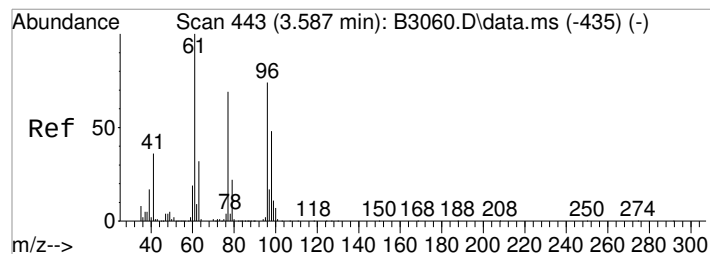


#27
 1,1-Dicethane
 Concen: 18.12 ug/L
 RT: 3.064 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am



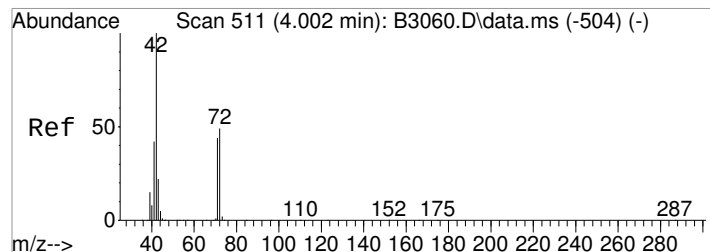
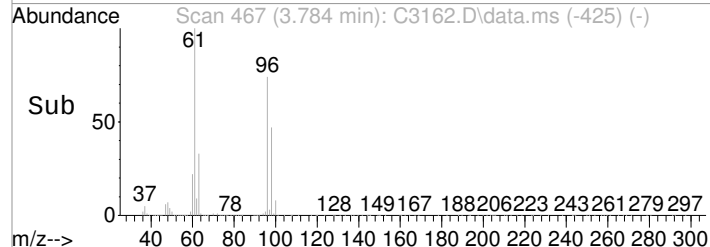
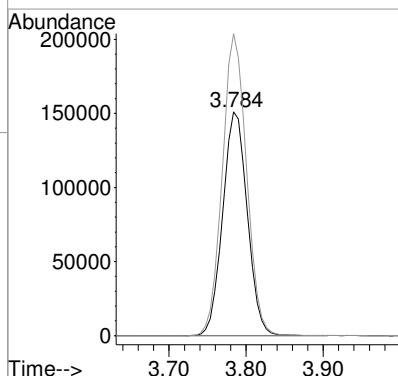
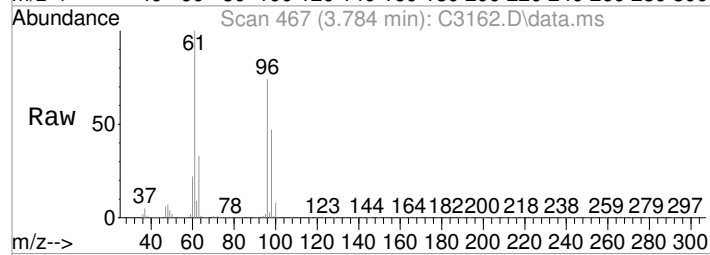
Tgt Ion: 63 Resp: 45328
 Ion Ratio Lower Upper
 63 100
 65 30.8 11.6 51.6
 83 12.0 0.0 32.7





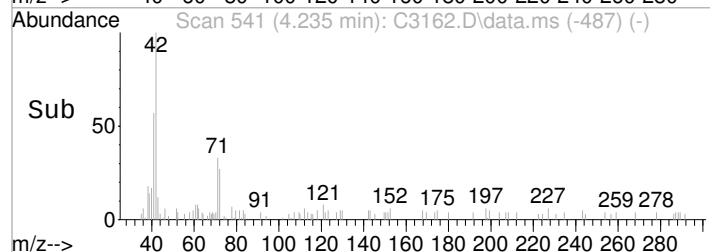
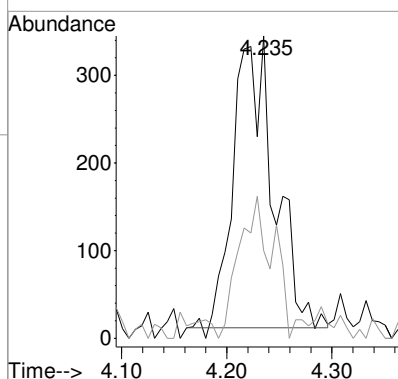
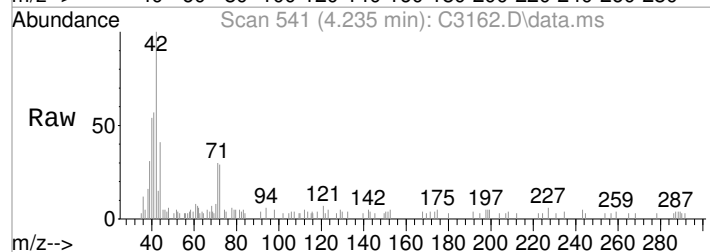
#33
 cis-1,2-Dichloroethene
 Concen: 223.61 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am

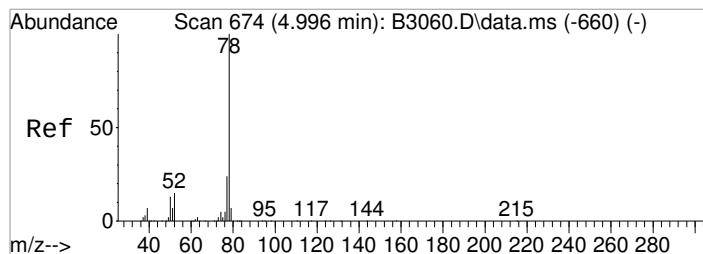
Tgt Ion: 96 Resp: 334892
 Ion Ratio Lower Upper
 96 100
 61 134.9 123.7 163.7



#38
 Tetrahydrofuran
 Concen: 1.16 ug/L
 RT: 4.235 min Scan# 541
 Delta R.T. 0.015 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am

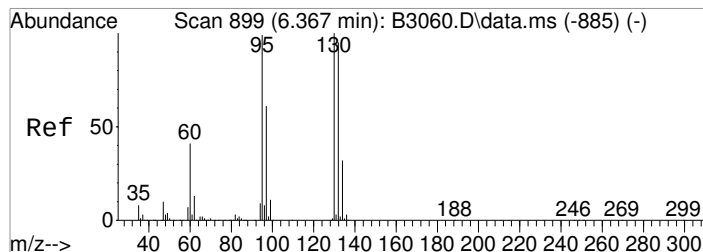
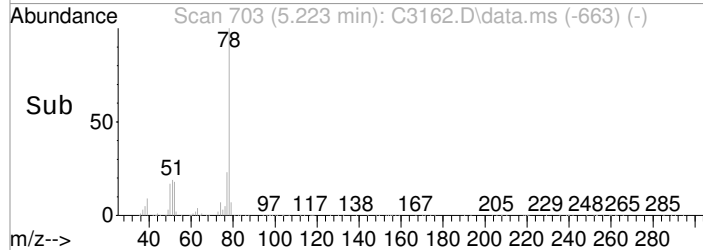
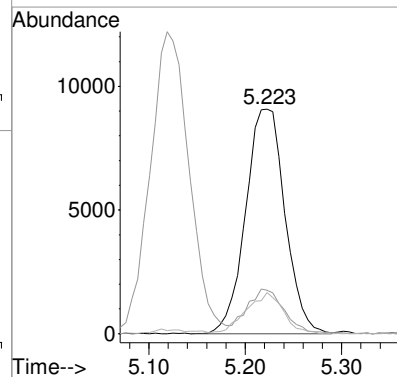
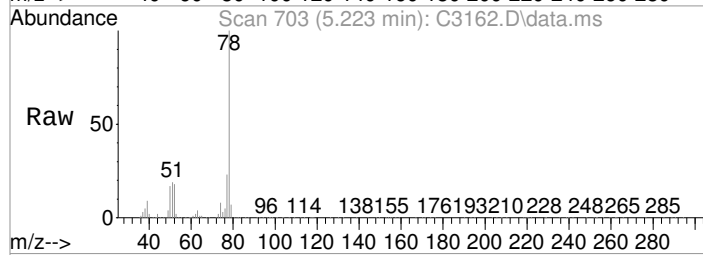
Tgt Ion: 42 Resp: 880
 Ion Ratio Lower Upper
 42 100
 72 29.0 16.0 56.0





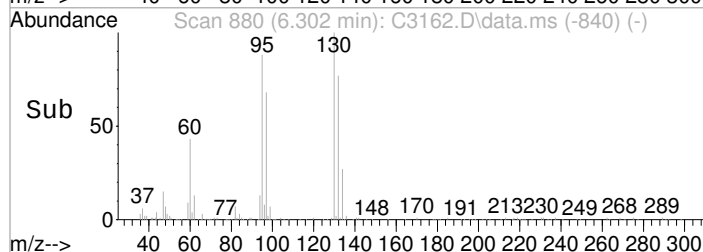
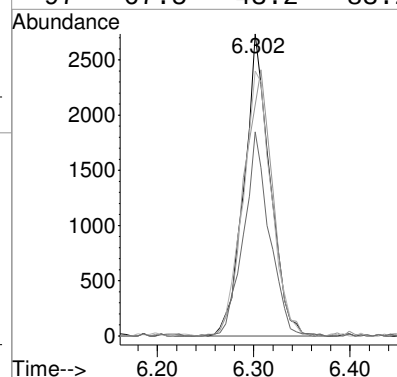
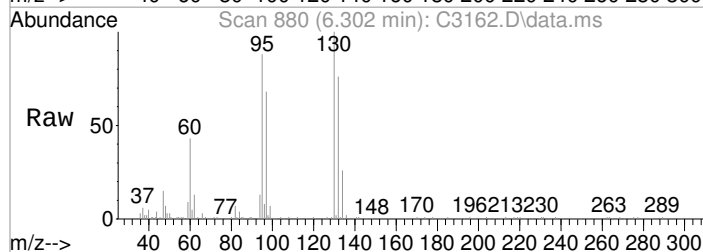
#48
 Benzene
 Concen: 4.87 ug/L
 RT: 5.223 min Scan# 703
 Delta R.T. -0.004 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am

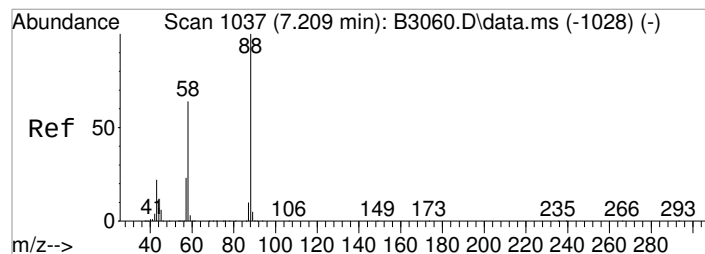
Tgt Ion:	78	Resp:	25739
Ion Ratio		Lower	Upper
78	100		
51	19.4	0.0	37.7
52	18.4	0.0	36.1



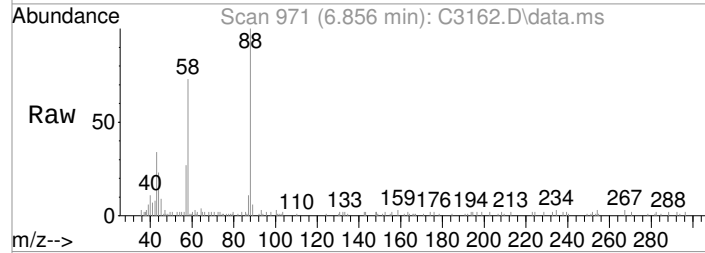
#53
 Trichloroethene
 Concen: 3.47 ug/L
 RT: 6.302 min Scan# 880
 Delta R.T. -0.005 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am

Tgt Ion:	130	Resp:	5098
Ion Ratio		Lower	Upper
130	100		
132	76.5	82.3	122.3#
95	87.8	75.5	115.5
97	67.5	43.2	83.2

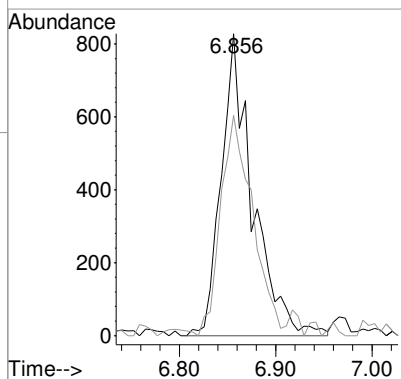
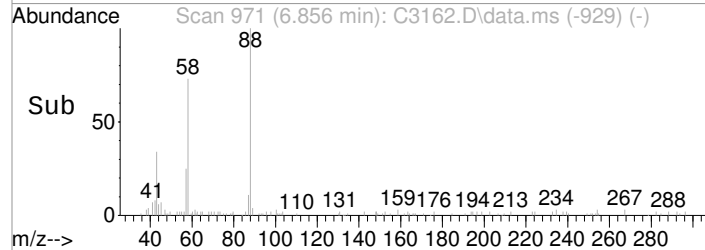




#57
 1,4-Dioxane
 Concen: 67.90 ug/L
 RT: 6.856 min Scan# 971
 Delta R.T. -0.001 min
 Lab File: C3162.D
 Acq: 21 Nov 2017 2:06 am



Tgt Ion: 88 Resp: 1872
 Ion Ratio Lower Upper
 88 100
 58 72.9 56.0 96.0



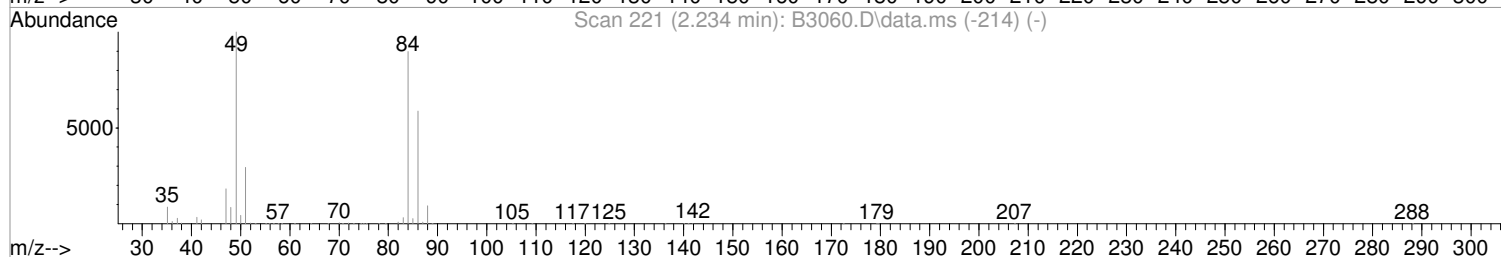
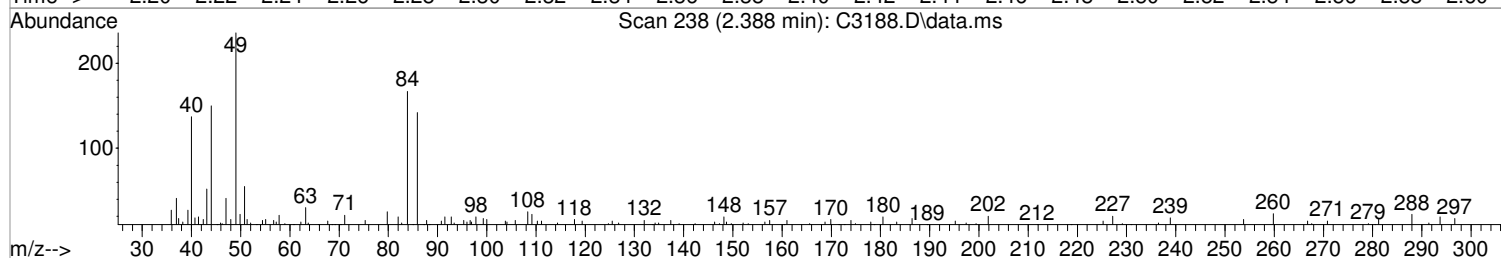
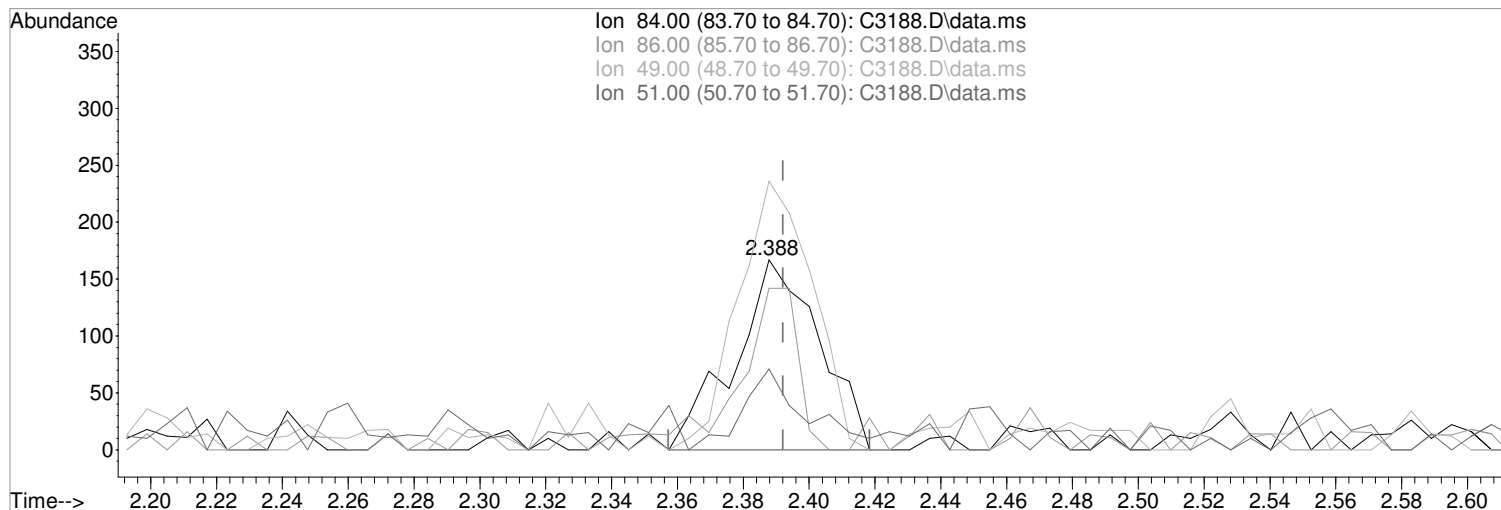
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3188.D
Acq On : 21 Nov 2017 2:47 pm
Operator : F. NAEGLER
Sample : R1710784-009|5.0
Misc : ECOLOGY 16560 T2
ALS Vial : 12 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 15:03:46 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3188.D\data.ms

(22) Methylene Chloride (P)

2.388min (-0.004) 0.21 ug/L m

response 298

Ion	Exp%	Act%
84.00	100	100
86.00	64.80	85.03#
49.00	138.10	141.32
51.00	42.50	32.93

Manual Integration:

After

Peak not found.

11/27/17

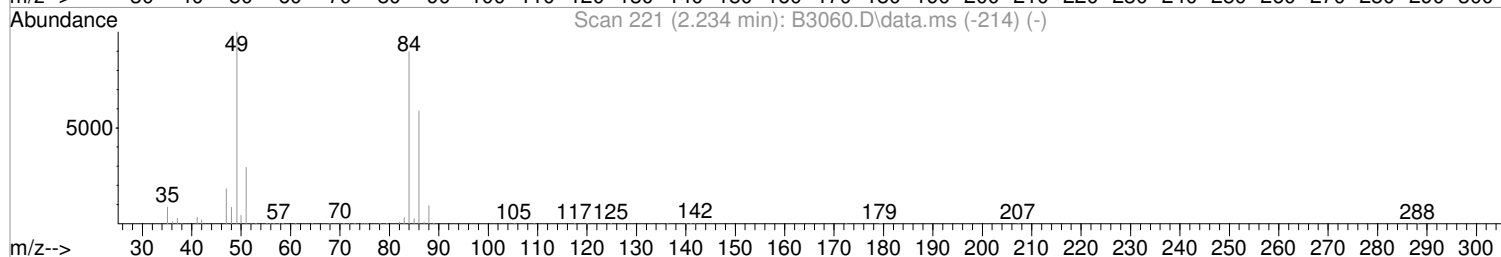
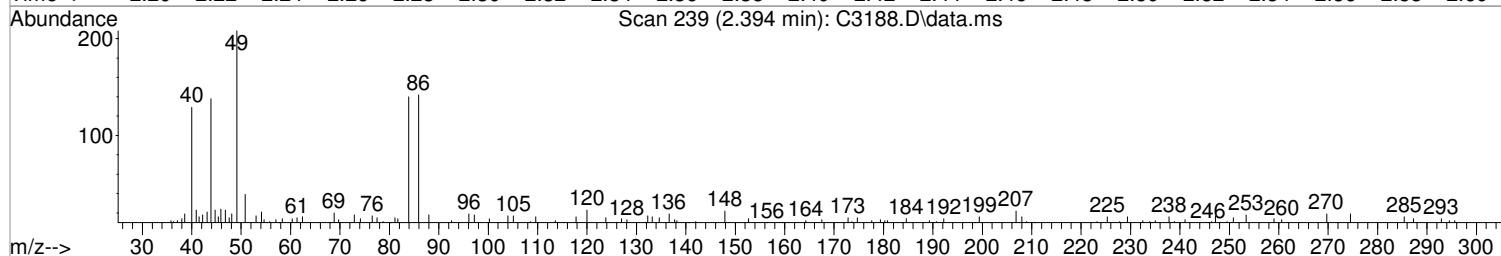
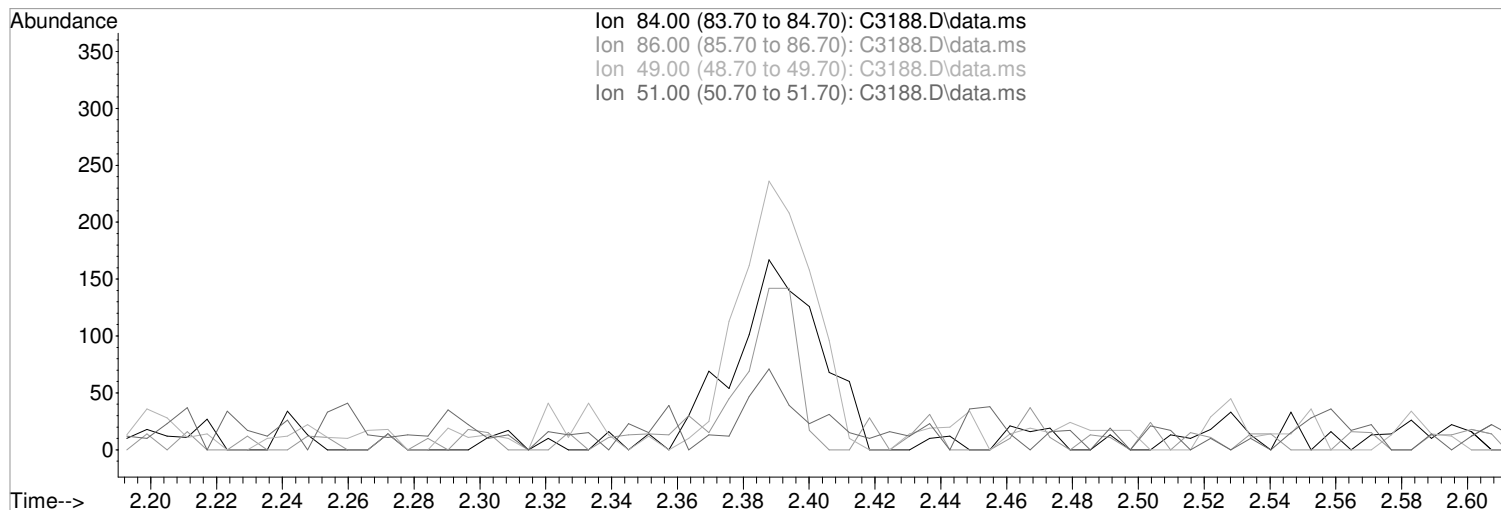
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3188.D
Acq On : 21 Nov 2017 2:47 pm
Operator : F. NAEGLER
Sample : R1710784-009|5.0
Misc : ECOLOGY 16560 T2
ALS Vial : 12 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 15:03:46 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3188.D\data.ms

(22) Methylene Chloride (P)

Manual Integration:

2.392min (-2.392) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
84.00	100	0.00
86.00	64.80	0.00#
49.00	138.10	0.00#
51.00	42.50	0.00#

11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3188.D
 Acq On : 21 Nov 2017 2:47 pm
 Operator : F. NAEGLER
 Sample : R1710784-009|5.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 12 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 27 11:18:11 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

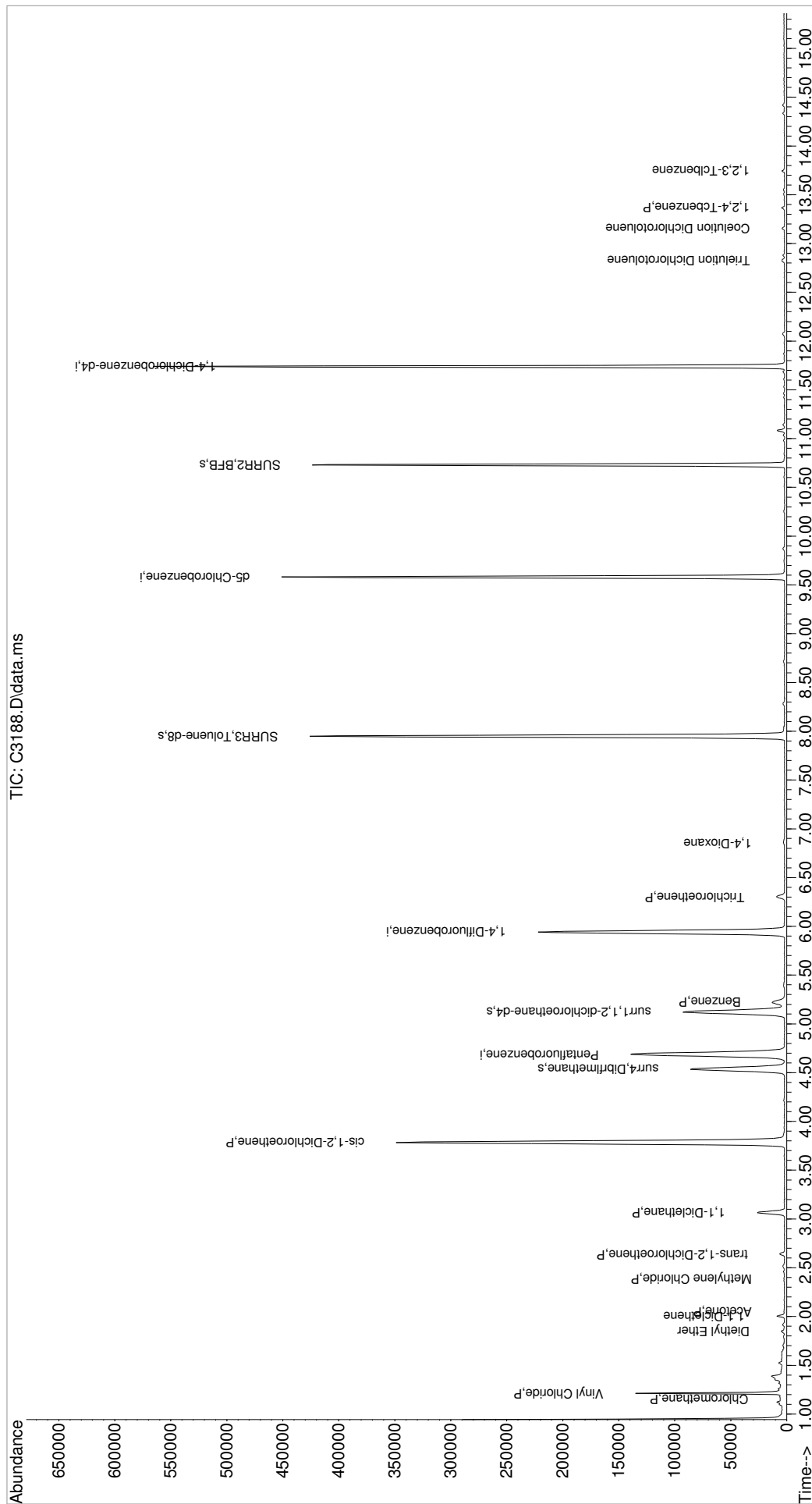
DL

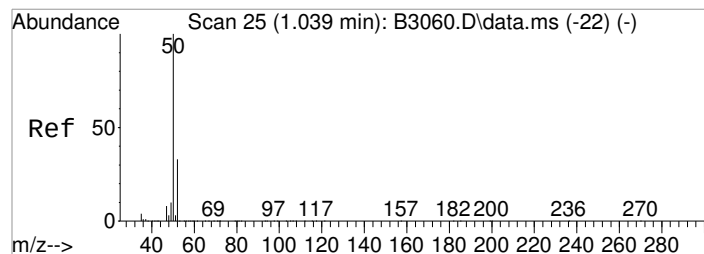
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.686	168	139365	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	207121	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.582	117	193113	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	104721	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	66419	47.75	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	95.50%	
47) surr1,1,2-dichloroetha...	5.119	65	91474	48.37	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	96.74%	
64) SURR3,Toluene-d8	7.948	98	262510	47.92	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	95.84%	
69) SURR2,BFB	10.728	95	100885	48.22	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	96.44%	
Target Compounds						
						Qvalue
3) Chloromethane	1.150	50	538	0.27	ug/L	98
4) Vinyl Chloride	1.211	62	61566	34.61	ug/L	99
9) Diethyl Ether	1.845	59	914	0.68	ug/L	85
13) 1,1-Dicethene	2.004	96	1665	1.39	ug/L	90
15) Acetone	2.046	43	526	0.55	ug/L	75
22) Methylene Chloride	2.388	84	298m	0.21	ug/L	
26) trans-1,2-Dichloroethene	2.638	96	1480	1.15	ug/L #	88
27) 1,1-Dicethane	3.065	63	22858	8.97	ug/L	100
33) cis-1,2-Dichloroethene	3.784	96	169051	110.85	ug/L	92
48) Benzene	5.223	78	13210	2.46	ug/L	95
53) Trichloroethene	6.302	130	2765	1.85	ug/L	93
57) 1,4-Dioxane	6.850	88	1085	38.68	ug/L #	73
111) Trielution Dichlorotol...	12.831	125	1156	0.44	ug/L	82
113) Coelution Dichlorotoluene	13.154	125	875	0.30	ug/L	80
114) 1,2,4-Tcbenzene	13.367	180	693	0.31	ug/L	86
117) 1,2,3-Tclbenzene	13.745	180	615	0.28	ug/L #	72

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQDATA\MSV0A14\Data\112117\
 Data File : C3188.D
 Acq On : 21 Nov 2017 2:47 pm
 Operator : F. NAEGLER
 Sample : R1710784-009|5.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 12 Sample Multiplier: 1
 Inst : MSV0A14

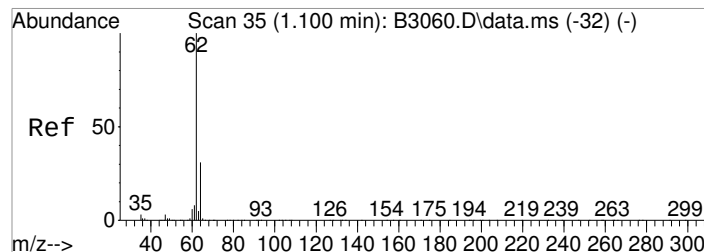
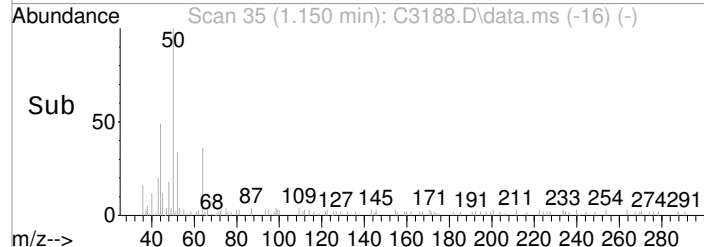
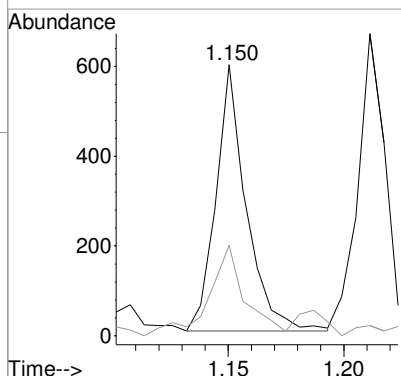
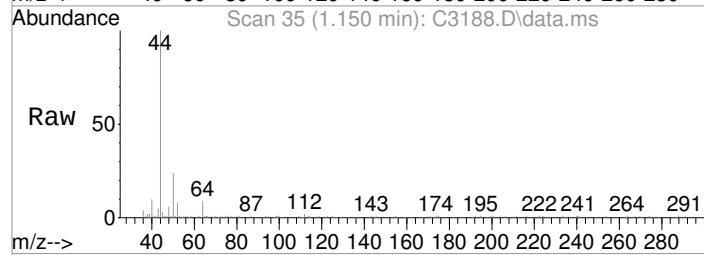
Quant Time: Nov 27 11:18:11 2017
 Quant Method : I:\ACQDATA\MSV0A14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration





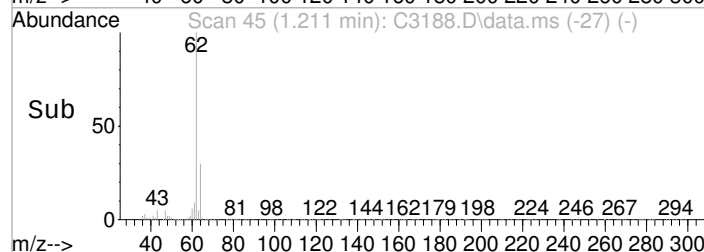
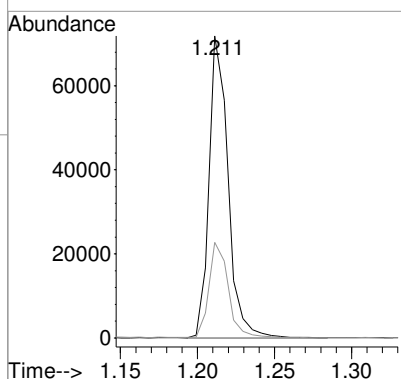
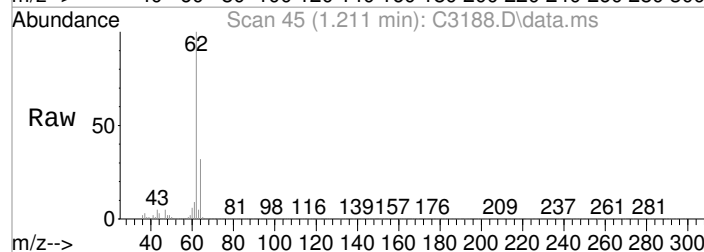
#3
 Chloromethane
 Concen: 0.27 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. 0.000 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

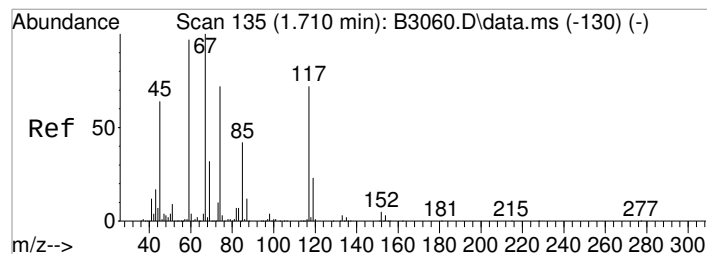
Tgt Ion: 50 Resp: 538
 Ion Ratio Lower Upper
 50 100
 52 33.4 12.1 52.1



#4
 Vinyl Chloride
 Concen: 34.61 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

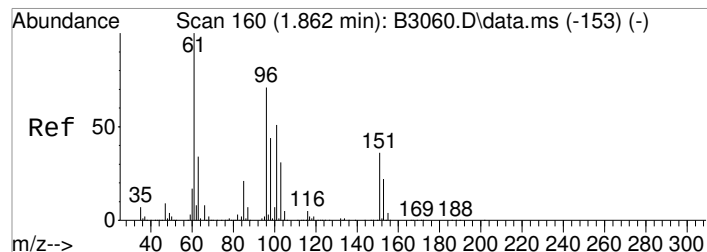
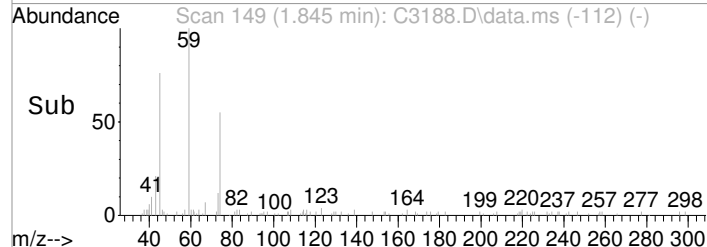
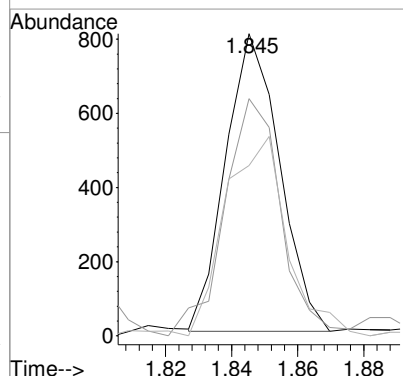
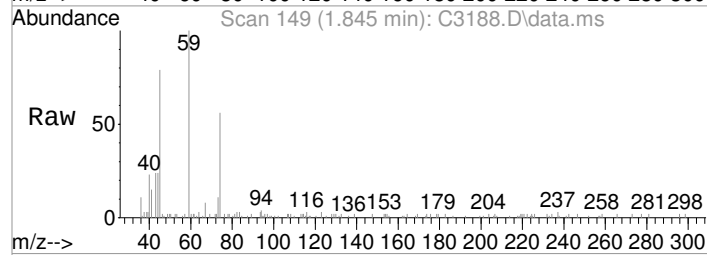
Tgt Ion: 62 Resp: 61566
 Ion Ratio Lower Upper
 62 100
 64 31.6 10.9 50.9





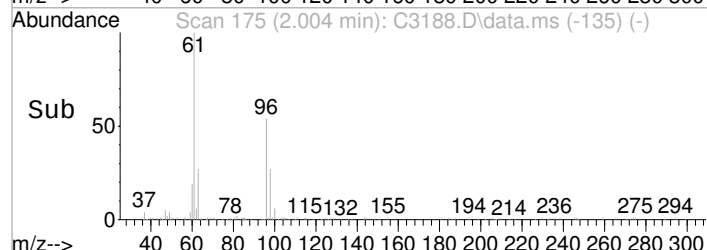
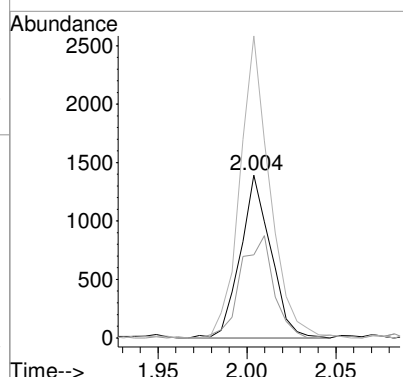
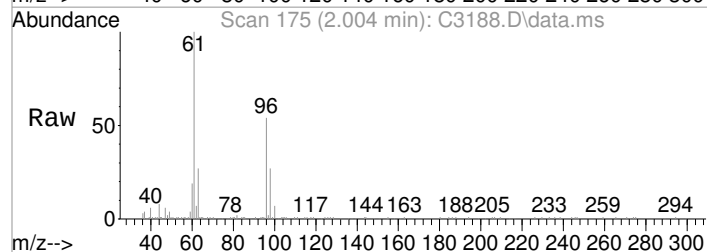
#9
 Diethyl Ether
 Concen: 0.68 ug/L
 RT: 1.845 min Scan# 149
 Delta R.T. -0.006 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

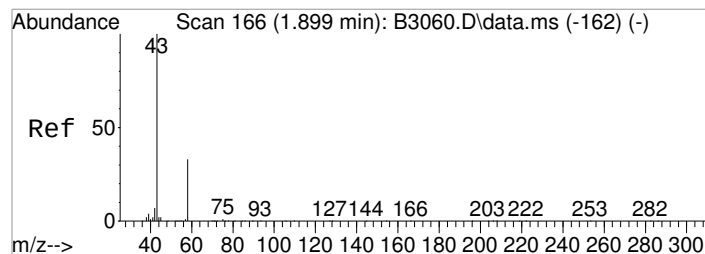
Tgt Ion: 59 Resp: 914
 Ion Ratio Lower Upper
 59 100
 45 78.5 52.4 92.4
 74 56.3 55.8 95.8



#13
 1,1-Dicethylene
 Concen: 1.39 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

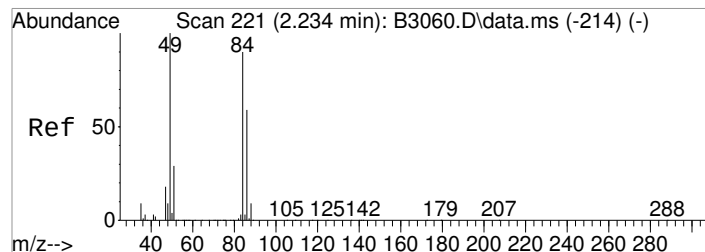
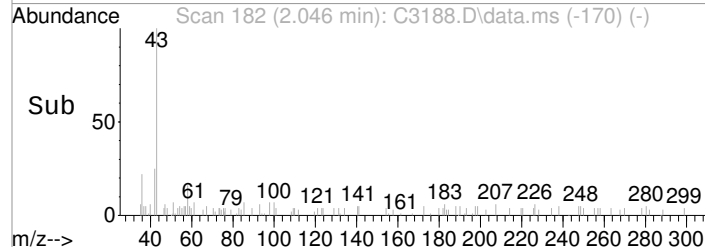
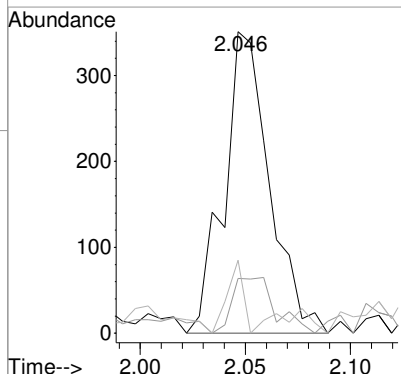
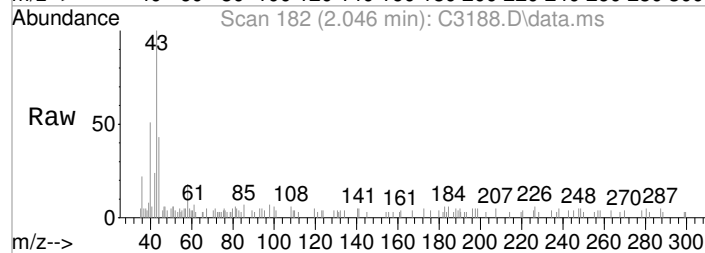
Tgt Ion: 96 Resp: 1665
 Ion Ratio Lower Upper
 96 100
 98 50.9 47.9 87.9
 61 185.4 157.9 197.9





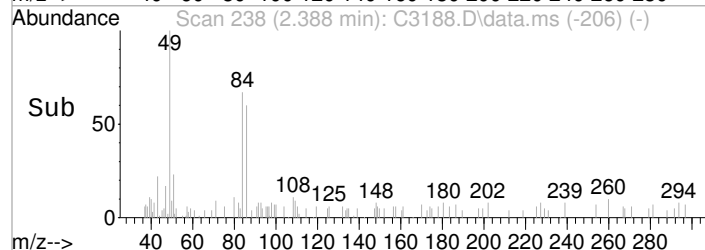
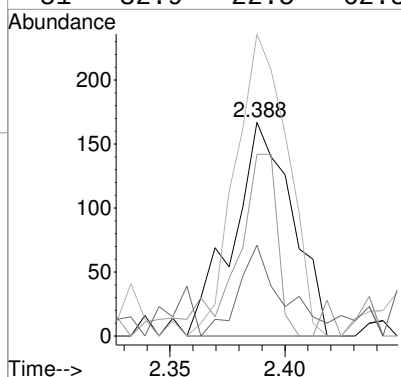
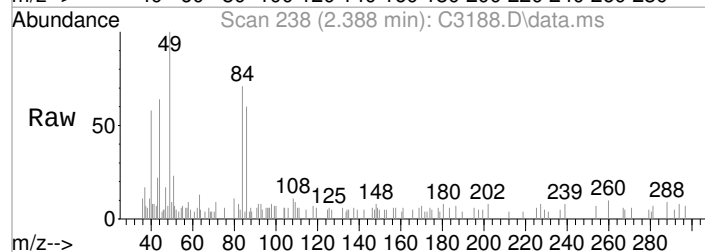
#15
 Acetone
 Concen: 0.55 ug/L
 RT: 2.046 min Scan# 182
 Delta R.T. -0.001 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

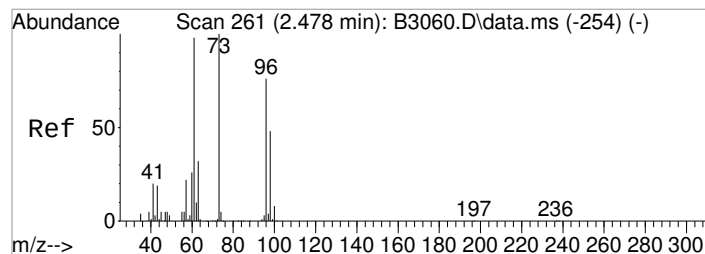
Tgt Ion: 43	Resp: 526
Ion Ratio	Lower Upper
43 100	
58 18.2	8.6 48.6
42 24.2	0.0 25.7



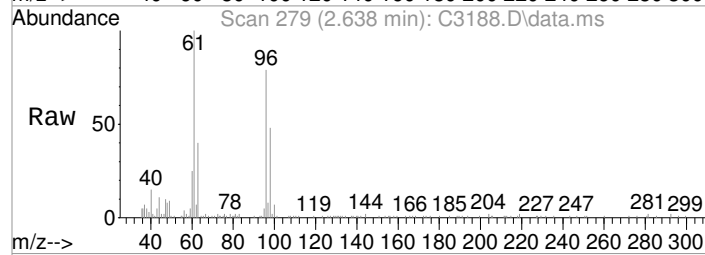
#22
 Methylene Chloride
 Concen: 0.21 ug/L m
 RT: 2.388 min Scan# 238
 Delta R.T. -0.004 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

Tgt Ion: 84	Resp: 298
Ion Ratio	Lower Upper
84 100	
86 85.0	44.8 84.8#
49 141.3	118.1 158.1
51 32.9	22.5 62.5

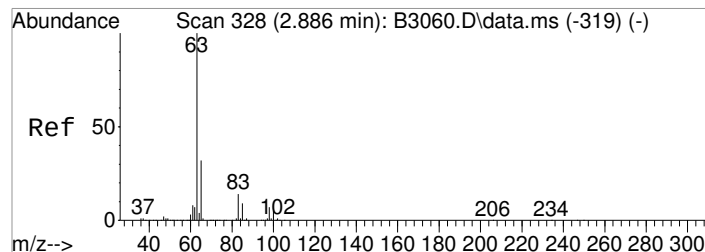
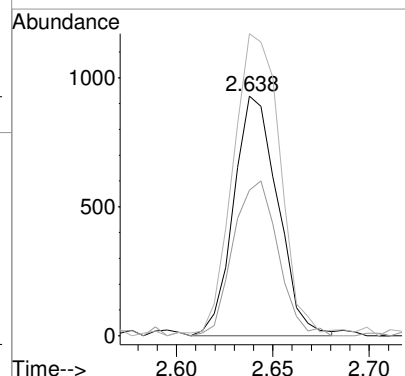
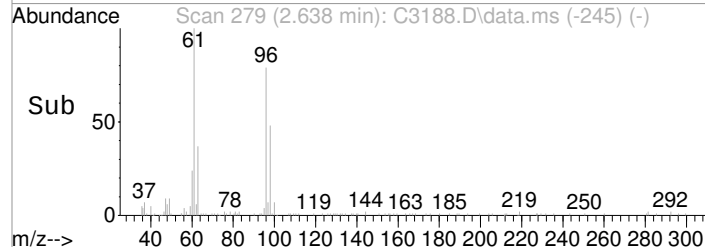




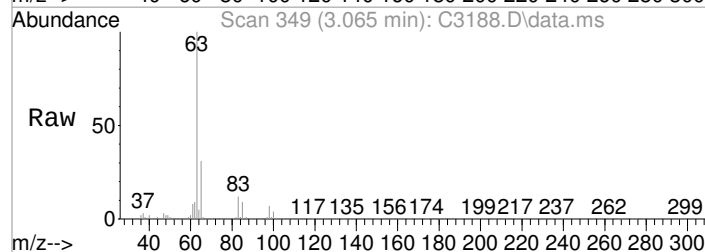
#26
 trans-1,2-Dichloroethene
 Concen: 1.15 ug/L
 RT: 2.638 min Scan# 279
 Delta R.T. -0.005 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm



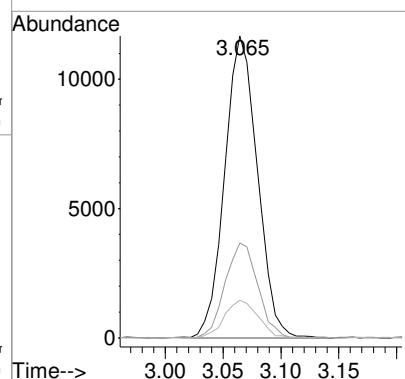
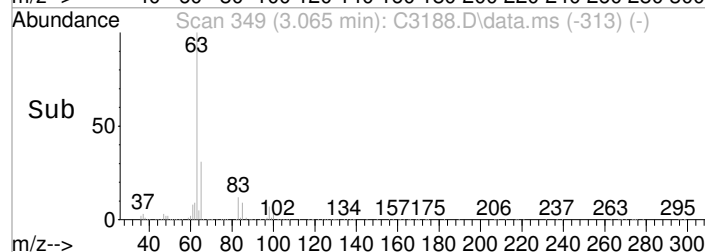
Tgt Ion: 96 Resp: 1480
 Ion Ratio Lower Upper
 96 100
 98 60.7 41.4 81.4
 61 126.0 127.1 167.1#

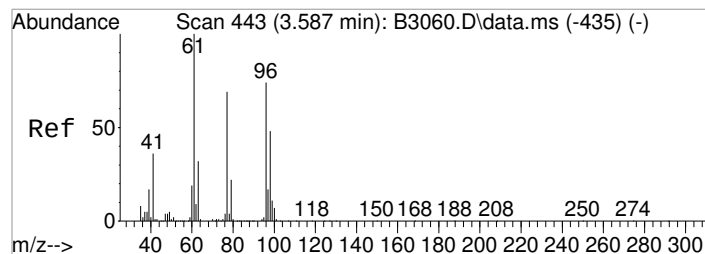


#27
 1,1-Dicethane
 Concen: 8.97 ug/L
 RT: 3.065 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm



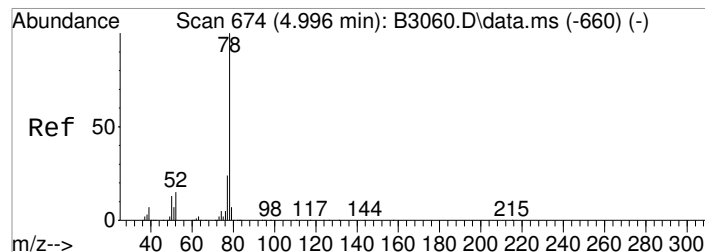
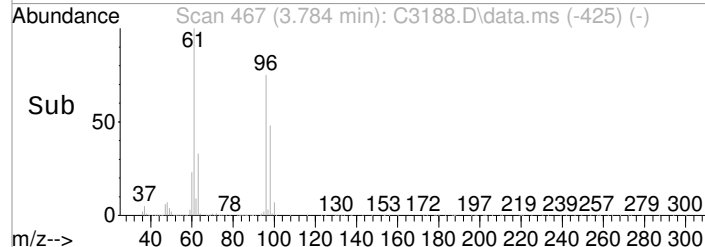
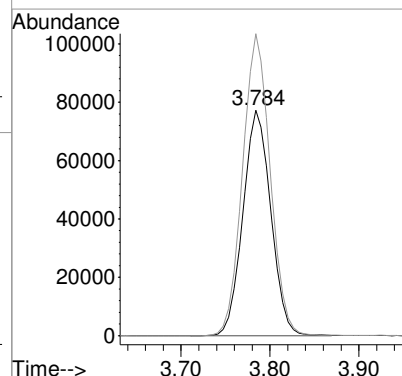
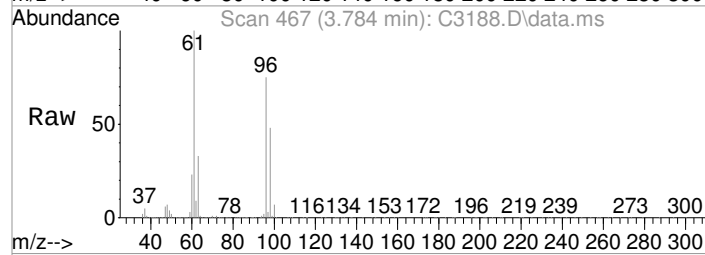
Tgt Ion: 63 Resp: 22858
 Ion Ratio Lower Upper
 63 100
 65 31.4 11.6 51.6
 83 12.5 0.0 32.7





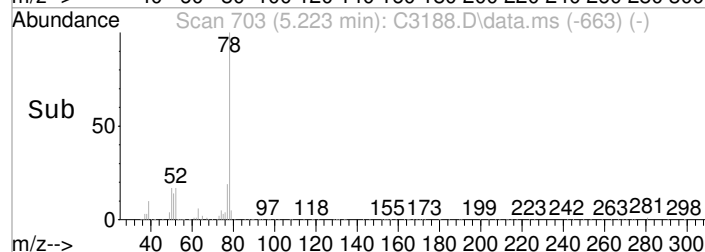
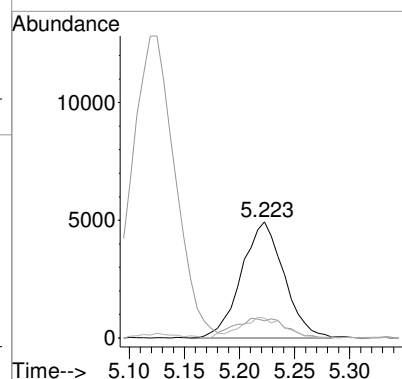
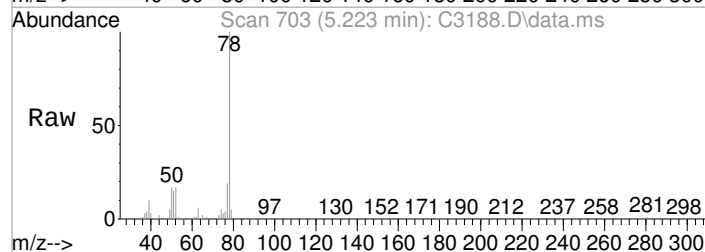
#33
 cis-1,2-Dichloroethene
 Concen: 110.85 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

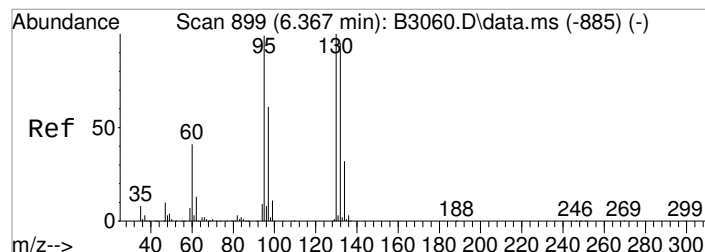
Tgt Ion	Ratio	Lower	Upper
96	100		
61	134.0	123.7	163.7



#48
 Benzene
 Concen: 2.46 ug/L
 RT: 5.223 min Scan# 703
 Delta R.T. -0.003 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

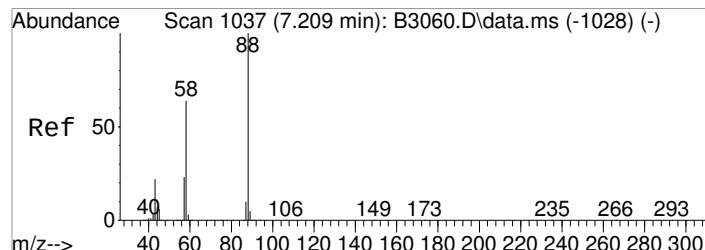
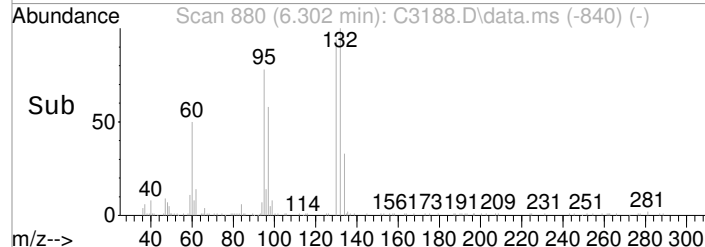
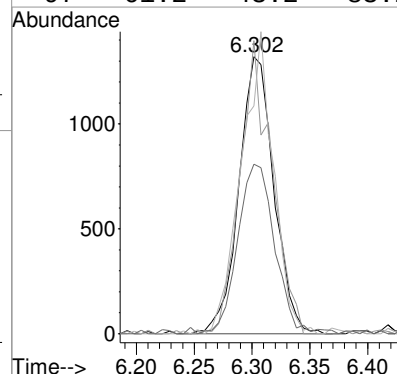
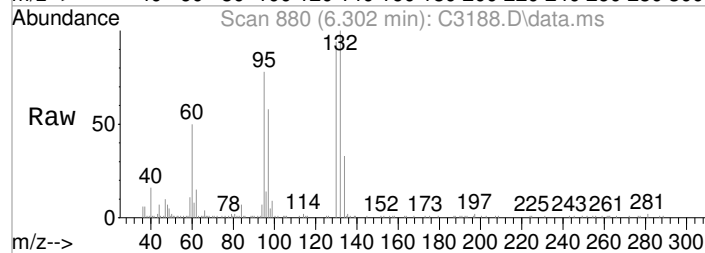
Tgt Ion	Ratio	Lower	Upper
78	100		
51	14.8	0.0	37.7
52	17.2	0.0	36.1





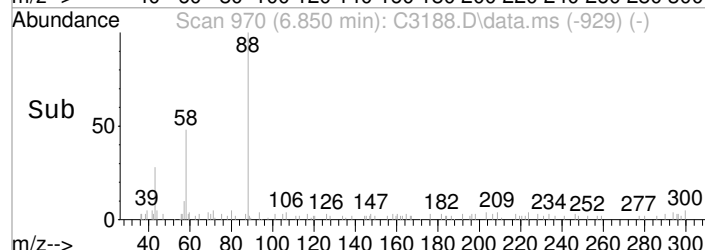
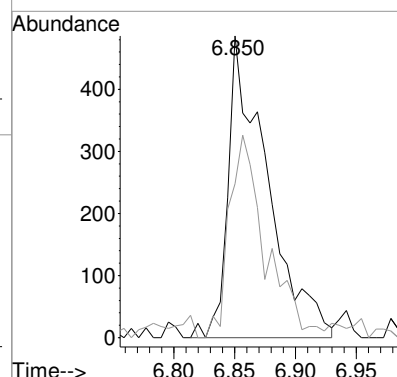
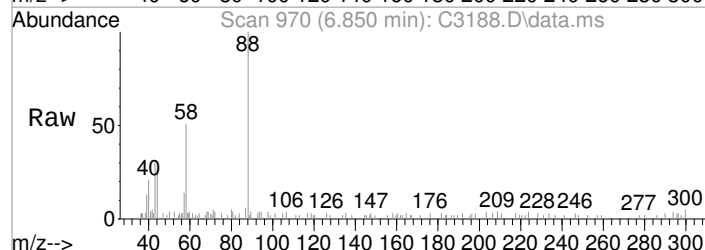
#53
 Trichloroethene
 Concen: 1.85 ug/L
 RT: 6.302 min Scan# 880
 Delta R.T. -0.005 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

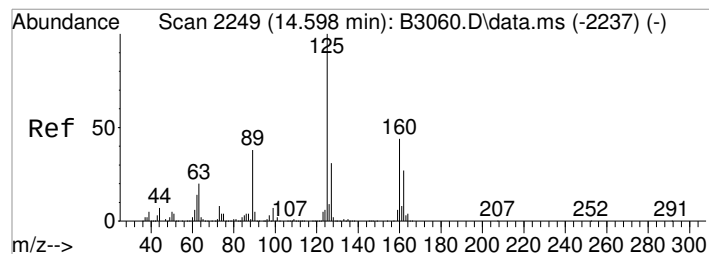
Tgt Ion:	130	Resp:	2765
Ion Ratio		Lower	Upper
130	100		
132	105.8	82.3	122.3
95	82.2	75.5	115.5
97	61.2	43.2	83.2



#57
 1,4-Dioxane
 Concen: 38.68 ug/L
 RT: 6.850 min Scan# 970
 Delta R.T. -0.007 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

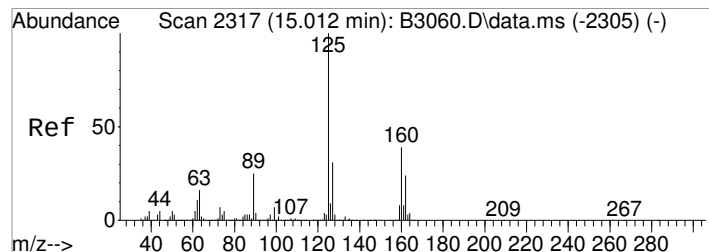
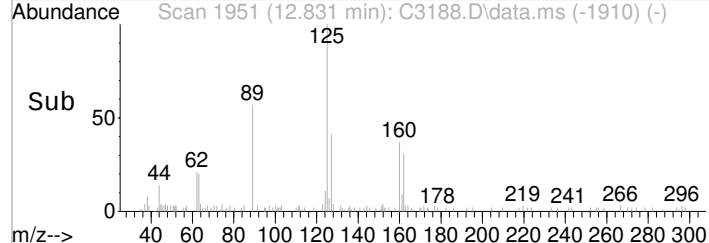
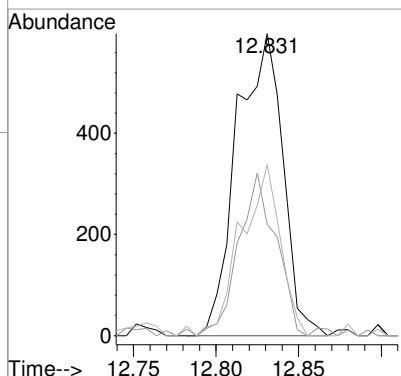
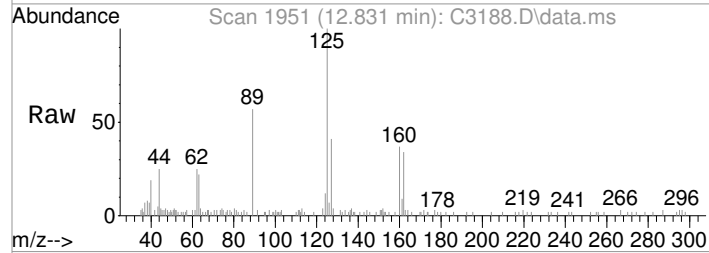
Tgt Ion:	88	Resp:	1085
Ion Ratio		Lower	Upper
88	100		
58	52.4	56.0	96.0#





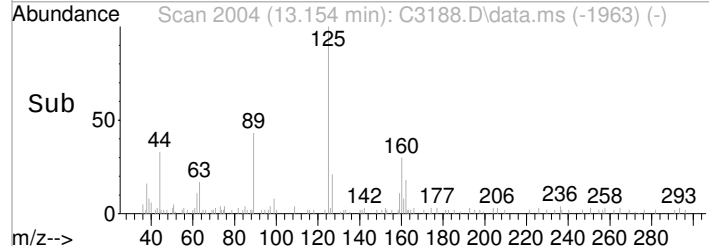
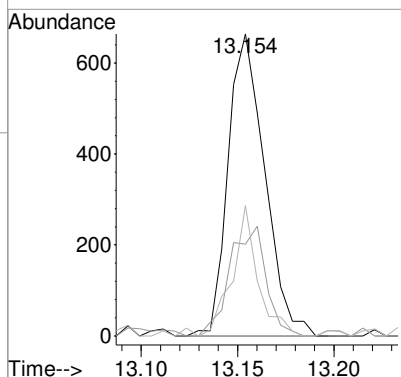
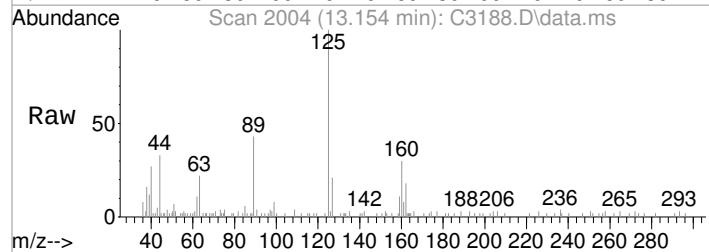
#111
 Trielution Dichlorotoluene
 Concen: 0.44 ug/L
 RT: 12.831 min Scan# 1951
 Delta R.T. 0.001 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

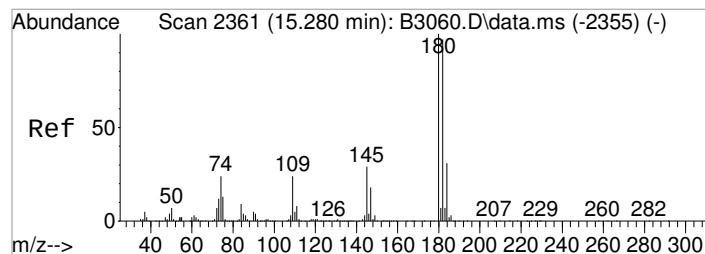
Tgt Ion:	125	Resp:	1156
Ion Ratio		Lower	Upper
125	100		
160	36.9	23.3	63.3
89	56.6	20.1	60.1



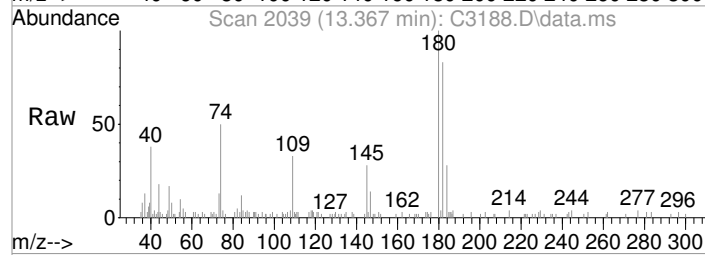
#113
 Coelution Dichlorotoluene
 Concen: 0.30 ug/L
 RT: 13.154 min Scan# 2004
 Delta R.T. 0.000 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm

Tgt Ion:	125	Resp:	875
Ion Ratio		Lower	Upper
125	100		
160	30.4	18.2	58.2
89	43.2	7.4	47.4

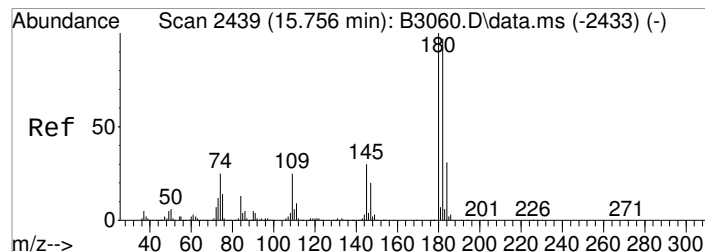
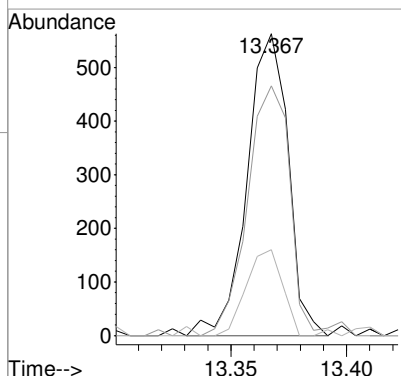
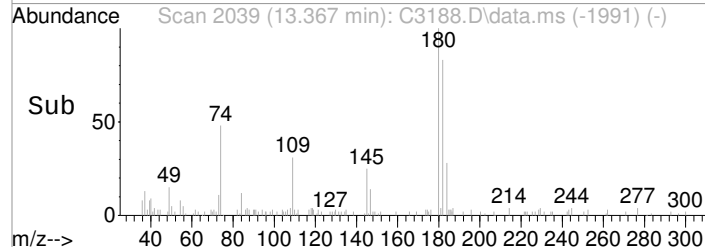




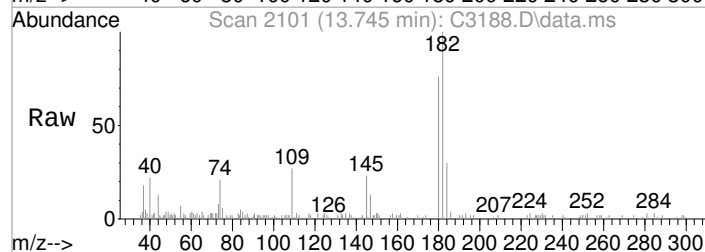
#114
 1,2,4-Tcbenzene
 Concen: 0.31 ug/L
 RT: 13.367 min Scan# 2039
 Delta R.T. 0.000 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm



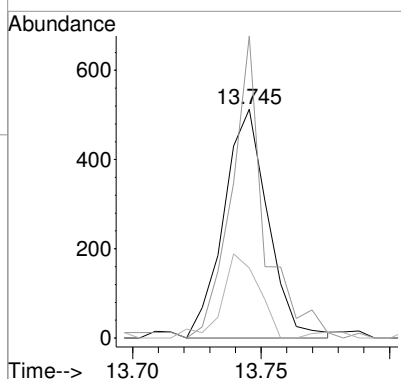
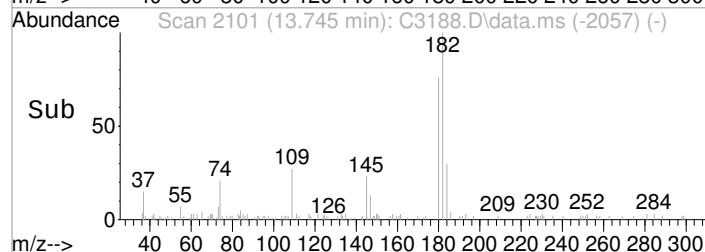
Tgt Ion:180 Resp: 693
 Ion Ratio Lower Upper
 180 100
 182 82.8 79.6 119.6
 145 31.8 9.6 49.6



#117
 1,2,3-Tclbenzene
 Concen: 0.28 ug/L
 RT: 13.745 min Scan# 2101
 Delta R.T. 0.000 min
 Lab File: C3188.D
 Acq: 21 Nov 2017 2:47 pm



Tgt Ion:180 Resp: 615
 Ion Ratio Lower Upper
 180 100
 182 132.0 75.0 115.0#
 145 32.6 12.7 52.7



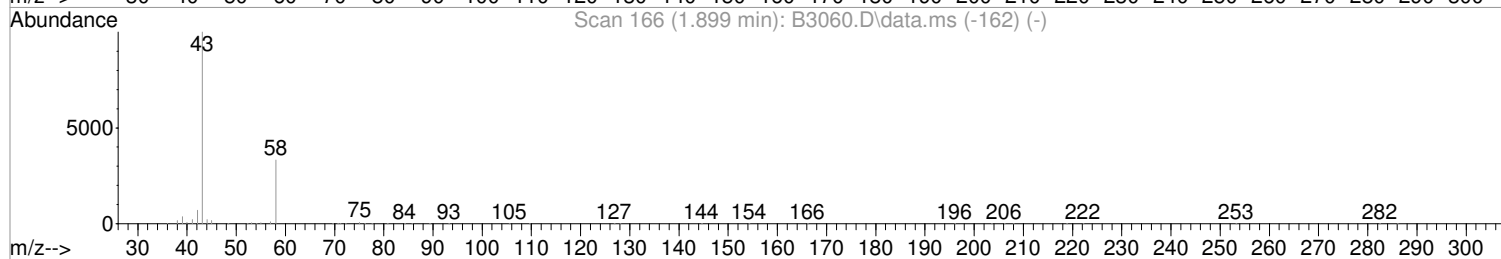
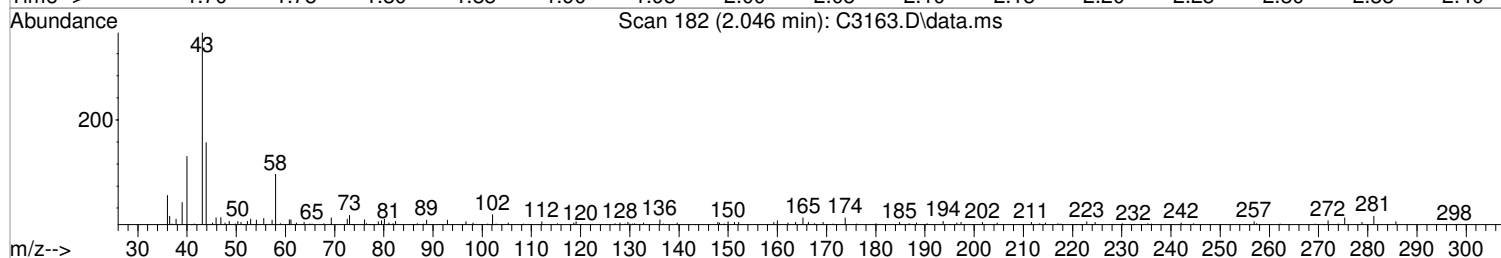
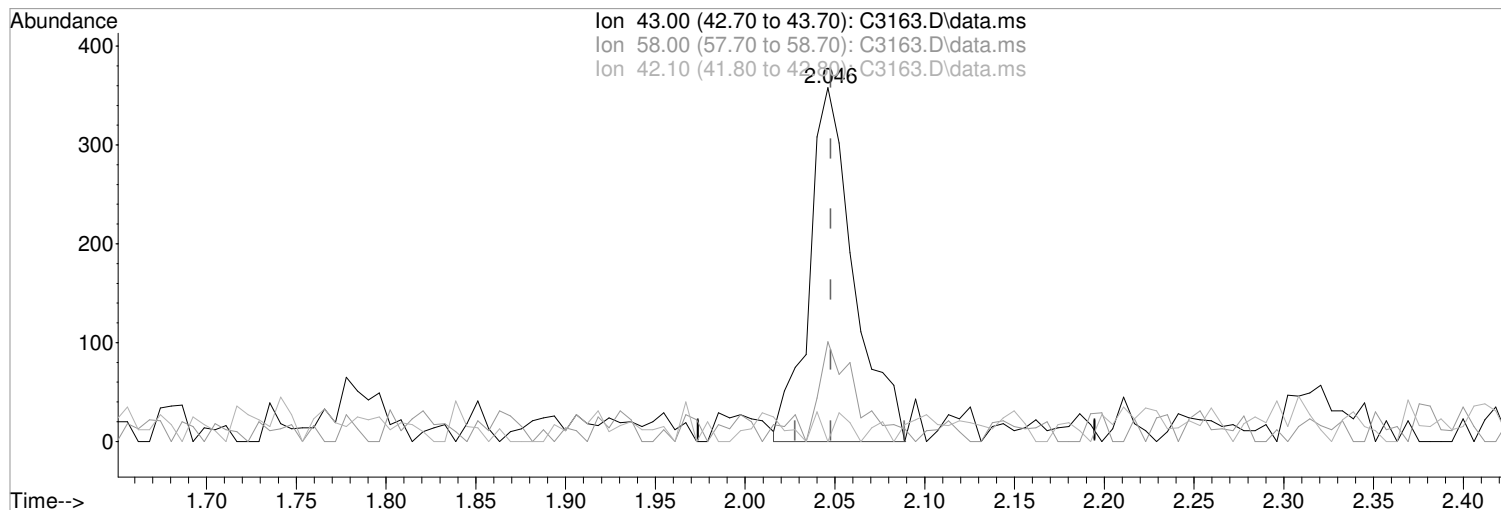
Quantitation Report (Qedit)

1st *FJ* 11/21/17
2nd *RL* 11/26/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3163.D
Acq On : 21 Nov 2017 2:28 am
Operator : F. NAEGLER
Sample : R1710784-010|25.0
Misc : ECOLOGY 16560 T2
ALS Vial : 40 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 08:57:13 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3163.D\data.ms

(15) Acetone (P)
2.046min (-0.002) 0.64 ug/L m
response 616

Manual Integration:

After

Poor integration.

11/21/17

Ion	Exp%	Act%
43.00	100	100
58.00	28.60	28.21
42.10	5.70	0.00
0.00	0.00	0.00

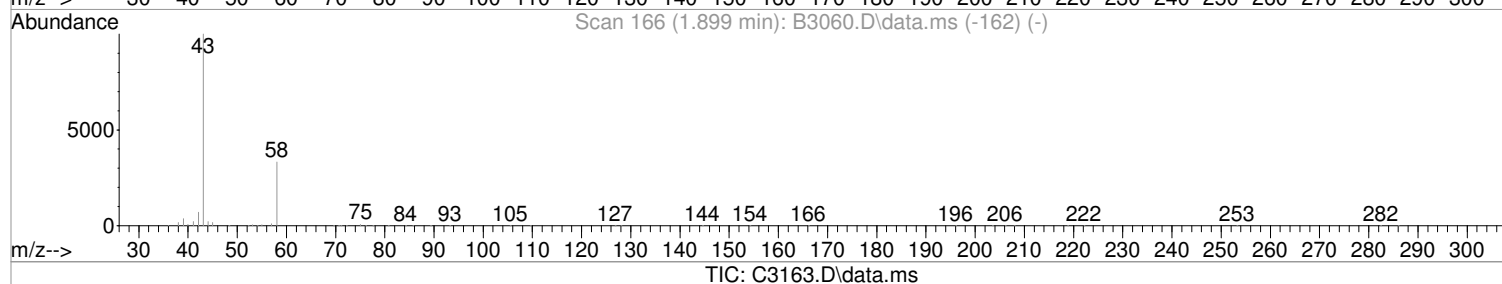
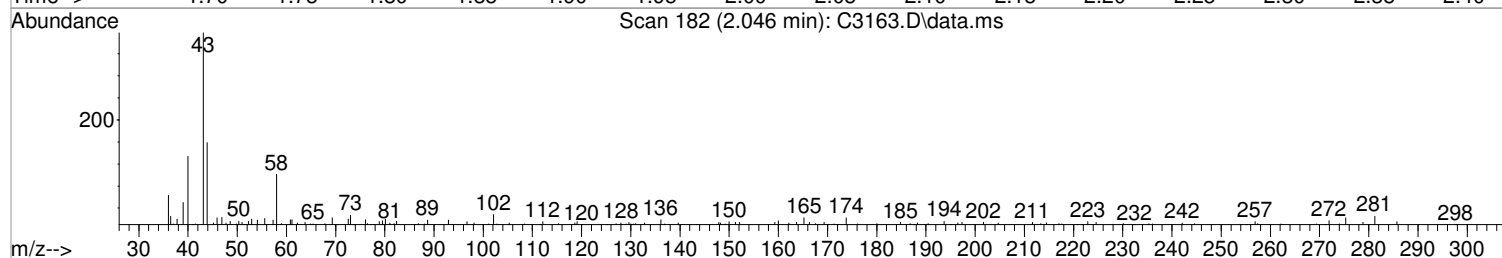
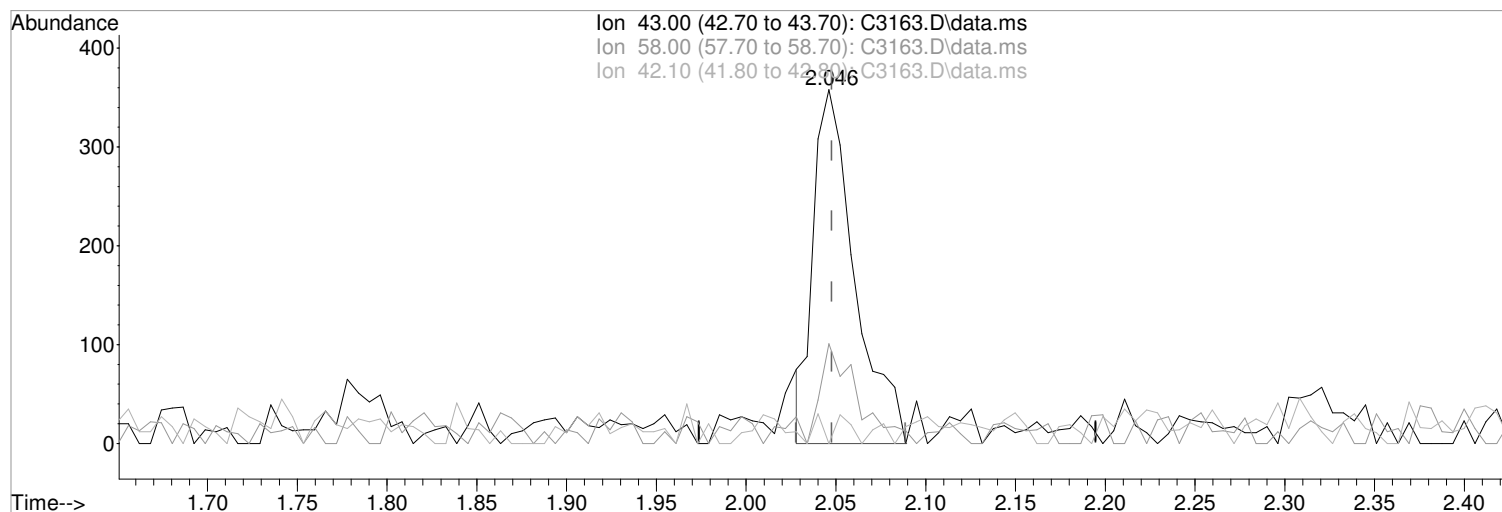
Quantitation Report (Qedit)

1st *FJ* 11/21/17
2nd *RL* 11/26/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3163.D
Acq On : 21 Nov 2017 2:28 am
Operator : F. NAEGLER
Sample : R1710784-010|25.0
Misc : ECOLOGY 16560 T2
ALS Vial : 40 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 08:57:13 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



(15) Acetone (P)

Manual Integration:

2.046min (-0.002) 0.60 ug/L

Before

response 570

Ion	Exp%	Act%
43.00	100	100
58.00	28.60	28.21
42.10	5.70	0.00
0.00	0.00	0.00

11/21/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3163.D
 Acq On : 21 Nov 2017 2:28 am
 Operator : F. NAEGLER
 Sample : R1710784-010|25.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 40 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:51:56 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

rpt 1/50

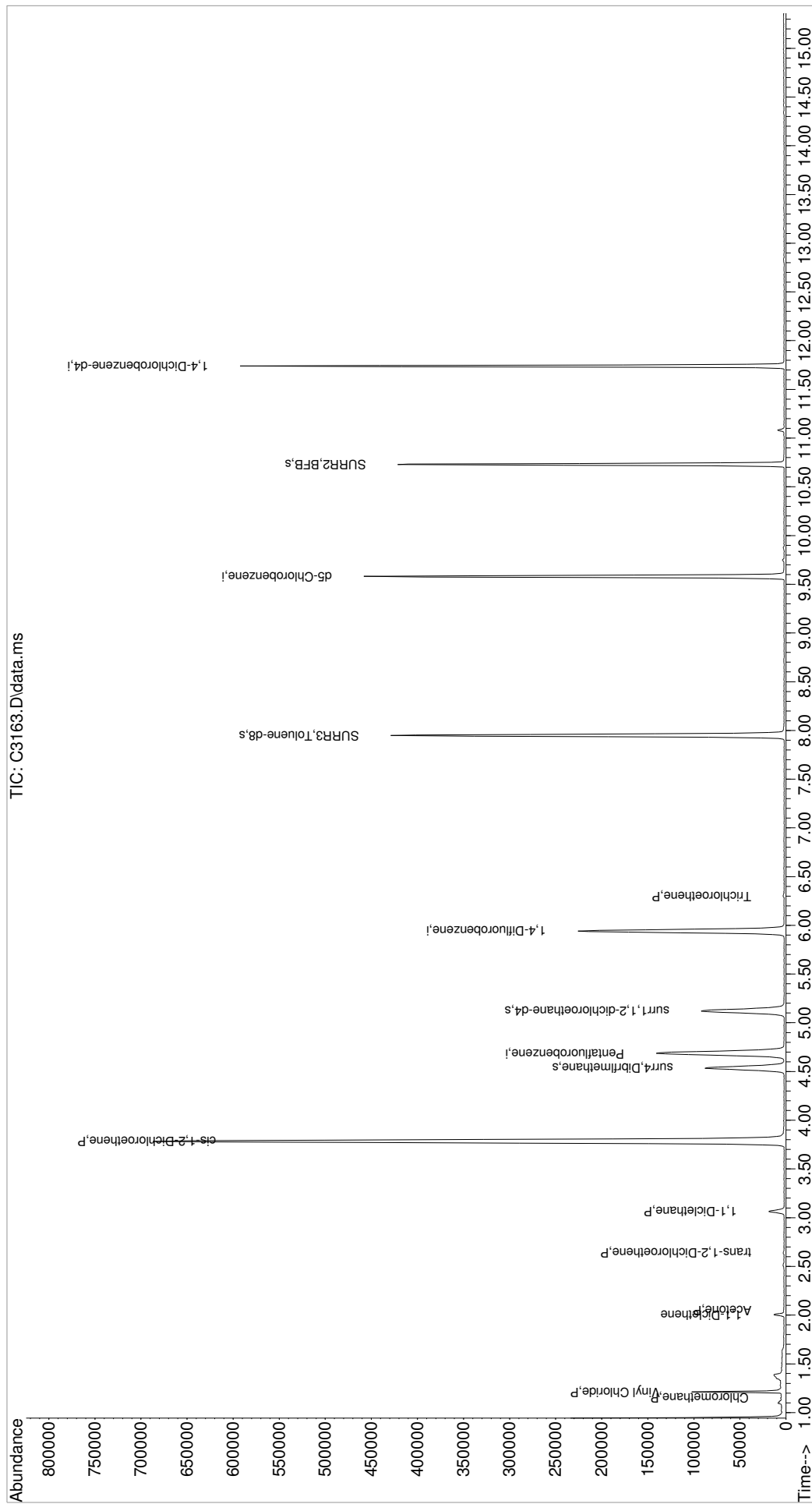
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.686	168	139527	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	209858	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	195700	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.739	152	105010	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	66485	47.18	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	94.36%	
47) surr1,1,2-dichloroetha...	5.119	65	91745	47.88	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	95.76%	
64) SURR3,Toluene-d8	7.947	98	261224	47.06	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	94.12%	
69) SURR2,BFB	10.727	95	100672	47.49	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	94.98%	
Target Compounds						
3) Chloromethane	1.150	50	467	0.24	ug/L	Qvalue 74
4) Vinyl Chloride	1.211	62	46197	25.94	ug/L	97
13) 1,1-Dicethene	2.003	96	3083	2.57	ug/L	96
15) Acetone	2.046	43	616m	0.64	ug/L	
26) trans-1,2-Dichloroethene	2.644	96	374	0.29	ug/L #	49
27) 1,1-Dicethane	3.064	63	14634	5.74	ug/L	98
33) cis-1,2-Dichloroethene	3.784	96	337450	221.02	ug/L	93
53) Trichloroethene	6.301	130	481	0.32	ug/L	87

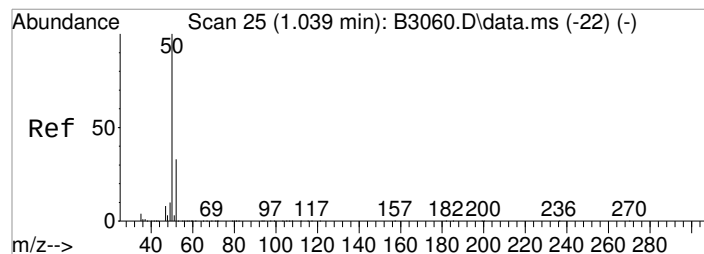
E-Over Calibration

(#) = qualifier out of range (m) = manual integration (+) = signals summed

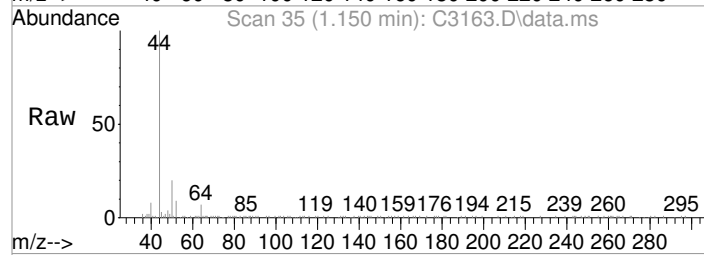
Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3163.D
Acq On : 21 Nov 2017 2:28 am
Operator : F. NAEGLER
Sample : R1710784-010|25.0
Misc : ECOLOGY 16560 T2
ALS Vial : 40 Sample Multiplier: 1
Inst : MSVOA14

Quant Time: Nov 21 16:51:56 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration

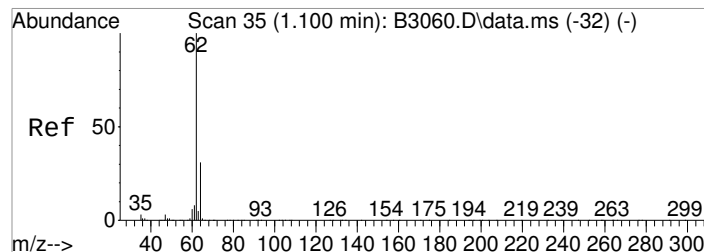
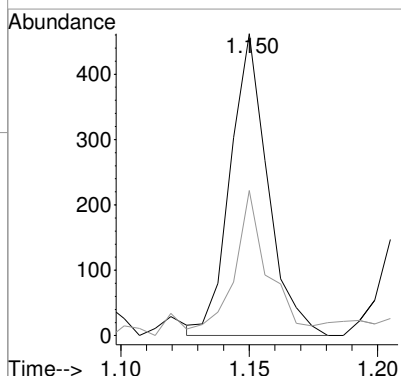
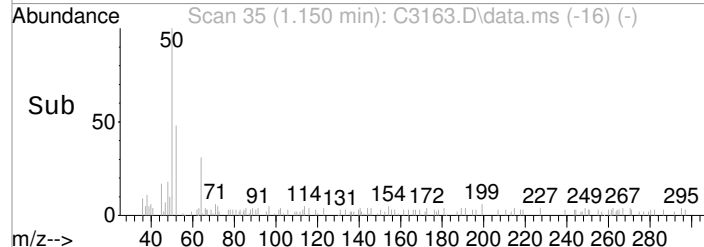




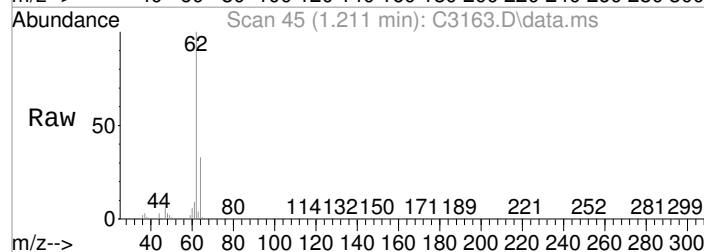
#3
 Chloromethane
 Concen: 0.24 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. -0.000 min
 Lab File: C3163.D
 Acq: 21 Nov 2017 2:28 am



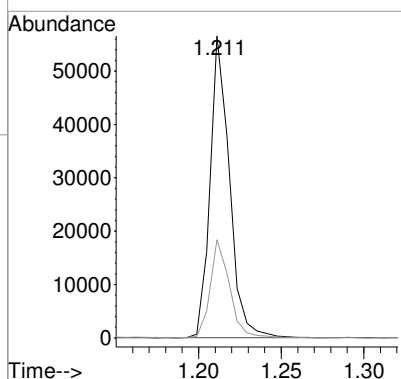
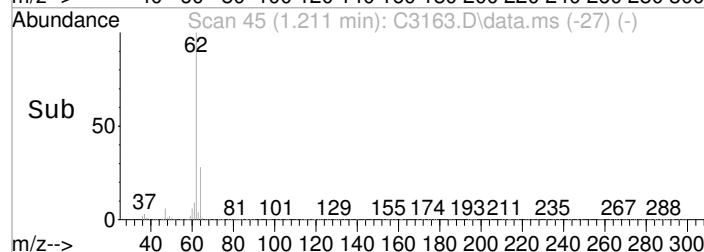
Tgt Ion: 50 Resp: 467
 Ion Ratio Lower Upper
 50 100
 52 46.7 12.1 52.1

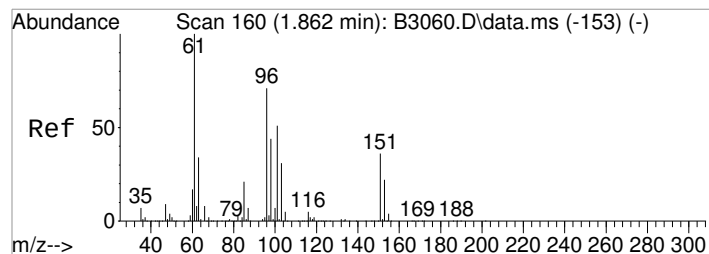


#4
 Vinyl Chloride
 Concen: 25.94 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3163.D
 Acq: 21 Nov 2017 2:28 am

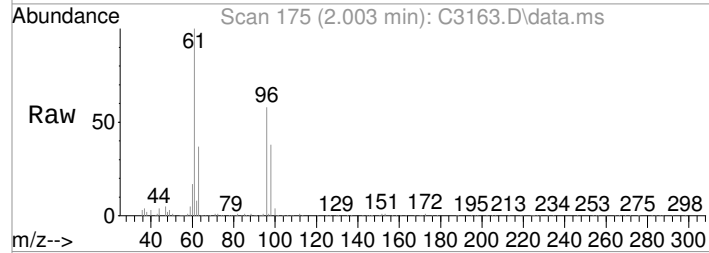


Tgt Ion: 62 Resp: 46197
 Ion Ratio Lower Upper
 62 100
 64 32.5 10.9 50.9

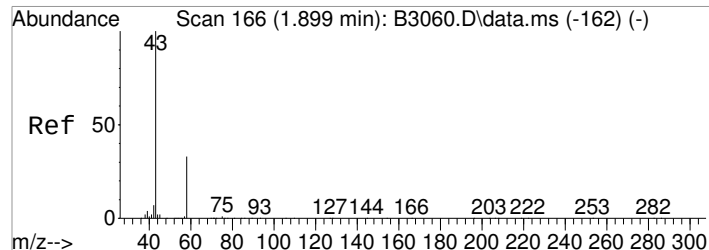
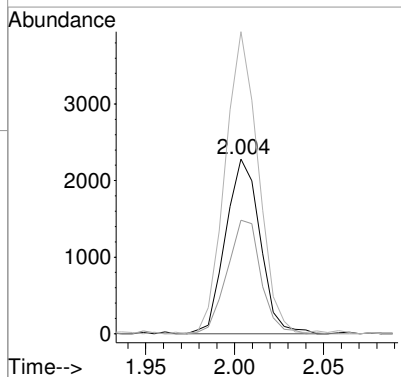
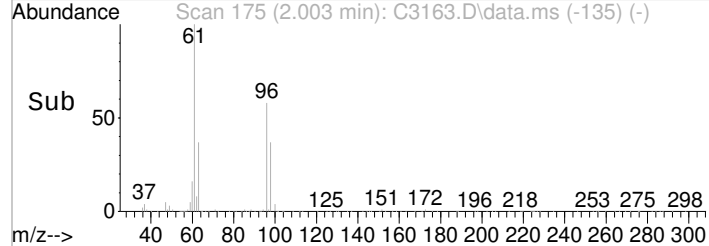




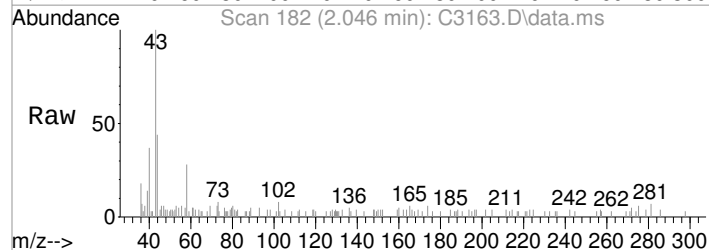
#13
 1,1-Dicethene
 Concen: 2.57 ug/L
 RT: 2.003 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3163.D
 Acq: 21 Nov 2017 2:28 am



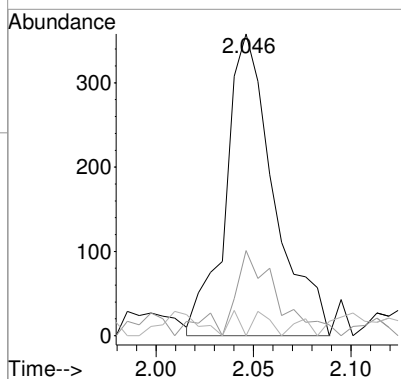
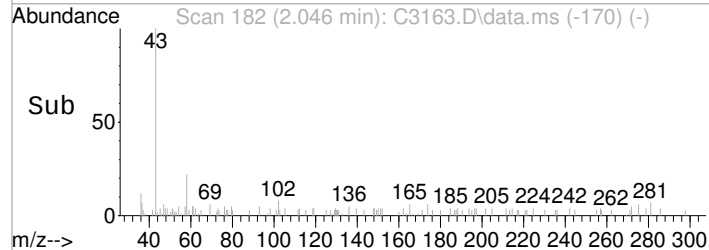
Tgt Ion: 96 Resp: 3083
 Ion Ratio Lower Upper
 96 100
 98 65.0 47.9 87.9
 61 172.8 157.9 197.9

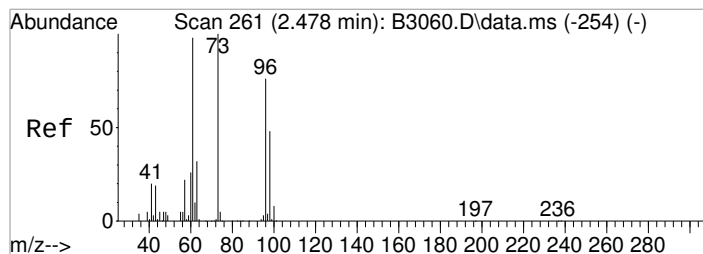


#15
 Acetone
 Concen: 0.64 ug/L m
 RT: 2.046 min Scan# 182
 Delta R.T. -0.002 min
 Lab File: C3163.D
 Acq: 21 Nov 2017 2:28 am

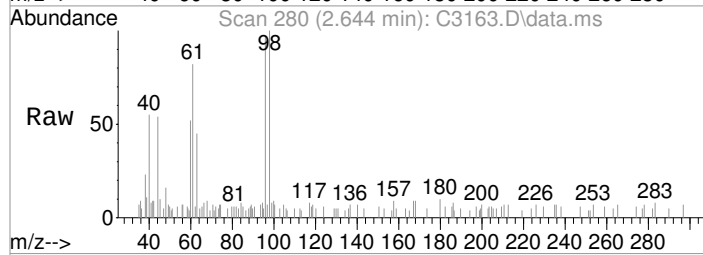


Tgt Ion: 43 Resp: 616
 Ion Ratio Lower Upper
 43 100
 58 28.2 8.6 48.6
 42 0.0 0.0 25.7

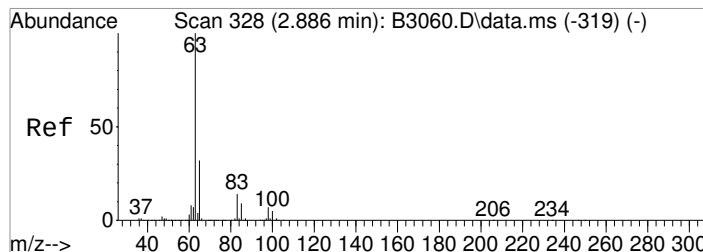
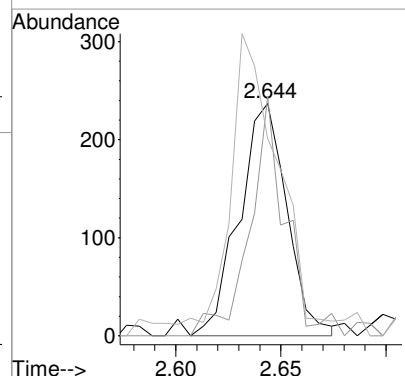
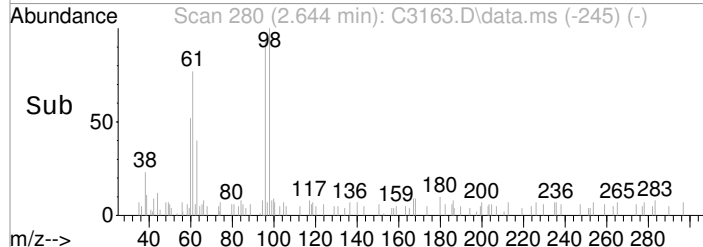




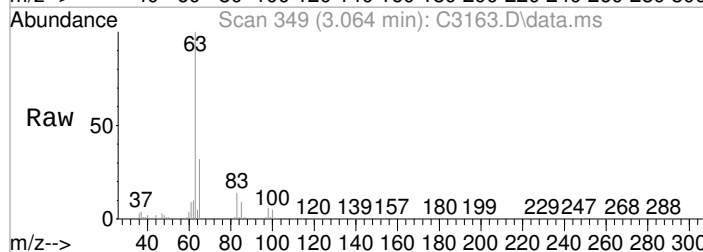
#26
 trans-1,2-Dichloroethene
 Concen: 0.29 ug/L
 RT: 2.644 min Scan# 280
 Delta R.T. 0.000 min
 Lab File: C3163.D
 Acq: 21 Nov 2017 2:28 am



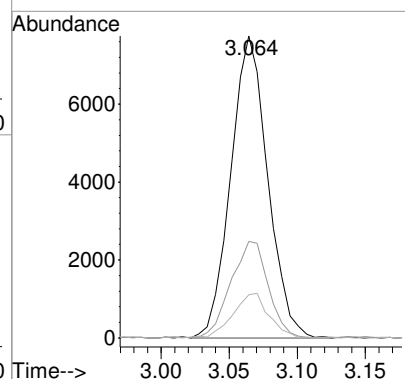
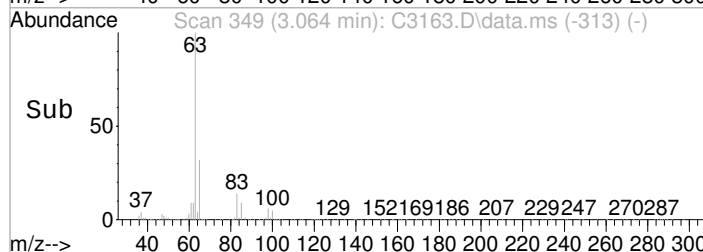
Tgt Ion: 96 Resp: 374
 Ion Ratio Lower Upper
 96 100
 98 103.0 41.4 81.4#
 61 84.8 127.1 167.1#

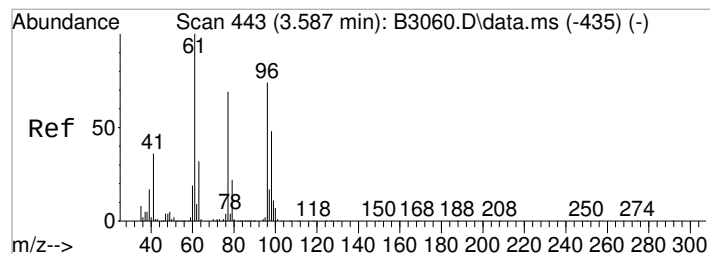


#27
 1,1-Dicethane
 Concen: 5.74 ug/L
 RT: 3.064 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3163.D
 Acq: 21 Nov 2017 2:28 am

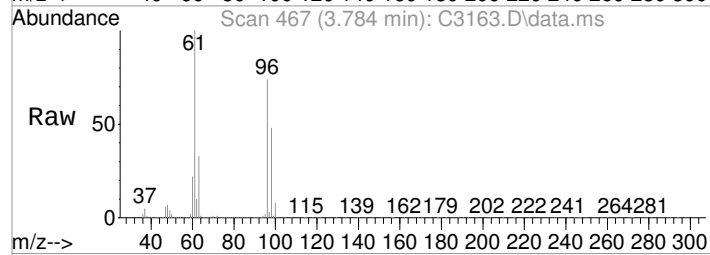


Tgt Ion: 63 Resp: 14634
 Ion Ratio Lower Upper
 63 100
 65 32.0 11.6 51.6
 83 14.3 0.0 32.7

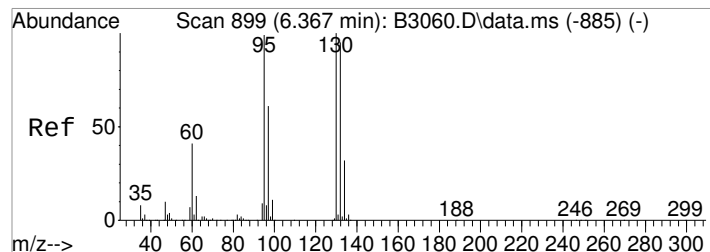
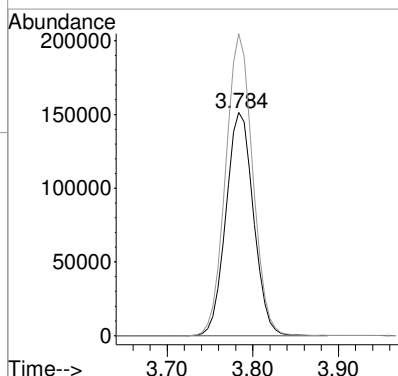
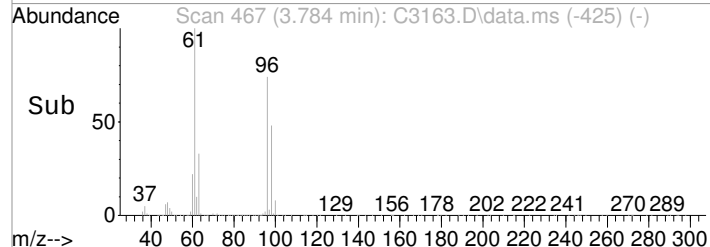




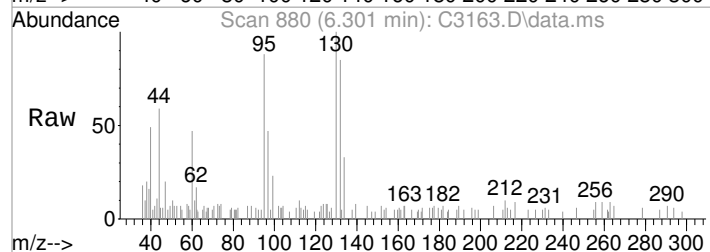
#33
 cis-1,2-Dichloroethene
 Concen: 221.02 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3163.D
 Acq: 21 Nov 2017 2:28 am



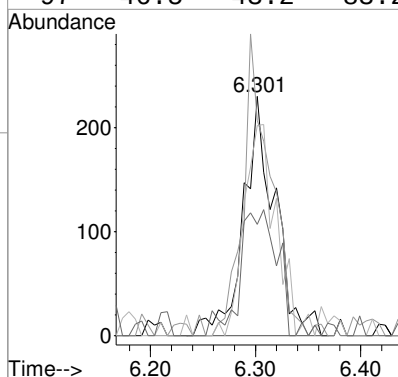
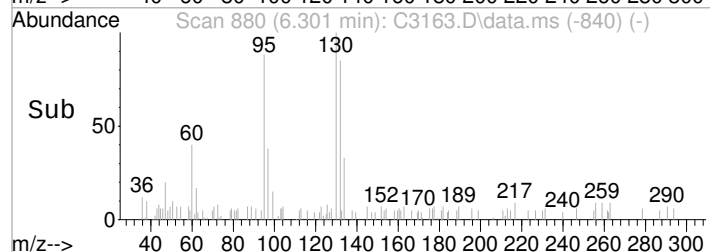
Tgt Ion: 96 Resp: 337450
 Ion Ratio Lower Upper
 96 100
 61 135.3 123.7 163.7



#53
 Trichloroethene
 Concen: 0.32 ug/L
 RT: 6.301 min Scan# 880
 Delta R.T. -0.005 min
 Lab File: C3163.D
 Acq: 21 Nov 2017 2:28 am



Tgt Ion: 130 Resp: 481
 Ion Ratio Lower Upper
 130 100
 132 90.0 82.3 122.3
 95 87.8 75.5 115.5
 97 46.5 43.2 83.2



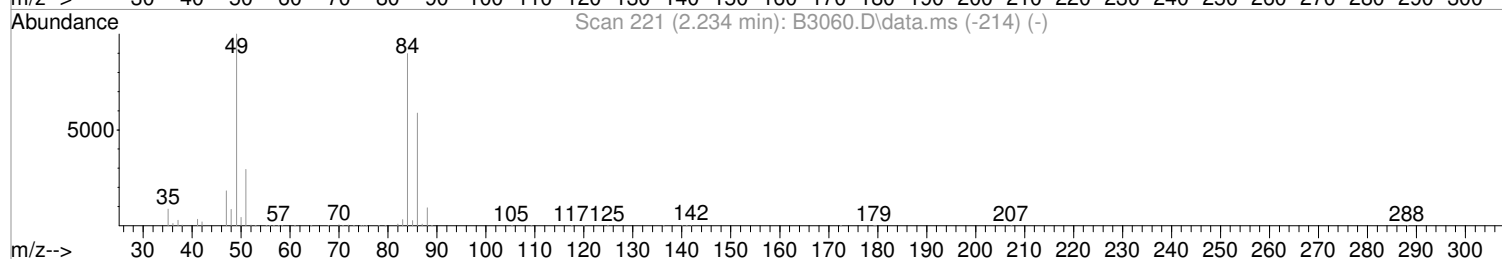
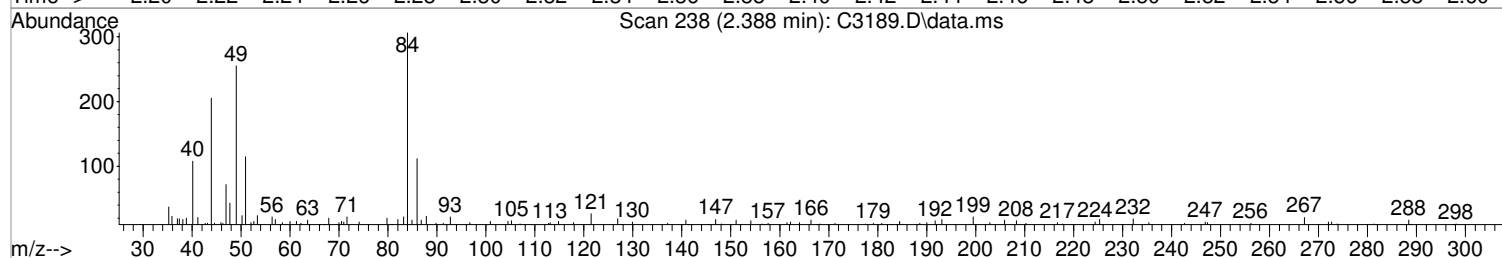
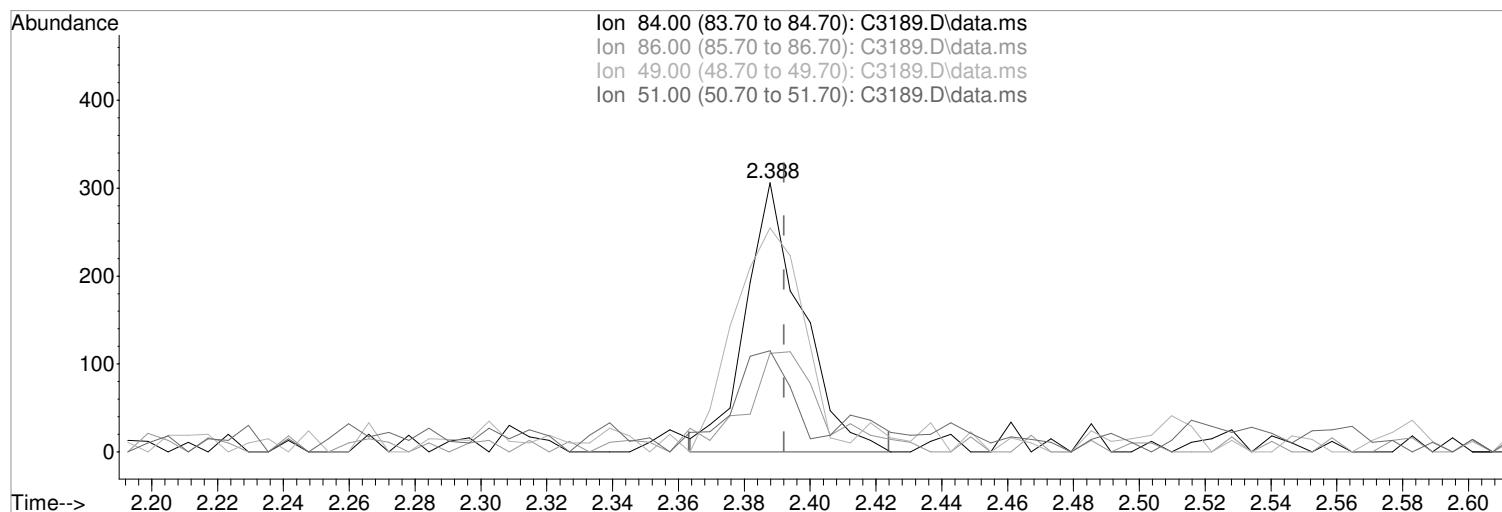
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3189.D
Acq On : 21 Nov 2017 3:09 pm
Operator : F. NAEGLER
Sample : R1710784-010|50.0
Misc : ECOLOGY 16560 T2
ALS Vial : 13 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:25:13 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3189.D\data.ms

(22) Methylene Chloride (P)

2.388min (-0.004) 0.25 ug/L m

response 363

Ion Exp% Act%

84.00 100 100

86.00 64.80 36.60#

49.00 138.10 83.33#

51.00 42.50 37.58

Manual Integration:

After

Peak not found.

11/27/17

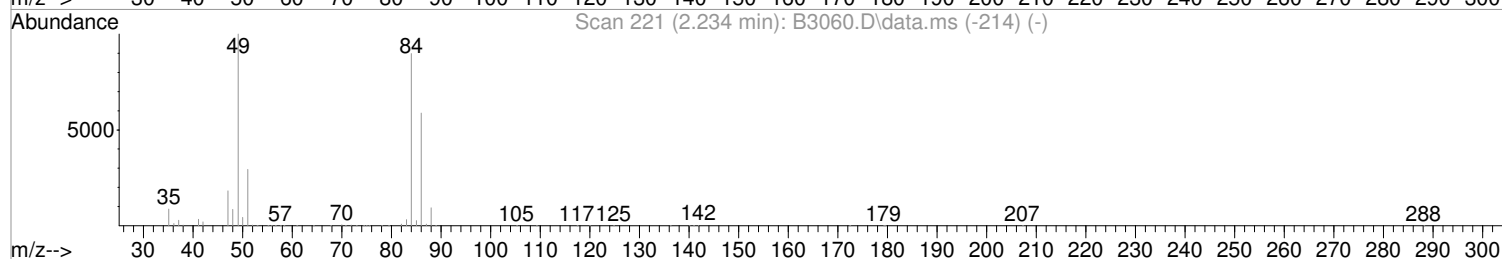
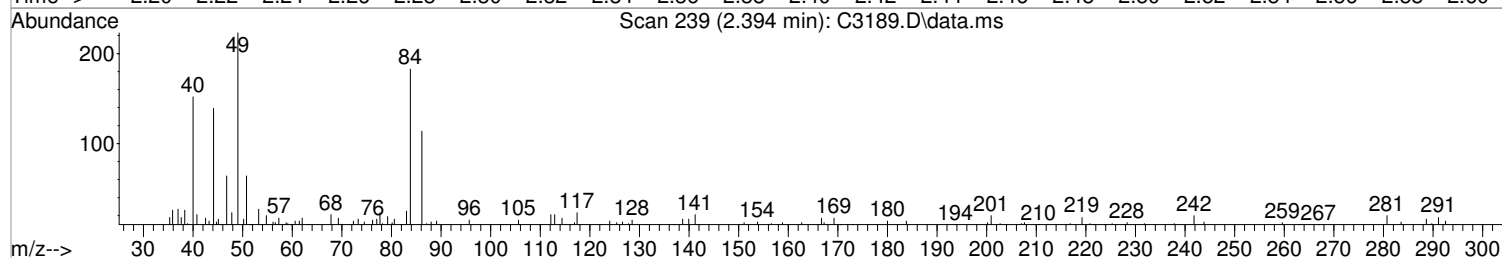
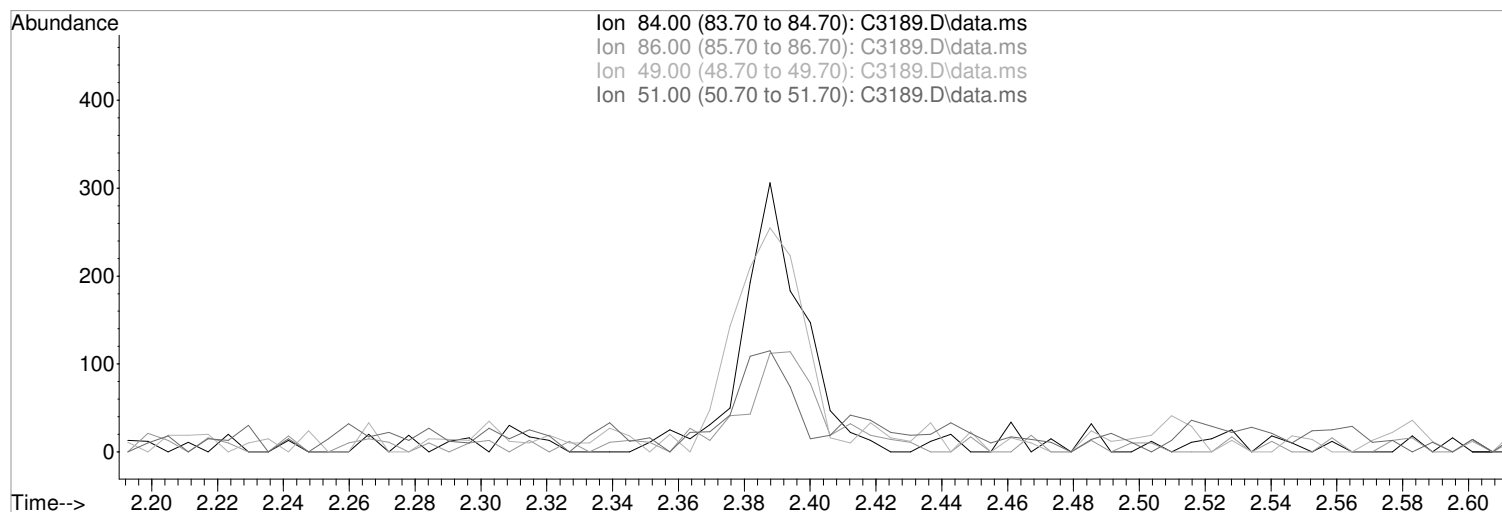
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3189.D
Acq On : 21 Nov 2017 3:09 pm
Operator : F. NAEGLER
Sample : R1710784-010|50.0
Misc : ECOLOGY 16560 T2
ALS Vial : 13 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:25:13 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3189.D\data.ms

(22) Methylene Chloride (P)

Manual Integration:

2.392min (-2.392) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
84.00	100	0.00
86.00	64.80	0.00#
49.00	138.10	0.00#
51.00	42.50	0.00#

11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3189.D
 Acq On : 21 Nov 2017 3:09 pm
 Operator : F. NAEGLER
 Sample : R1710784-010|50.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 13 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 27 11:19:43 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

DL

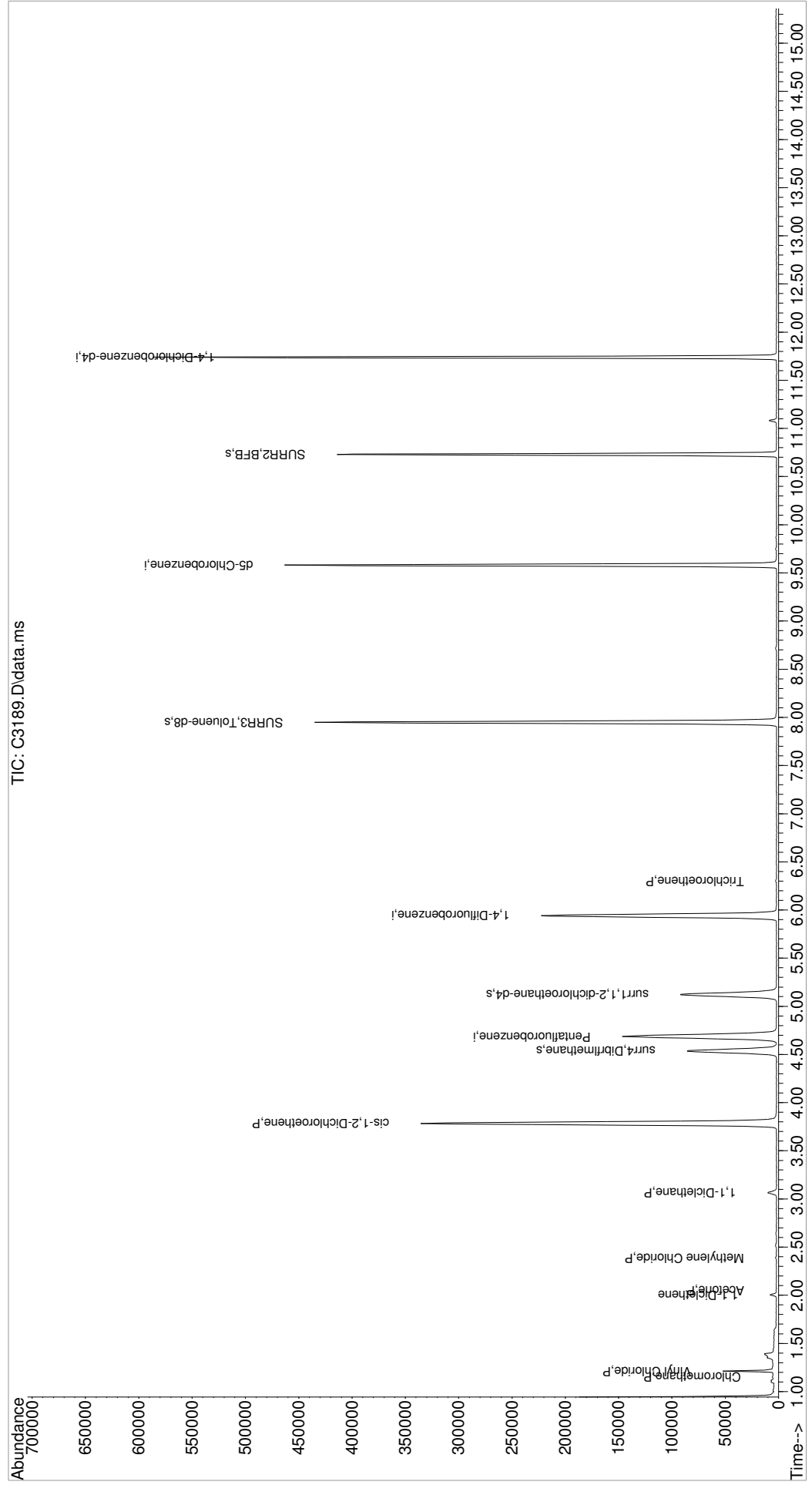
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

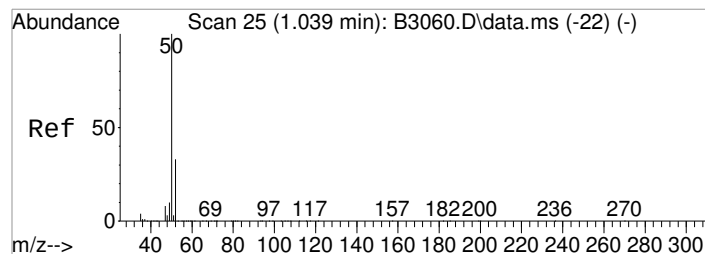
Internal Standards						
1) Pentafluorobenzene	4.686	168	141155	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	210927	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.582	117	196833	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	105031	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	66690	47.08	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery =	94.16%		
47) surr1,1,2-dichloroetha...	5.125	65	92564	48.06	ug/L	0.00
Spiked Amount 50.000	Range 73 - 125		Recovery =	96.12%		
64) SURR3,Toluene-d8	7.948	98	264206	47.36	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery =	94.72%		
69) SURR2,BFB	10.728	95	99842	46.86	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery =	93.72%		
Target Compounds						Qvalue
3) Chloromethane	1.150	50	489	0.25	ug/L	79
4) Vinyl Chloride	1.211	62	23342	12.95	ug/L	100
13) 1,1-Dicethene	2.004	96	1557	1.28	ug/L	92
15) Acetone	2.053	43	410	0.42	ug/L	83
22) Methylene Chloride	2.388	84	363m	0.25	ug/L	
27) 1,1-Dicethane	3.065	63	7403	2.87	ug/L	97
33) cis-1,2-Dichloroethene	3.784	96	163952	106.15	ug/L	94
53) Trichloroethene	6.296	130	331	0.22	ug/L #	77

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSV0A14\Data\112117\
 Data File : C3189.D
 Acq On : 21 Nov 2017 3:09 pm
 Operator : F. NAEGLER
 Sample : R1710784-010|50.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 13 Sample Multiplier: 1
 Inst : MSV0A14

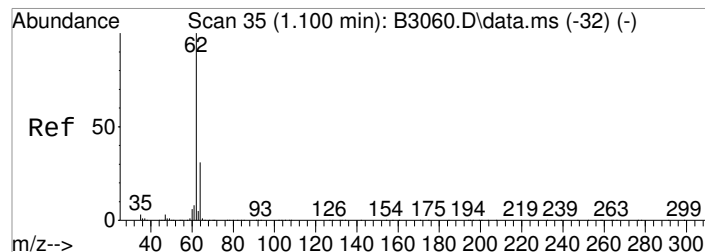
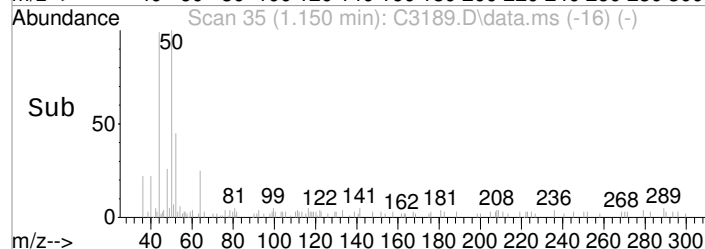
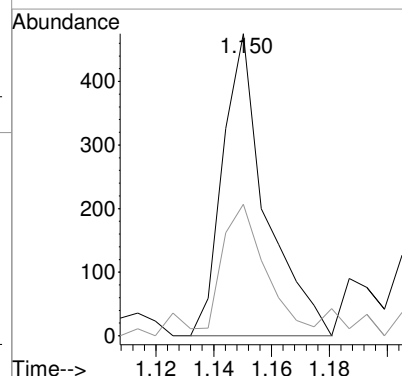
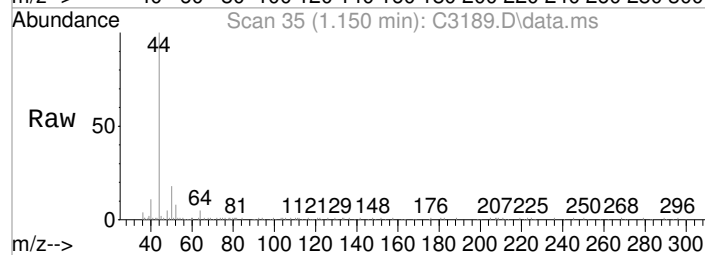
Quant Time: Nov 27 11:19:43 2017
 Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 Qlast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration





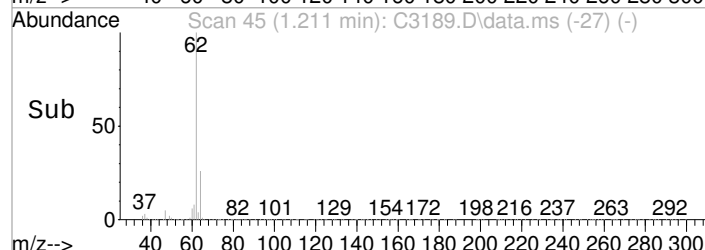
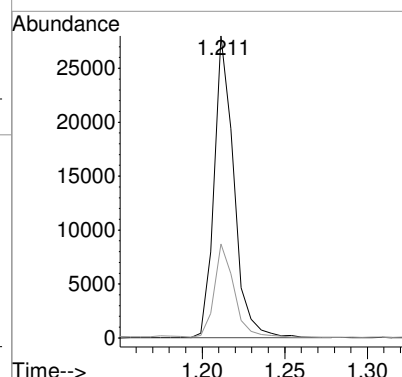
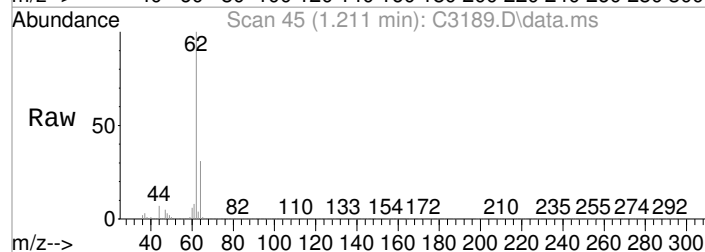
#3
 Chloromethane
 Concen: 0.25 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. 0.000 min
 Lab File: C3189.D
 Acq: 21 Nov 2017 3:09 pm

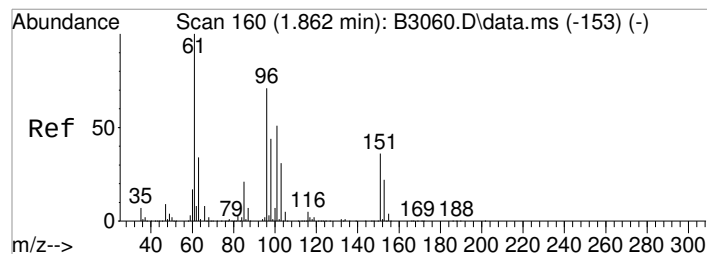
Tgt Ion: 50 Resp: 489
 Ion Ratio Lower Upper
 50 100
 52 43.6 12.1 52.1



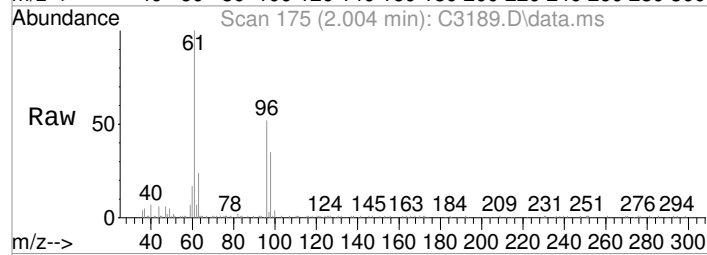
#4
 Vinyl Chloride
 Concen: 12.95 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3189.D
 Acq: 21 Nov 2017 3:09 pm

Tgt Ion: 62 Resp: 23342
 Ion Ratio Lower Upper
 62 100
 64 31.1 10.9 50.9

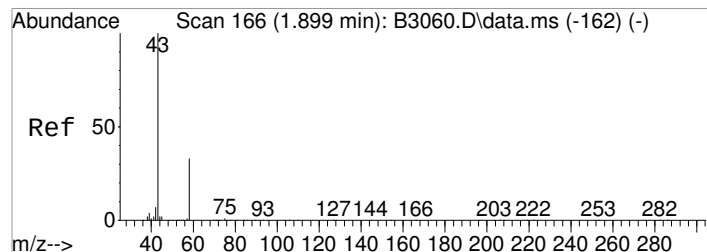
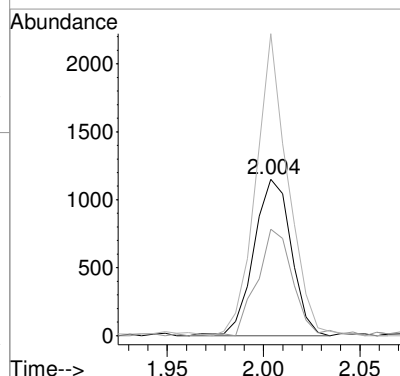
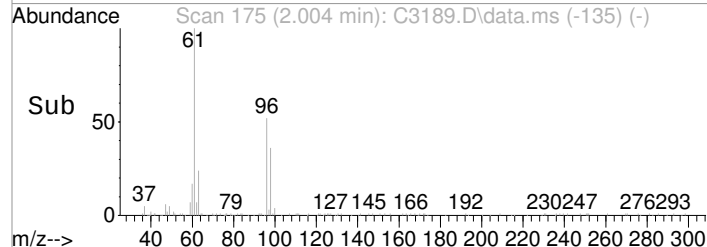




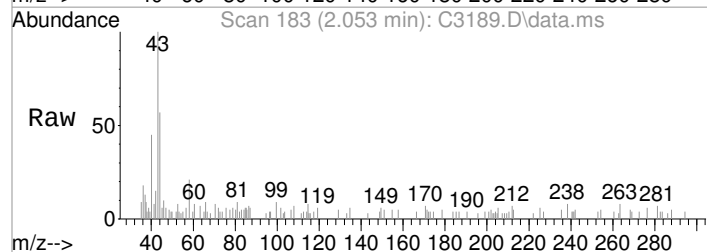
#13
 1,1-Dicethene
 Concen: 1.28 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3189.D
 Acq: 21 Nov 2017 3:09 pm



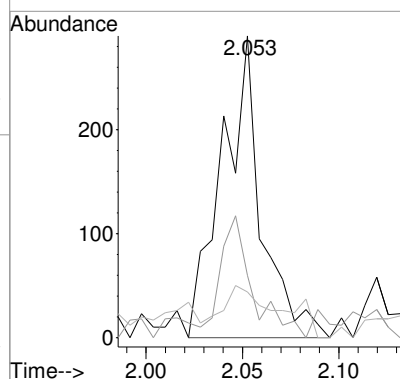
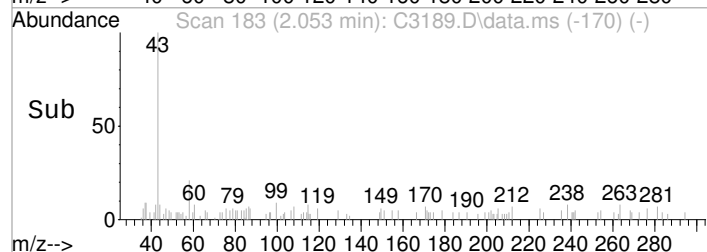
Tgt Ion: 96 Resp: 1557
 Ion Ratio Lower Upper
 96 100
 98 68.1 47.9 87.9
 61 193.0 157.9 197.9

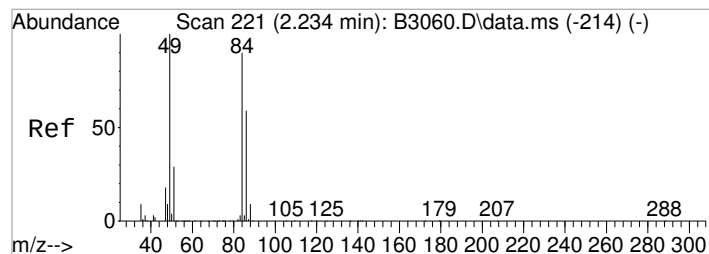


#15
 Acetone
 Concen: 0.42 ug/L
 RT: 2.053 min Scan# 183
 Delta R.T. 0.005 min
 Lab File: C3189.D
 Acq: 21 Nov 2017 3:09 pm

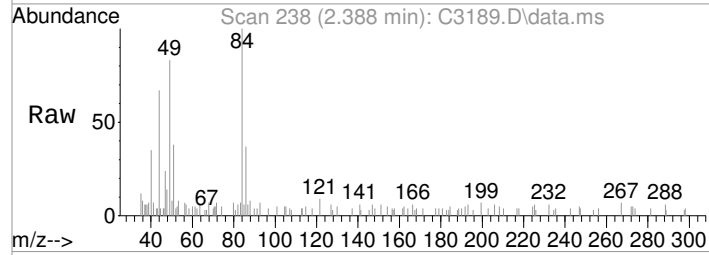


Tgt Ion: 43 Resp: 410
 Ion Ratio Lower Upper
 43 100
 58 20.7 8.6 48.6
 42 15.2 0.0 25.7

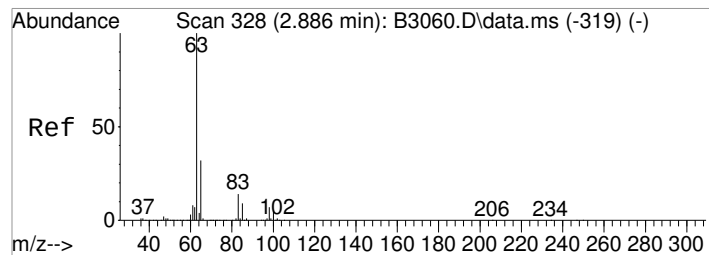
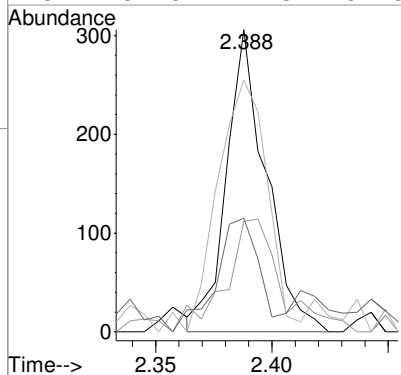
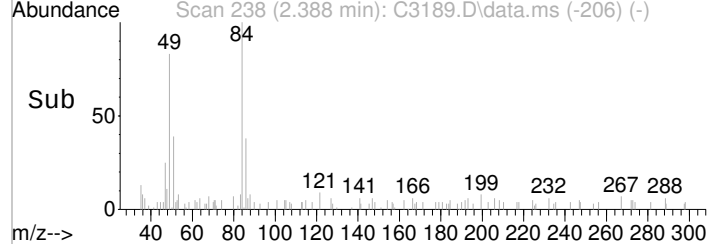




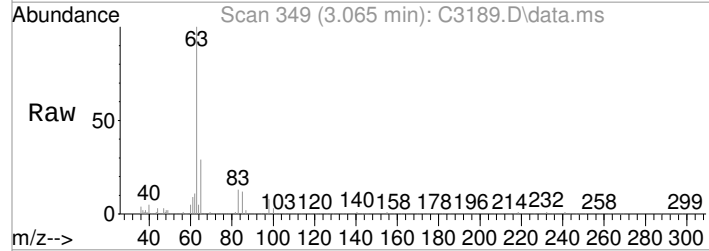
#22
 Methylene Chloride
 Concen: 0.25 ug/L m
 RT: 2.388 min Scan# 238
 Delta R.T. -0.004 min
 Lab File: C3189.D
 Acq: 21 Nov 2017 3:09 pm



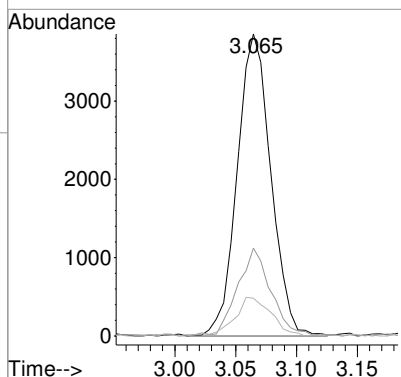
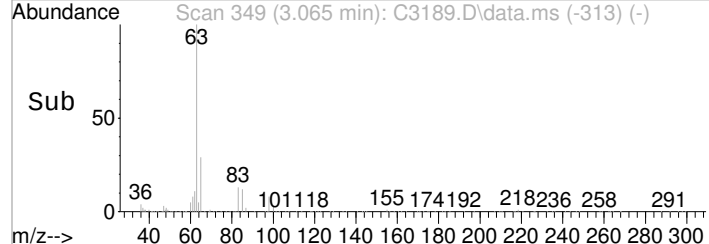
Tgt Ion:	84	Resp:	363
Ion Ratio	Lower	Upper	
84	100		
86	36.6	44.8	84.8#
49	83.3	118.1	158.1#
51	37.6	22.5	62.5

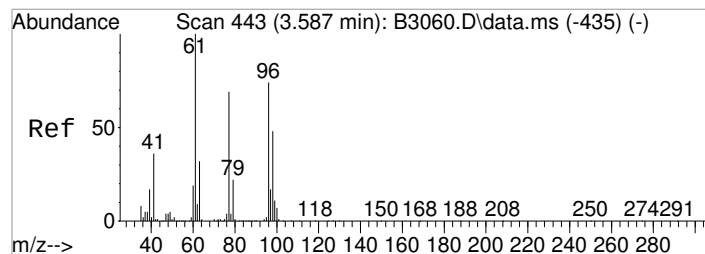


#27
 1,1-Dicethane
 Concen: 2.87 ug/L
 RT: 3.065 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3189.D
 Acq: 21 Nov 2017 3:09 pm



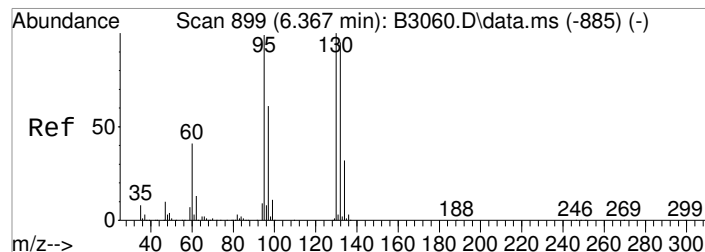
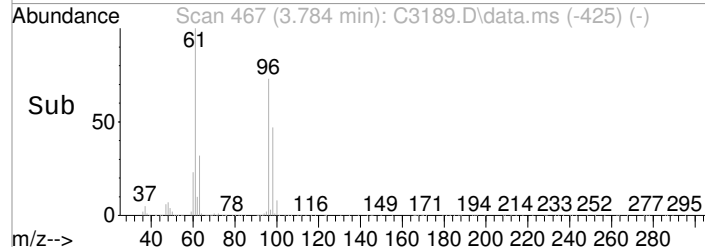
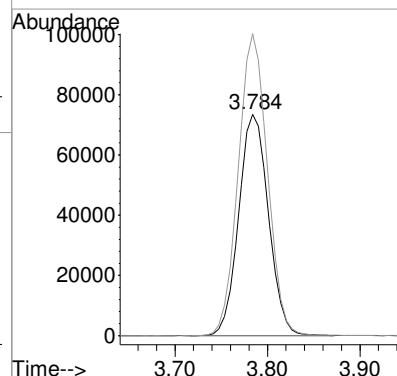
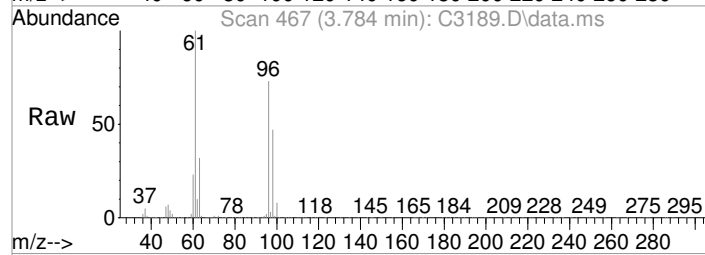
Tgt Ion:	63	Resp:	7403
Ion Ratio	Lower	Upper	
63	100		
65	29.1	11.6	51.6
83	12.5	0.0	32.7





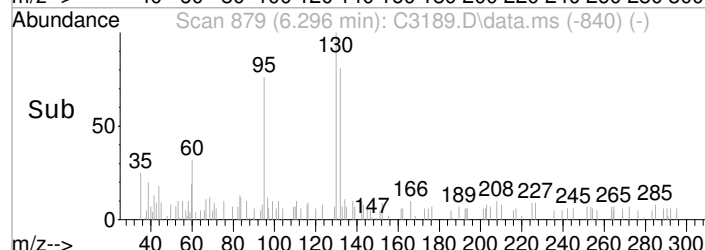
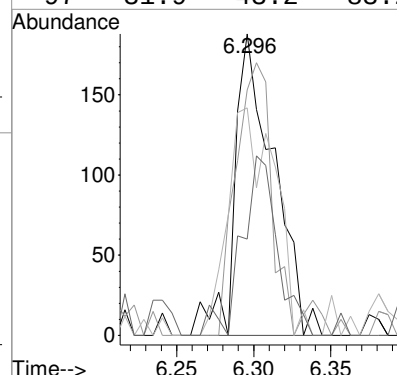
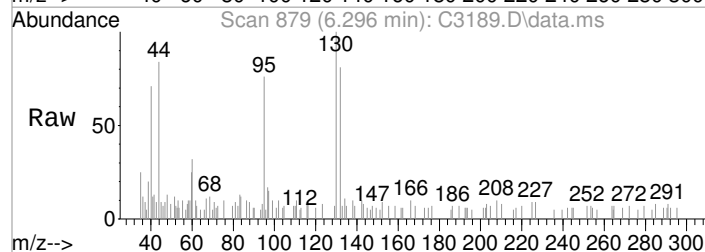
#33
 cis-1,2-Dichloroethene
 Concen: 106.15 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3189.D
 Acq: 21 Nov 2017 3:09 pm

Tgt Ion	Ratio	Resp	Lower	Upper
96	100	163952		
61	136.4	123.7	163.7	



#53
 Trichloroethene
 Concen: 0.22 ug/L
 RT: 6.296 min Scan# 879
 Delta R.T. -0.011 min
 Lab File: C3189.D
 Acq: 21 Nov 2017 3:09 pm

Tgt Ion	Ratio	Resp	Lower	Upper
130	100	331		
132	81.4	82.3	122.3#	
95	80.9	75.5	115.5	
97	31.9	43.2	83.2#	



Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3164.D
 Acq On : 21 Nov 2017 2:50 am
 Operator : F. NAEGLER
 Sample : R1710784-011|10.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 41 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:53:53 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

rpt 1/25

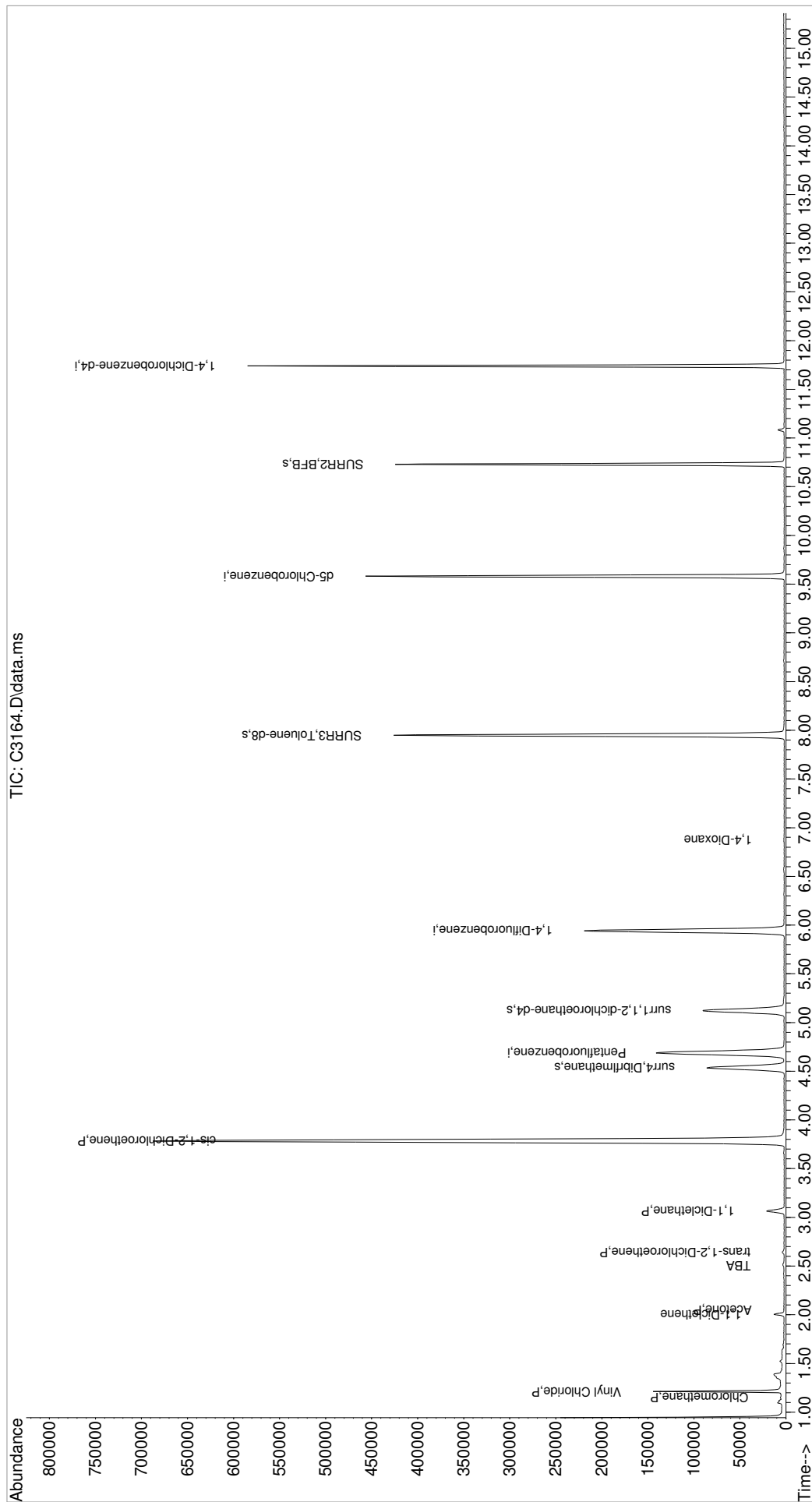
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	138435	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	207055	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.582	117	197020	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	105097	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	65379	47.02	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	94.04%	
47) surr1,1,2-dichloroetha...	5.125	65	89984	47.59	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	95.18%	
64) SURR3,Toluene-d8	7.948	98	259019	47.29	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	94.58%	
69) SURR2,BFB	10.728	95	99658	47.65	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	95.30%	
Target Compounds						
3) Chloromethane	1.150	50	545	0.28	ug/L	Qvalue 91
4) Vinyl Chloride	1.211	62	65256	36.93	ug/L	97
13) 1,1-Dicethene	2.004	96	2808	2.36	ug/L #	82
15) Acetone	2.053	43	423	0.45	ug/L	93
23) TBA	2.510	59	903	3.97	ug/L	73
26) trans-1,2-Dichloroethene	2.644	96	675	0.53	ug/L #	67
27) 1,1-Dicethane	3.065	63	17232	6.81	ug/L	92
33) cis-1,2-Dichloroethene	3.784	96	333090	219.89	ug/L	92
57) 1,4-Dioxane	6.875	88	309	11.02	ug/L #	51

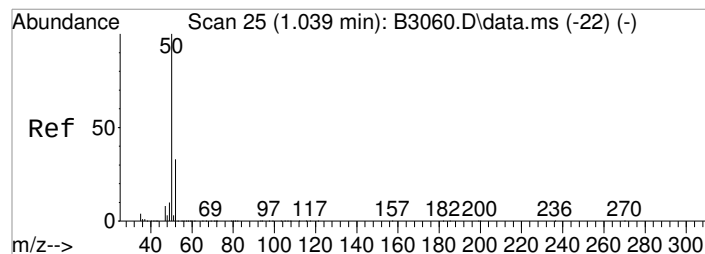
E-Over Calibration

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3164.D
Acq On : 21 Nov 2017 2:50 am
Operator : F. NAEGLER
Sample : R1710784-011|10.0
Misc : ECOLOGY 16560 T2
ALS Vial : 41 Sample Multiplier: 1
Inst : MSVOA14

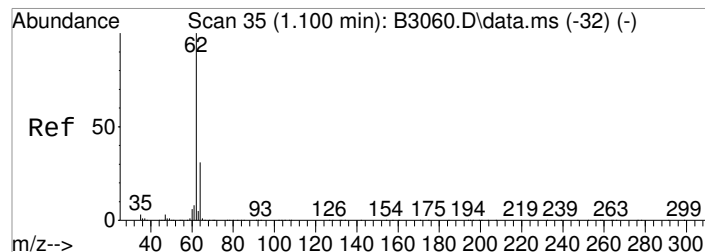
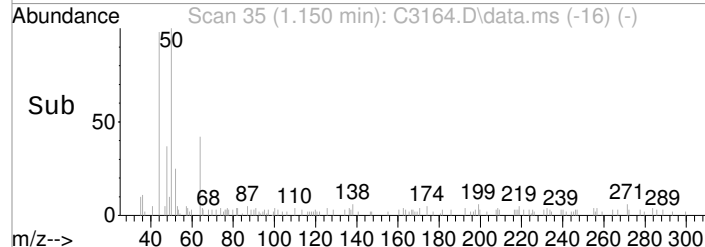
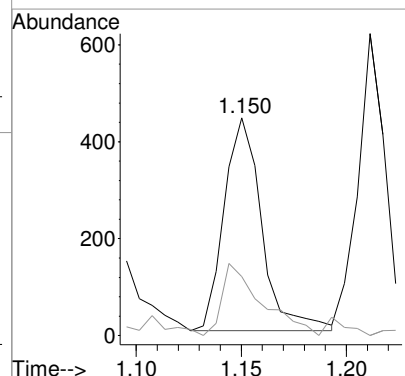
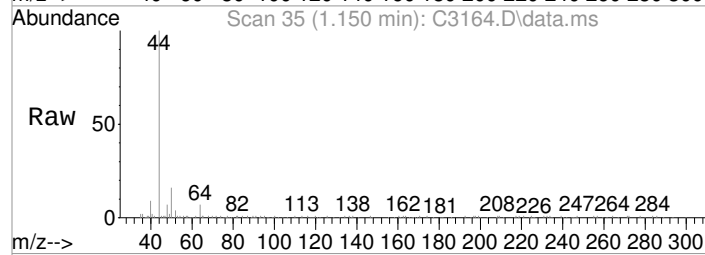
Quant Time: Nov 21 16:53:53 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration





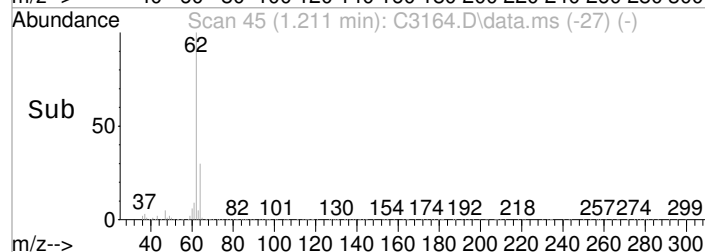
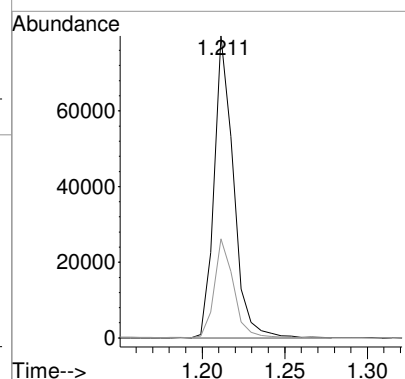
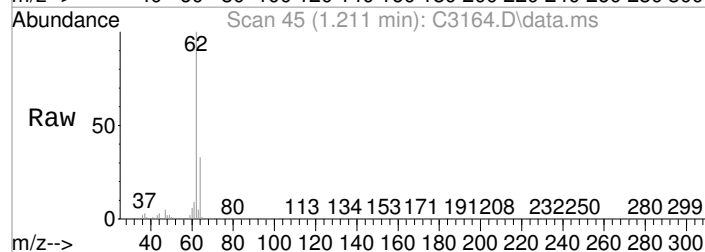
#3
 Chloromethane
 Concen: 0.28 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. 0.000 min
 Lab File: C3164.D
 Acq: 21 Nov 2017 2:50 am

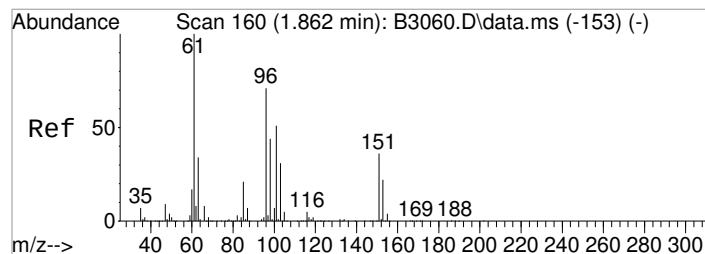
Tgt Ion: 50 Resp: 545
 Ion Ratio Lower Upper
 50 100
 52 27.2 12.1 52.1



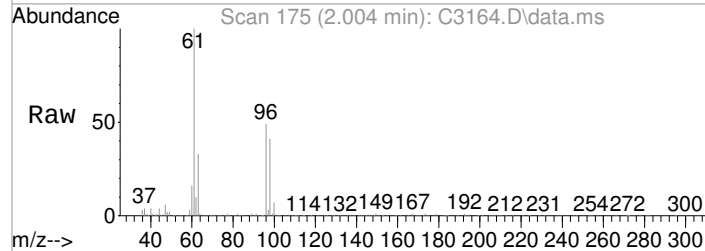
#4
 Vinyl Chloride
 Concen: 36.93 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3164.D
 Acq: 21 Nov 2017 2:50 am

Tgt Ion: 62 Resp: 65256
 Ion Ratio Lower Upper
 62 100
 64 32.8 10.9 50.9

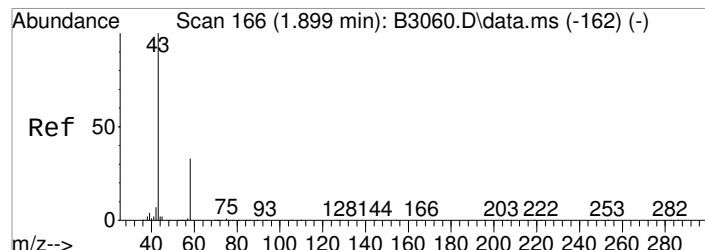
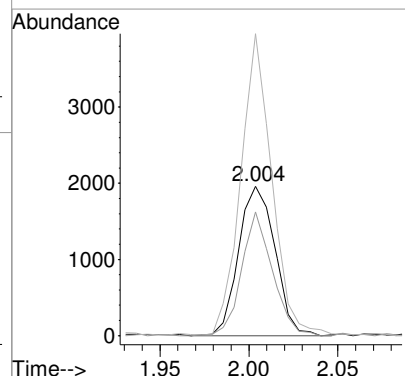
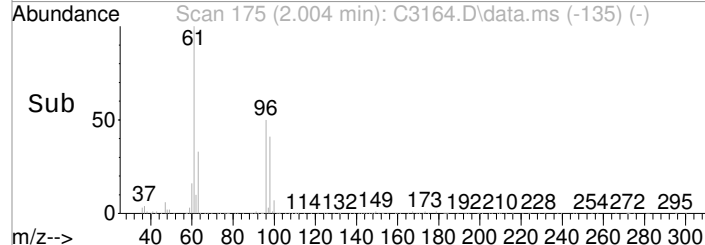




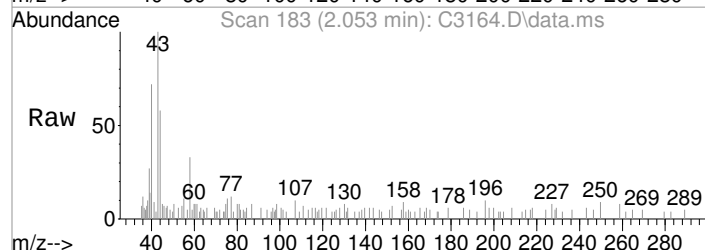
#13
 1,1-Dicethene
 Concen: 2.36 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3164.D
 Acq: 21 Nov 2017 2:50 am



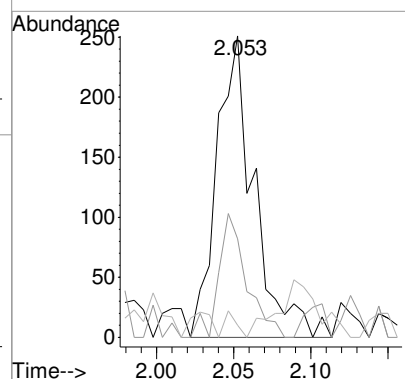
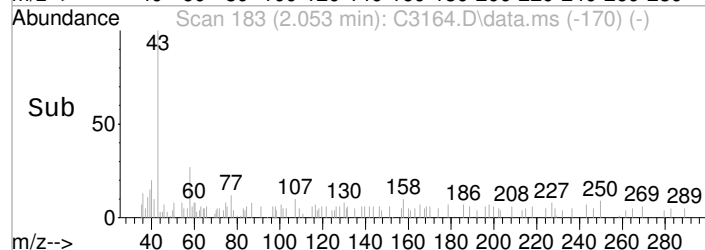
Tgt Ion: 96 Resp: 2808
 Ion Ratio Lower Upper
 96 100
 98 82.9 47.9 87.9
 61 202.2 157.9 197.9#

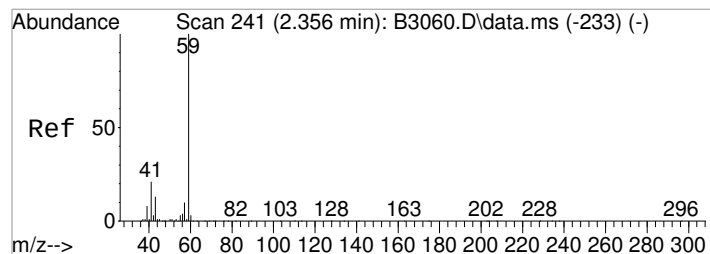


#15
 Acetone
 Concen: 0.45 ug/L
 RT: 2.053 min Scan# 183
 Delta R.T. 0.005 min
 Lab File: C3164.D
 Acq: 21 Nov 2017 2:50 am

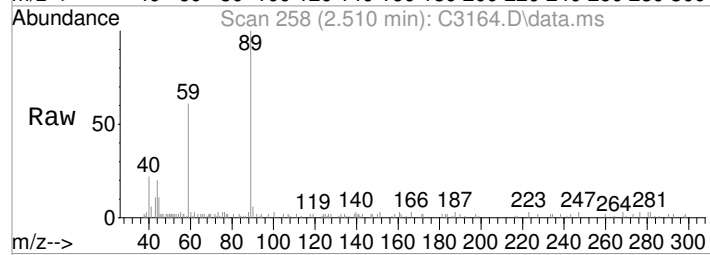


Tgt Ion: 43 Resp: 423
 Ion Ratio Lower Upper
 43 100
 58 32.7 8.6 48.6
 42 4.0 0.0 25.7

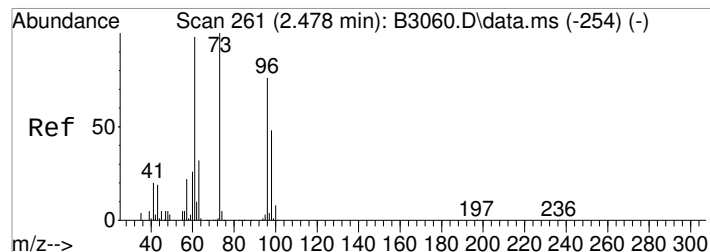
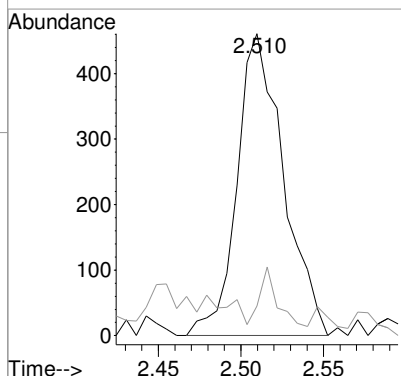
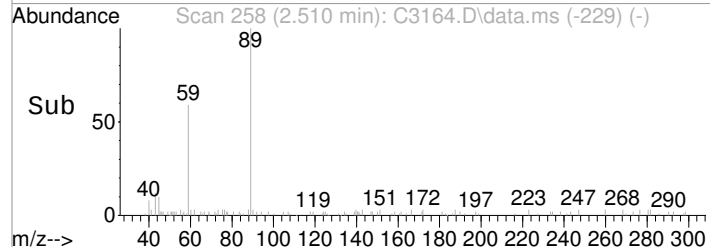




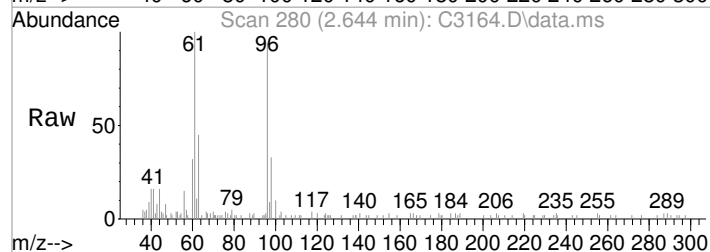
#23
 TBA
 Concen: 3.97 ug/L
 RT: 2.510 min Scan# 258
 Delta R.T. -0.007 min
 Lab File: C3164.D
 Acq: 21 Nov 2017 2:50 am



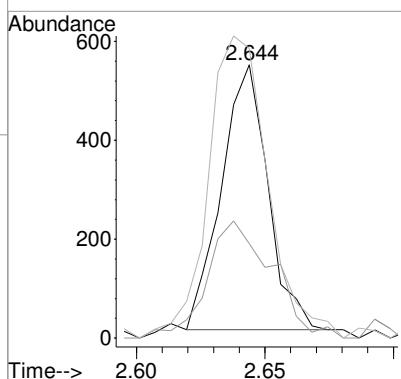
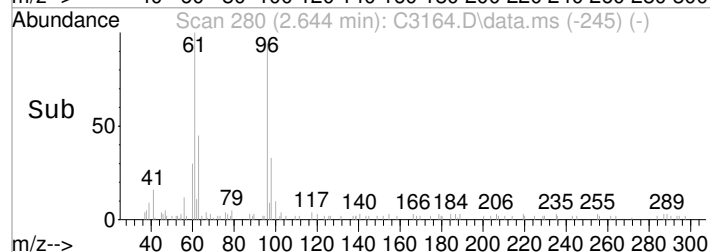
Tgt Ion: 59 Resp: 903
 Ion Ratio Lower Upper
 59 100
 41 9.8 2.6 42.6

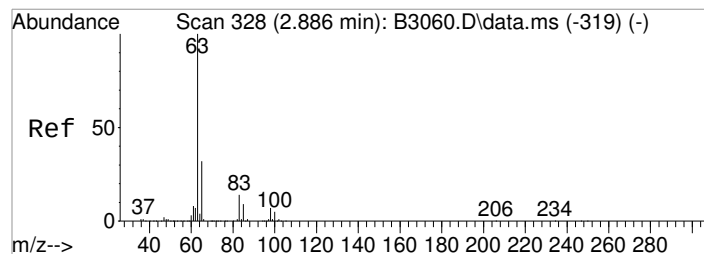


#26
 trans-1,2-Dichloroethene
 Concen: 0.53 ug/L
 RT: 2.644 min Scan# 280
 Delta R.T. 0.001 min
 Lab File: C3164.D
 Acq: 21 Nov 2017 2:50 am

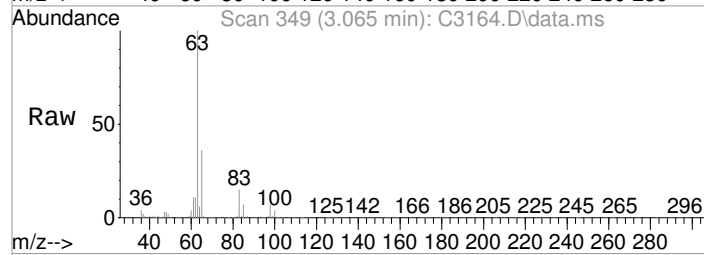


Tgt Ion: 96 Resp: 675
 Ion Ratio Lower Upper
 96 100
 98 34.5 41.4 81.4#
 61 106.0 127.1 167.1#

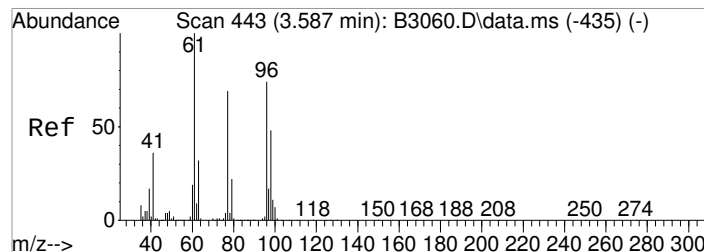
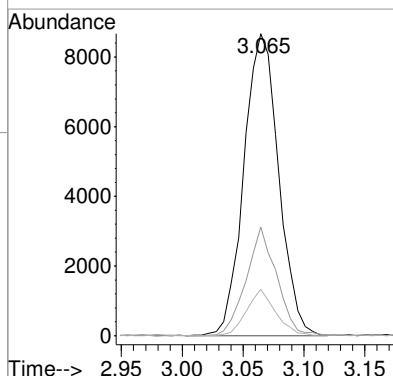
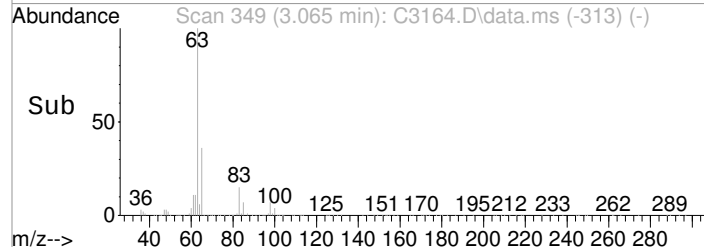




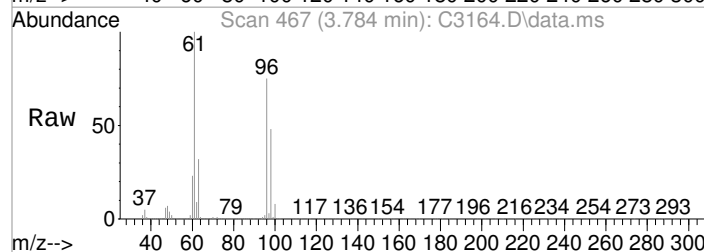
#27
 1,1-Dicethane
 Concen: 6.81 ug/L
 RT: 3.065 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3164.D
 Acq: 21 Nov 2017 2:50 am



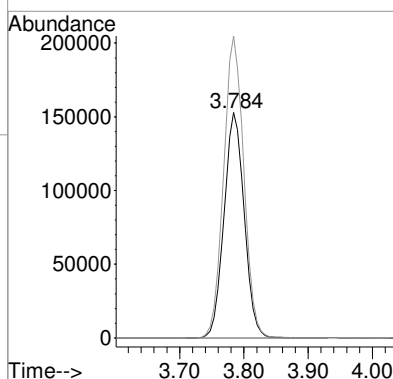
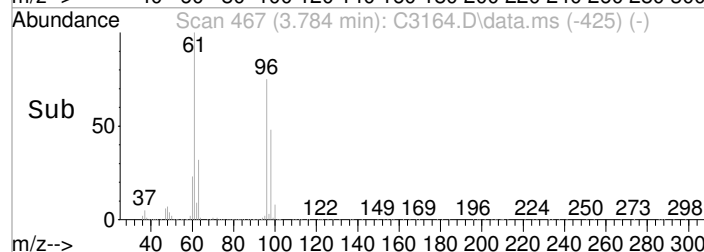
Tgt Ion: 63 Resp: 17232
 Ion Ratio Lower Upper
 63 100
 65 36.0 11.6 51.6
 83 15.3 0.0 32.7

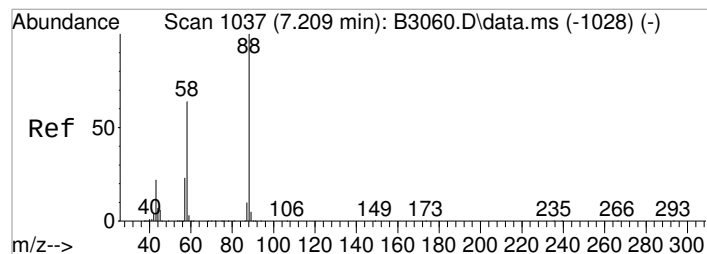


#33
 cis-1,2-Dichloroethene
 Concen: 219.89 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3164.D
 Acq: 21 Nov 2017 2:50 am

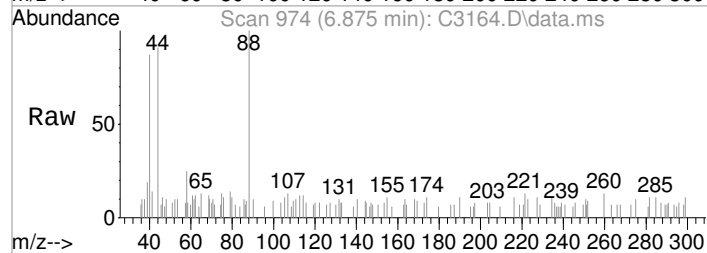


Tgt Ion: 96 Resp: 333090
 Ion Ratio Lower Upper
 96 100
 61 133.9 123.7 163.7

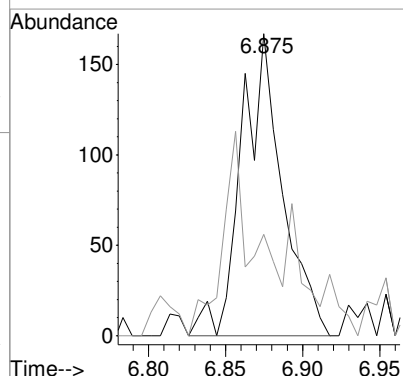
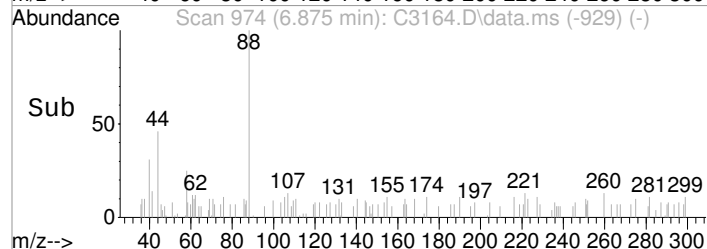




#57
 1,4-Dioxane
 Concen: 11.02 ug/L
 RT: 6.875 min Scan# 974
 Delta R.T. 0.018 min
 Lab File: C3164.D
 Acq: 21 Nov 2017 2:50 am



Tgt Ion: 88 Resp: 309
 Ion Ratio Lower Upper
 88 100
 58 33.5 56.0 96.0#



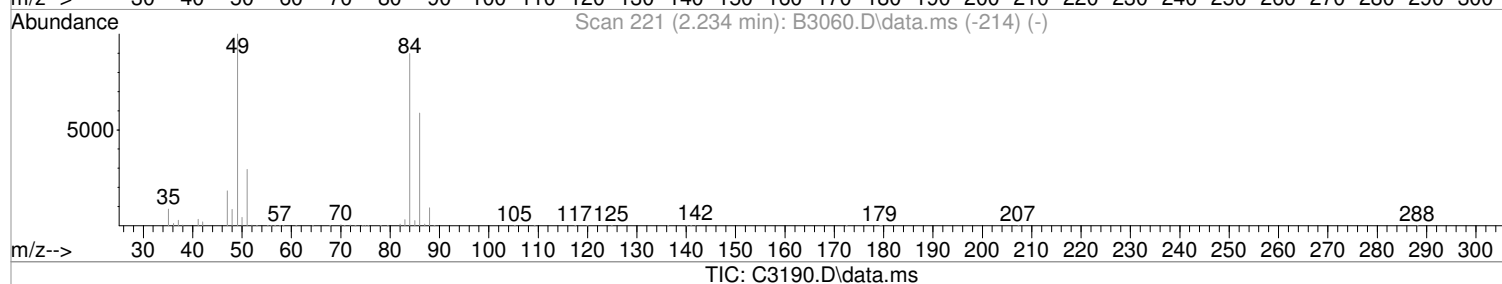
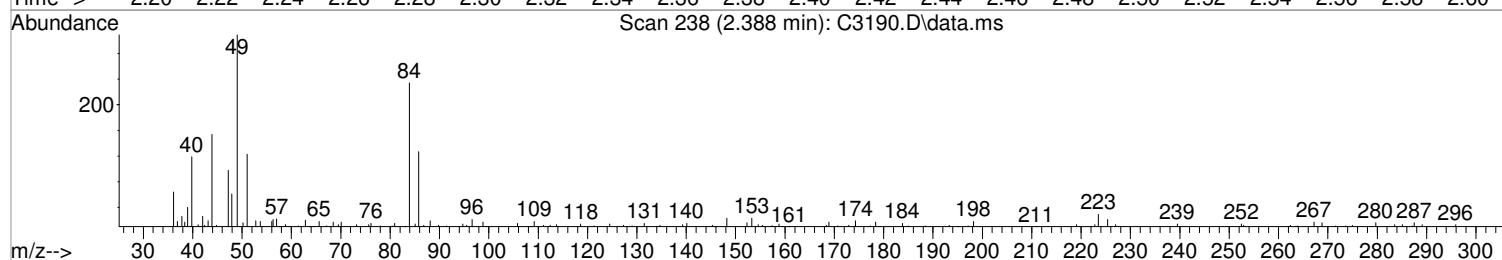
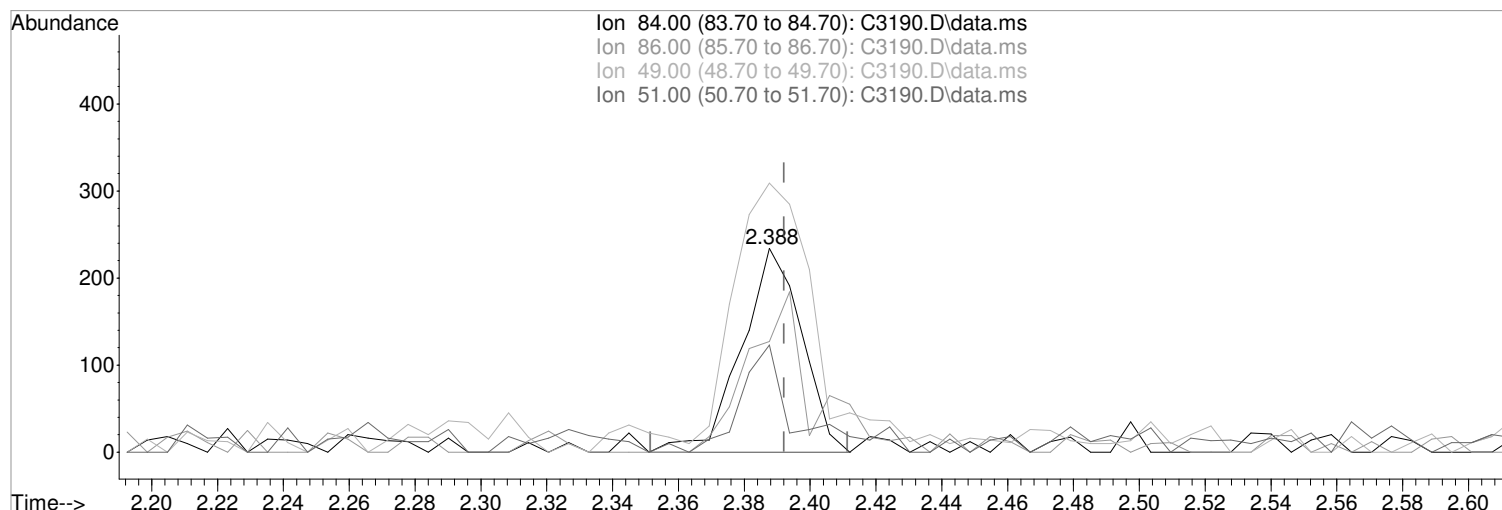
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3190.D
Acq On : 21 Nov 2017 3:32 pm
Operator : F. NAEGLER
Sample : R1710784-011|25.0
Misc : ECOLOGY 16560 T2
ALS Vial : 14 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:25:31 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



(22) Methylene Chloride (P)

2.388min (-0.004) 0.21 ug/L m

response 298

Ion	Exp%	Act%
84.00	100	100
86.00	64.80	54.27
49.00	138.10	132.05
51.00	42.50	52.56

Manual Integration:

After

Peak not found.

11/27/17

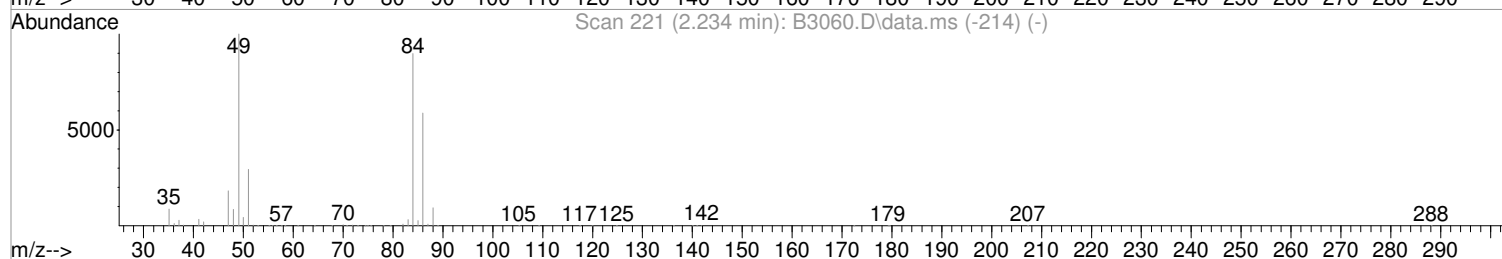
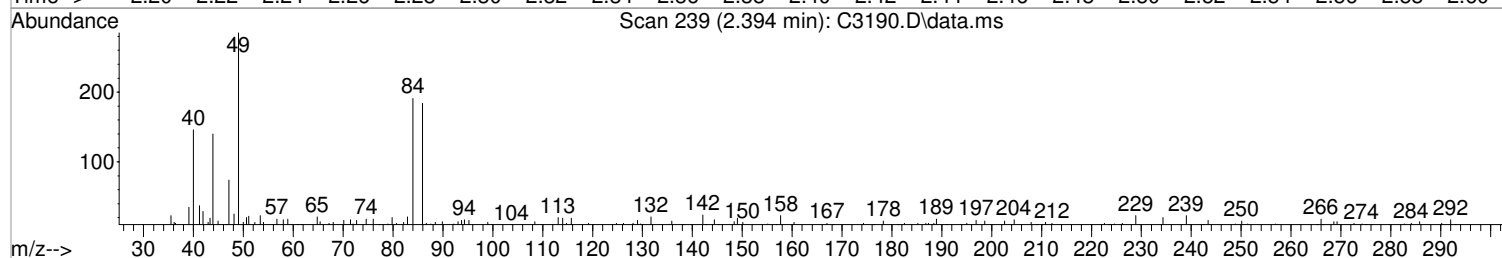
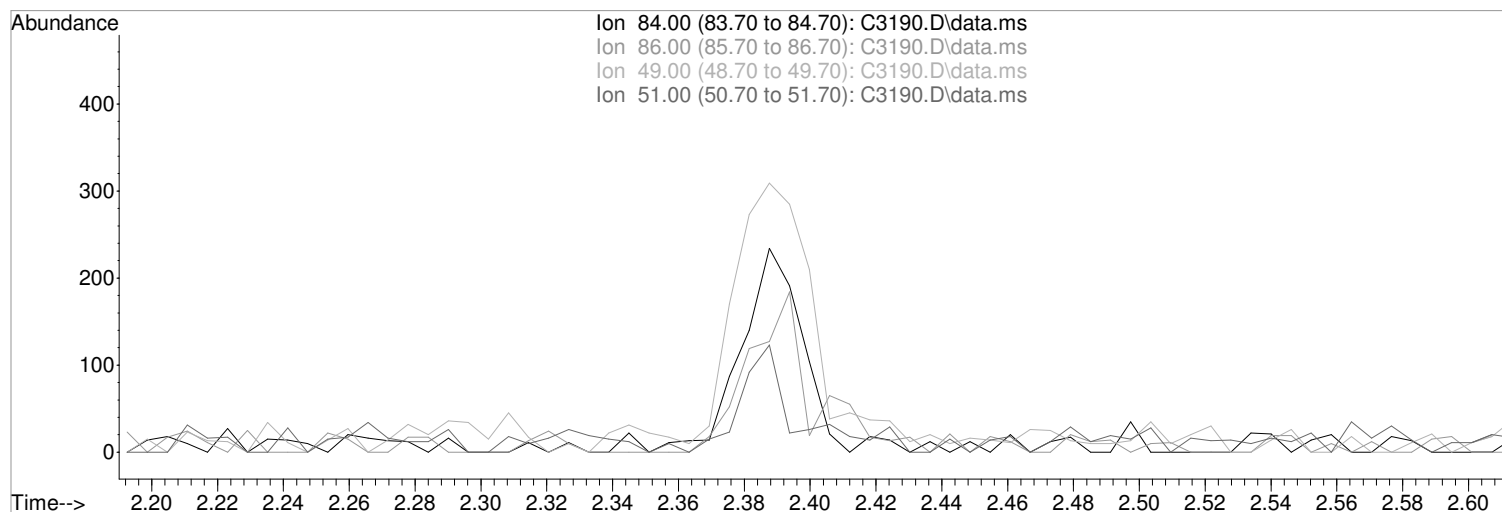
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3190.D
Acq On : 21 Nov 2017 3:32 pm
Operator : F. NAEGLER
Sample : R1710784-011|25.0
Misc : ECOLOGY 16560 T2
ALS Vial : 14 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:25:31 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



(22) Methylene Chloride (P)

Manual Integration:

2.392min (-2.392) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
84.00	100	0.00
86.00	64.80	0.00#
49.00	138.10	0.00#
51.00	42.50	0.00#

11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3190.D
 Acq On : 21 Nov 2017 3:32 pm
 Operator : F. NAEGLER
 Sample : R1710784-011|25.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 14 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 27 11:21:21 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

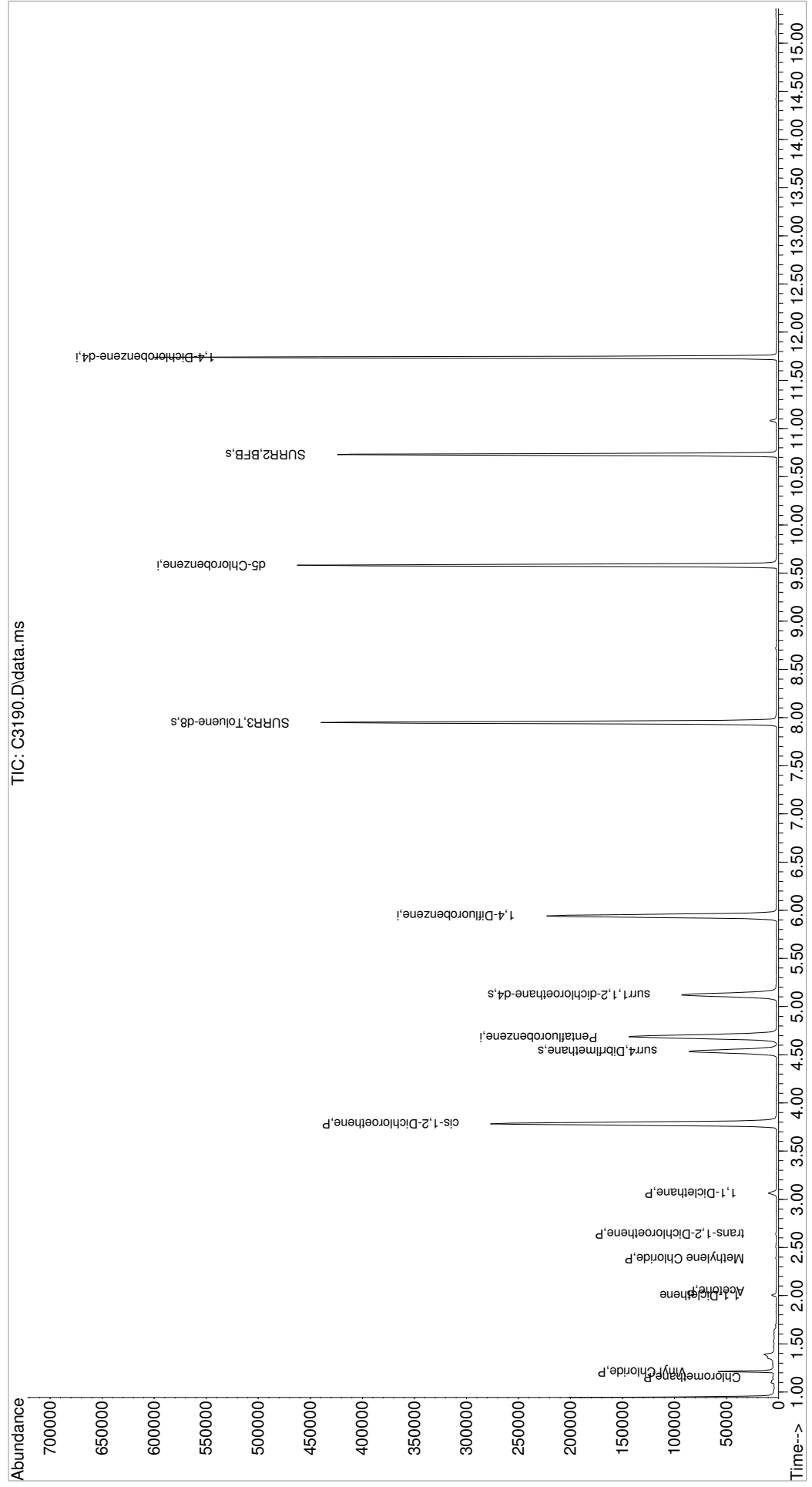
DL

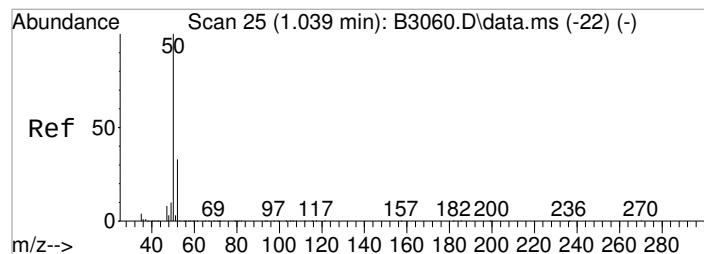
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.686	168	139229	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	210394	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	198599	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.739	152	109018	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	66671	47.19	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	94.38%	
47) surr1,1,2-dichloroetha...	5.125	65	92063	47.92	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	95.84%	
64) SURR3,Toluene-d8	7.948	98	262796	47.22	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	94.44%	
69) SURR2,BFB	10.727	95	100817	47.44	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	94.88%	
Target Compounds						
3) Chloromethane	1.150	50	574	0.29	ug/L	95
4) Vinyl Chloride	1.211	62	26439	14.88	ug/L	99
13) 1,1-Dicethene	2.004	96	1082	0.90	ug/L	92
15) Acetone	2.052	43	290	0.30	ug/L	80
22) Methylene Chloride	2.388	84	298m	0.21	ug/L	
26) trans-1,2-Dichloroethene	2.644	96	327	0.25	ug/L #	68
27) 1,1-Dicethane	3.064	63	7162	2.81	ug/L	92
33) cis-1,2-Dichloroethene	3.784	96	136605	89.66	ug/L	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSV0A14\Data\112117\
Data File : C3190.D
Acq On : 21 Nov 2017 3:32 pm
Operator : F. NAEGLER
Sample : R1710784-011|25.0
Misc : ECOLOGY 16560 T2
ALS Vial : 14 Sample Multiplier: 1
Inst : MSV0A14

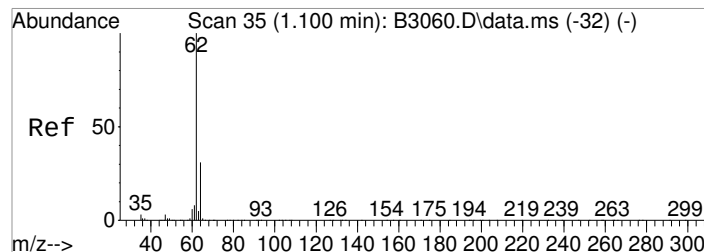
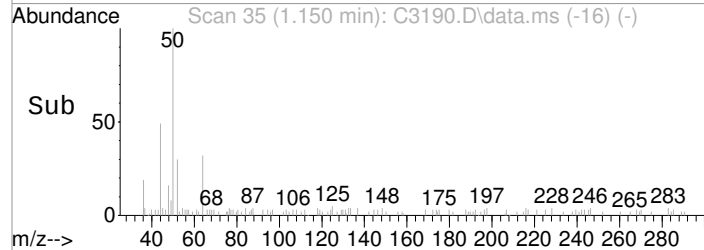
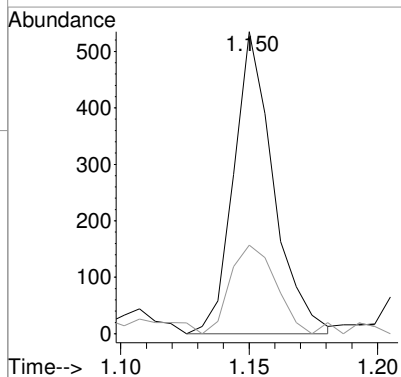
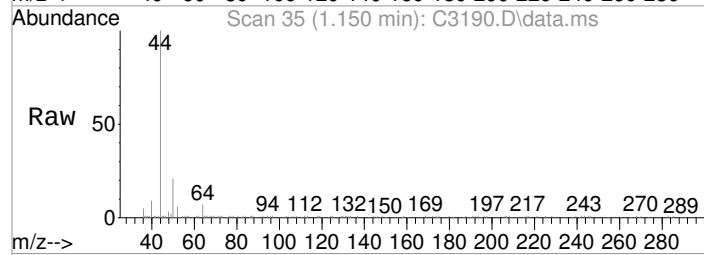
Quant Time: Nov 27 11:21:21 2017
Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration





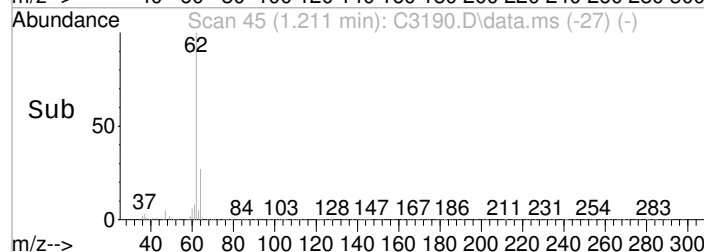
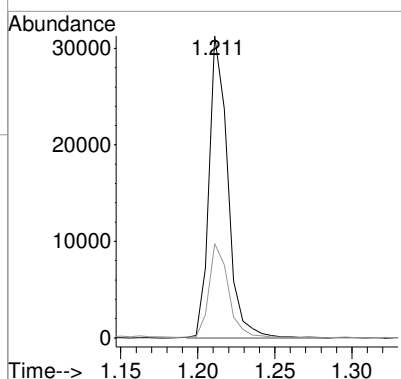
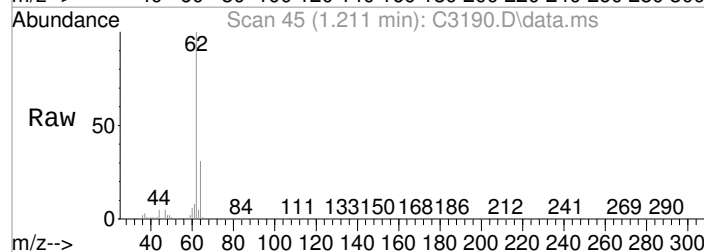
#3
 Chloromethane
 Concen: 0.29 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. -0.000 min
 Lab File: C3190.D
 Acq: 21 Nov 2017 3:32 pm

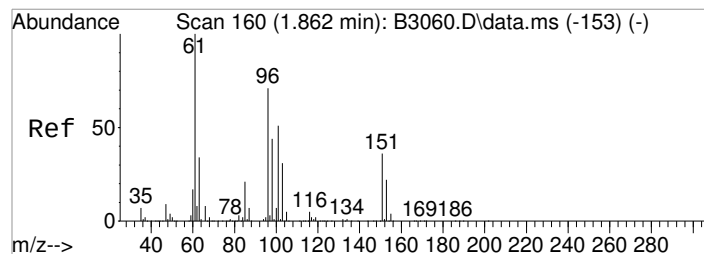
Tgt Ion: 50 Resp: 574
 Ion Ratio Lower Upper
 50 100
 52 29.3 12.1 52.1



#4
 Vinyl Chloride
 Concen: 14.88 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3190.D
 Acq: 21 Nov 2017 3:32 pm

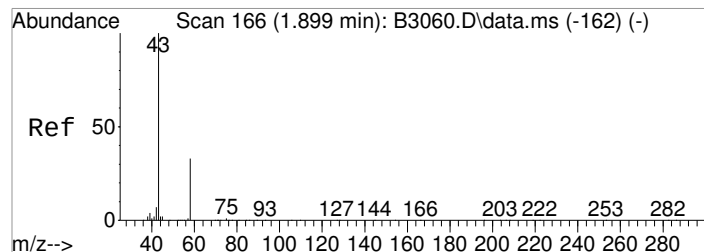
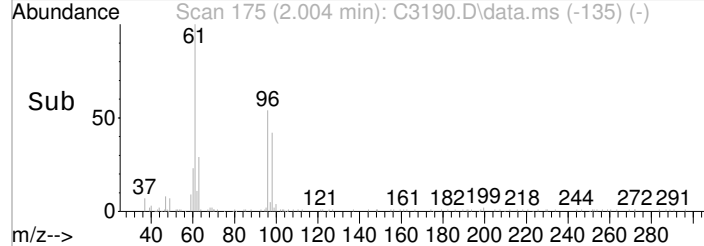
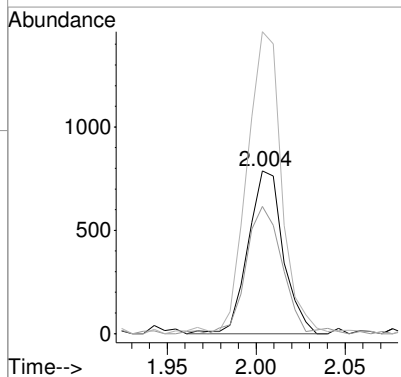
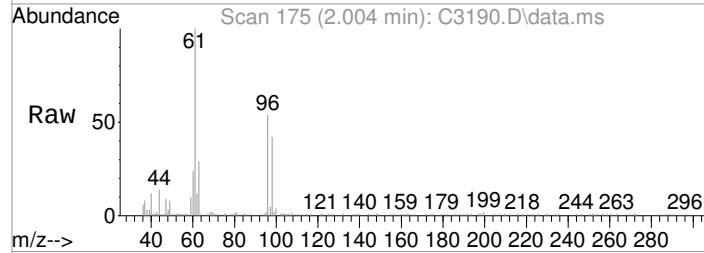
Tgt Ion: 62 Resp: 26439
 Ion Ratio Lower Upper
 62 100
 64 31.2 10.9 50.9





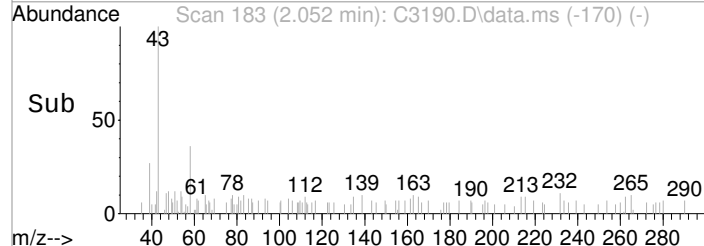
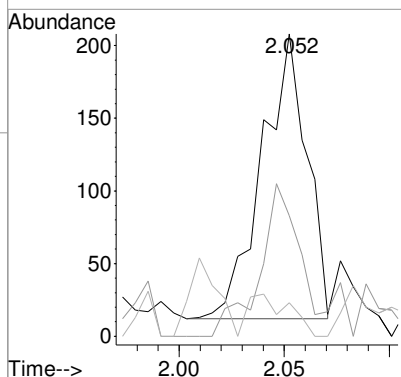
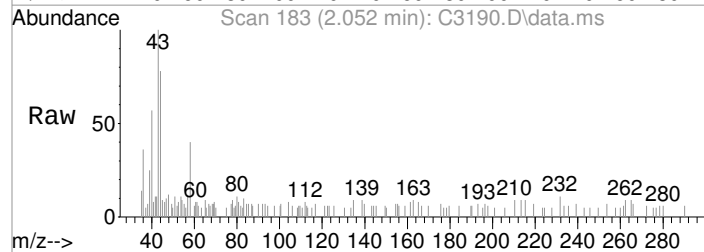
#13
 1,1-Dicloroethene
 Concen: 0.90 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3190.D
 Acq: 21 Nov 2017 3:32 pm

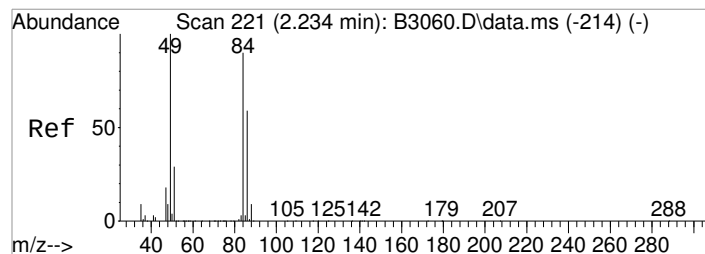
Tgt Ion	96	Resp	1082
Ion Ratio	Lower	Upper	
96	100		
98	78.3	47.9	87.9
61	185.6	157.9	197.9



#15
 Acetone
 Concen: 0.30 ug/L
 RT: 2.052 min Scan# 183
 Delta R.T. 0.004 min
 Lab File: C3190.D
 Acq: 21 Nov 2017 3:32 pm

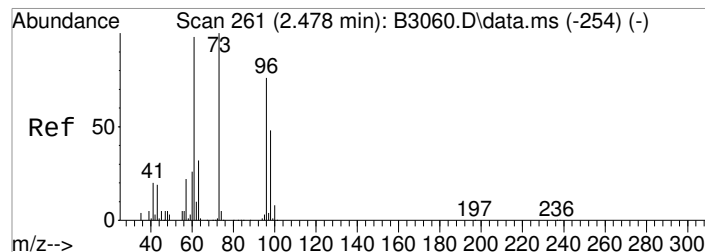
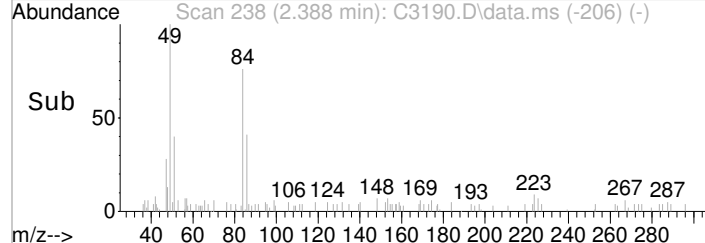
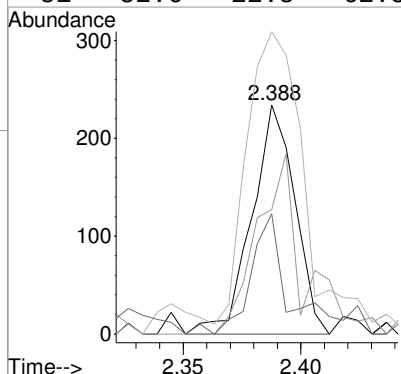
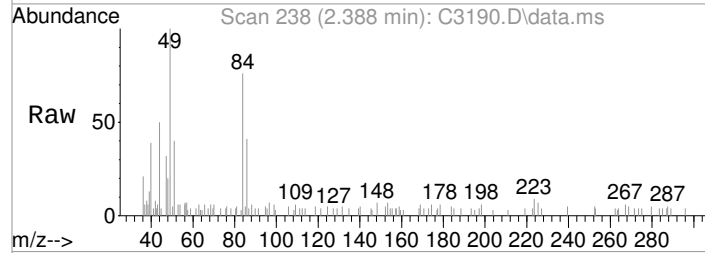
Tgt Ion	43	Resp	290
Ion Ratio	Lower	Upper	
43	100		
58	39.9	8.6	48.6
42	11.1	0.0	25.7





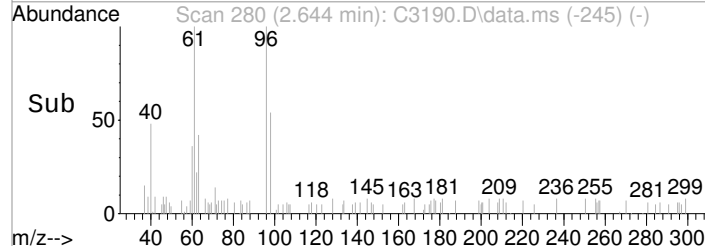
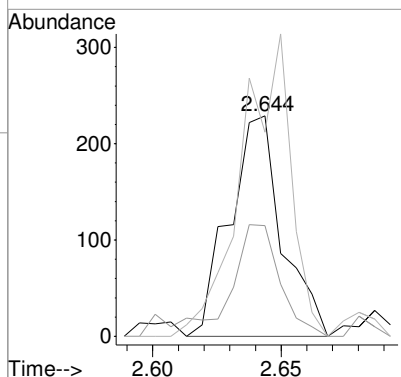
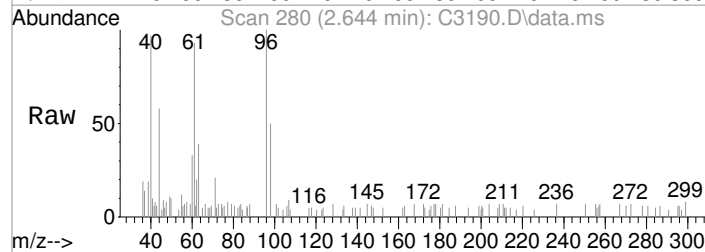
#22
 Methylene Chloride
 Concen: 0.21 ug/L m
 RT: 2.388 min Scan# 238
 Delta R.T. -0.004 min
 Lab File: C3190.D
 Acq: 21 Nov 2017 3:32 pm

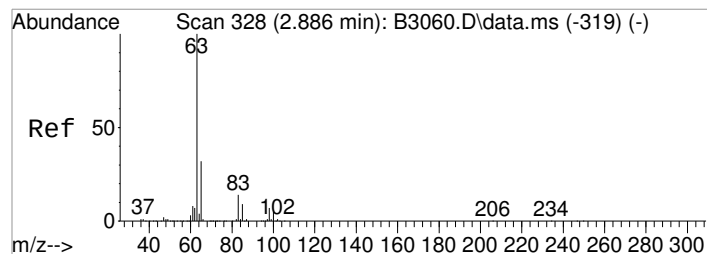
Tgt Ion:	84	Resp:	298
Ion Ratio	Lower	Upper	
84	100		
86	54.3	44.8	84.8
49	132.1	118.1	158.1
51	52.6	22.5	62.5



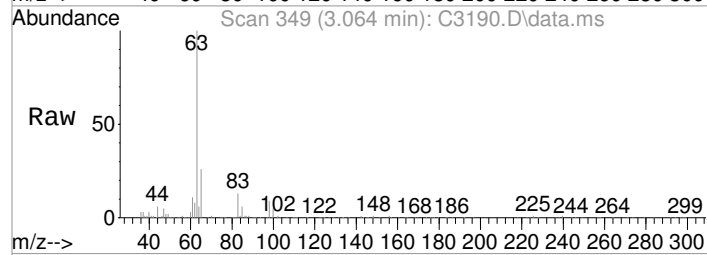
#26
 trans-1,2-Dichloroethene
 Concen: 0.25 ug/L
 RT: 2.644 min Scan# 280
 Delta R.T. 0.000 min
 Lab File: C3190.D
 Acq: 21 Nov 2017 3:32 pm

Tgt Ion:	96	Resp:	327
Ion Ratio	Lower	Upper	
96	100		
98	50.2	41.4	81.4
61	98.3	127.1	167.1#

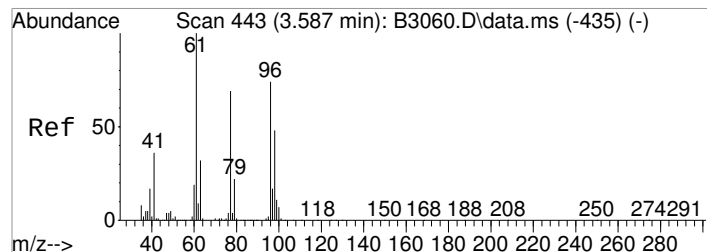
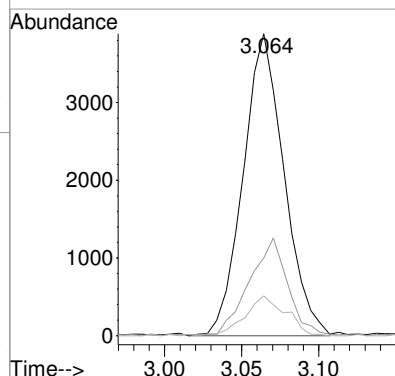
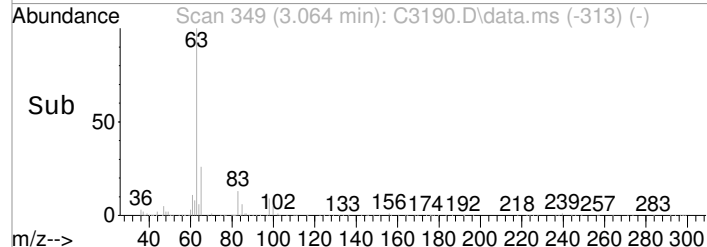




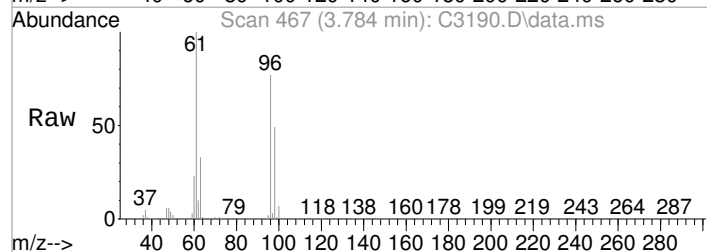
#27
 1,1-Dicethane
 Concen: 2.81 ug/L
 RT: 3.064 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3190.D
 Acq: 21 Nov 2017 3:32 pm



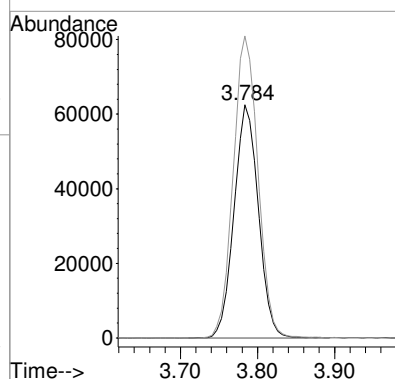
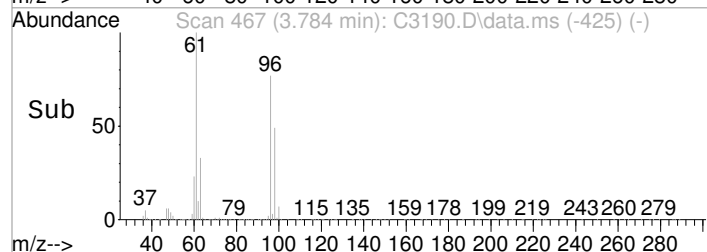
Tgt Ion: 63 Resp: 7162
 Ion Ratio Lower Upper
 63 100
 65 25.7 11.6 51.6
 83 13.3 0.0 32.7



#33
 cis-1,2-Dichloroethene
 Concen: 89.66 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3190.D
 Acq: 21 Nov 2017 3:32 pm



Tgt Ion: 96 Resp: 136605
 Ion Ratio Lower Upper
 96 100
 61 129.4 123.7 163.7



Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3159.D
 Acq On : 21 Nov 2017 12:59 am
 Operator : F. NAEGLER
 Sample : R1710784-012|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 36 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:40:52 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

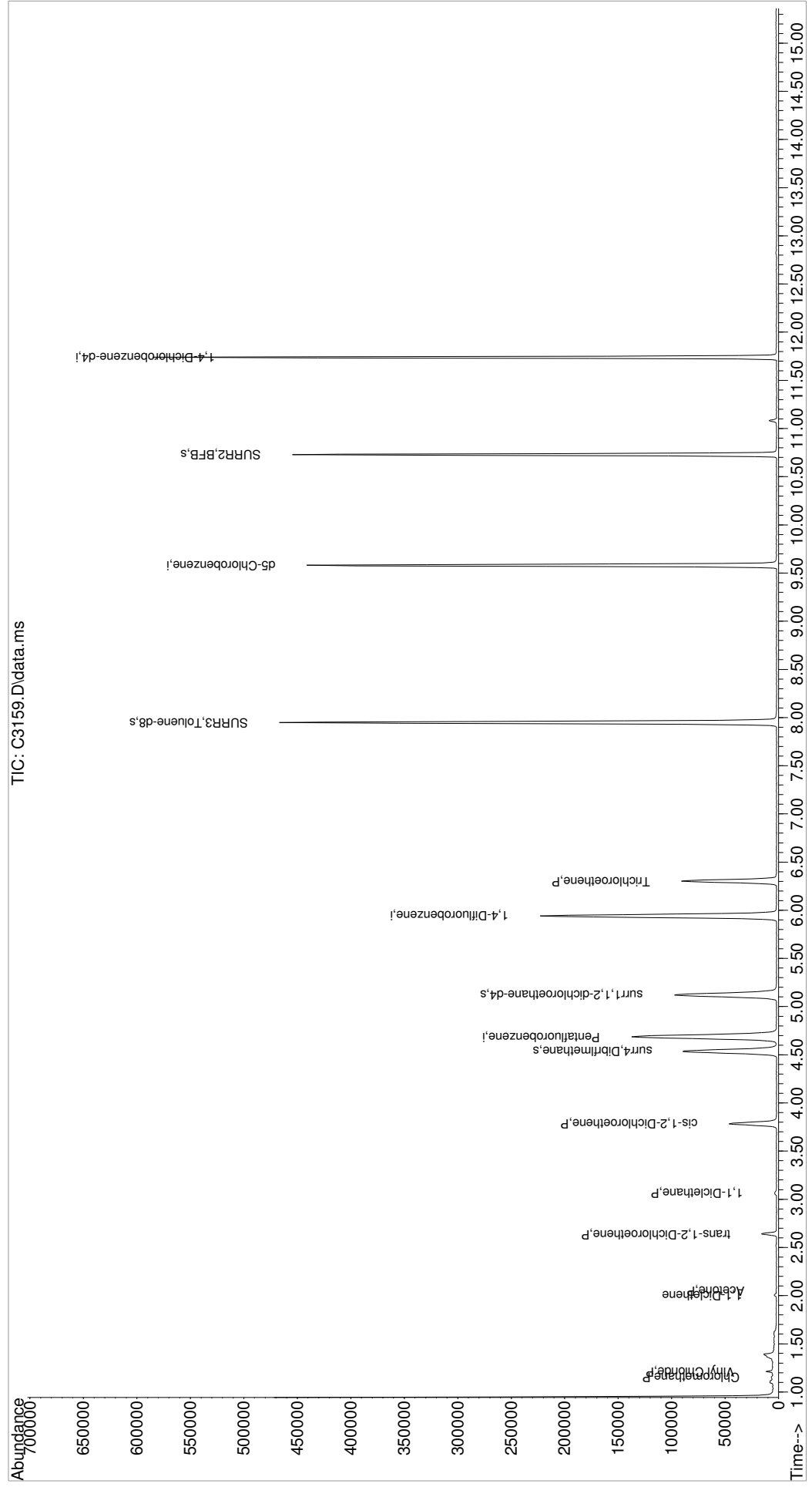
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

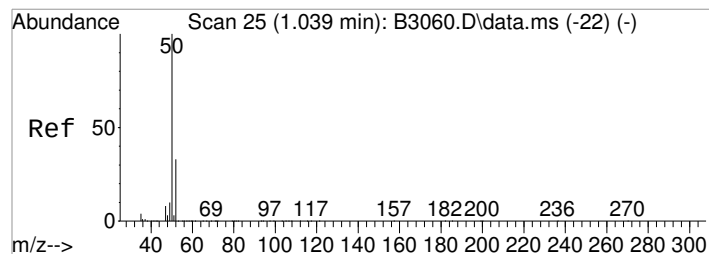
Internal Standards						
1) Pentafluorobenzene	4.686	168	134887	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	208093	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	194676	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	105099	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	68281	48.86	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.72%			
47) surr1,1,2-dichloroetha...	5.119	65	96252	50.66	ug/L	0.00
Spiked Amount 50.000	Range 73 - 125		Recovery = 101.32%			
64) SURR3,Toluene-d8	7.948	98	277166	50.36	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 100.72%			
69) SURR2,BFB	10.728	95	107261	51.03	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 102.06%			
Target Compounds						
						Qvalue
3) Chloromethane	1.150	50	466	0.25	ug/L	98
4) Vinyl Chloride	1.211	62	2893	1.68	ug/L	92
13) 1,1-Dicethene	2.004	96	635	0.55	ug/L	89
15) Acetone	2.052	43	265	0.29	ug/L	94
26) trans-1,2-Dichloroethene	2.638	96	4693	3.76	ug/L	93
27) 1,1-Dicethane	3.064	63	1909	0.77	ug/L	95
33) cis-1,2-Dichloroethene	3.784	96	21355	14.47	ug/L	95
53) Trichloroethene	6.302	130	33756	22.50	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSV0A14\Data\112017\
Data File : C3159.D
Acq On : 21 Nov 2017 12:59 am
Operator : F. NAEGLER
Sample : R1710784-012|1.0
Misc : ECOLOGY 16560 T2
ALS Vial : 36 Sample Multiplier: 1
Inst : MSV0A14

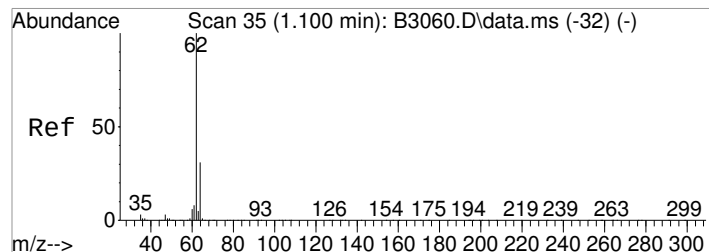
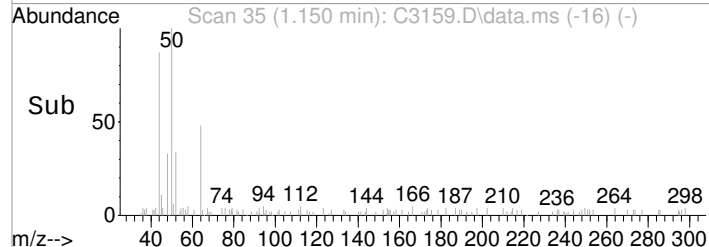
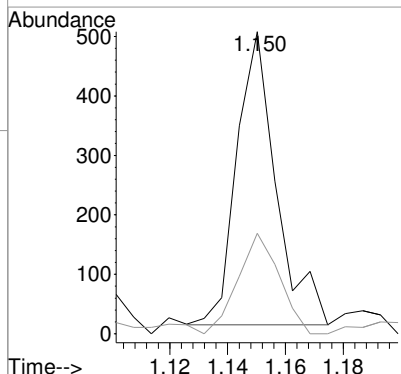
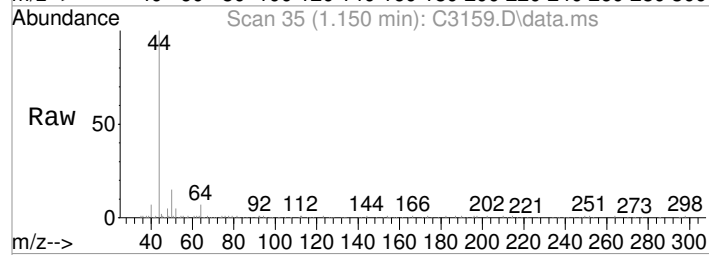
Quant Time: Nov 21 16:40:52 2017
Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration





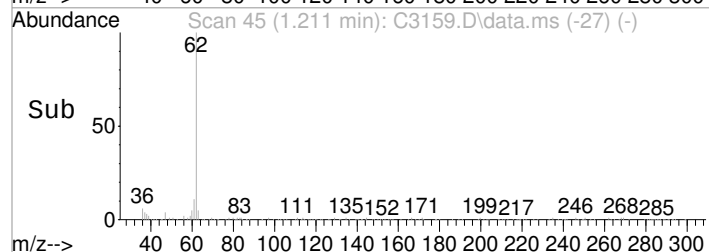
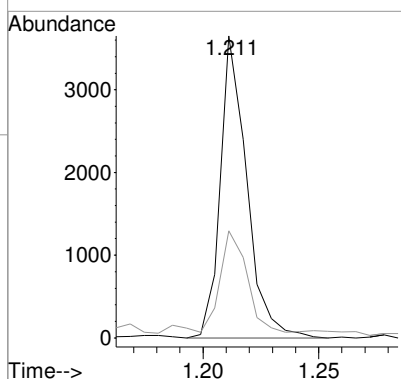
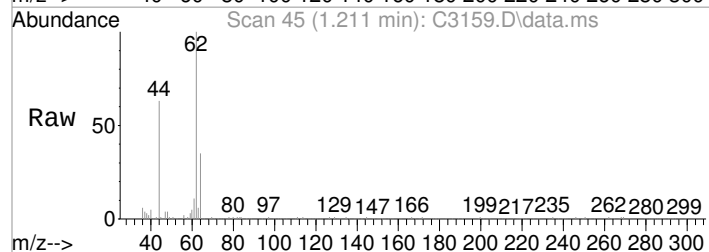
#3
 Chloromethane
 Concen: 0.25 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. 0.000 min
 Lab File: C3159.D
 Acq: 21 Nov 2017 12:59 am

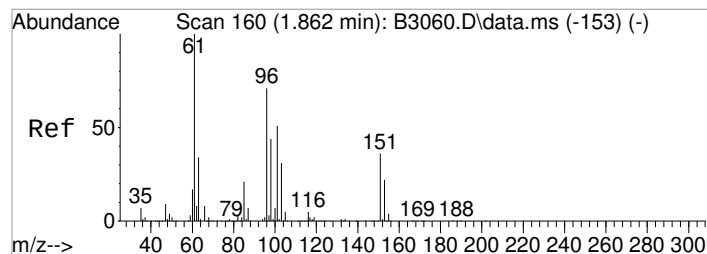
Tgt Ion: 50 Resp: 466
 Ion Ratio Lower Upper
 50 100
 52 33.3 12.1 52.1



#4
 Vinyl Chloride
 Concen: 1.68 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3159.D
 Acq: 21 Nov 2017 12:59 am

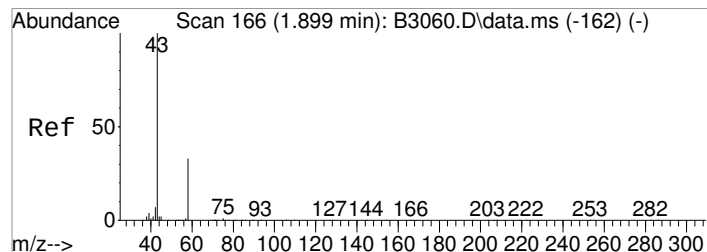
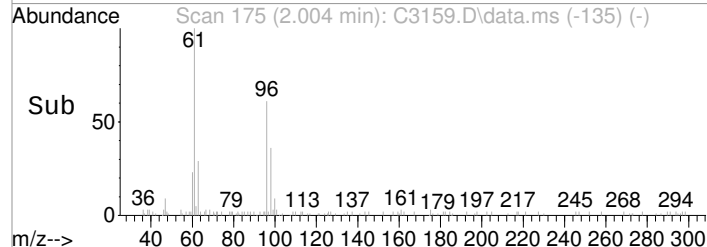
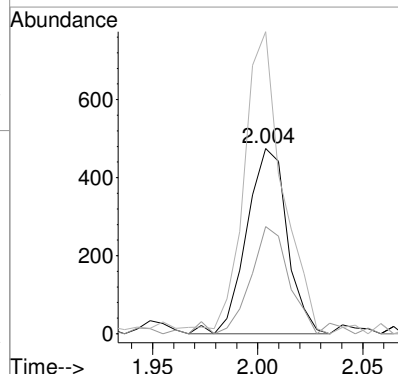
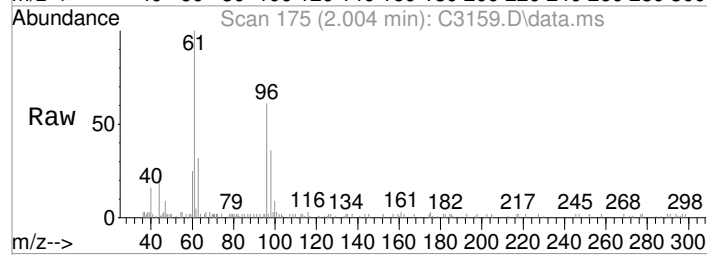
Tgt Ion: 62 Resp: 2893
 Ion Ratio Lower Upper
 62 100
 64 35.4 10.9 50.9





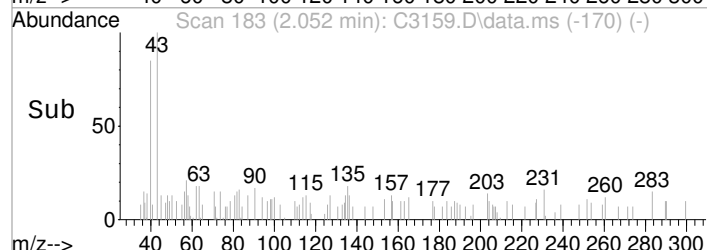
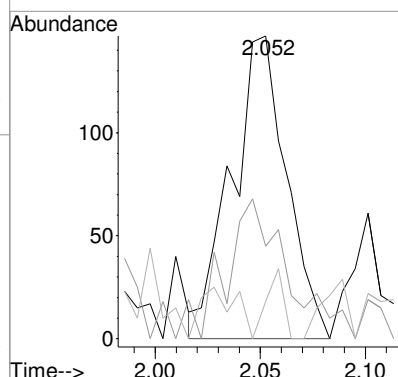
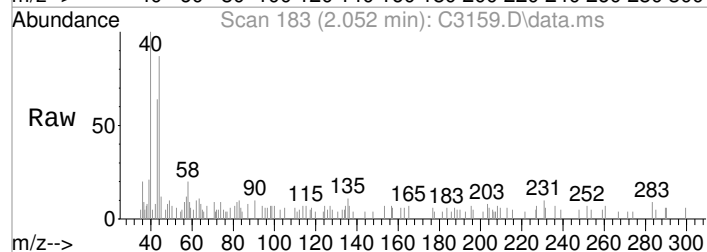
#13
 1,1-Dicethene
 Concen: 0.55 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3159.D
 Acq: 21 Nov 2017 12:59 am

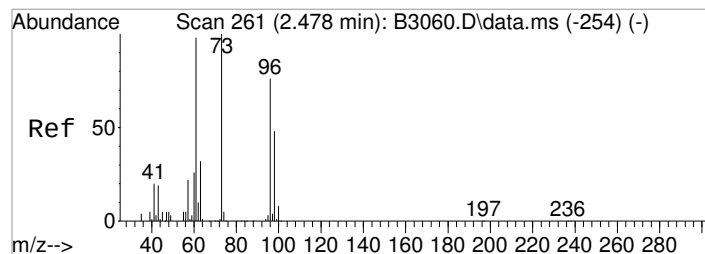
Tgt Ion: 96 Resp: 635
 Ion Ratio Lower Upper
 96 100
 98 57.9 47.9 87.9
 61 162.9 157.9 197.9



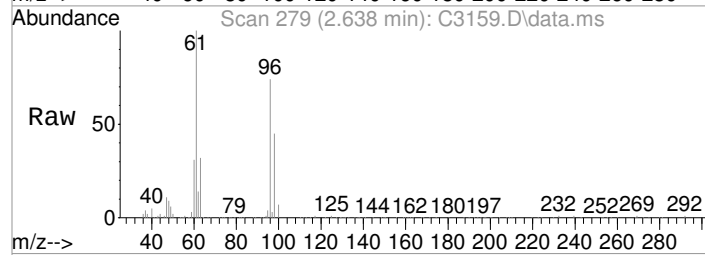
#15
 Acetone
 Concen: 0.29 ug/L
 RT: 2.052 min Scan# 183
 Delta R.T. 0.005 min
 Lab File: C3159.D
 Acq: 21 Nov 2017 12:59 am

Tgt Ion: 43 Resp: 265
 Ion Ratio Lower Upper
 43 100
 58 30.6 8.6 48.6
 42 12.2 0.0 25.7

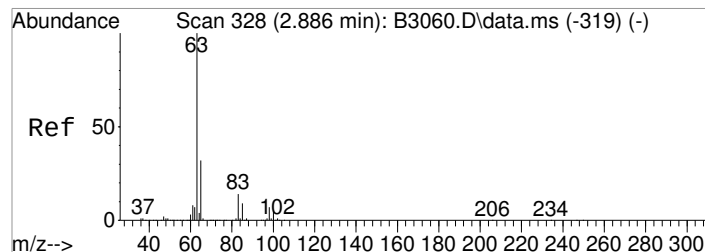
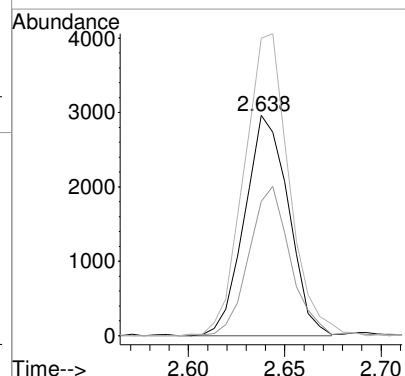
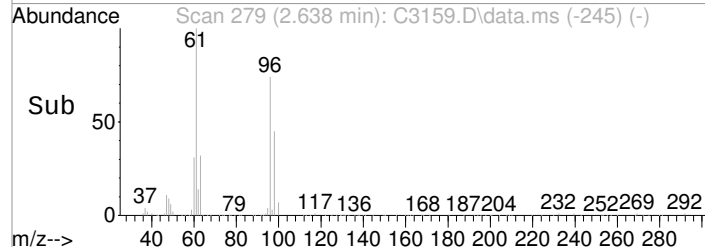




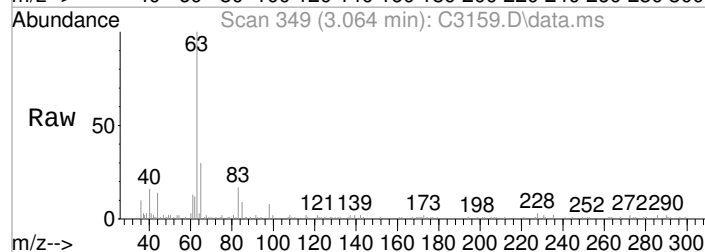
#26
 trans-1,2-Dichloroethene
 Concen: 3.76 ug/L
 RT: 2.638 min Scan# 279
 Delta R.T. -0.005 min
 Lab File: C3159.D
 Acq: 21 Nov 2017 12:59 am



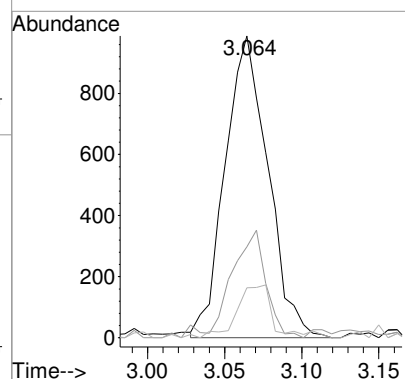
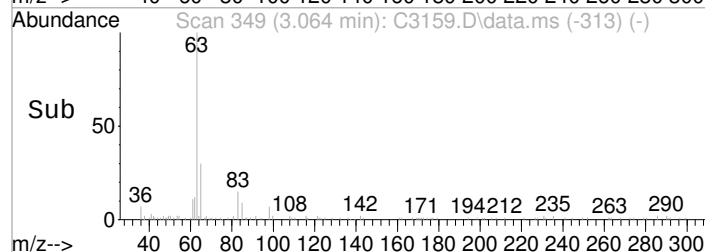
Tgt Ion: 96 Resp: 4693
 Ion Ratio Lower Upper
 96 100
 98 61.0 41.4 81.4
 61 135.0 127.1 167.1

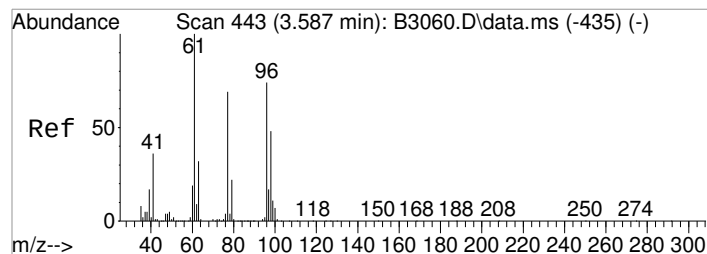


#27
 1,1-Dicethane
 Concen: 0.77 ug/L
 RT: 3.064 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3159.D
 Acq: 21 Nov 2017 12:59 am



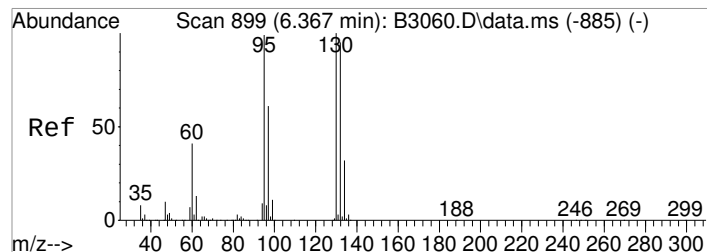
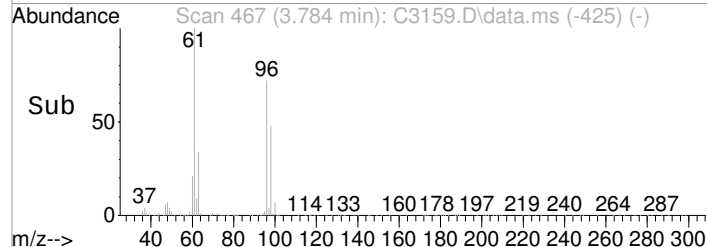
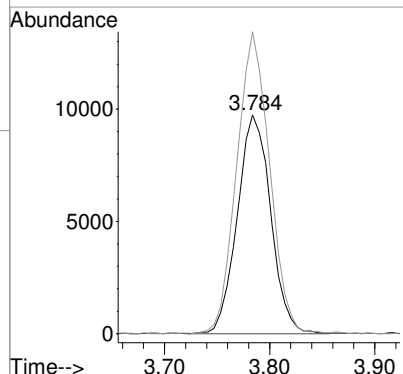
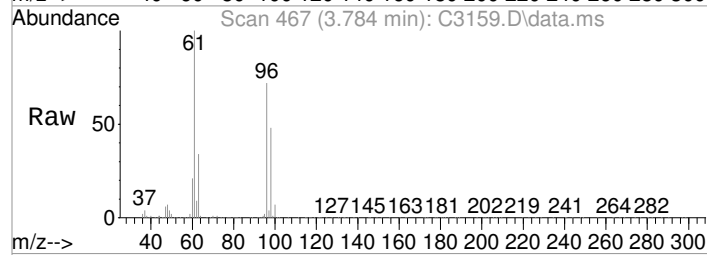
Tgt Ion: 63 Resp: 1909
 Ion Ratio Lower Upper
 63 100
 65 30.2 11.6 51.6
 83 16.6 0.0 32.7





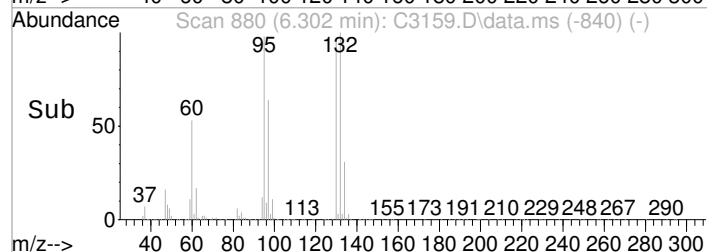
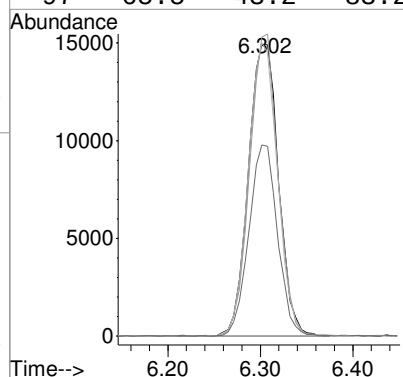
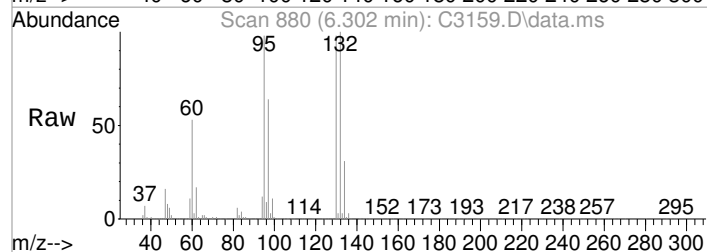
#33
 cis-1,2-Dichloroethene
 Concen: 14.47 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3159.D
 Acq: 21 Nov 2017 12:59 am

Tgt Ion: 96 Resp: 21355
 Ion Ratio Lower Upper
 96 100
 61 138.0 123.7 163.7



#53
 Trichloroethene
 Concen: 22.50 ug/L
 RT: 6.302 min Scan# 880
 Delta R.T. -0.005 min
 Lab File: C3159.D
 Acq: 21 Nov 2017 12:59 am

Tgt Ion: 130 Resp: 33756
 Ion Ratio Lower Upper
 130 100
 132 102.5 82.3 122.3
 95 100.6 75.5 115.5
 97 65.5 43.2 83.2



Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3160.D
 Acq On : 21 Nov 2017 1:22 am
 Operator : F. NAEGLER
 Sample : R1710784-013|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 37 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:42:57 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

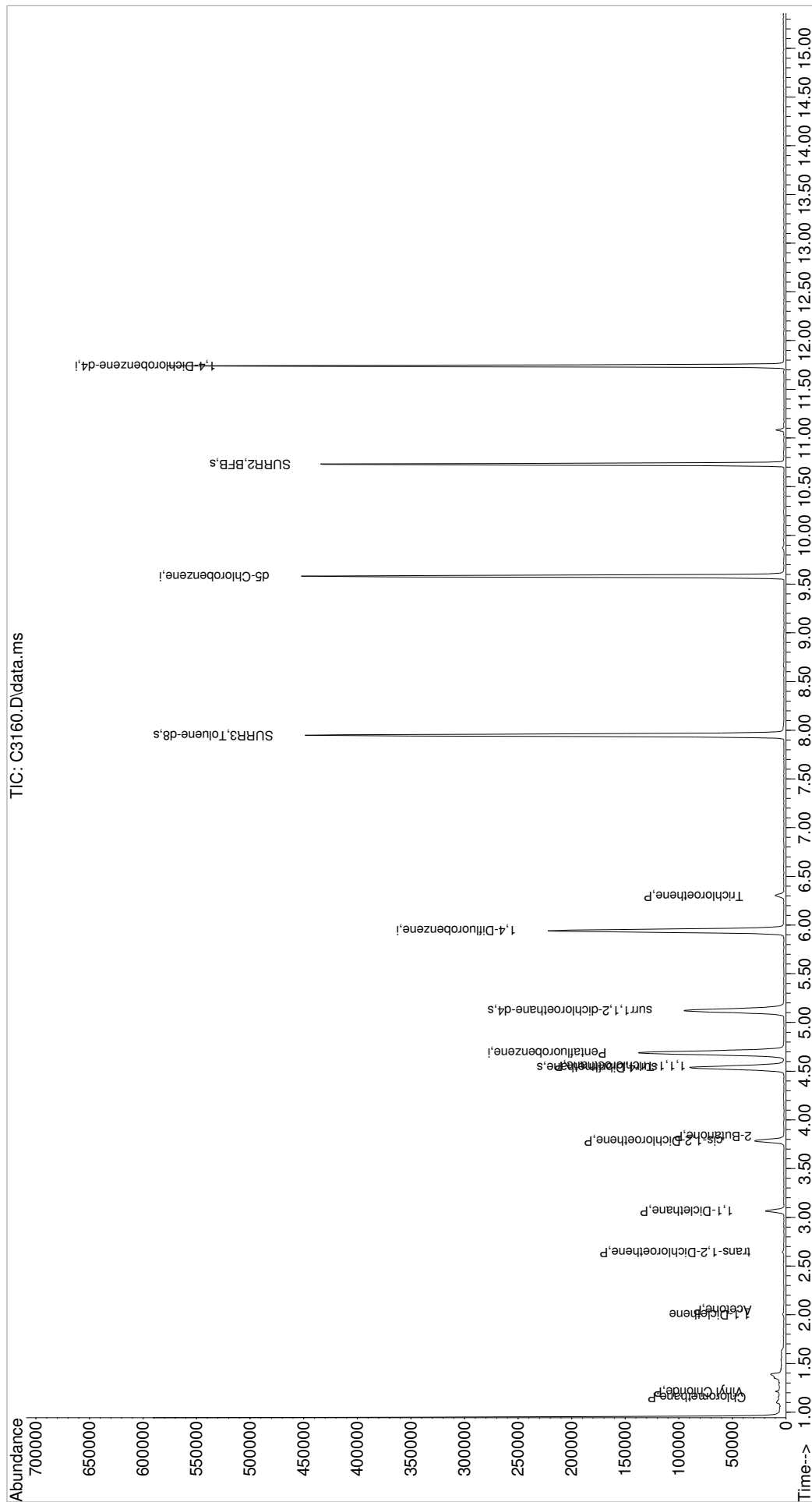
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

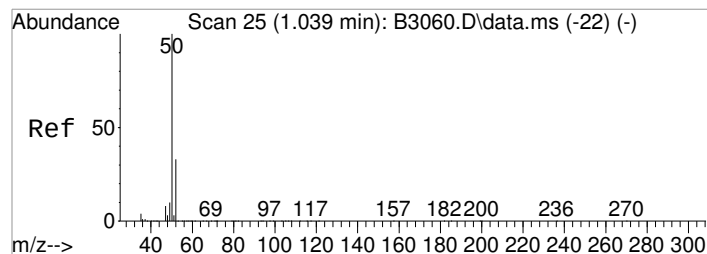
Internal Standards						
1) Pentafluorobenzene	4.692	168	136203	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	207529	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	192675	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	104784	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	67911	48.73	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery =	97.46%		
47) surr1,1,2-dichloroetha...	5.125	65	95938	50.63	ug/L	0.00
Spiked Amount 50.000	Range 73 - 125		Recovery =	101.26%		
64) SURR3,Toluene-d8	7.948	98	273160	49.76	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery =	99.52%		
69) SURR2,BFB	10.727	95	104726	49.96	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery =	99.92%		
Target Compounds						
						Qvalue
3) Chloromethane	1.150	50	487	0.25	ug/L	82
4) Vinyl Chloride	1.211	62	1463	0.84	ug/L	85
13) 1,1-Dicethene	2.004	96	274	0.23	ug/L	96
15) Acetone	2.046	43	280	0.30	ug/L	70
26) trans-1,2-Dichloroethene	2.644	96	452	0.36	ug/L #	84
27) 1,1-Dicethane	3.064	63	15977	6.42	ug/L	98
33) cis-1,2-Dichloroethene	3.784	96	13863	9.30	ug/L	95
34) 2-Butanone	3.833	43	308	0.25	ug/L	87
40) 1,1,1-Trichloroethane	4.552	97	1818	0.96	ug/L	89
53) Trichloroethene	6.302	130	3021	2.02	ug/L #	83

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSV0A14\Data\112017\
Data File : C3160.D
Acq On : 21 Nov 2017 1:22 am
Operator : F. NAEGLER
Sample : R1710784-013|1.0
Misc : ECOLOGY 16560 T2
ALS Vial : 37 Sample Multiplier: 1
Inst : MSV0A14

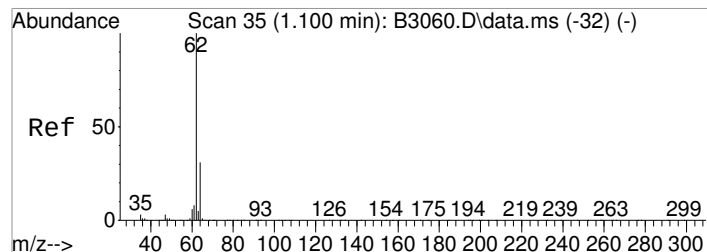
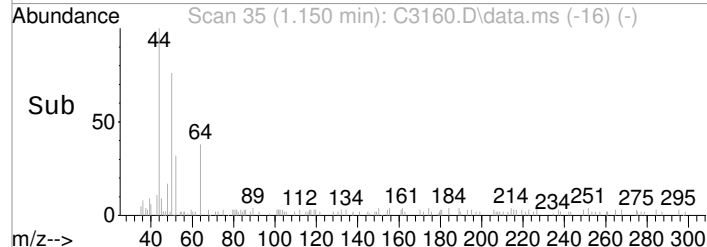
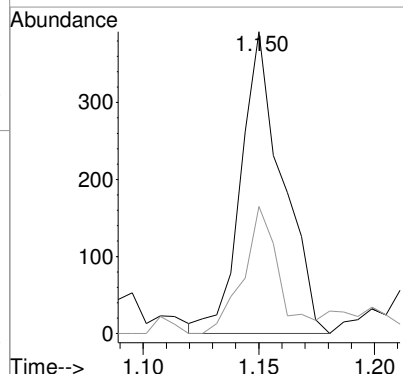
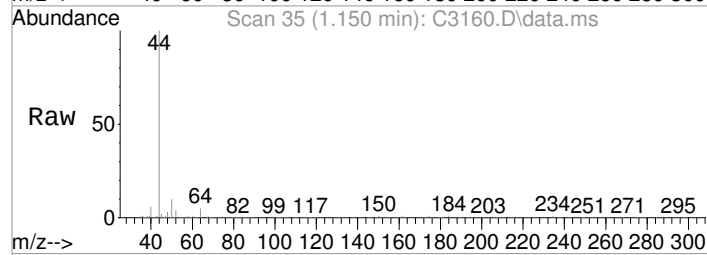
Quant Time: Nov 21 16:42:57 2017
Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration





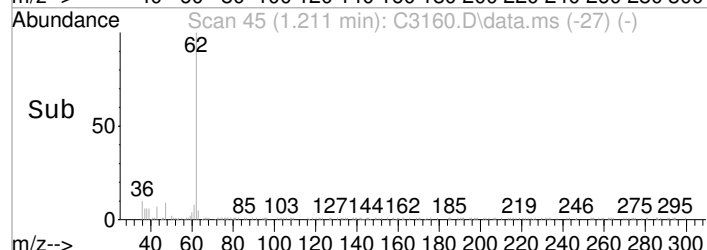
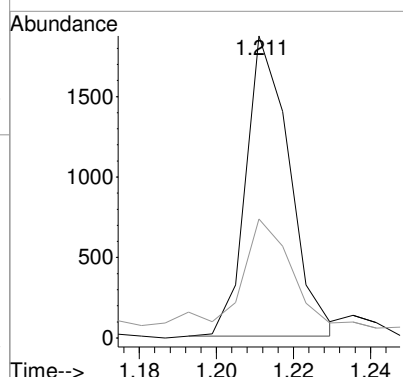
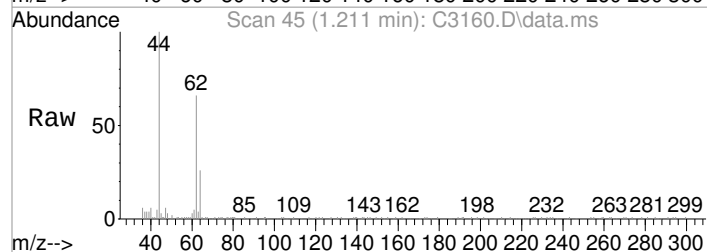
#3
 Chloromethane
 Concen: 0.25 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. -0.000 min
 Lab File: C3160.D
 Acq: 21 Nov 2017 1:22 am

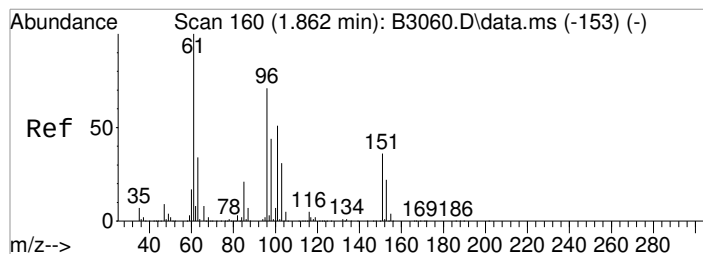
Tgt Ion: 50 Resp: 487
 Ion Ratio Lower Upper
 50 100
 52 42.1 12.1 52.1



#4
 Vinyl Chloride
 Concen: 0.84 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3160.D
 Acq: 21 Nov 2017 1:22 am

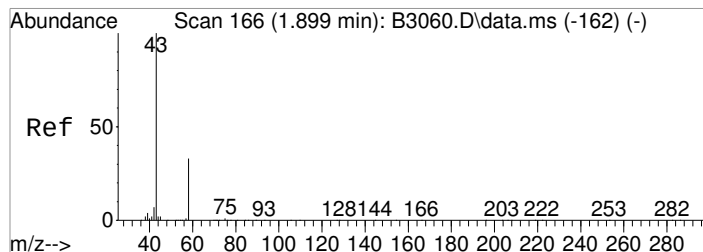
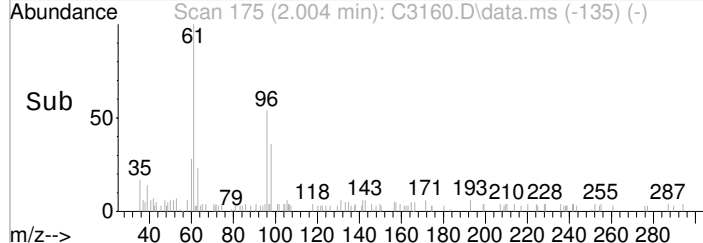
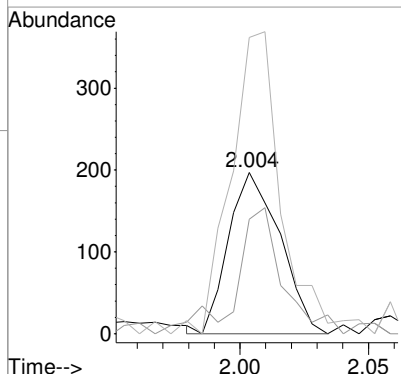
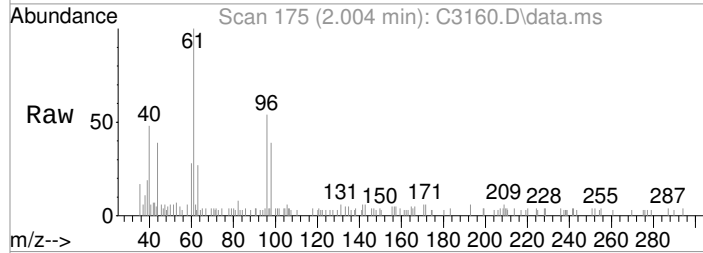
Tgt Ion: 62 Resp: 1463
 Ion Ratio Lower Upper
 62 100
 64 39.4 10.9 50.9





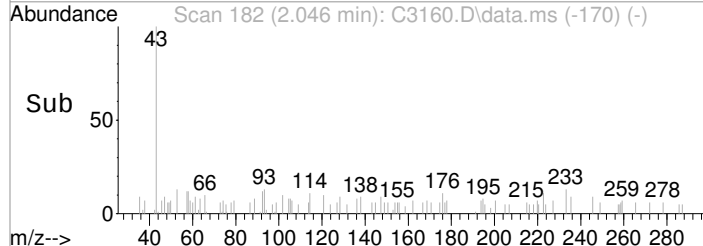
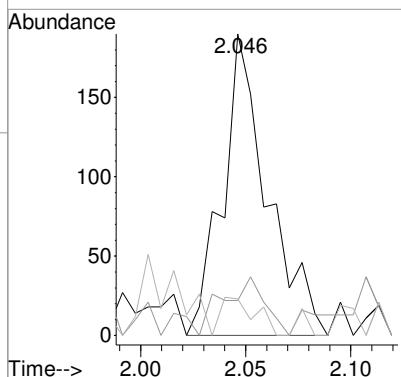
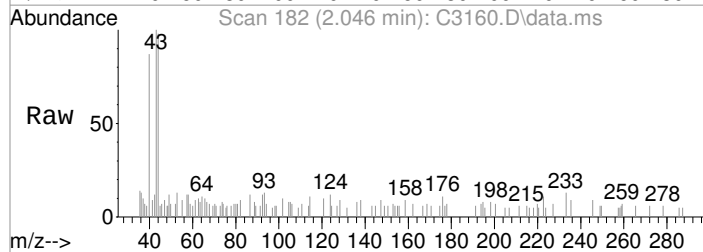
#13
 1,1-Dicloroethene
 Concen: 0.23 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3160.D
 Acq: 21 Nov 2017 1:22 am

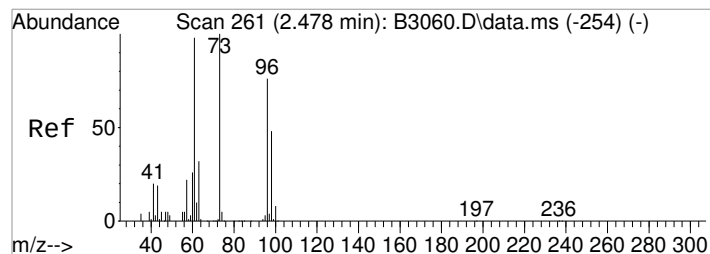
Tgt Ion: 96	Resp: 274
Ion Ratio	Lower Upper
96 100	
98 71.1	47.9 87.9
61 183.8	157.9 197.9



#15
 Acetone
 Concen: 0.30 ug/L
 RT: 2.046 min Scan# 182
 Delta R.T. -0.002 min
 Lab File: C3160.D
 Acq: 21 Nov 2017 1:22 am

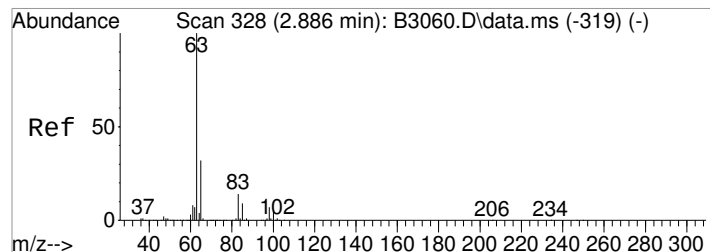
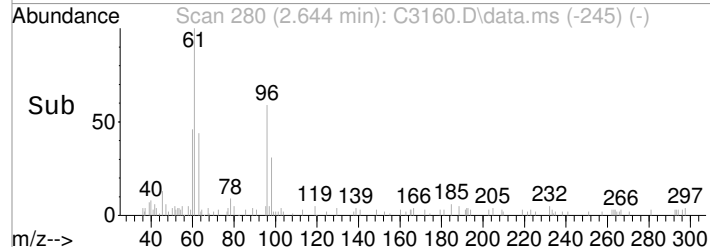
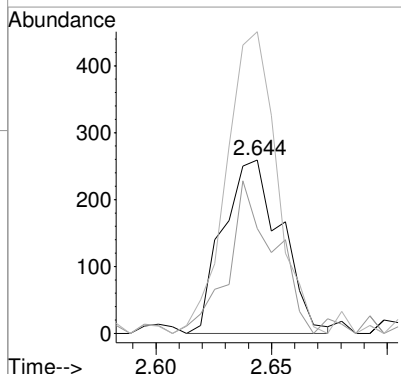
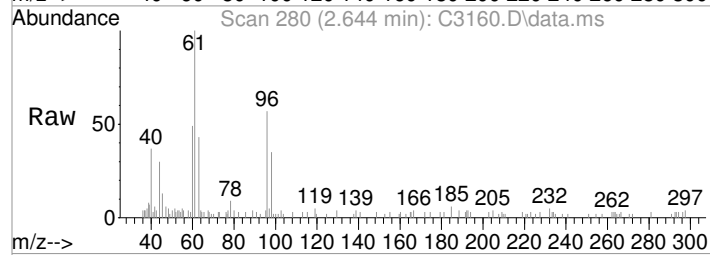
Tgt Ion: 43	Resp: 280
Ion Ratio	Lower Upper
43 100	
58 11.6	8.6 48.6
42 12.1	0.0 25.7





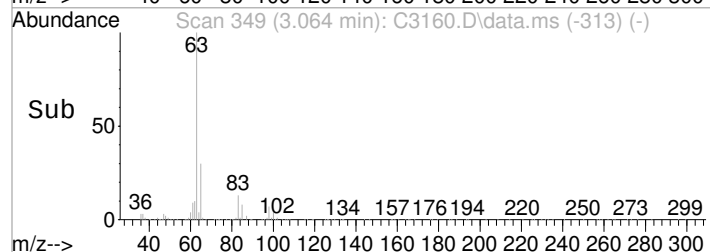
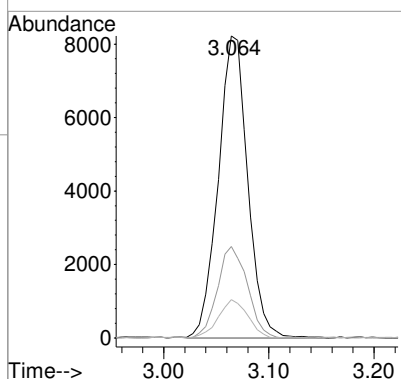
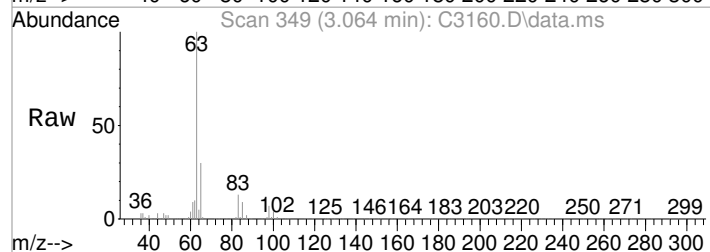
#26
 trans-1,2-Dichloroethene
 Concen: 0.36 ug/L
 RT: 2.644 min Scan# 280
 Delta R.T. 0.001 min
 Lab File: C3160.D
 Acq: 21 Nov 2017 1:22 am

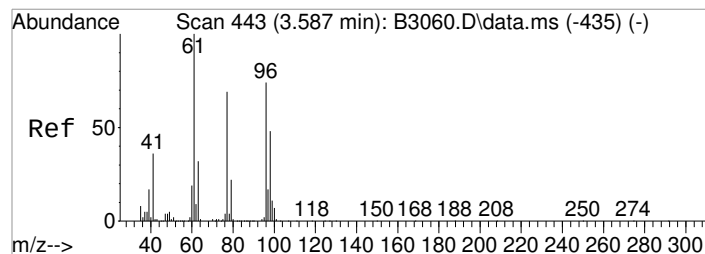
Tgt Ion: 96 Resp: 452
 Ion Ratio Lower Upper
 96 100
 98 60.6 41.4 81.4
 61 174.1 127.1 167.1#



#27
 1,1-Dicethane
 Concen: 6.42 ug/L
 RT: 3.064 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3160.D
 Acq: 21 Nov 2017 1:22 am

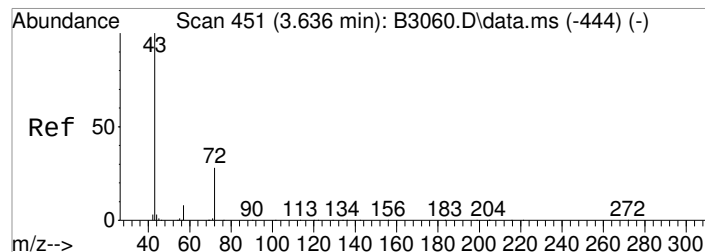
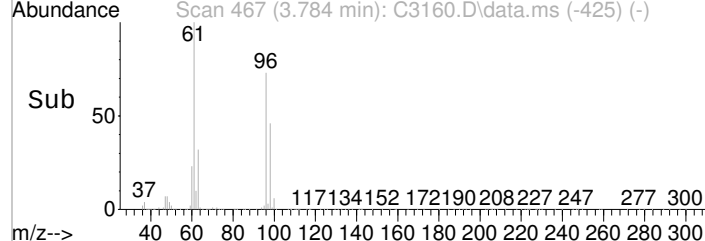
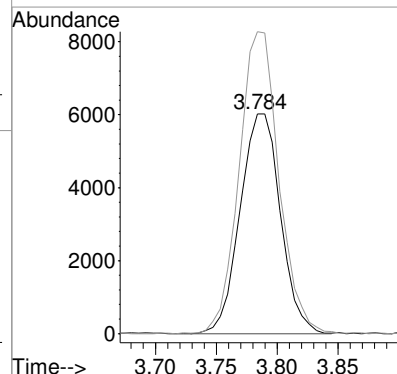
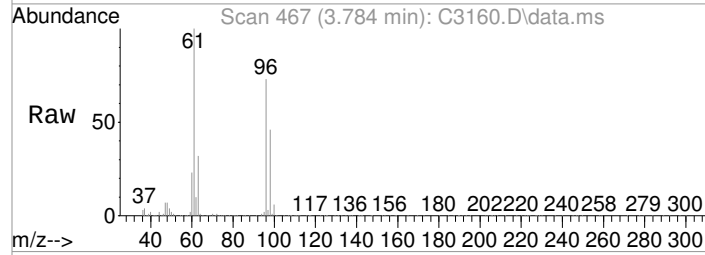
Tgt Ion: 63 Resp: 15977
 Ion Ratio Lower Upper
 63 100
 65 30.3 11.6 51.6
 83 12.7 0.0 32.7





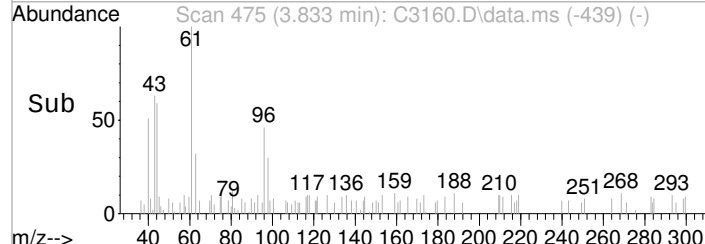
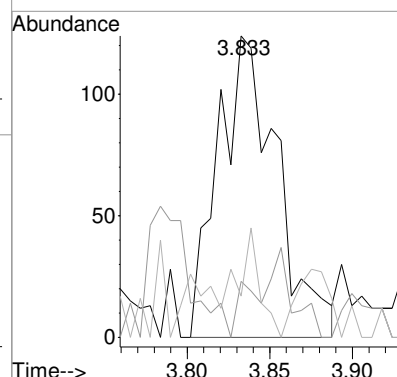
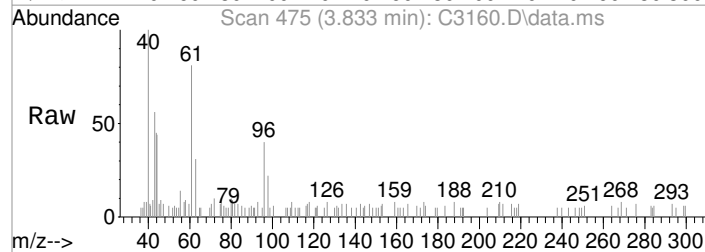
#33
 cis-1,2-Dichloroethene
 Concen: 9.30 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3160.D
 Acq: 21 Nov 2017 1:22 am

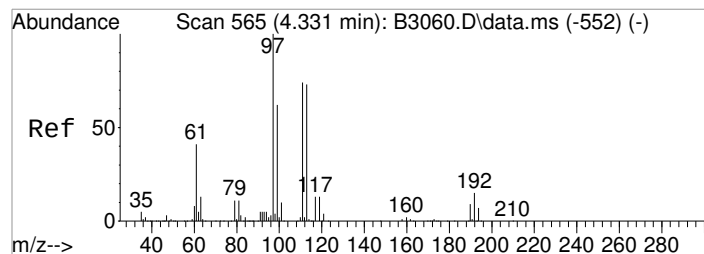
Tgt Ion: 96 Resp: 13863
 Ion Ratio Lower Upper
 96 100
 61 137.4 123.7 163.7



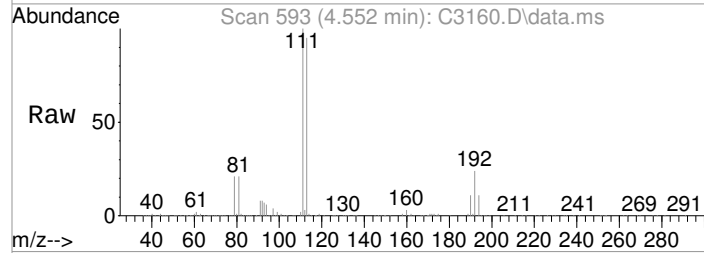
#34
 2-Butanone
 Concen: 0.25 ug/L
 RT: 3.833 min Scan# 475
 Delta R.T. -0.002 min
 Lab File: C3160.D
 Acq: 21 Nov 2017 1:22 am

Tgt Ion: 43 Resp: 308
 Ion Ratio Lower Upper
 43 100
 72 18.5 5.0 45.0
 57 13.7 0.0 28.3

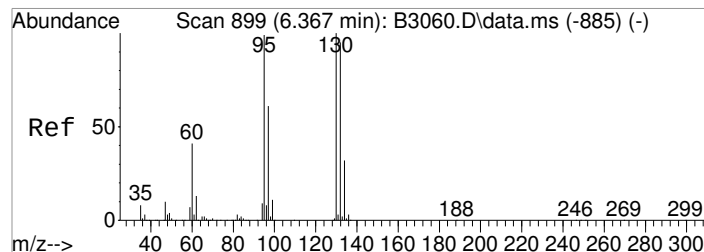
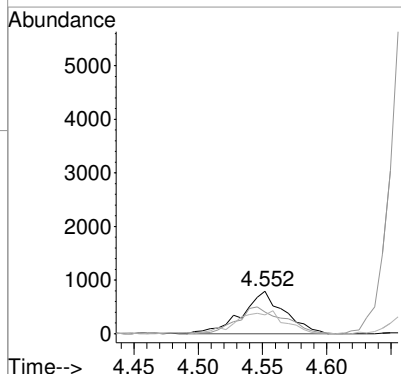
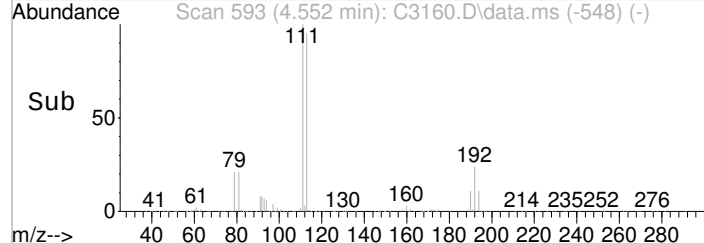




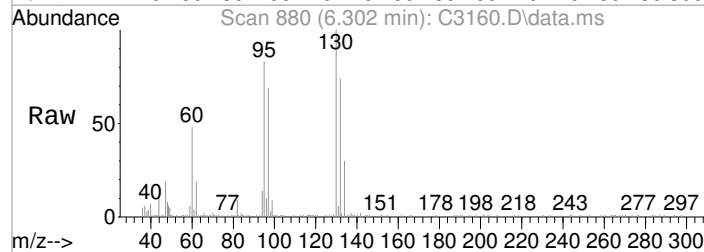
#40
 1,1,1-Trichloroethane
 Concen: 0.96 ug/L
 RT: 4.552 min Scan# 593
 Delta R.T. -0.004 min
 Lab File: C3160.D
 Acq: 21 Nov 2017 1:22 am



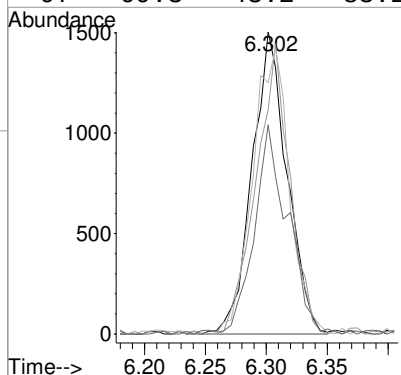
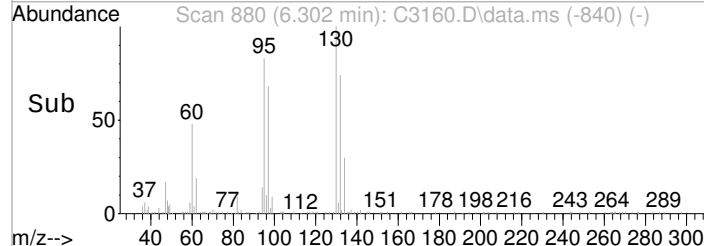
Tgt Ion: 97 Resp: 1818
 Ion Ratio Lower Upper
 97 100
 99 51.1 44.2 84.2
 61 44.3 27.0 67.0



#53
 Trichloroethene
 Concen: 2.02 ug/L
 RT: 6.302 min Scan# 880
 Delta R.T. -0.005 min
 Lab File: C3160.D
 Acq: 21 Nov 2017 1:22 am



Tgt Ion: 130 Resp: 3021
 Ion Ratio Lower Upper
 130 100
 132 76.2 82.3 122.3#
 95 83.1 75.5 115.5
 97 69.3 43.2 83.2



Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3158.D
 Acq On : 21 Nov 2017 12:37 am
 Operator : F. NAEGLER
 Sample : R1710784-014|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 35 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:40:19 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

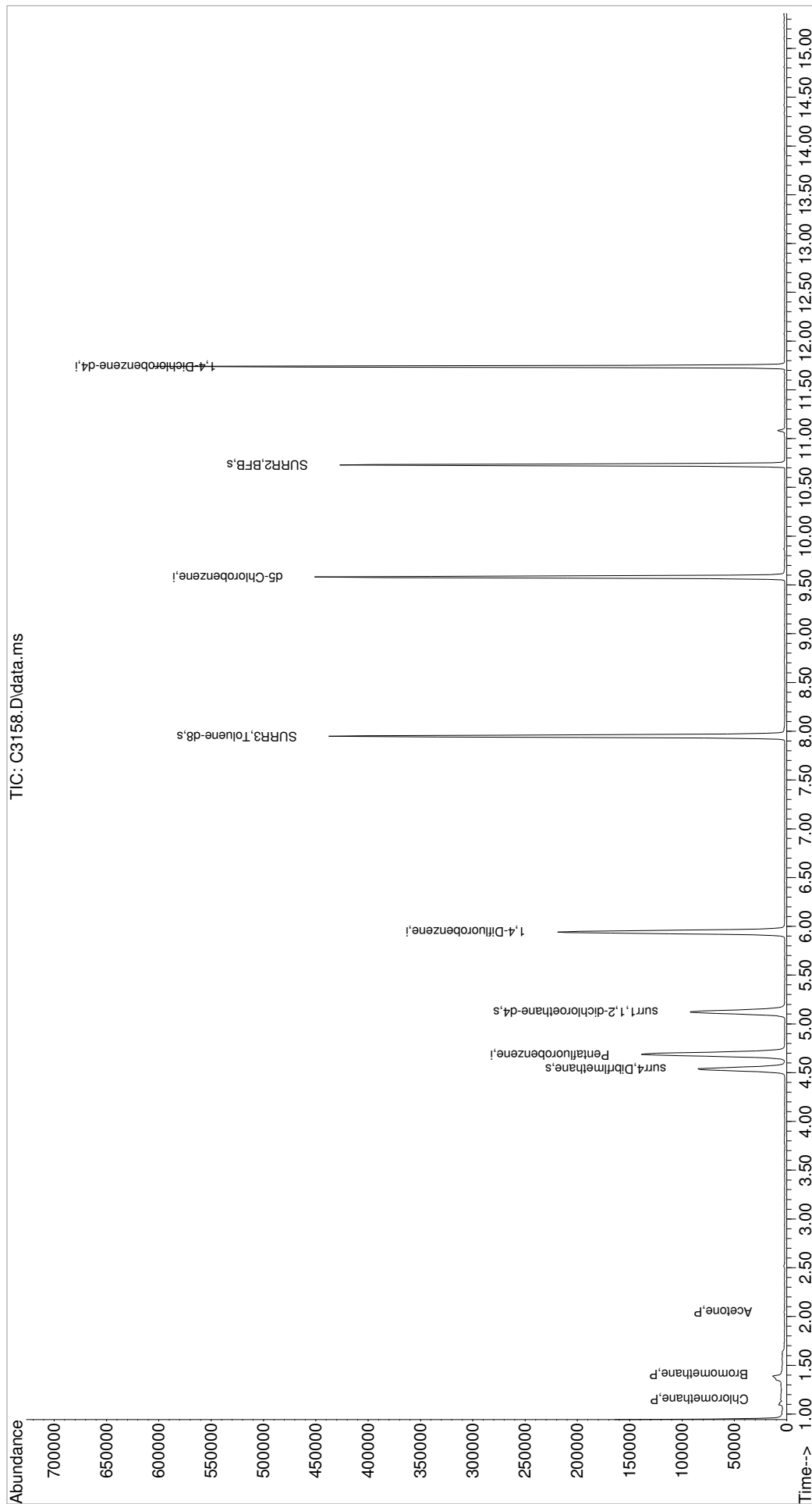
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

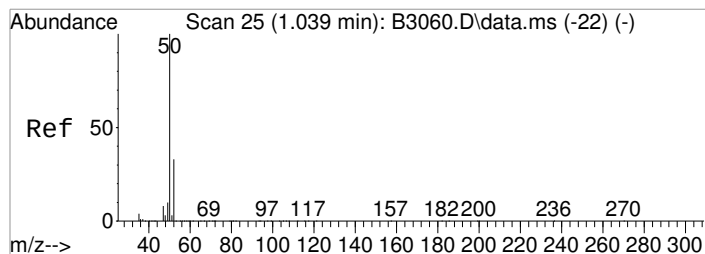
Internal Standards						
1) Pentafluorobenzene	4.686	168	137397	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	207857	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.582	117	192570	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	106210	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	64851	46.46	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery =	92.92%		
47) surr1,1,2-dichloroetha...	5.119	65	92679	48.83	ug/L	0.00
Spiked Amount 50.000	Range 73 - 125		Recovery =	97.66%		
64) SURR3,Toluene-d8	7.948	98	264547	48.12	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery =	96.24%		
69) SURR2,BFB	10.728	95	101506	48.35	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery =	96.70%		
Target Compounds						
3) Chloromethane	1.156	50	476	0.25	ug/L	Qvalue 100
5) Bromomethane	1.406	94	268	0.24	ug/L	# 75
15) Acetone	2.053	43	246	0.26	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

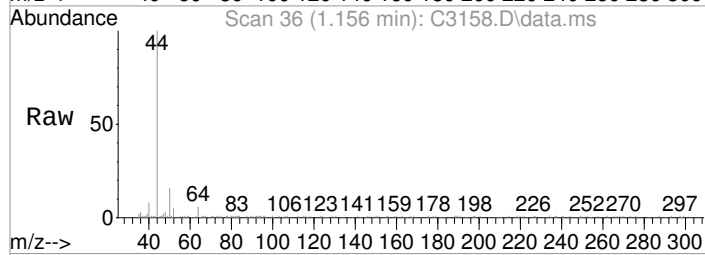
Data Path : I:\ACQUDATA\MSV0A14\Data\112017\
 Data File : C3158.D
 Acq On : 21 Nov 2017 12:37 am
 Operator : F. NAEGLER
 Sample : R1710784-014|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 35 Sample Multiplier: 1
 Inst : MSV0A14

Quant Time: Nov 21 16:40:19 2017
 Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

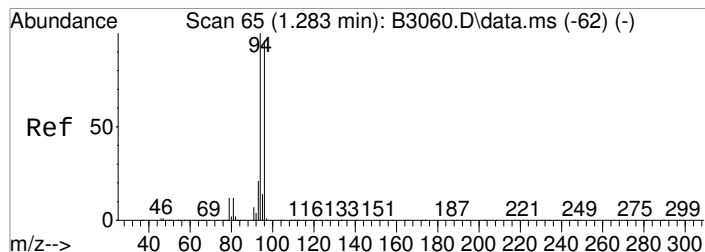
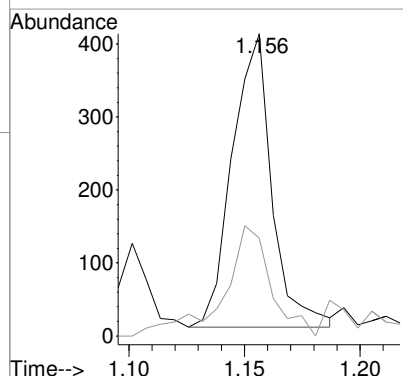
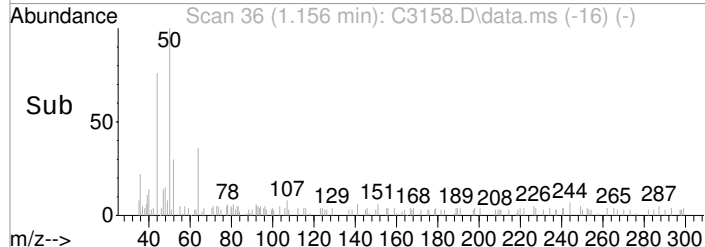




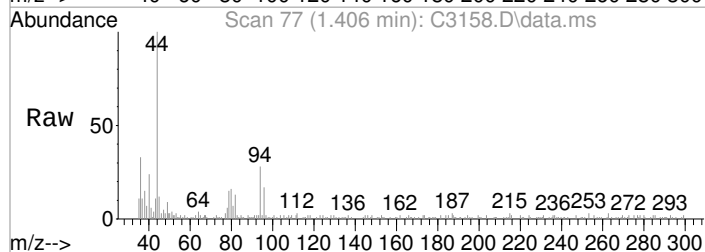
#3
 Chloromethane
 Concen: 0.25 ug/L
 RT: 1.156 min Scan# 36
 Delta R.T. 0.006 min
 Lab File: C3158.D
 Acq: 21 Nov 2017 12:37 am



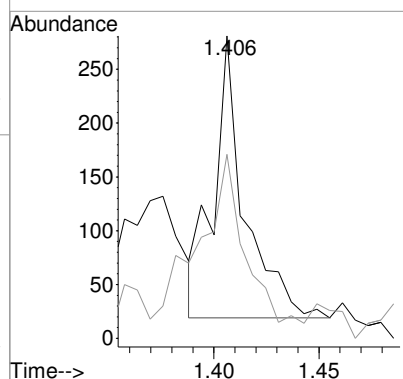
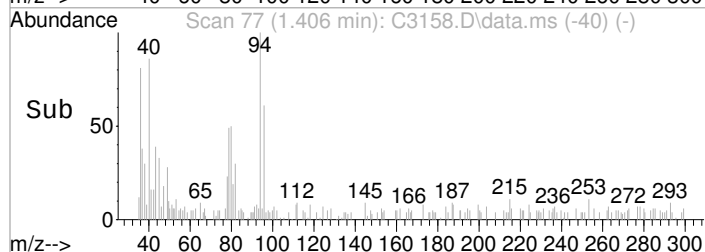
Tgt Ion: 50 Resp: 476
 Ion Ratio Lower Upper
 50 100
 52 32.4 12.1 52.1

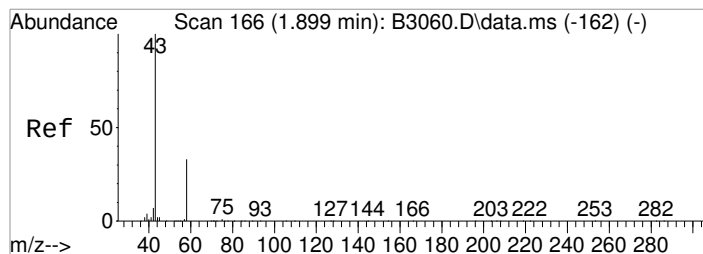


#5
 Bromomethane
 Concen: 0.24 ug/L
 RT: 1.406 min Scan# 77
 Delta R.T. 0.000 min
 Lab File: C3158.D
 Acq: 21 Nov 2017 12:37 am

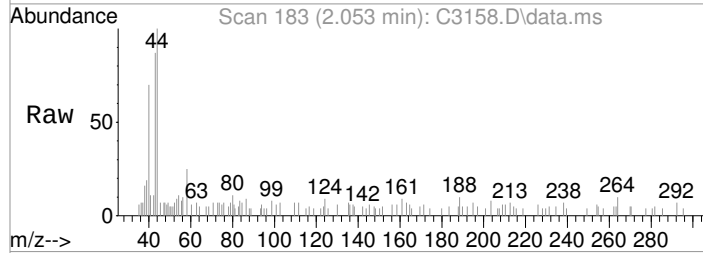


Tgt Ion: 94 Resp: 268
 Ion Ratio Lower Upper
 94 100
 96 68.0 72.2 112.2#

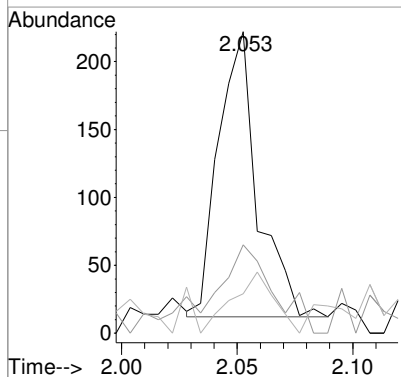
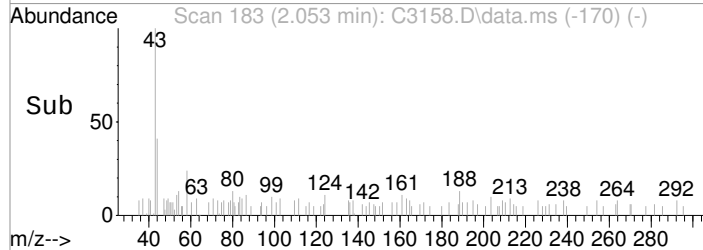




#15
 Acetone
 Concen: 0.26 ug/L
 RT: 2.053 min Scan# 183
 Delta R.T. 0.005 min
 Lab File: C3158.D
 Acq: 21 Nov 2017 12:37 am



Tgt Ion:	43	Resp:	246
Ion Ratio	Lower	Upper	
43	100		
58	29.3	8.6	48.6
42	13.1	0.0	25.7



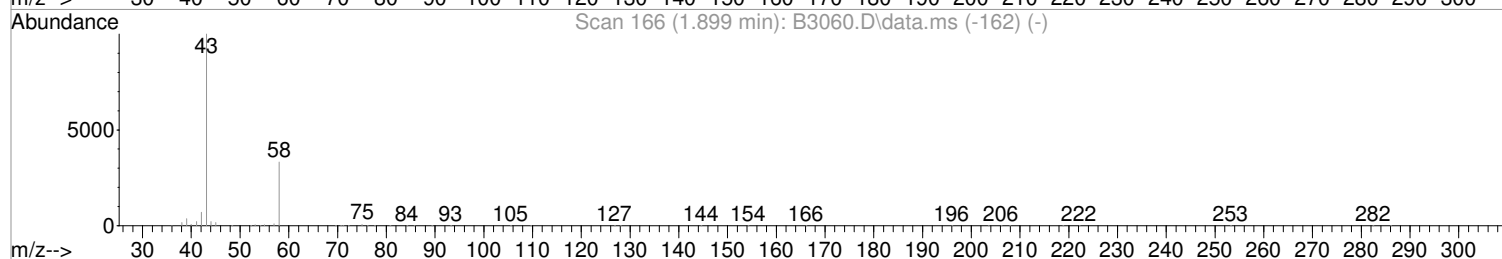
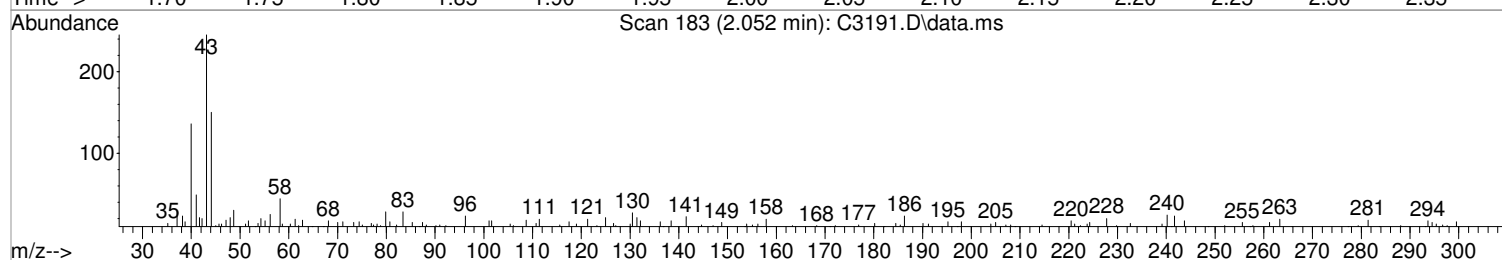
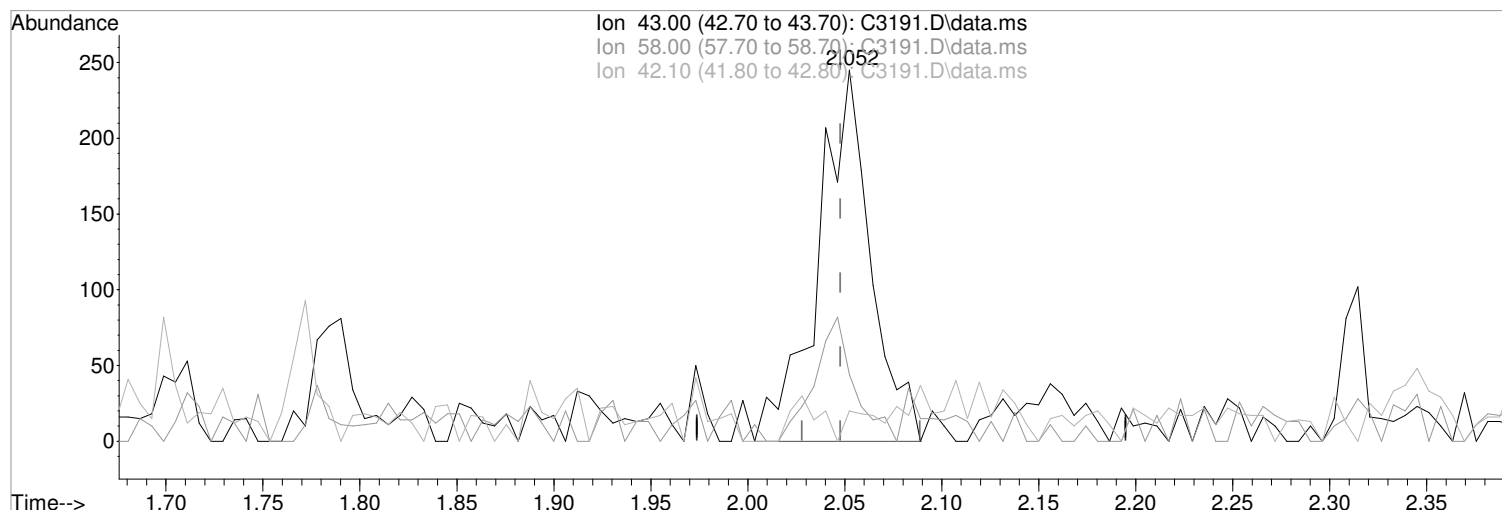
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3191.D
Acq On : 21 Nov 2017 3:54 pm
Operator : F. NAEGLER
Sample : R1710784-015|1.0
Misc : ECOLOGY 16560 T2
ALS Vial : 15 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:25:53 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3191.D\data.ms

(15) Acetone (P)
2.052min (+0.004) 0.48 ug/L m
response 462

Ion	Exp%	Act%
43.00	100	100
58.00	28.60	17.96
42.10	5.70	8.16
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

11/27/17

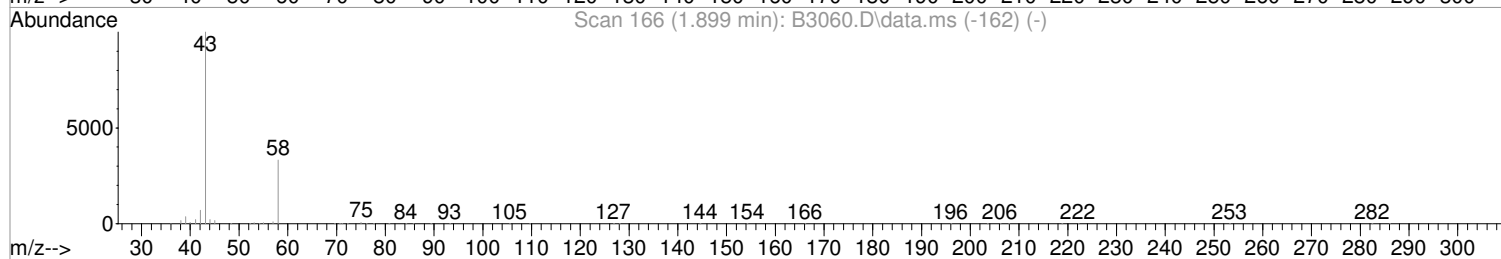
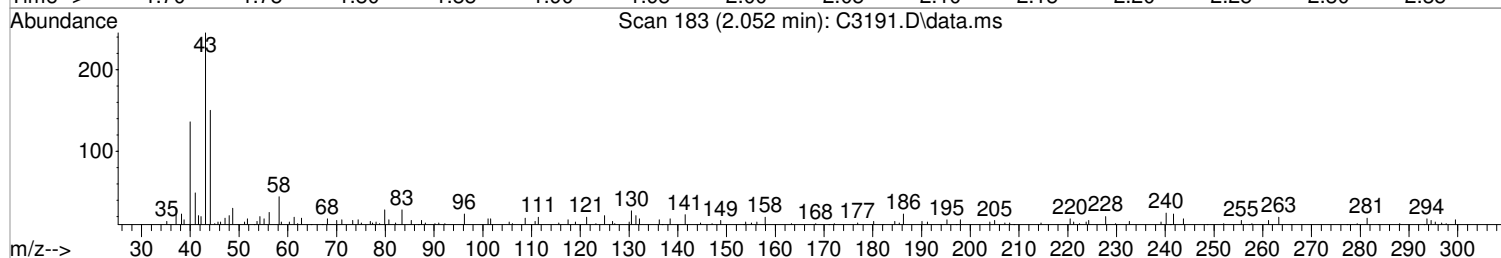
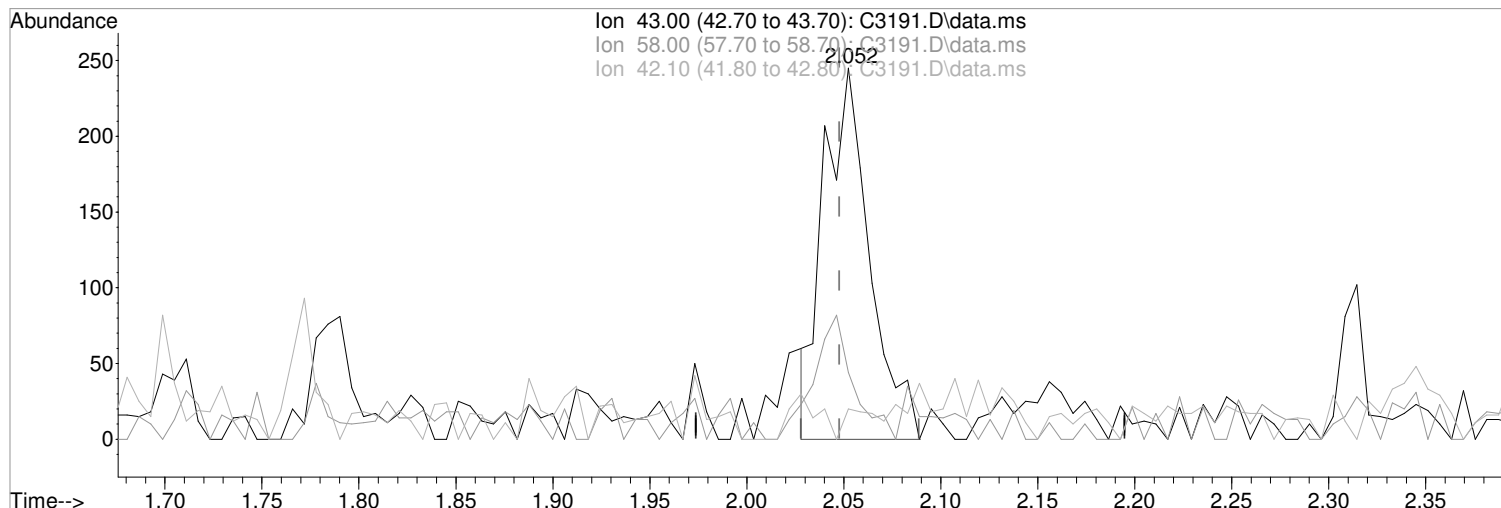
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3191.D
Acq On : 21 Nov 2017 3:54 pm
Operator : F. NAEGLER
Sample : R1710784-015|1.0
Misc : ECOLOGY 16560 T2
ALS Vial : 15 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:25:53 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3191.D\data.ms

(15) Acetone (P)
2.052min (+0.004) 0.42 ug/L
response 401

Manual Integration:

Before

Ion	Exp%	Act%
43.00	100	100
58.00	28.60	23.27
42.10	5.70	8.16
0.00	0.00	0.00

11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3191.D
 Acq On : 21 Nov 2017 3:54 pm
 Operator : F. NAEGLER
 Sample : R1710784-015|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 15 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 27 11:23:48 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

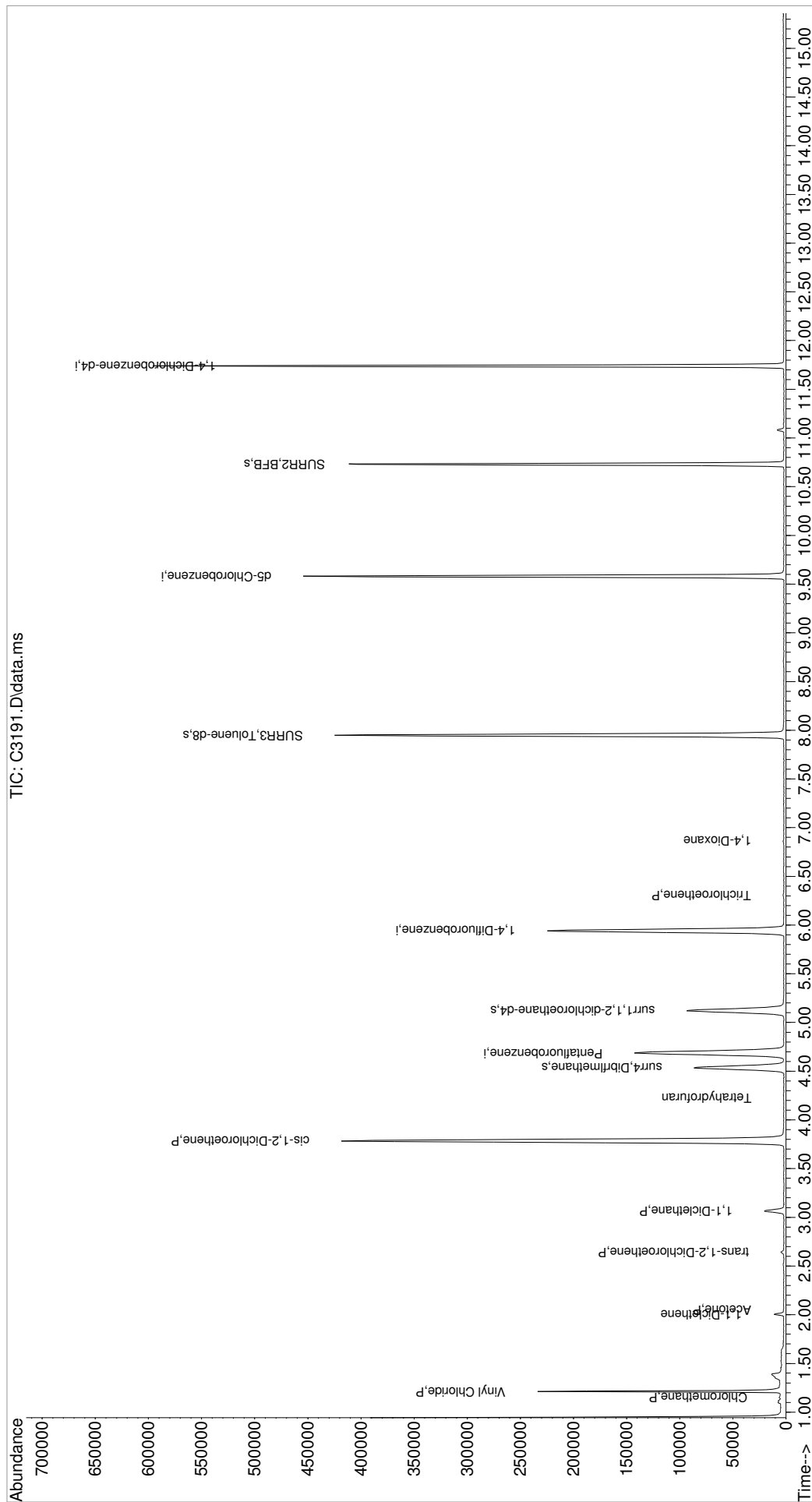
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

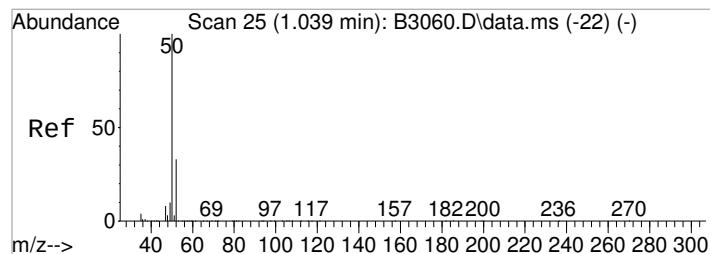
Internal Standards						
1) Pentafluorobenzene	4.686	168	141151	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	211039	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	195901	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	104766	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	66377	46.84	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	93.68%	
47) surr1,1,2-dichloroetha...	5.119	65	91227	47.34	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	94.68%	
64) SURR3,Toluene-d8	7.948	98	262366	47.00	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	94.00%	
69) SURR2,BFB	10.727	95	100497	47.14	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	94.28%	
Target Compounds						
						Qvalue
3) Chloromethane	1.150	50	454	0.23	ug/L	98
4) Vinyl Chloride	1.211	62	114809	63.72	ug/L	97
13) 1,1-Dicethene	2.004	96	2346	1.93	ug/L	87
15) Acetone	2.052	43	462m	0.48	ug/L	
26) trans-1,2-Dichloroethene	2.644	96	785	0.60	ug/L	94
27) 1,1-Dicethane	3.064	63	16650	6.45	ug/L	96
33) cis-1,2-Dichloroethene	3.784	96	202350	131.01	ug/L	95
38) Tetrahydrofuran	4.229	42	308	0.39	ug/L	85
53) Trichloroethene	6.308	130	333	0.22	ug/L #	59
57) 1,4-Dioxane	6.869	88	501	17.53	ug/L	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

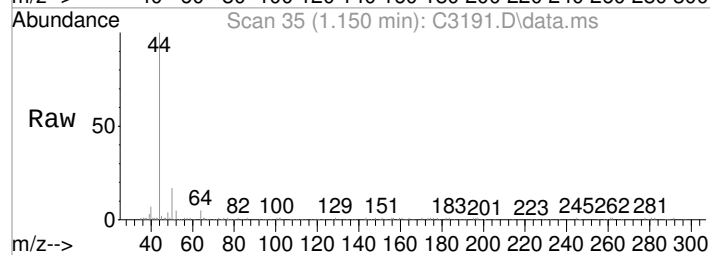
Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3191.D
Acq On : 21 Nov 2017 3:54 pm
Operator : F. NAEGLER
Sample : R1710784-015|1.0
Misc : ECOLOGY 16560 T2
ALS Vial : 15 Sample Multiplier: 1
Inst : MSVOA14

Quant Time: Nov 27 11:23:48 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration

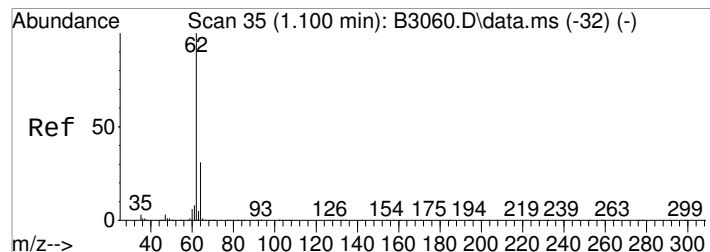
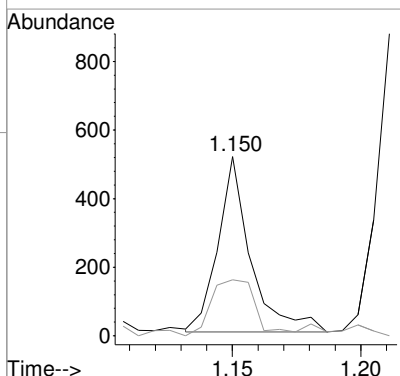
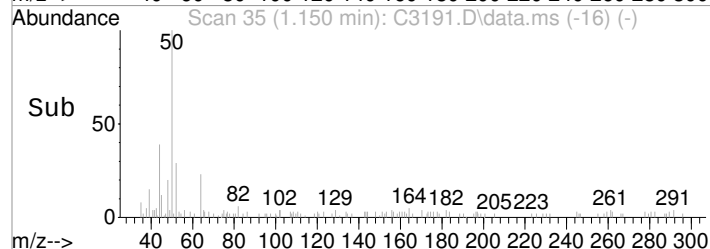




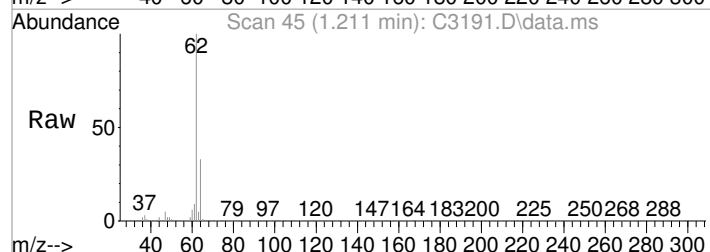
#3
 Chloromethane
 Concen: 0.23 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. -0.000 min
 Lab File: C3191.D
 Acq: 21 Nov 2017 3:54 pm



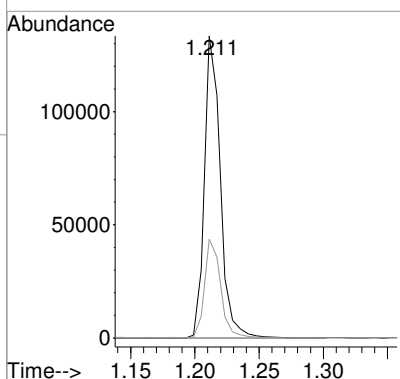
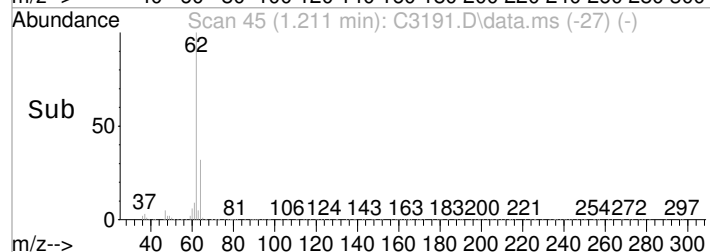
Tgt Ion: 50 Resp: 454
 Ion Ratio Lower Upper
 50 100
 52 31.2 12.1 52.1

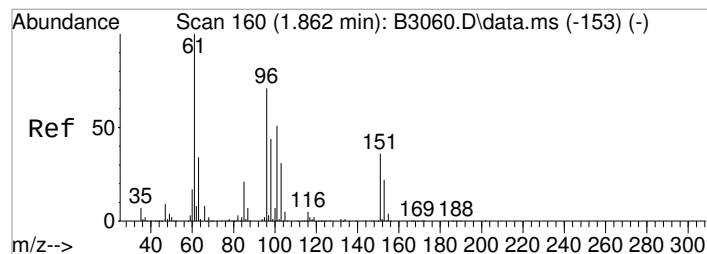


#4
 Vinyl Chloride
 Concen: 63.72 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3191.D
 Acq: 21 Nov 2017 3:54 pm

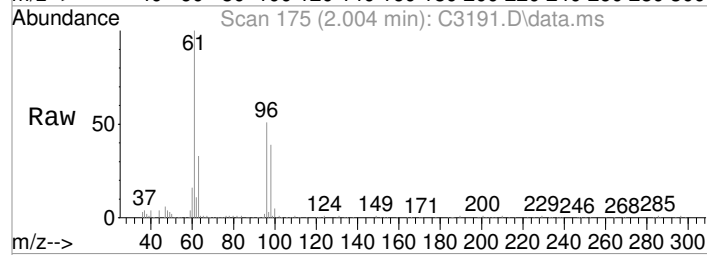


Tgt Ion: 62 Resp: 114809
 Ion Ratio Lower Upper
 62 100
 64 32.8 10.9 50.9

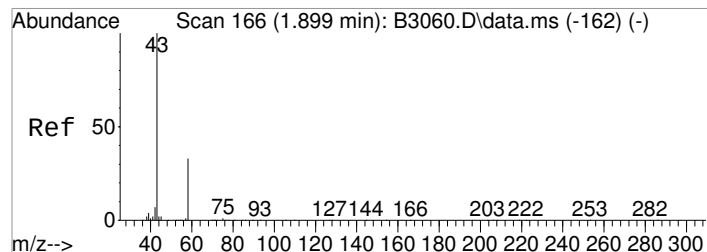
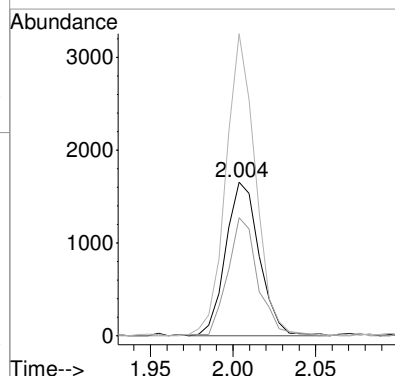
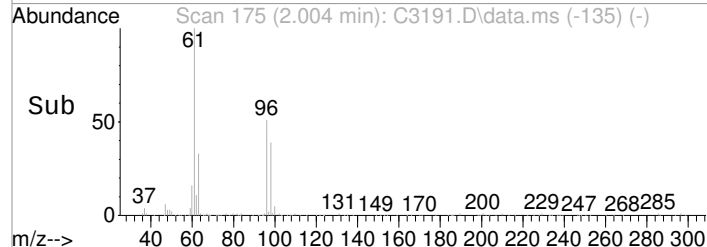




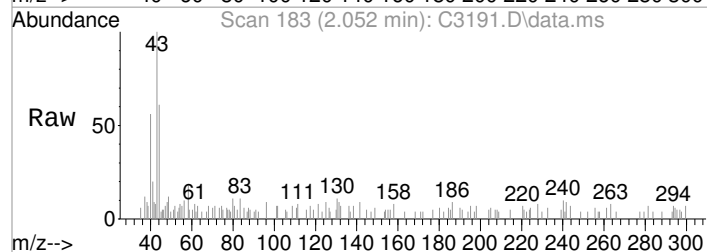
#13
 1,1-Dicethene
 Concen: 1.93 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3191.D
 Acq: 21 Nov 2017 3:54 pm



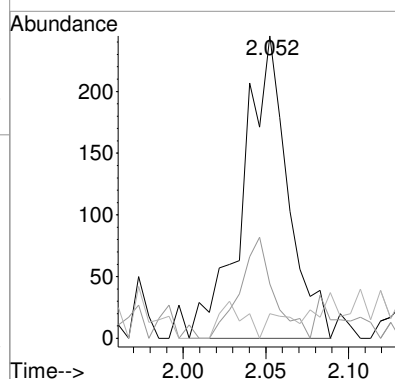
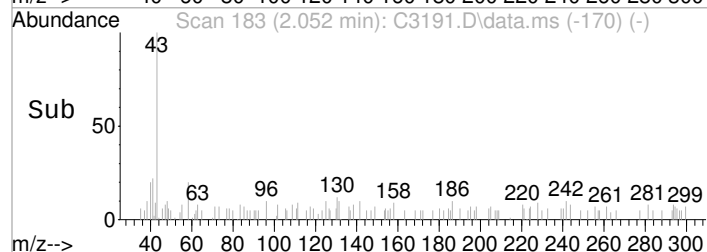
Tgt Ion: 96 Resp: 2346
 Ion Ratio Lower Upper
 96 100
 98 76.8 47.9 87.9
 61 196.9 157.9 197.9

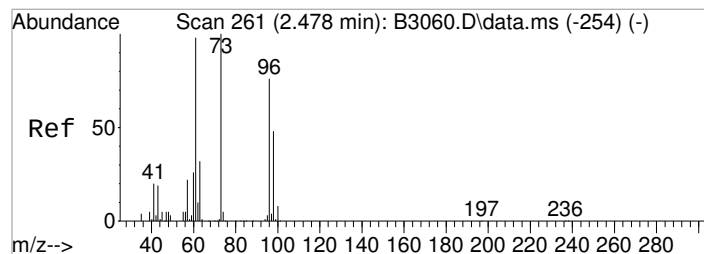


#15
 Acetone
 Concen: 0.48 ug/L m
 RT: 2.052 min Scan# 183
 Delta R.T. 0.004 min
 Lab File: C3191.D
 Acq: 21 Nov 2017 3:54 pm

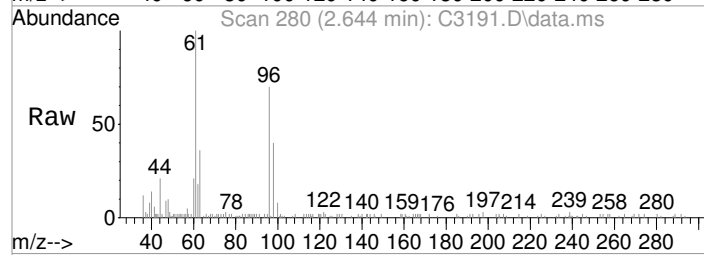


Tgt Ion: 43 Resp: 462
 Ion Ratio Lower Upper
 43 100
 58 18.0 8.6 48.6
 42 8.2 0.0 25.7

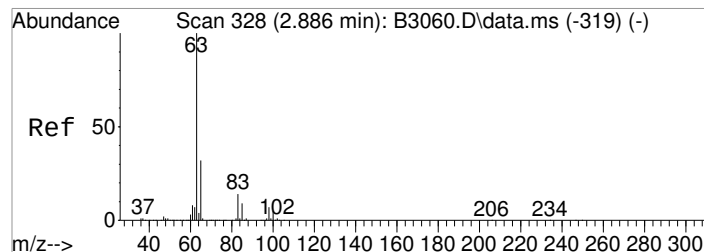
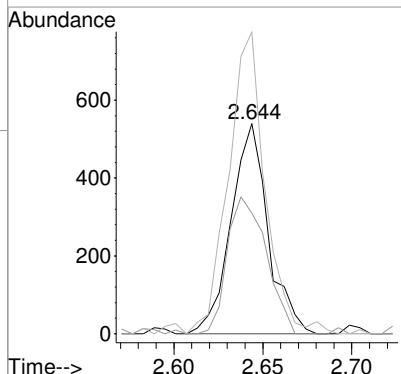
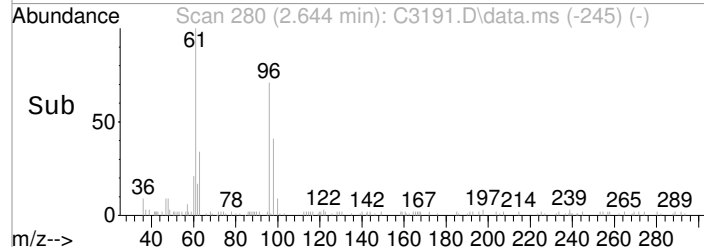




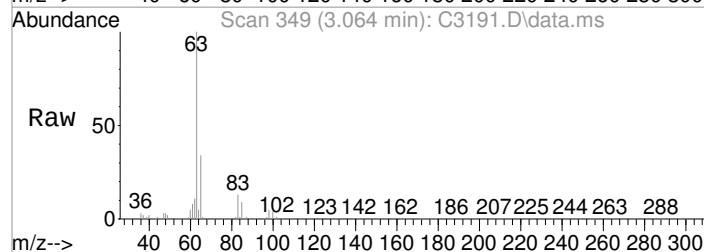
#26
 trans-1,2-Dichloroethene
 Concen: 0.60 ug/L
 RT: 2.644 min Scan# 280
 Delta R.T. 0.001 min
 Lab File: C3191.D
 Acq: 21 Nov 2017 3:54 pm



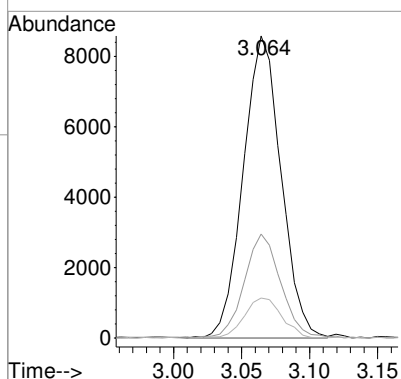
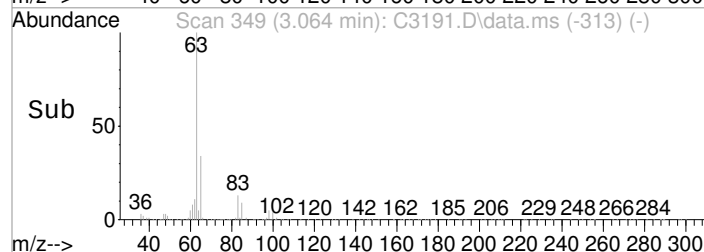
Tgt Ion: 96 Resp: 785
 Ion Ratio Lower Upper
 96 100
 98 56.3 41.4 81.4
 61 140.8 127.1 167.1

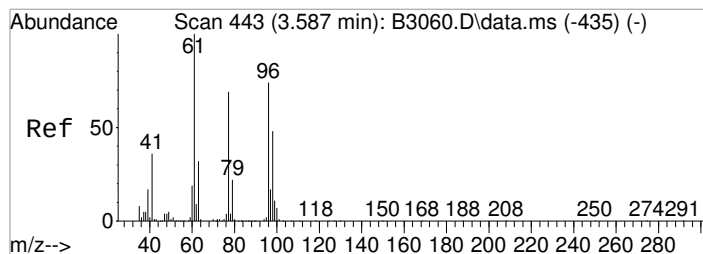


#27
 1,1-Dicethane
 Concen: 6.45 ug/L
 RT: 3.064 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3191.D
 Acq: 21 Nov 2017 3:54 pm

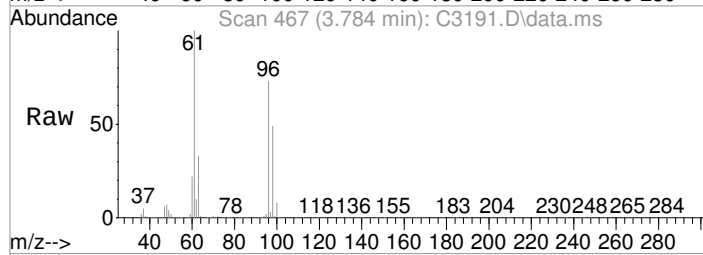


Tgt Ion: 63 Resp: 16650
 Ion Ratio Lower Upper
 63 100
 65 34.4 11.6 51.6
 83 13.3 0.0 32.7

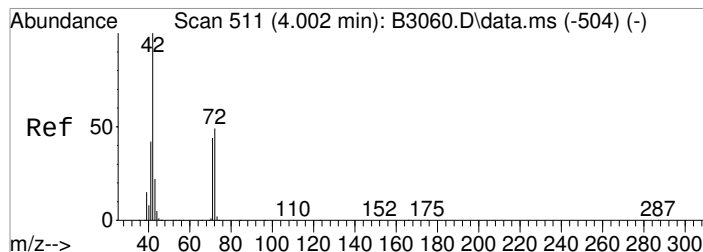
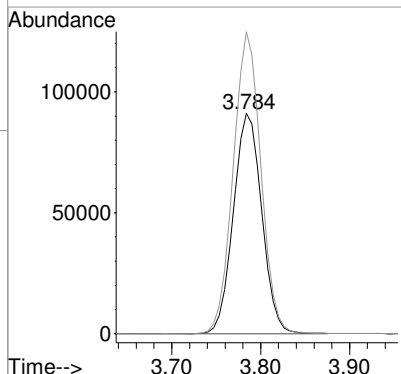
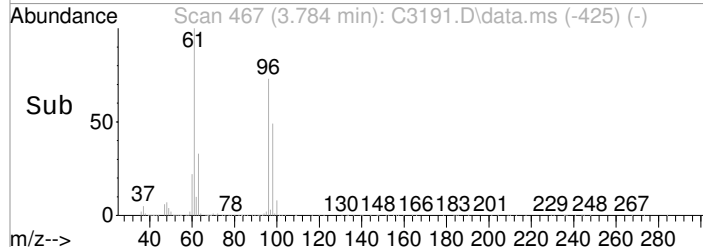




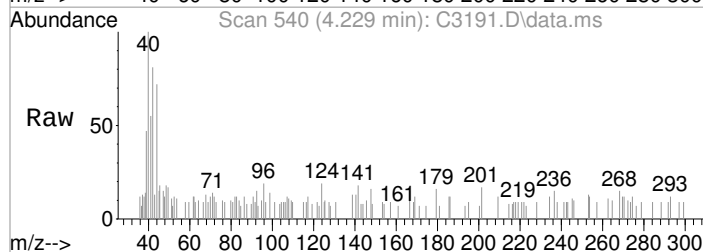
#33
 cis-1,2-Dichloroethene
 Concen: 131.01 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3191.D
 Acq: 21 Nov 2017 3:54 pm



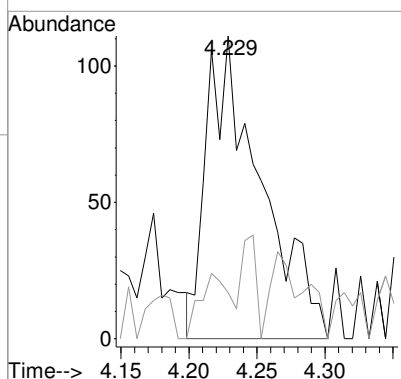
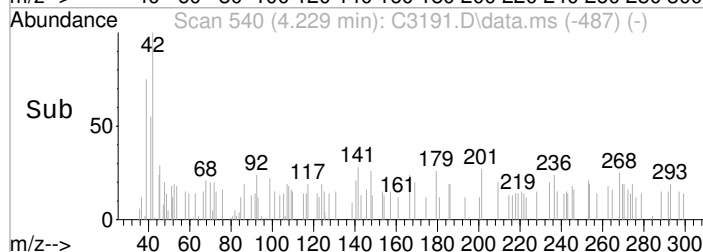
Tgt Ion: 96 Resp: 202350
 Ion Ratio Lower Upper
 96 100
 61 137.1 123.7 163.7

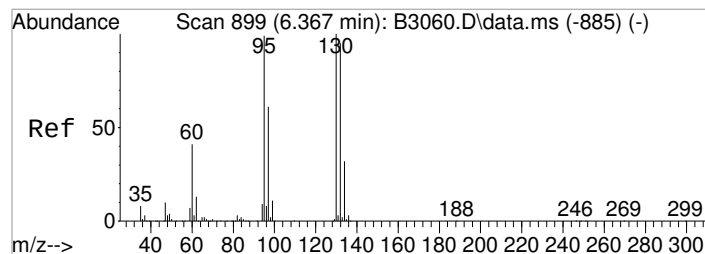


#38
 Tetrahydrofuran
 Concen: 0.39 ug/L
 RT: 4.229 min Scan# 540
 Delta R.T. 0.009 min
 Lab File: C3191.D
 Acq: 21 Nov 2017 3:54 pm



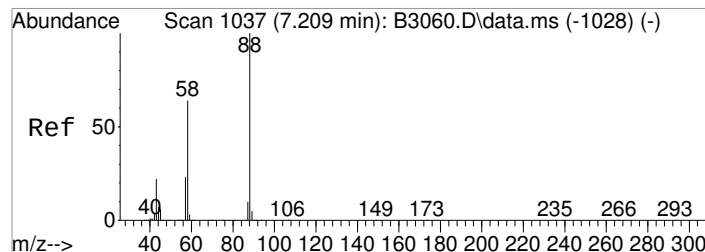
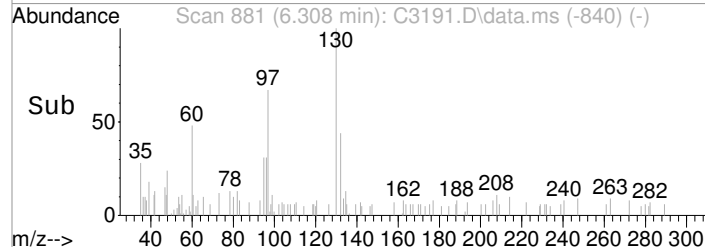
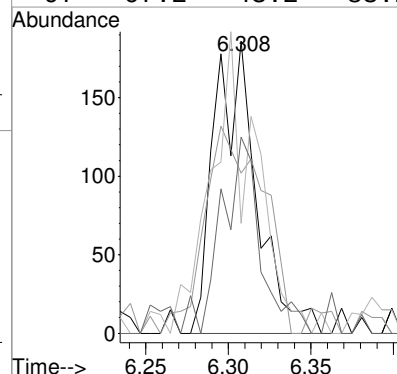
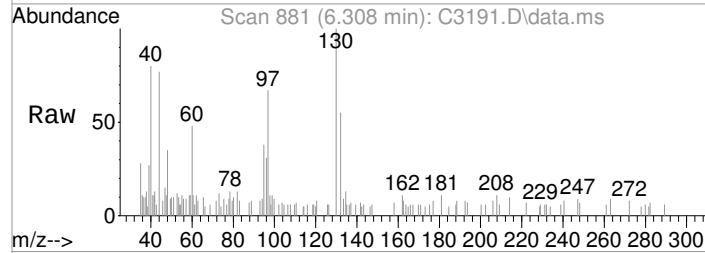
Tgt Ion: 42 Resp: 308
 Ion Ratio Lower Upper
 42 100
 72 27.0 16.0 56.0





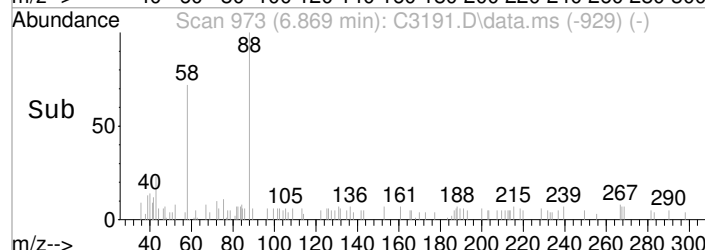
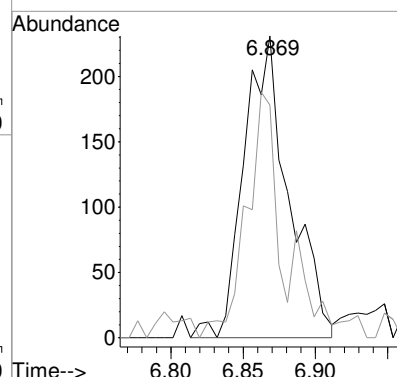
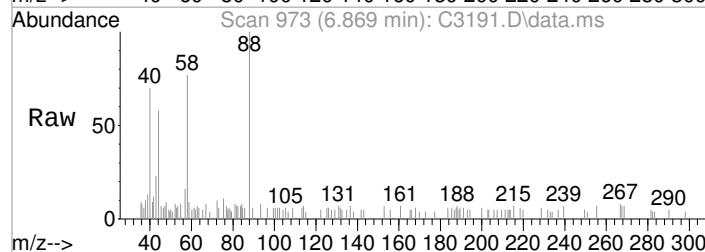
#53
 Trichloroethene
 Concen: 0.22 ug/L
 RT: 6.308 min Scan# 881
 Delta R.T. 0.001 min
 Lab File: C3191.D
 Acq: 21 Nov 2017 3:54 pm

Tgt Ion:130	Resp:	333
Ion Ratio	Lower	Upper
130	100	
132	54.8	82.3 122.3#
95	37.6	75.5 115.5#
97	67.2	43.2 83.2



#57
 1,4-Dioxane
 Concen: 17.53 ug/L
 RT: 6.869 min Scan# 973
 Delta R.T. 0.012 min
 Lab File: C3191.D
 Acq: 21 Nov 2017 3:54 pm

Tgt Ion: 88	Resp:	501
Ion Ratio	Lower	Upper
88	100	
58	85.7	56.0 96.0



Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3166.D
 Acq On : 21 Nov 2017 3:35 am
 Operator : F. NAEGLER
 Sample : R1710784-016|2.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 43 Sample Multiplier: 1

Inst : MSVOA14

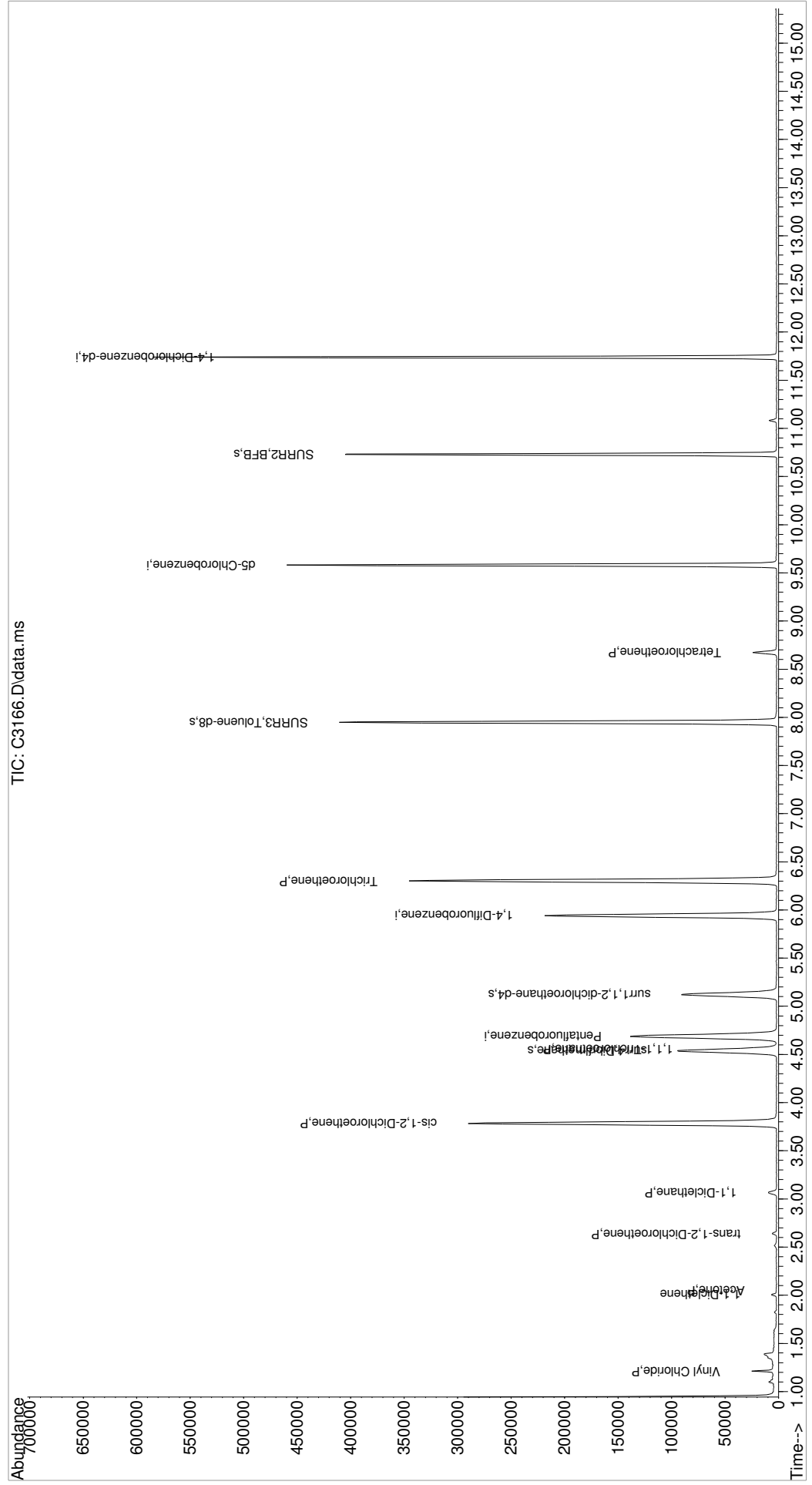
Quant Time: Nov 22 16:23:08 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

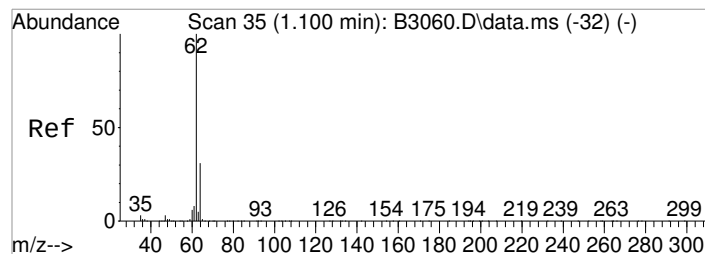
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	137287	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	207816	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	194716	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	103716	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	65398	46.86	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	93.72%	
47) surr1,1,2-dichloroetha...	5.125	65	89962	47.41	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	94.82%	
64) SURR3,Toluene-d8	7.948	98	256537	46.67	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	93.34%	
69) SURR2,BFB	10.728	95	99150	47.23	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	94.46%	
Target Compounds						
4) Vinyl Chloride	1.211	62	10060	5.74	ug/L	Qvalue 100
13) 1,1-Dicethene	2.010	96	1199	1.02	ug/L	# 88
15) Acetone	2.046	43	398	0.42	ug/L	77
26) trans-1,2-Dichloroethene	2.638	96	1321	1.04	ug/L	97
27) 1,1-Dicethane	3.064	63	7571	3.02	ug/L	93
33) cis-1,2-Dichloroethene	3.784	96	140763	93.70	ug/L	93
40) 1,1,1-Trichloroethane	4.552	97	10175	5.32	ug/L	93
53) Trichloroethene	6.302	130	125270	83.59	ug/L	95
71) Tetrachloroethene	8.673	164	4730	4.16	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSV0A14\Data\112017\
 Data File : C3166.D
 Acq On : 21 Nov 2017 3:35 am
 Operator : F. NAEGLER
 Sample : R1710784-016|2.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 43 Sample Multiplier: 1
 Inst : MSV0A14

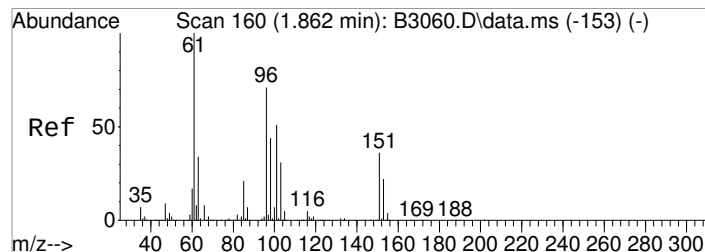
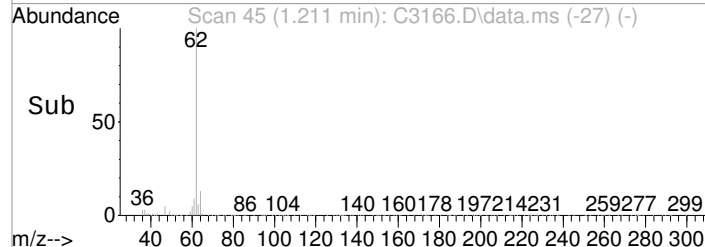
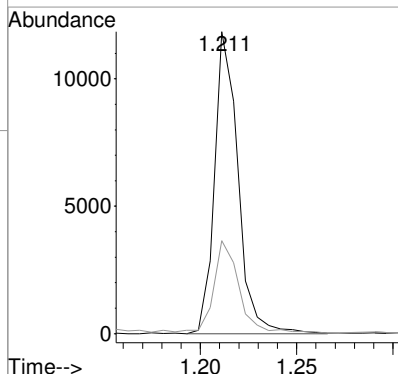
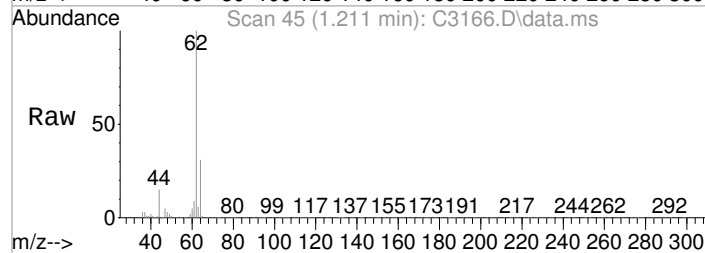
Quant Time: Nov 22 16:23:08 2017
 Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 Qlast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration





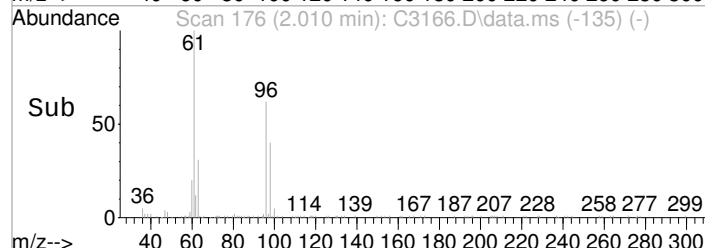
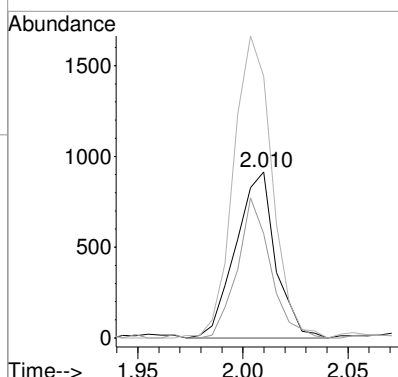
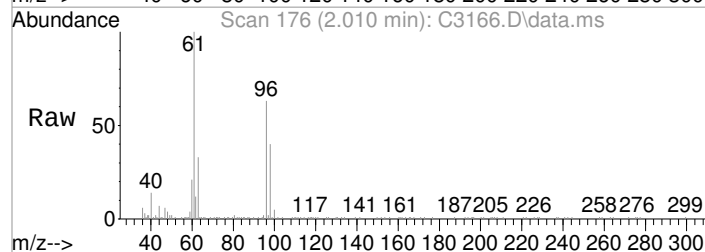
#4
 Vinyl Chloride
 Concen: 5.74 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3166.D
 Acq: 21 Nov 2017 3:35 am

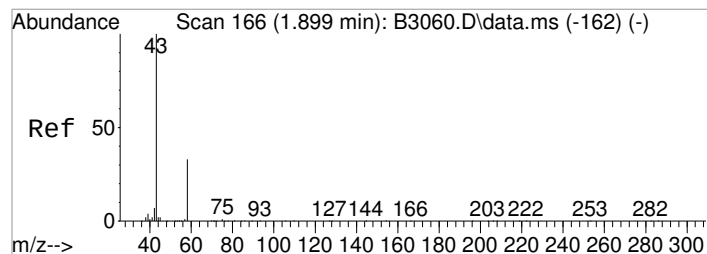
Tgt Ion: 62 Resp: 10060
 Ion Ratio Lower Upper
 62 100
 64 30.8 10.9 50.9



#13
 1,1-Dicethene
 Concen: 1.02 ug/L
 RT: 2.010 min Scan# 176
 Delta R.T. 0.001 min
 Lab File: C3166.D
 Acq: 21 Nov 2017 3:35 am

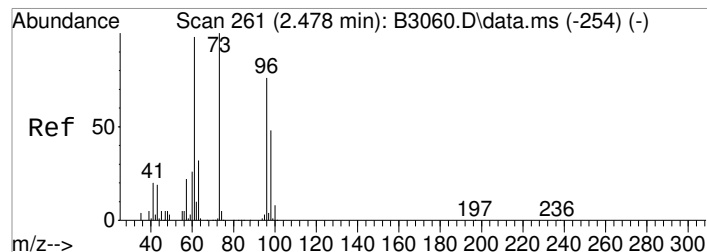
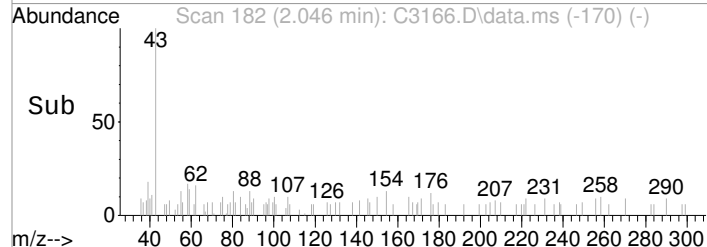
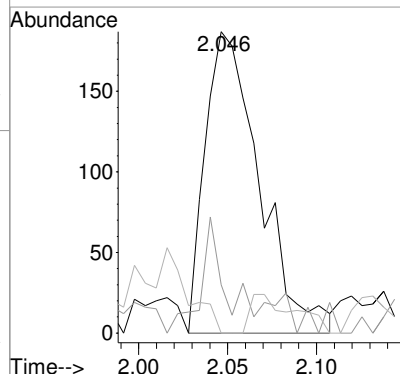
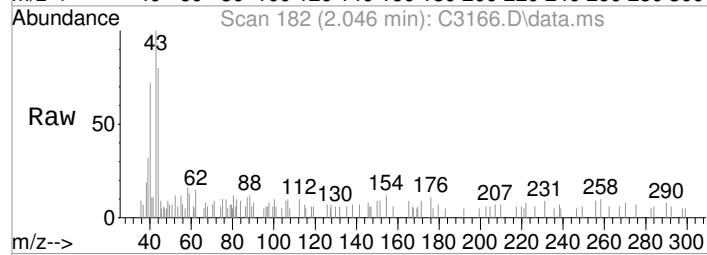
Tgt Ion: 96 Resp: 1199
 Ion Ratio Lower Upper
 96 100
 98 62.8 47.9 87.9
 61 157.6 157.9 197.9#





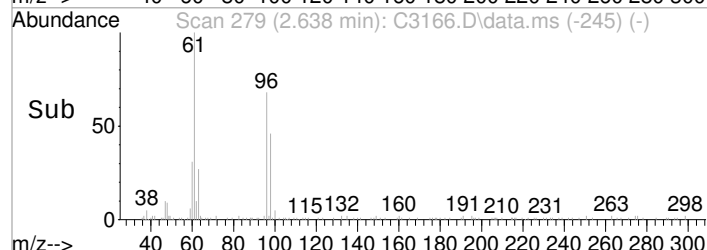
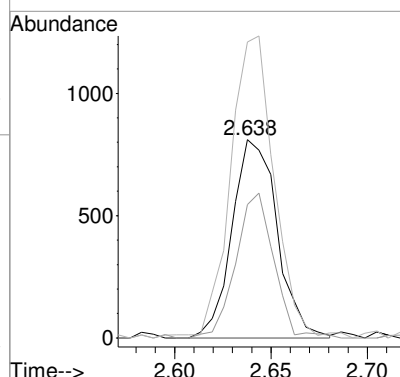
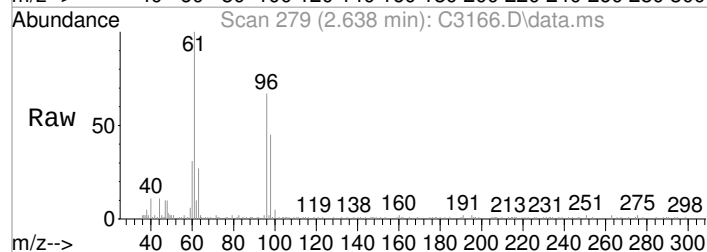
#15
 Acetone
 Concen: 0.42 ug/L
 RT: 2.046 min Scan# 182
 Delta R.T. -0.002 min
 Lab File: C3166.D
 Acq: 21 Nov 2017 3:35 am

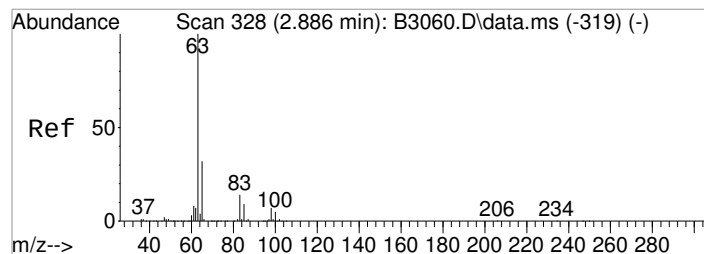
Tgt Ion: 43 Resp: 398
 Ion Ratio Lower Upper
 43 100
 58 16.0 8.6 48.6
 42 0.0 0.0 25.7



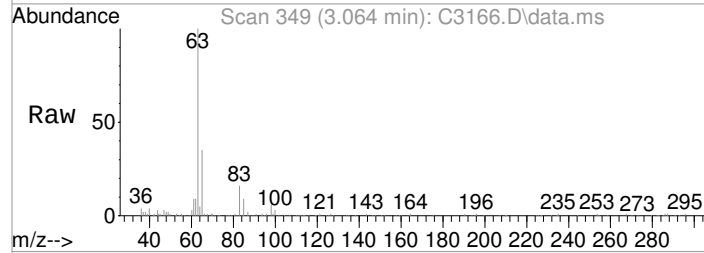
#26
 trans-1,2-Dichloroethene
 Concen: 1.04 ug/L
 RT: 2.638 min Scan# 279
 Delta R.T. -0.005 min
 Lab File: C3166.D
 Acq: 21 Nov 2017 3:35 am

Tgt Ion: 96 Resp: 1321
 Ion Ratio Lower Upper
 96 100
 98 67.2 41.4 81.4
 61 149.2 127.1 167.1

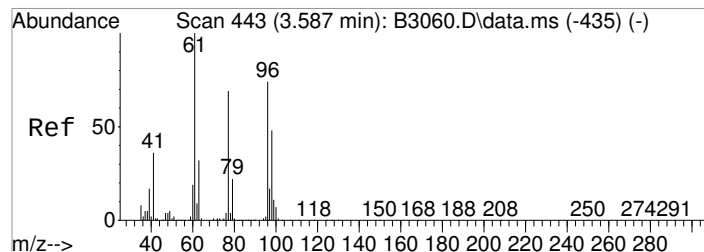
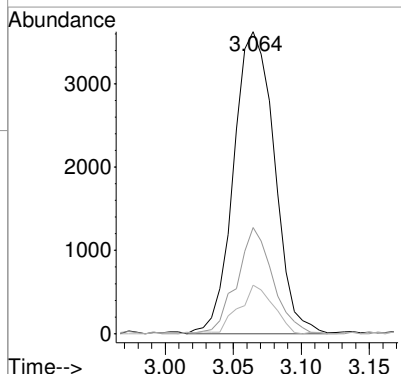
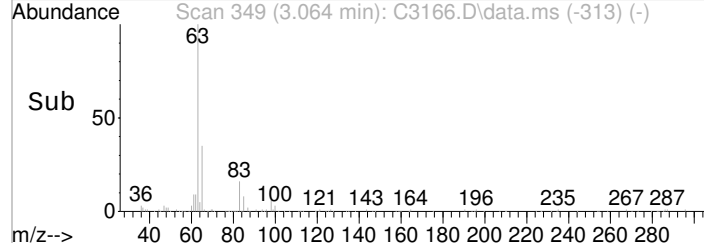




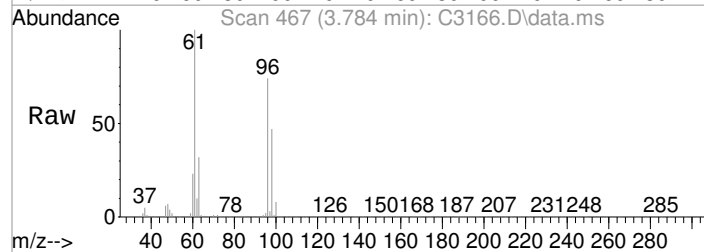
#27
 1,1-Dicethane
 Concen: 3.02 ug/L
 RT: 3.064 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3166.D
 Acq: 21 Nov 2017 3:35 am



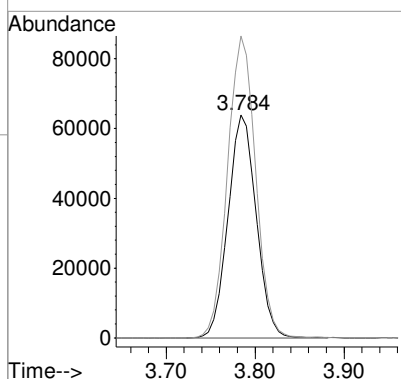
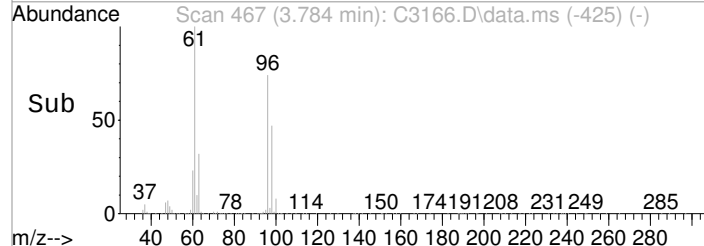
Tgt Ion: 63 Resp: 7571
 Ion Ratio Lower Upper
 63 100
 65 35.1 11.6 51.6
 83 16.1 0.0 32.7

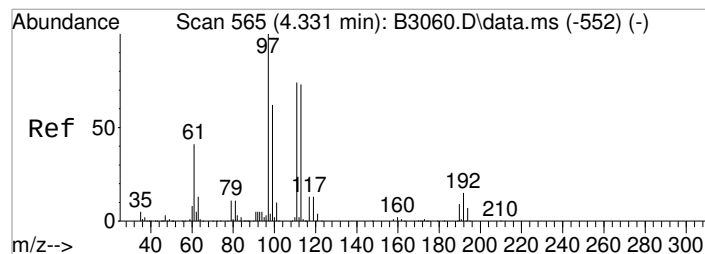


#33
 cis-1,2-Dichloroethene
 Concen: 93.70 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3166.D
 Acq: 21 Nov 2017 3:35 am

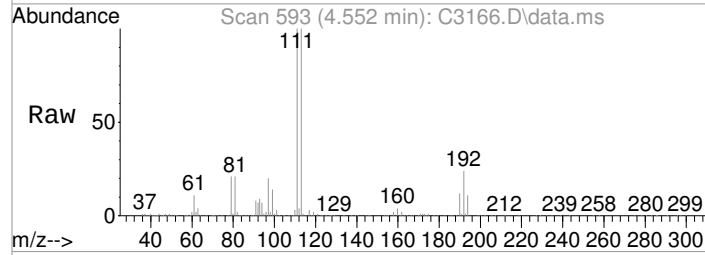


Tgt Ion: 96 Resp: 140763
 Ion Ratio Lower Upper
 96 100
 61 135.5 123.7 163.7

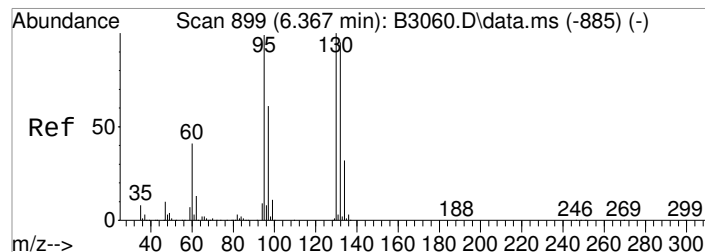
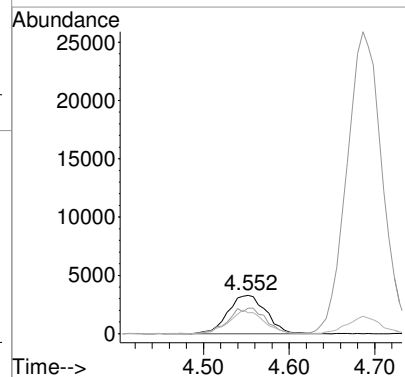
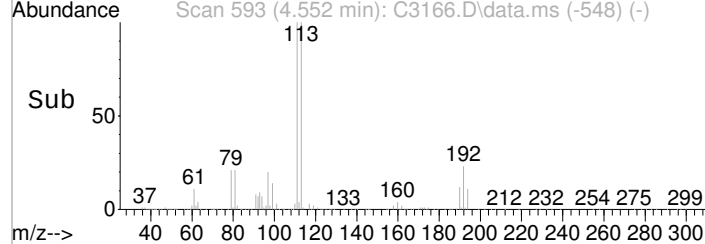




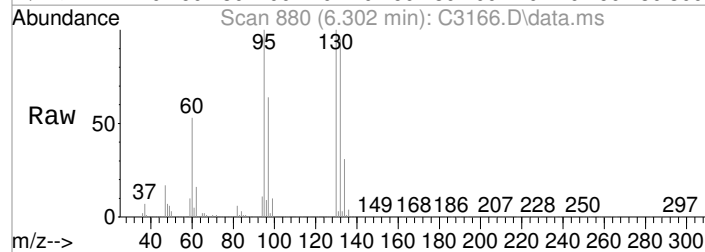
#40
 1,1,1-Trichloroethane
 Concen: 5.32 ug/L
 RT: 4.552 min Scan# 593
 Delta R.T. -0.004 min
 Lab File: C3166.D
 Acq: 21 Nov 2017 3:35 am



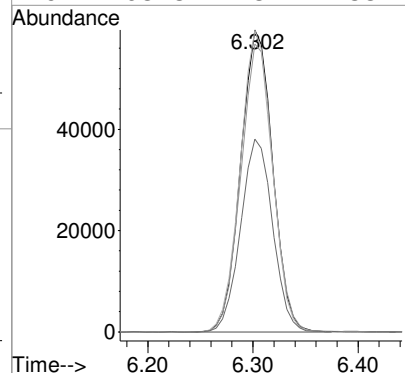
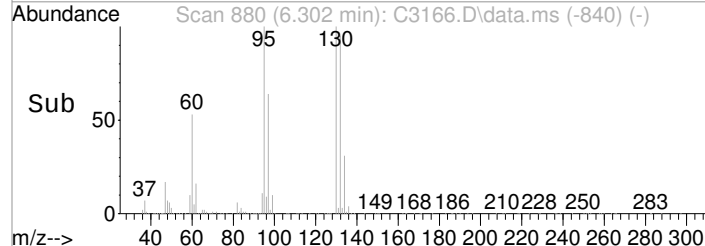
Tgt Ion:	97	Resp:	10175
Ion Ratio	100	Lower	Upper
99	66.8	44.2	84.2
61	55.2	27.0	67.0

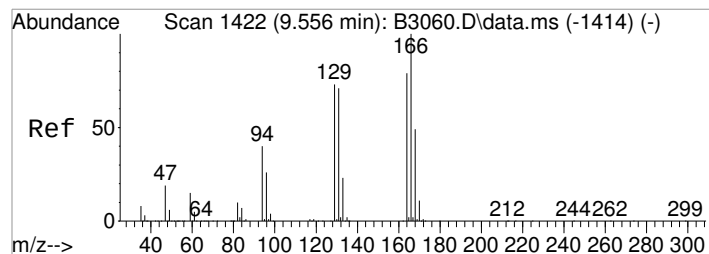


#53
 Trichloroethene
 Concen: 83.59 ug/L
 RT: 6.302 min Scan# 880
 Delta R.T. -0.005 min
 Lab File: C3166.D
 Acq: 21 Nov 2017 3:35 am

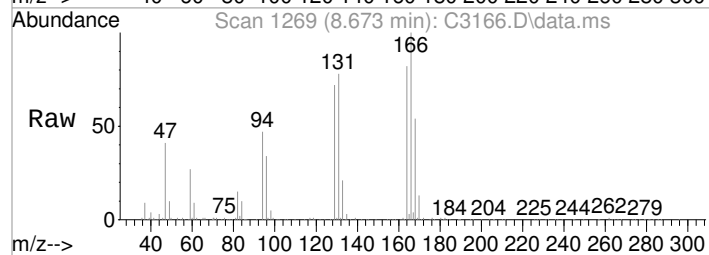


Tgt Ion:	130	Resp:	125270
Ion Ratio	100	Lower	Upper
132	95.4	82.3	122.3
95	99.9	75.5	115.5
97	63.8	43.2	83.2

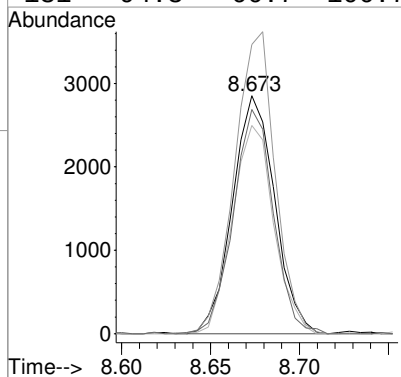
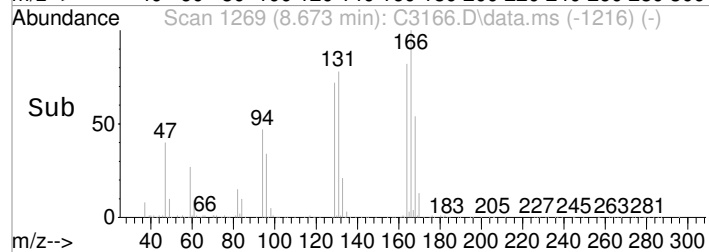




#71
 Tetrachloroethene
 Concen: 4.16 ug/L
 RT: 8.673 min Scan# 1269
 Delta R.T. -0.003 min
 Lab File: C3166.D
 Acq: 21 Nov 2017 3:35 am



Tgt Ion:	164	Resp:	4730
Ion Ratio		Lower	Upper
164	100		
166	121.5	109.9	149.9
129	87.6	70.1	110.1
131	94.3	66.7	106.7



Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3161.D
 Acq On : 21 Nov 2017 1:44 am
 Operator : F. NAEGLER
 Sample : R1710784-017|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 38 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:44:25 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

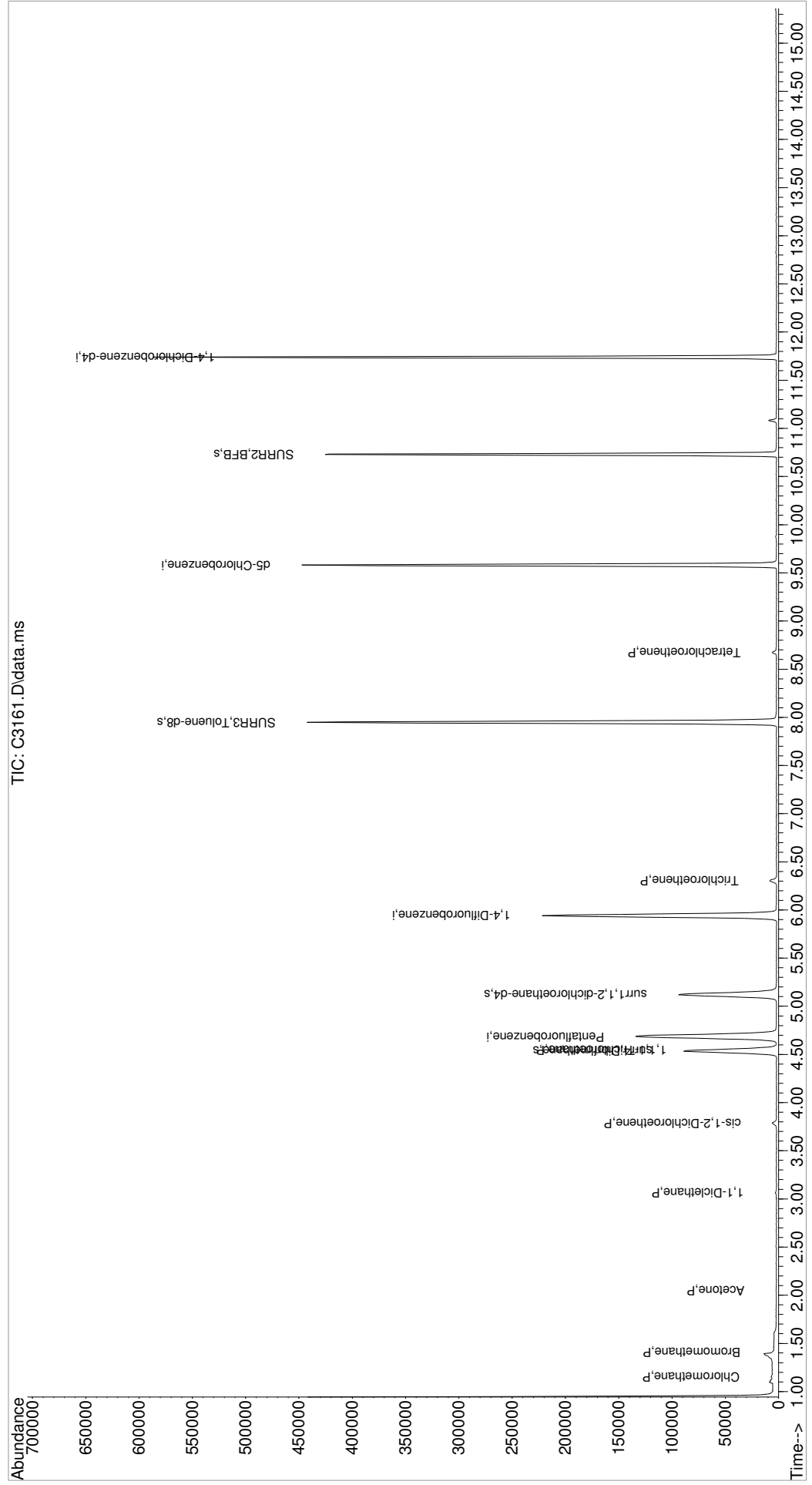
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

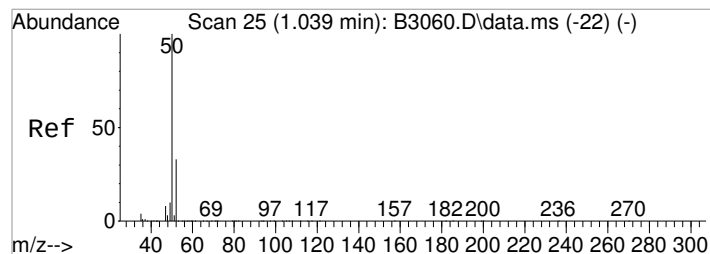
Internal Standards						
1) Pentafluorobenzene	4.686	168	134629	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	203950	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	192985	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.739	152	103424	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	66344	48.44	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	96.88%	
47) surr1,1,2-dichloroetha...	5.119	65	93302	50.10	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	100.20%	
64) SURR3,Toluene-d8	7.948	98	264192	48.97	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	97.94%	
69) SURR2,BFB	10.727	95	102208	49.61	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	99.22%	
Target Compounds						
						Qvalue
3) Chloromethane	1.150	50	499	0.26	ug/L	91
5) Bromomethane	1.406	94	302	0.28	ug/L	88
15) Acetone	2.052	43	237	0.26	ug/L	84
27) 1,1-Dicethane	3.064	63	780	0.32	ug/L	81
33) cis-1,2-Dichloroethene	3.790	96	1772	1.20	ug/L	85
40) 1,1,1-Trichloroethane	4.546	97	1377	0.73	ug/L #	83
53) Trichloroethene	6.308	130	2287	1.56	ug/L	93
71) Tetrachloroethene	8.673	164	876	0.78	ug/L #	82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

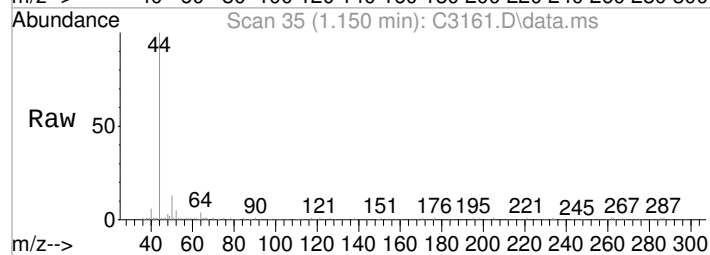
Data Path : I:\ACQUDATA\MSV0A14\Data\112017\
 Data File : C3161.D
 Acq On : 21 Nov 2017 1:44 am
 Operator : F. NAEGLER
 Sample : R1710784-017|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 38 Sample Multiplier: 1
 Inst : MSV0A14

Quant Time: Nov 21 16:44:25 2017
 Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

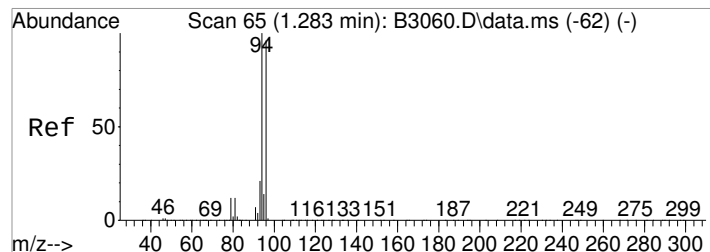
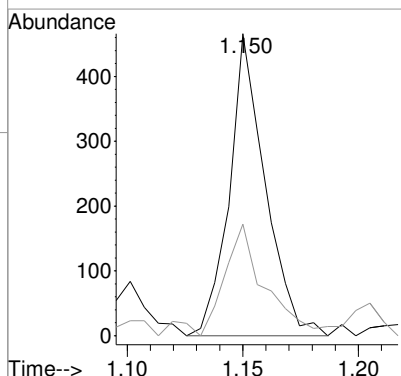
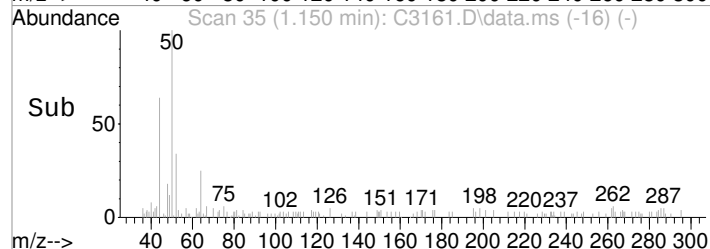




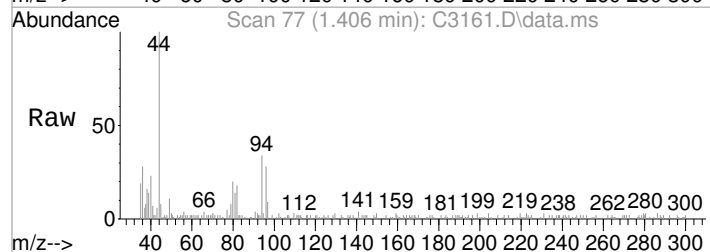
#3
 Chloromethane
 Concen: 0.26 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. -0.000 min
 Lab File: C3161.D
 Acq: 21 Nov 2017 1:44 am



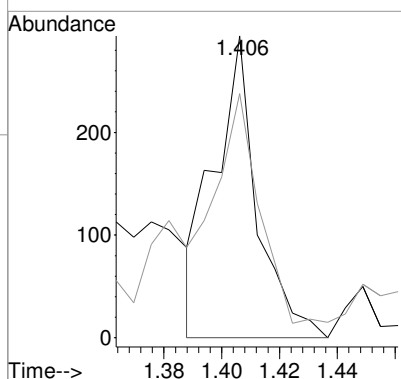
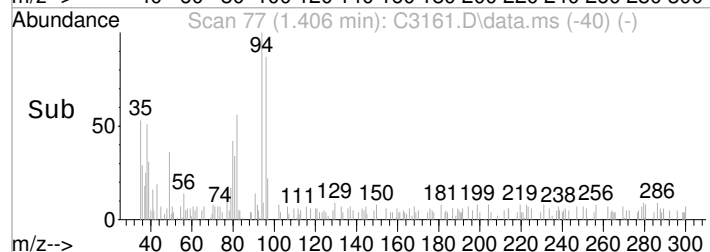
Tgt Ion: 50 Resp: 499
 Ion Ratio Lower Upper
 50 100
 52 36.9 12.1 52.1

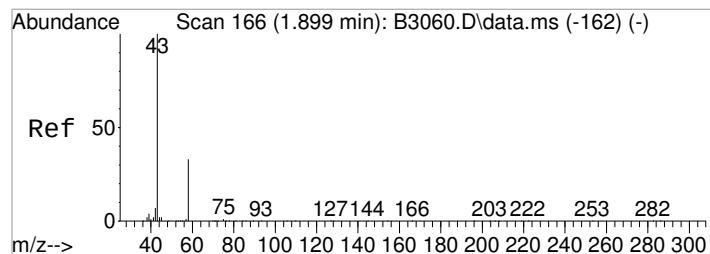


#5
 Bromomethane
 Concen: 0.28 ug/L
 RT: 1.406 min Scan# 77
 Delta R.T. 0.000 min
 Lab File: C3161.D
 Acq: 21 Nov 2017 1:44 am

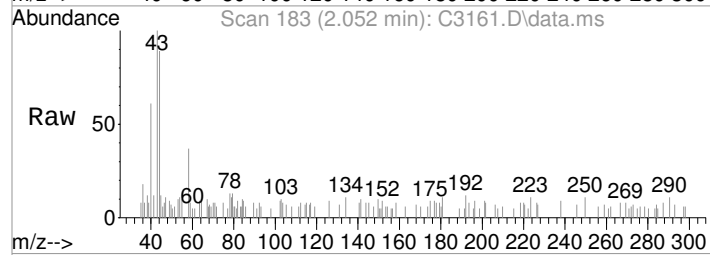


Tgt Ion: 94 Resp: 302
 Ion Ratio Lower Upper
 94 100
 96 81.0 72.2 112.2

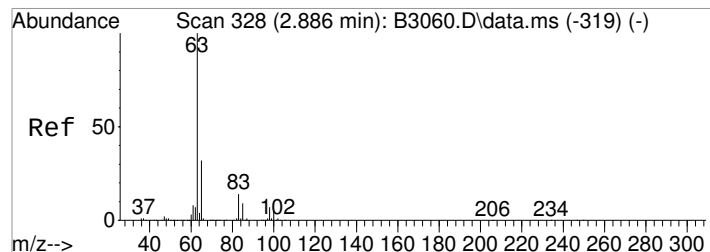
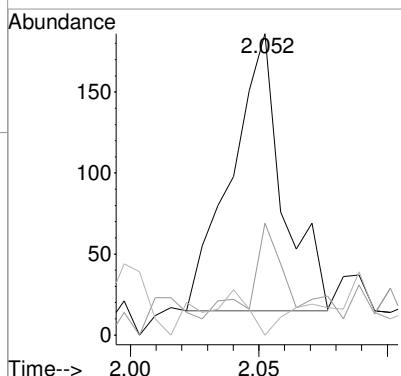
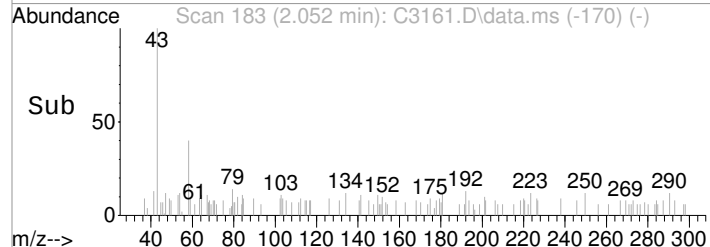




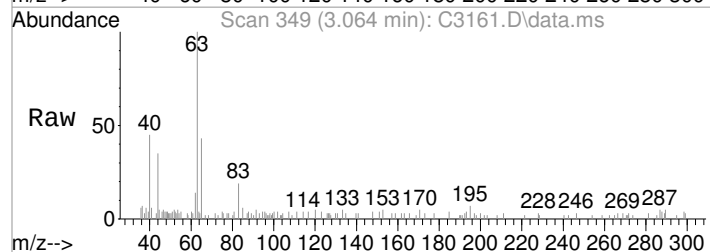
#15
 Acetone
 Concen: 0.26 ug/L
 RT: 2.052 min Scan# 183
 Delta R.T. 0.004 min
 Lab File: C3161.D
 Acq: 21 Nov 2017 1:44 am



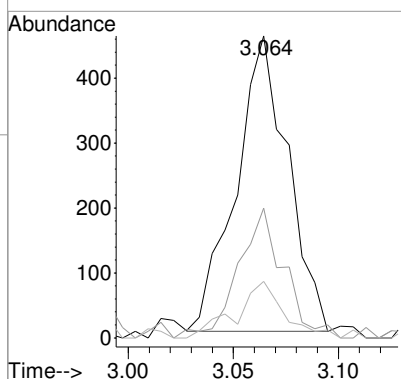
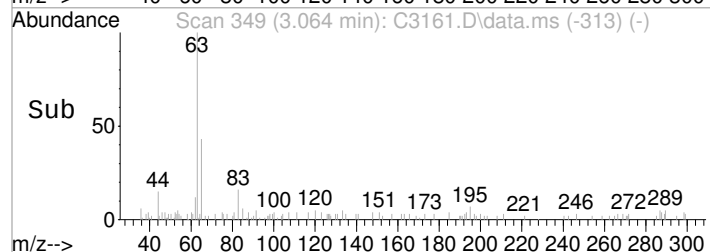
Tgt Ion: 43 Resp: 237
 Ion Ratio Lower Upper
 43 100
 58 37.1 8.6 48.6
 42 0.0 0.0 25.7

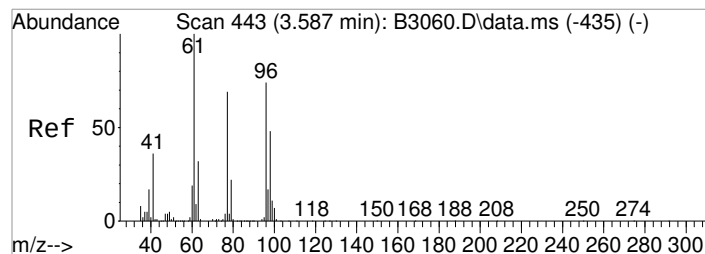


#27
 1,1-Dicethane
 Concen: 0.32 ug/L
 RT: 3.064 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3161.D
 Acq: 21 Nov 2017 1:44 am



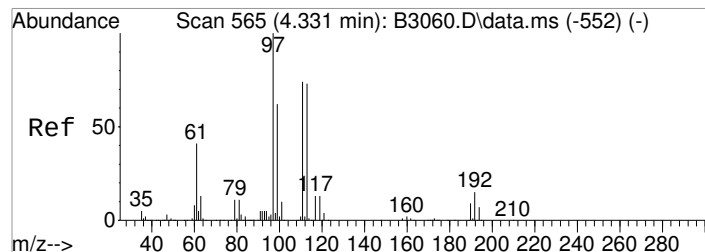
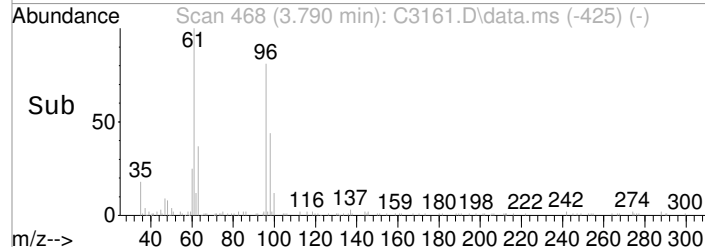
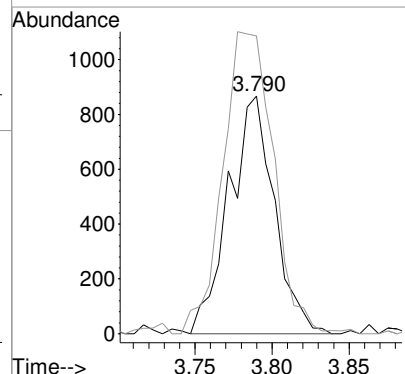
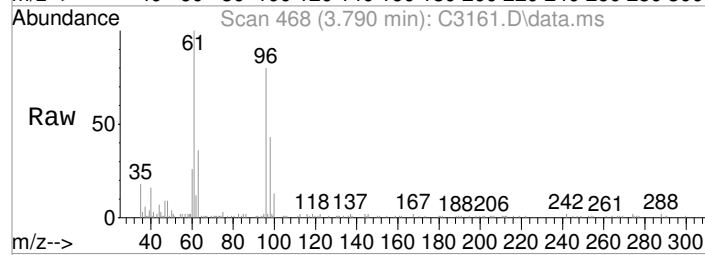
Tgt Ion: 63 Resp: 780
 Ion Ratio Lower Upper
 63 100
 65 43.0 11.6 51.6
 83 18.7 0.0 32.7





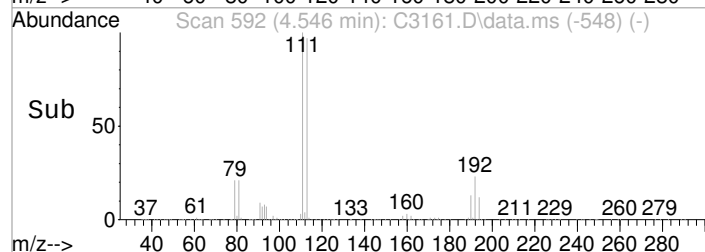
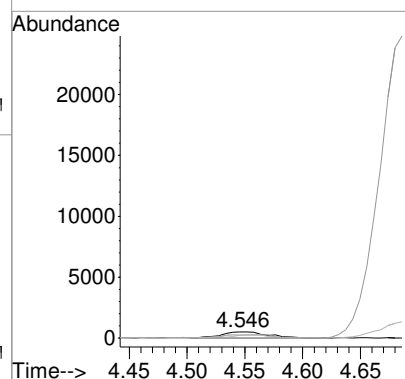
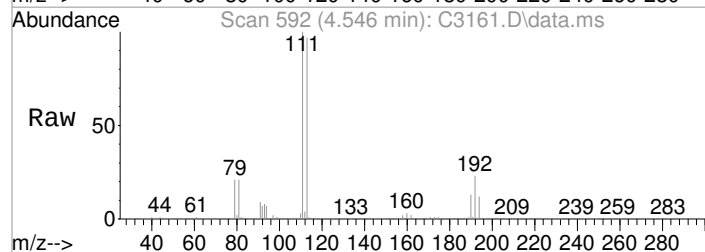
#33
 cis-1,2-Dichloroethene
 Concen: 1.20 ug/L
 RT: 3.790 min Scan# 468
 Delta R.T. 0.001 min
 Lab File: C3161.D
 Acq: 21 Nov 2017 1:44 am

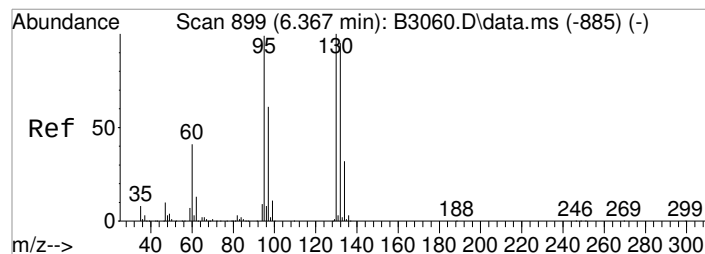
Tgt Ion: 96 Resp: 1772
 Ion Ratio Lower Upper
 96 100
 61 125.4 123.7 163.7



#40
 1,1,1-Trichloroethane
 Concen: 0.73 ug/L
 RT: 4.546 min Scan# 592
 Delta R.T. -0.010 min
 Lab File: C3161.D
 Acq: 21 Nov 2017 1:44 am

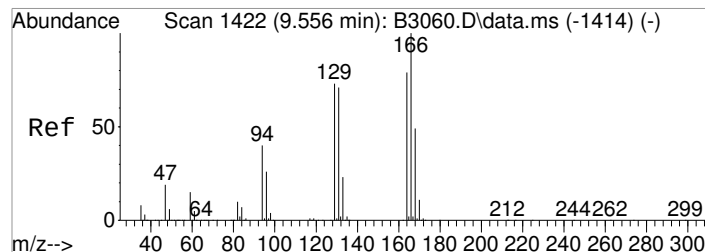
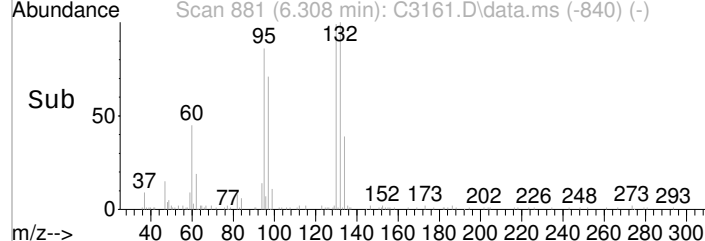
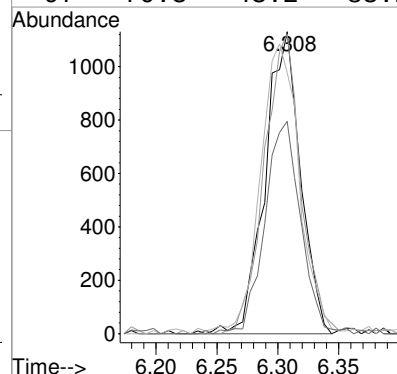
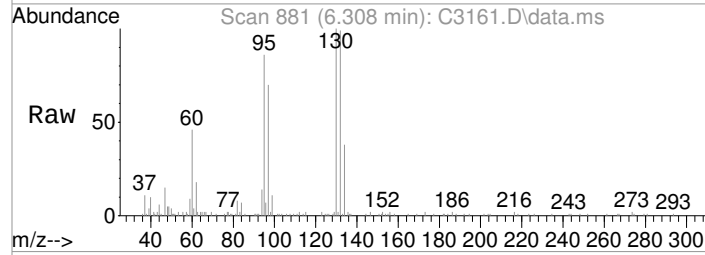
Tgt Ion: 97 Resp: 1377
 Ion Ratio Lower Upper
 97 100
 99 43.7 44.2 84.2#
 61 43.9 27.0 67.0





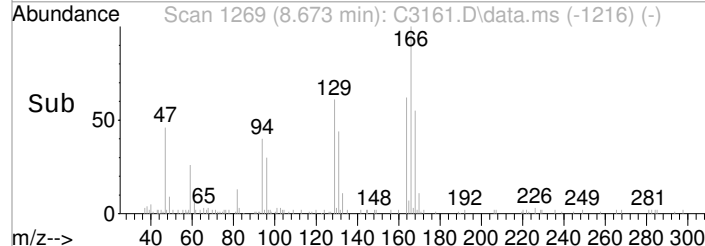
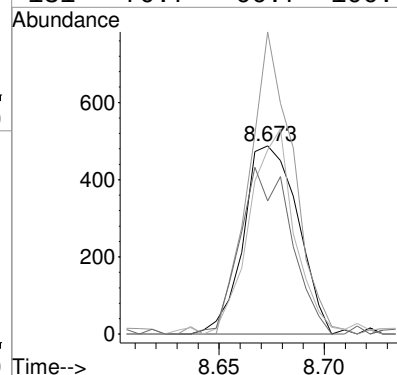
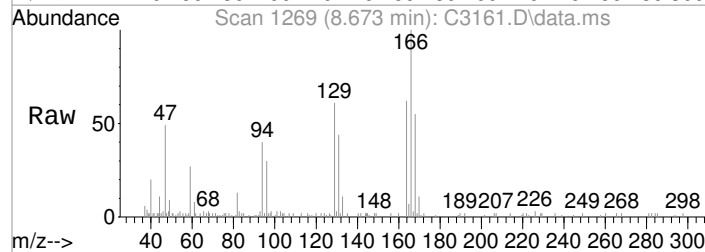
#53
 Trichloroethene
 Concen: 1.56 ug/L
 RT: 6.308 min Scan# 881
 Delta R.T. 0.001 min
 Lab File: C3161.D
 Acq: 21 Nov 2017 1:44 am

Tgt Ion	Ratio	Resp	Lower	Upper
130	100			
132	99.3	82.3	122.3	
95	86.5	75.5	115.5	
97	70.3	43.2	83.2	



#71
 Tetrachloroethene
 Concen: 0.78 ug/L
 RT: 8.673 min Scan# 1269
 Delta R.T. -0.003 min
 Lab File: C3161.D
 Acq: 21 Nov 2017 1:44 am

Tgt Ion	Ratio	Resp	Lower	Upper
164	100			
166	160.5	109.9	149.9#	
129	97.7	70.1	110.1	
131	70.7	66.7	106.7	



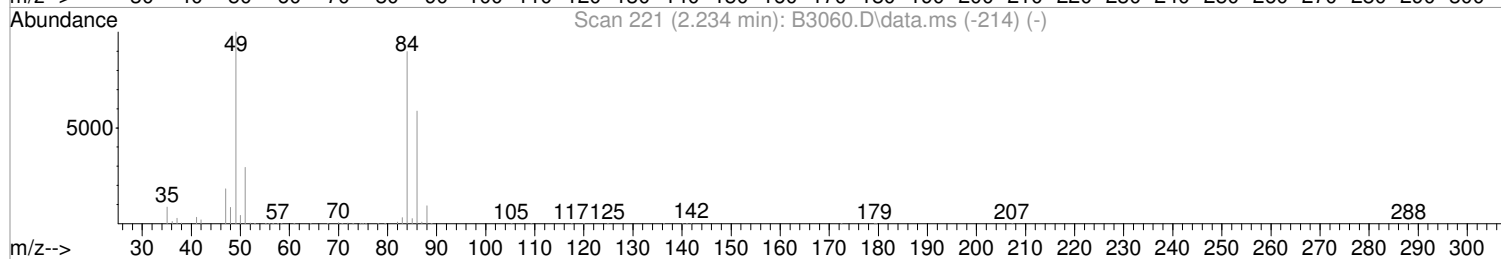
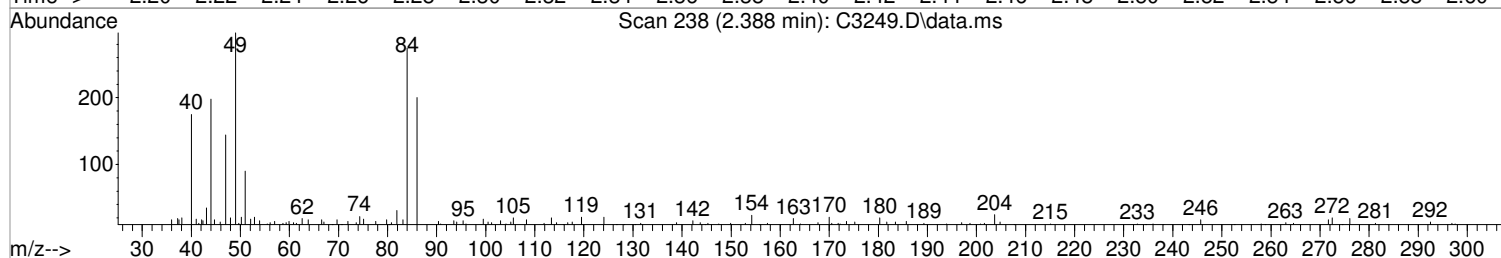
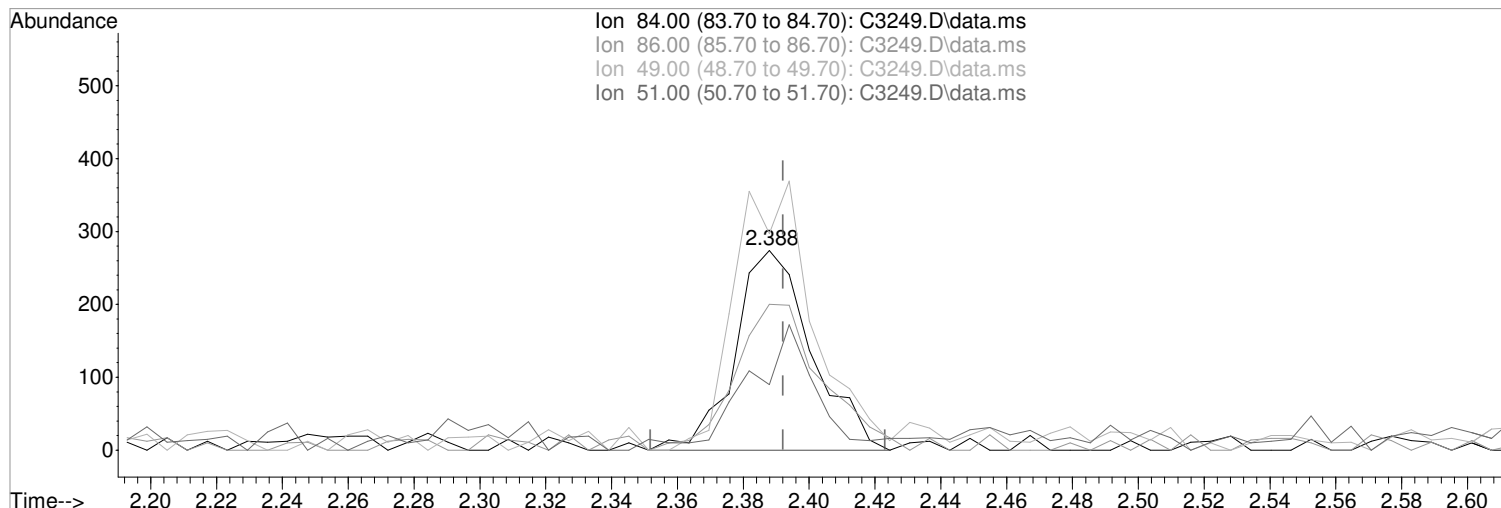
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
Data File : C3249.D
Acq On : 22 Nov 2017 3:18 pm
Operator : F. NAEGLER
Sample : R1710784-018|1.0
Misc : ECOLOGY 16560 T2
ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 15:34:11 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3249.D\data.ms

(22) Methylene Chloride (P)

2.388min (-0.004) 0.31 ug/L m

response 443

Ion	Exp%	Act%
84.00	100	100
86.00	64.80	72.99
49.00	138.10	108.39#
51.00	42.50	32.85

Manual Integration:

After

Peak not found.

11/27/17

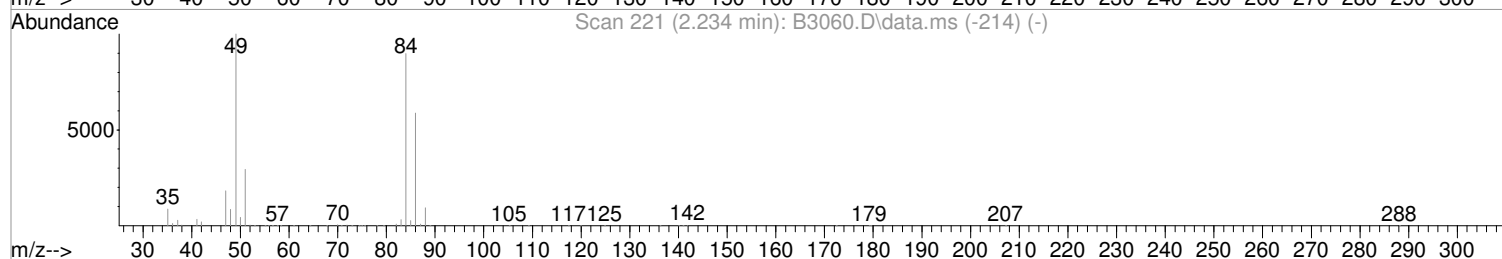
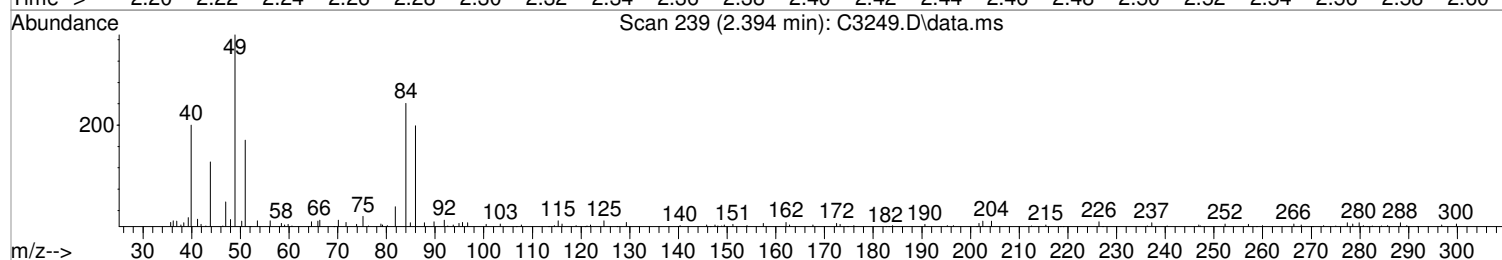
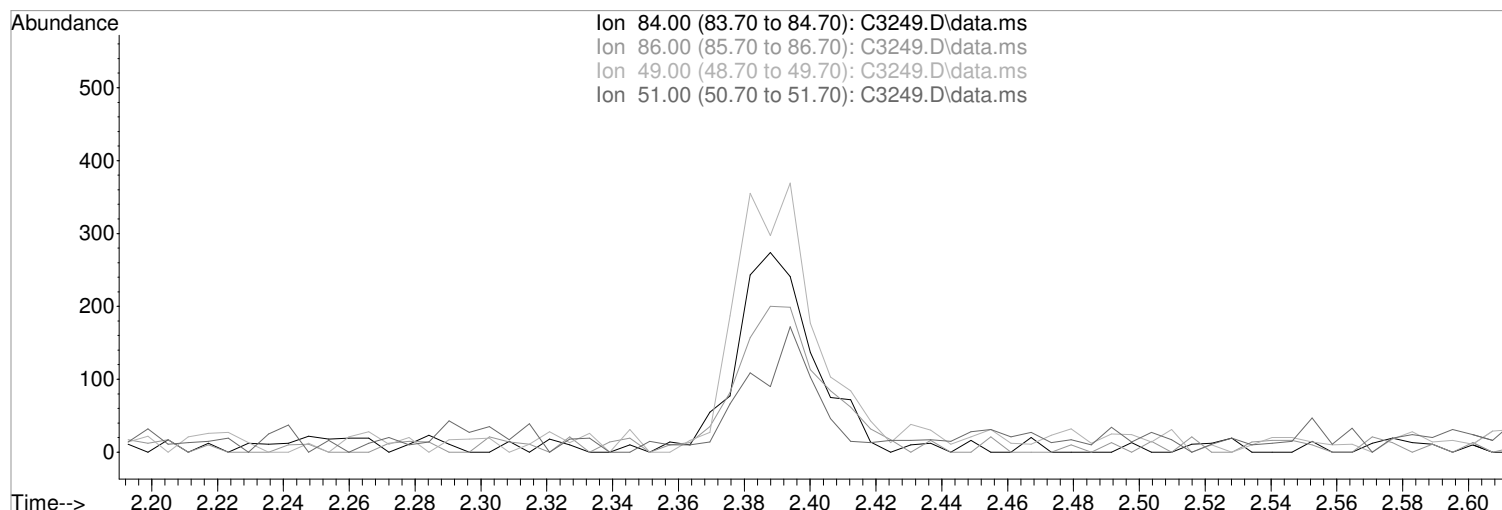
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
Data File : C3249.D
Acq On : 22 Nov 2017 3:18 pm
Operator : F. NAEGLER
Sample : R1710784-018|1.0
Misc : ECOLOGY 16560 T2
ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 15:34:11 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3249.D\data.ms

(22) Methylene Chloride (P)

Manual Integration:

2.392min (-2.392) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
84.00	100	0.00
86.00	64.80	0.00#
49.00	138.10	0.00#
51.00	42.50	0.00#

11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3249.D
 Acq On : 22 Nov 2017 3:18 pm
 Operator : F. NAEGLER
 Sample : R1710784-018|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 27 14:33:53 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

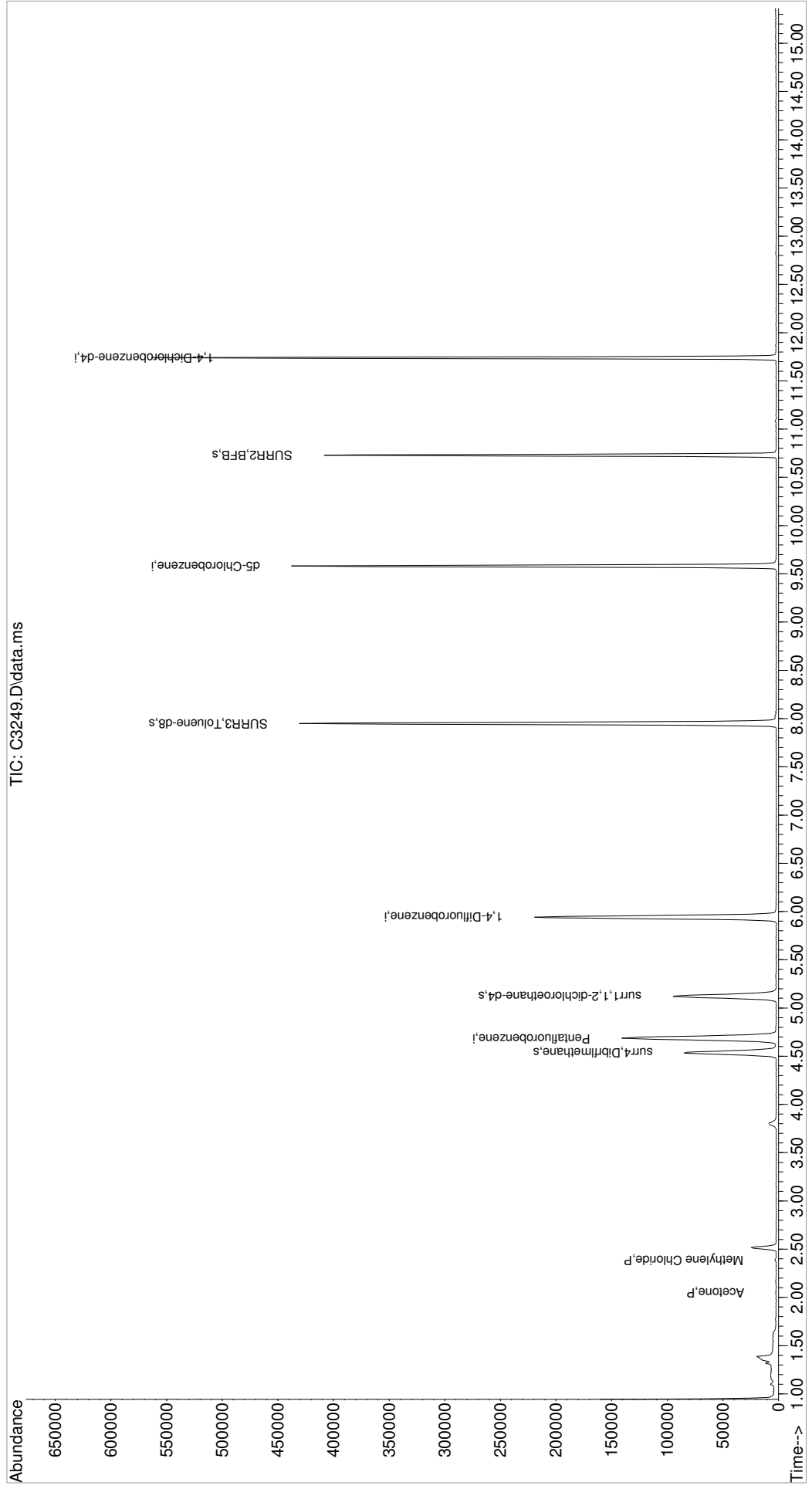
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

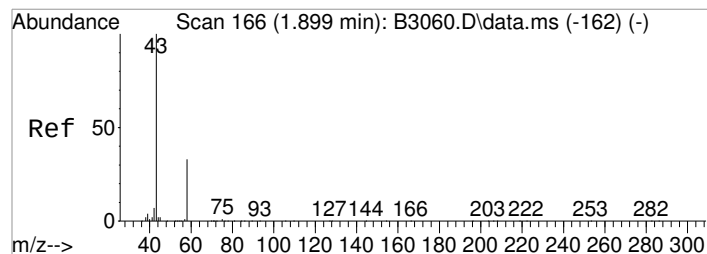
Internal Standards						
1) Pentafluorobenzene	4.686	168	137258	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	205845	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.582	117	184650	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	100612	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	65218	47.18	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery =	94.36%		
47) surr1,1,2-dichloroetha...	5.119	65	93275	49.62	ug/L	0.00
Spiked Amount 50.000	Range 73 - 125		Recovery =	99.24%		
64) SURR3,Toluene-d8	7.948	98	261070	47.95	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery =	95.90%		
69) SURR2,BFB	10.728	95	96686	46.50	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery =	93.00%		
Target Compounds						
15) Acetone	2.046	43	324	0.34	ug/L	Qvalue 99
22) Methylene Chloride	2.388	84	443m	0.31	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
Data File : C3249.D
Acq On : 22 Nov 2017 3:18 pm
Operator : F. NAEGLER
Sample : R1710784-018|1.0
Misc : ECOLOGY 16560 T2
ALS Vial : 11 Sample Multiplier: 1
Inst : MSVOA14

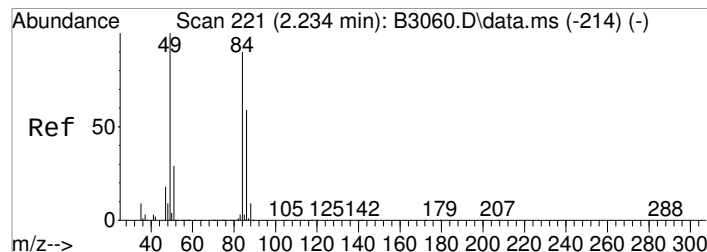
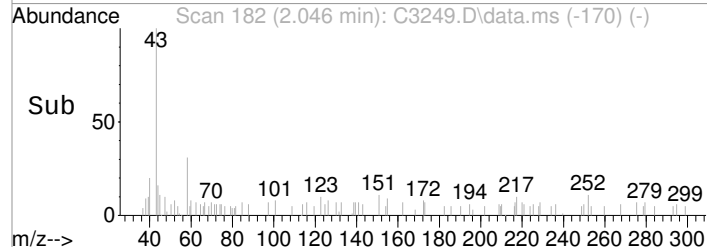
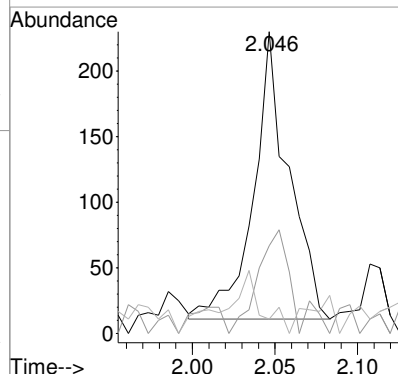
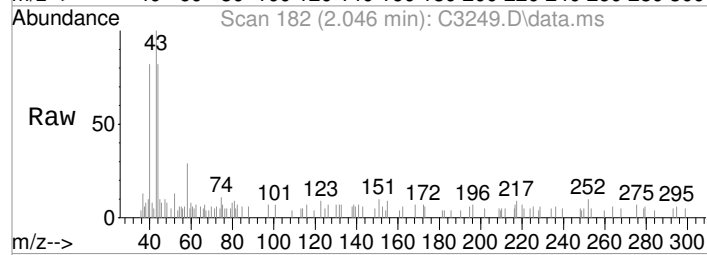
Quant Time: Nov 27 14:33:53 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration





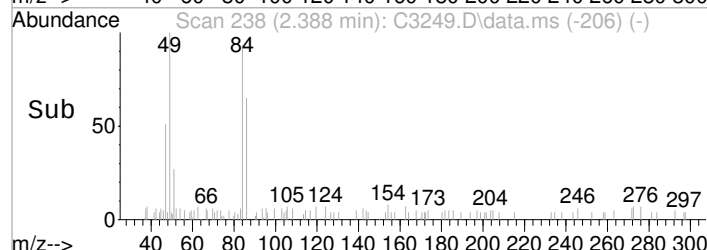
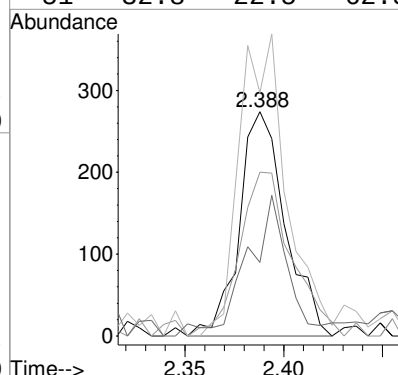
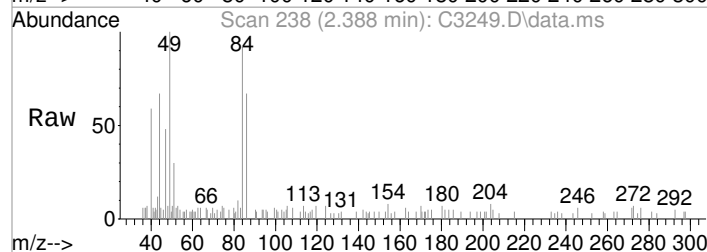
#15
 Acetone
 Concen: 0.34 ug/L
 RT: 2.046 min Scan# 182
 Delta R.T. -0.001 min
 Lab File: C3249.D
 Acq: 22 Nov 2017 3:18 pm

Tgt Ion: 43	Resp: 324
Ion Ratio	Lower Upper
43 100	
58 29.1	8.6 48.6
42 4.8	0.0 25.7



#22
 Methylene Chloride
 Concen: 0.31 ug/L m
 RT: 2.388 min Scan# 238
 Delta R.T. -0.004 min
 Lab File: C3249.D
 Acq: 22 Nov 2017 3:18 pm

Tgt Ion: 84	Resp: 443
Ion Ratio	Lower Upper
84 100	
86 73.0	44.8 84.8
49 108.4	118.1 158.1#
51 32.8	22.5 62.5



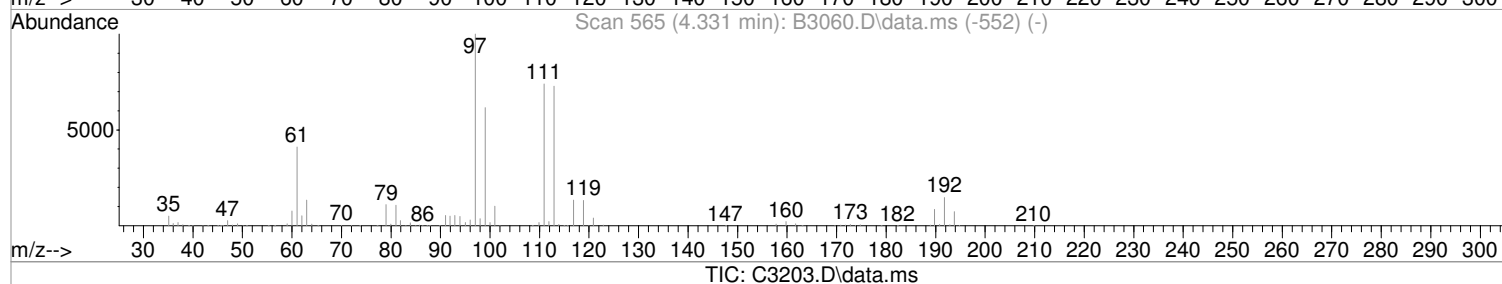
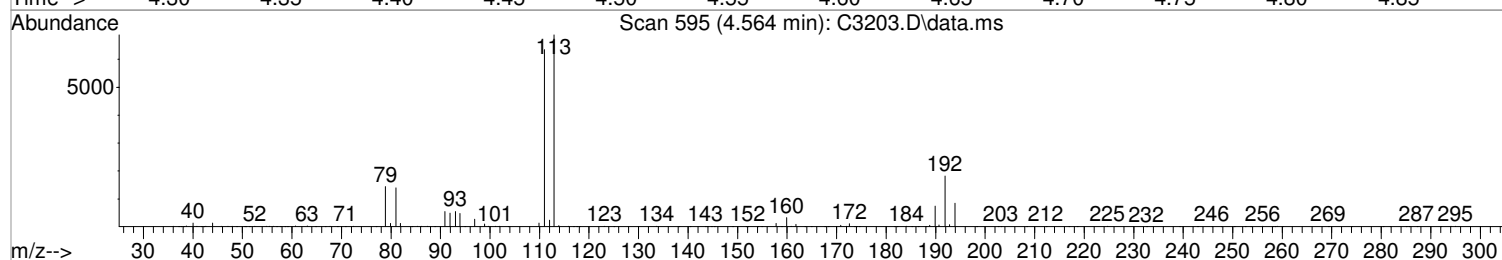
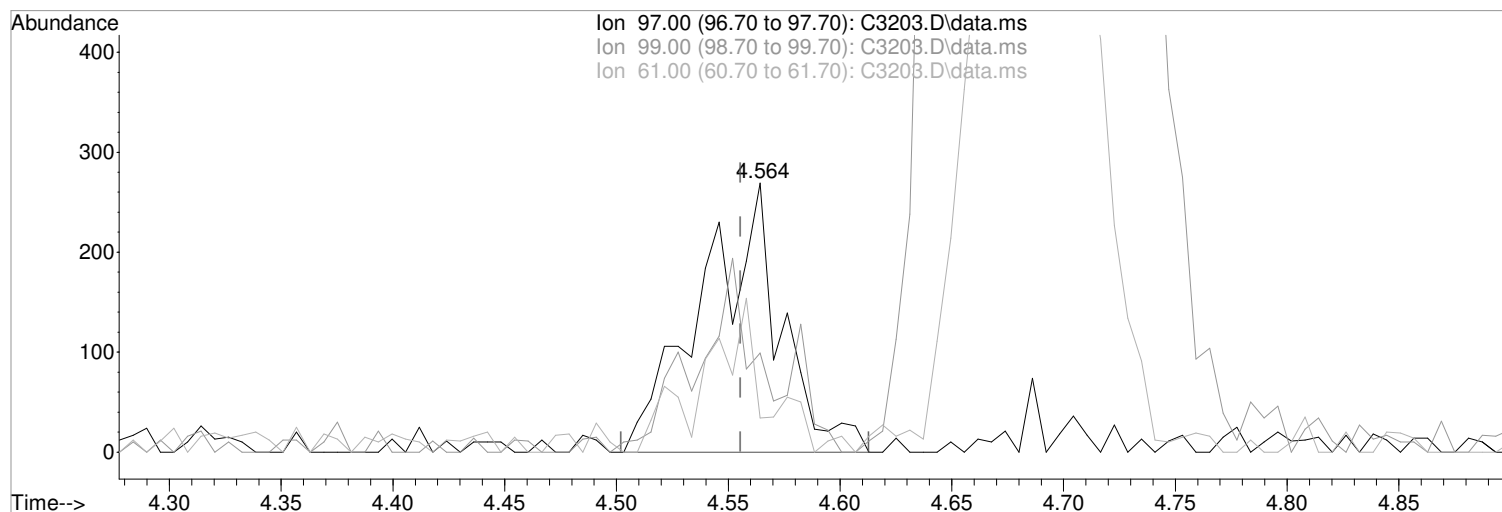
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3203.D
Acq On : 21 Nov 2017 8:21 pm
Operator : F. NAEGLER
Sample : R1710784-019|10.0
Misc : ECOLOGY 16560 T2
ALS Vial : 27 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 09:26:30 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



(40) 1,1,1-Trichloroethane (P)

4.564min (+0.009) 0.36 ug/L m

response 659

Ion Exp% Act%

97.00 100 100

99.00 64.20 36.80#

61.00 47.00 12.64#

0.00 0.00 0.00

Manual Integration:

After

Peak not found.

11/27/17

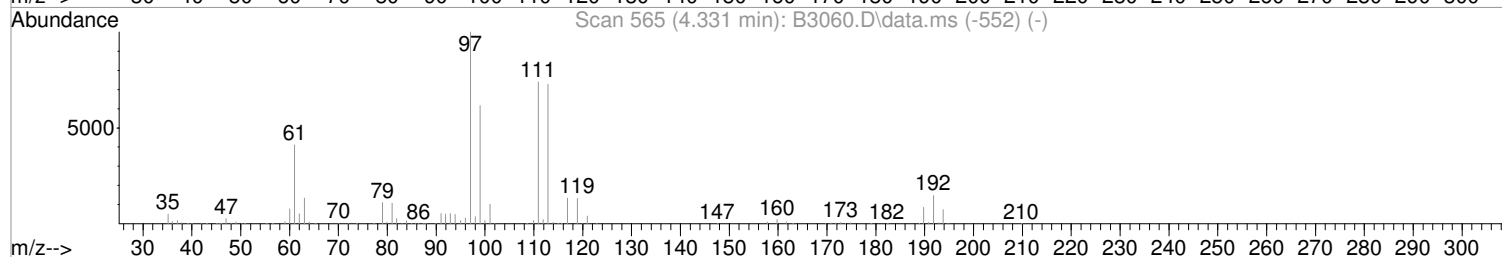
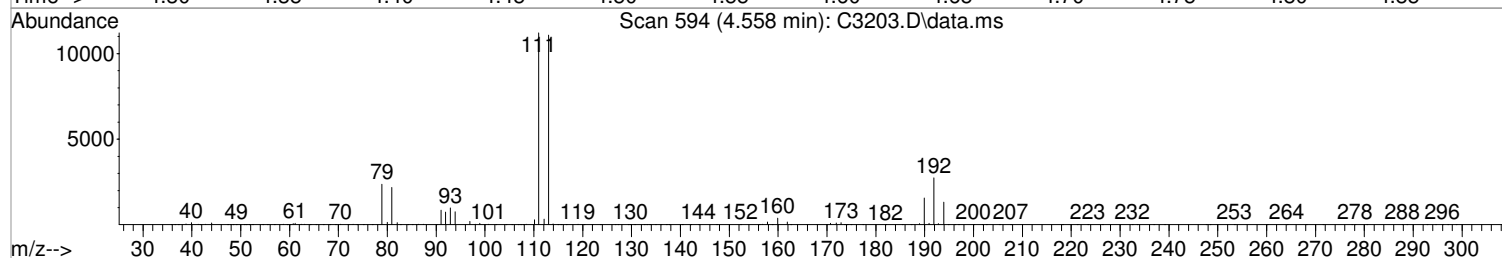
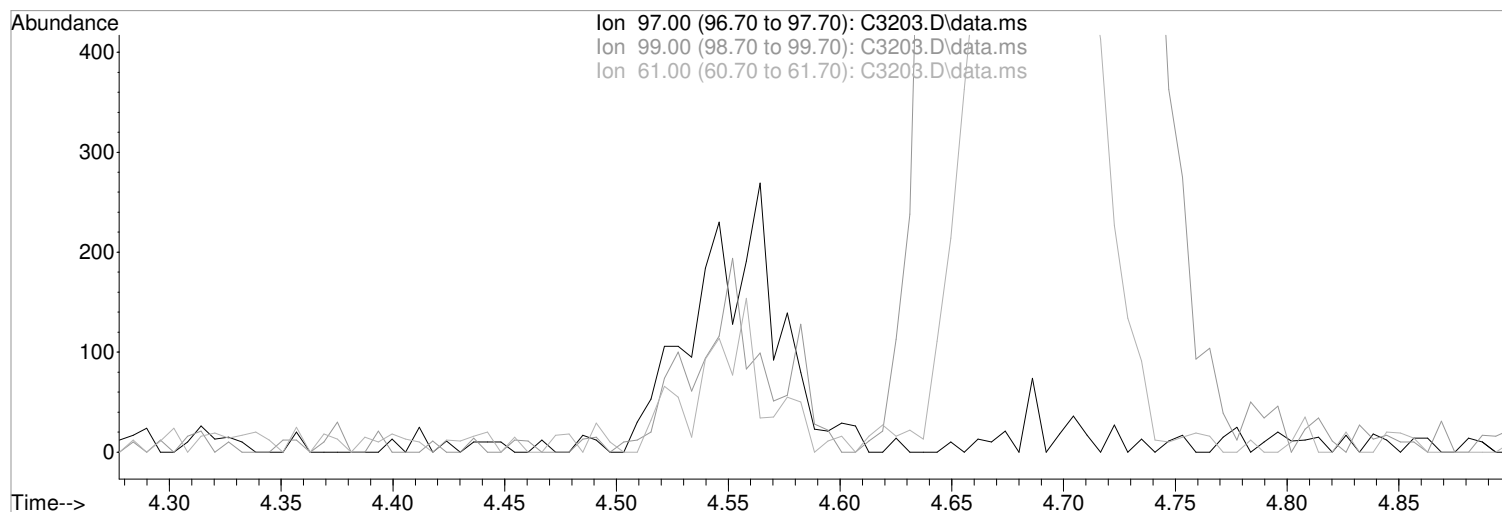
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3203.D
Acq On : 21 Nov 2017 8:21 pm
Operator : F. NAEGLER
Sample : R1710784-019|10.0
Misc : ECOLOGY 16560 T2
ALS Vial : 27 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 09:26:30 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3203.D\data.ms

(40) 1,1,1-Trichloroethane (P)

Manual Integration:

4.556min (-4.556) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
97.00	100	0.00
99.00	64.20	0.00#
61.00	47.00	0.00#
0.00	0.00	0.00

11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3203.D
 Acq On : 21 Nov 2017 8:21 pm
 Operator : F. NAEGLER
 Sample : R1710784-019|10.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 27 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 27 12:56:42 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

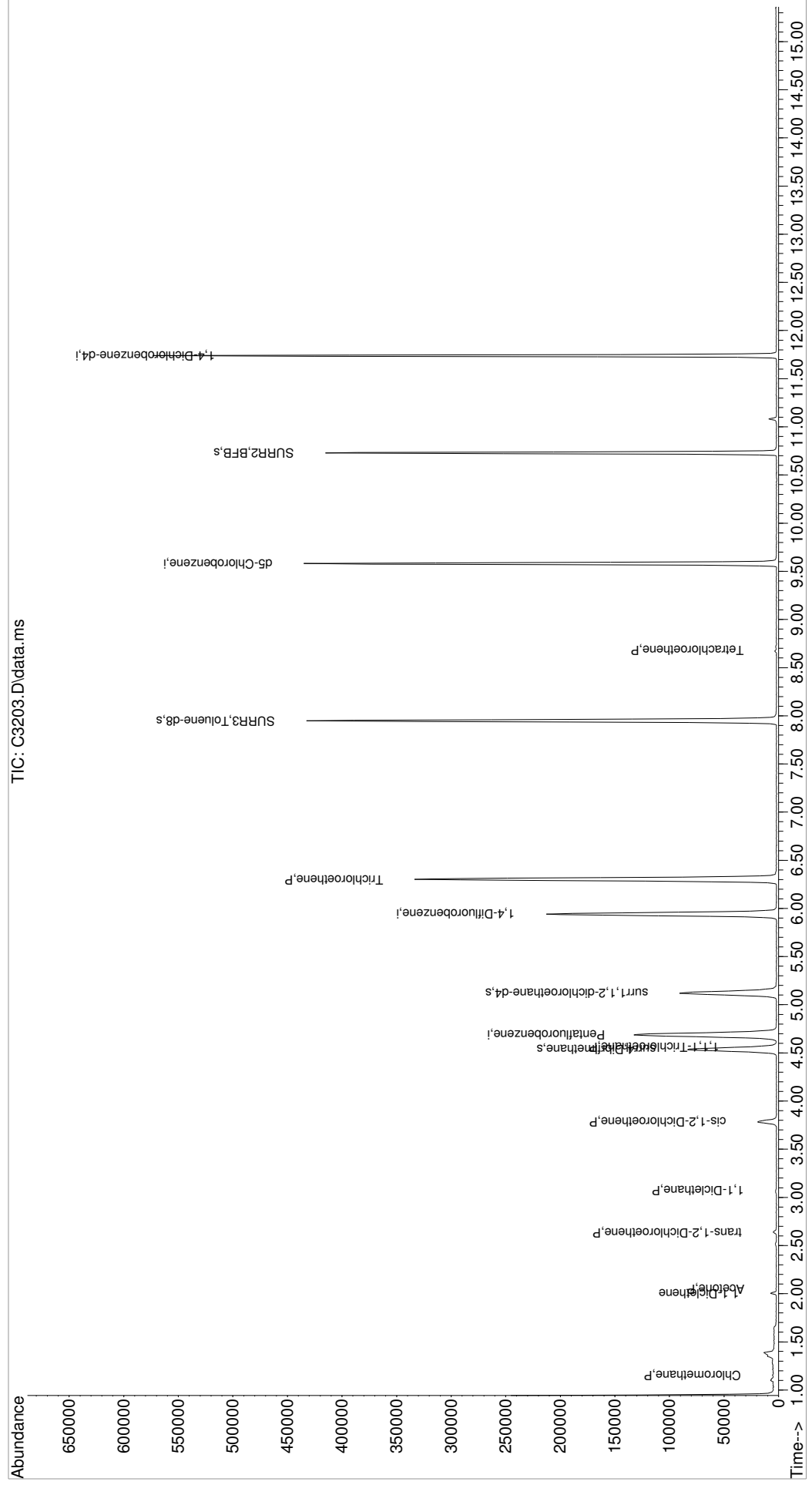
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	131337	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	197194	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	185711	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	101112	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	63492	47.95	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery =	95.90%		
47) surr1,1,2-dichloroetha...	5.119	65	87758	48.74	ug/L	0.00
Spiked Amount 50.000	Range 73 - 125		Recovery =	97.48%		
64) SURR3,Toluene-d8	7.948	98	255302	48.95	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery =	97.90%		
69) SURR2,BFB	10.728	95	97908	49.15	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery =	98.30%		
Target Compounds						
3) Chloromethane	1.150	50	417	0.23	ug/L	78
13) 1,1-Dicethene	2.004	96	1305	1.16	ug/L	98
15) Acetone	2.052	43	437	0.49	ug/L	93
26) trans-1,2-Dichloroethene	2.638	96	969	0.80	ug/L #	89
27) 1,1-Dicethene	3.071	63	1086	0.45	ug/L	93
33) cis-1,2-Dichloroethene	3.784	96	8579	5.97	ug/L	92
40) 1,1,1-Trichloroethane	4.564	97	659m	0.36	ug/L	
53) Trichloroethene	6.302	130	121827	85.67	ug/L	97
71) Tetrachloroethene	8.679	164	307	0.28	ug/L #	73

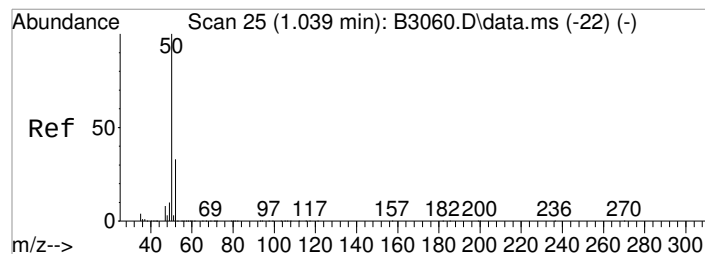
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSV0A14\Data\112117\
 Data File : C3203.D
 Acq On : 21 Nov 2017 8:21 pm
 Operator : F. NAEGLER
 Sample : R1710784-019|10.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 27 Sample Multiplier: 1

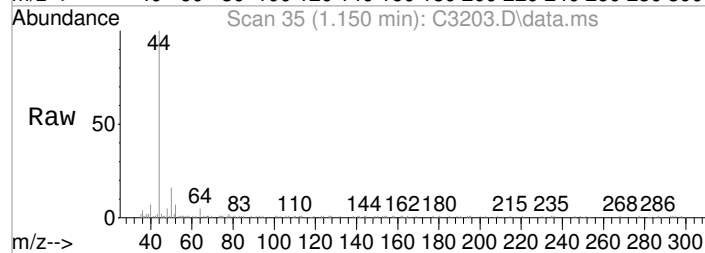
Inst : MSV0A14

Quant Time: Nov 27 12:56:42 2017
 Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

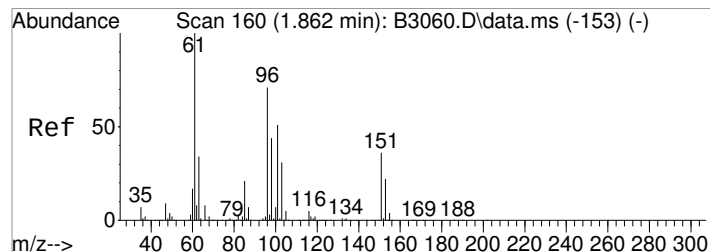
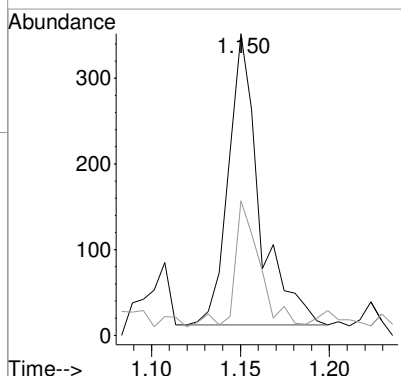
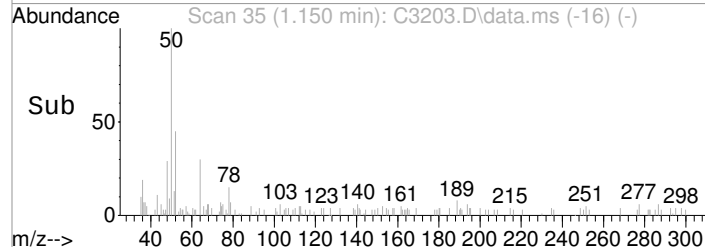




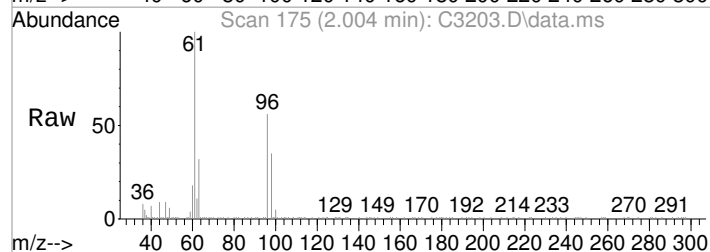
#3
 Chloromethane
 Concen: 0.23 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. 0.000 min
 Lab File: C3203.D
 Acq: 21 Nov 2017 8:21 pm



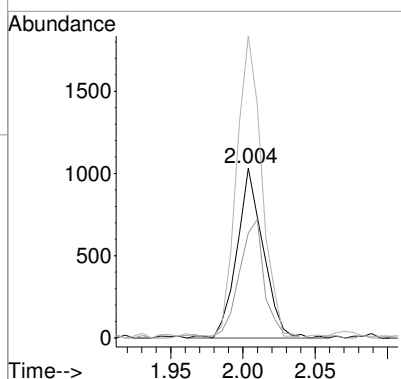
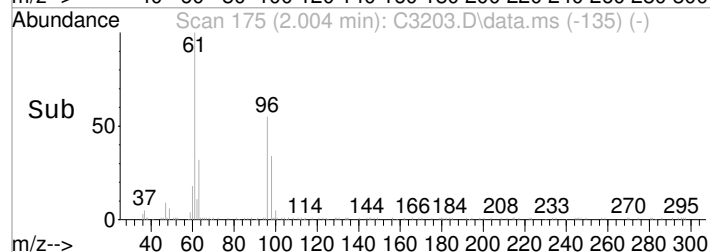
Tgt Ion: 50 Resp: 417
 Ion Ratio Lower Upper
 50 100
 52 44.6 12.1 52.1

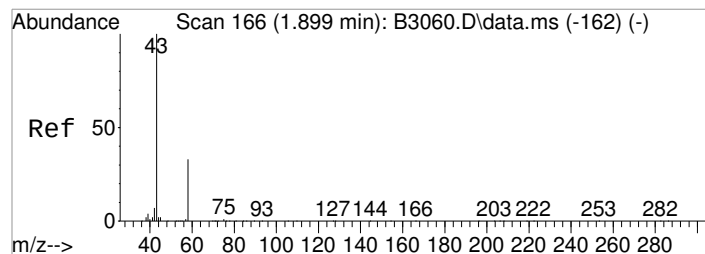


#13
 1,1-Dicethene
 Concen: 1.16 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3203.D
 Acq: 21 Nov 2017 8:21 pm



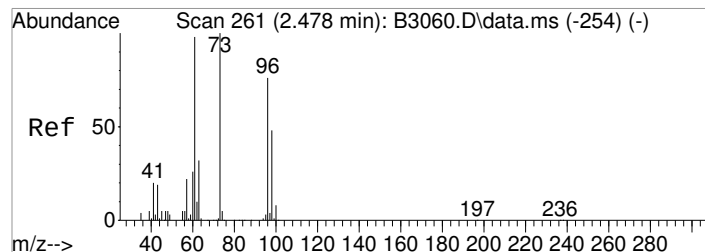
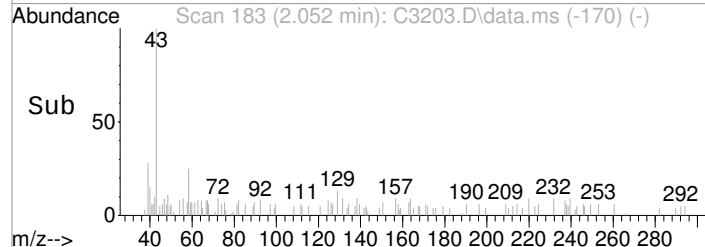
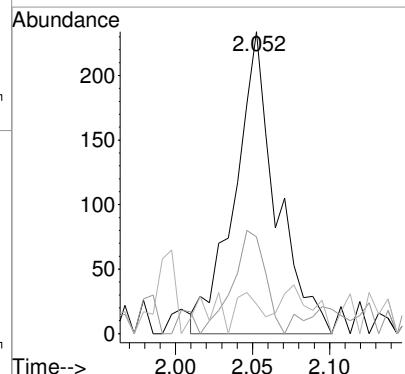
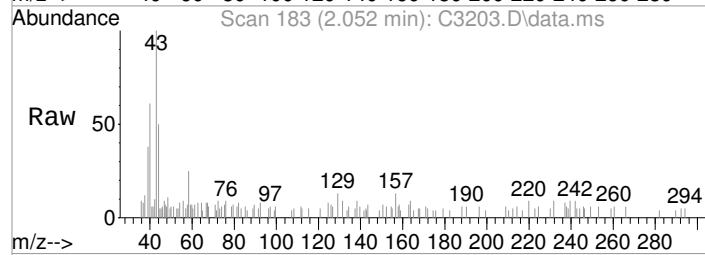
Tgt Ion: 96 Resp: 1305
 Ion Ratio Lower Upper
 96 100
 98 63.7 47.9 87.9
 61 177.7 157.9 197.9





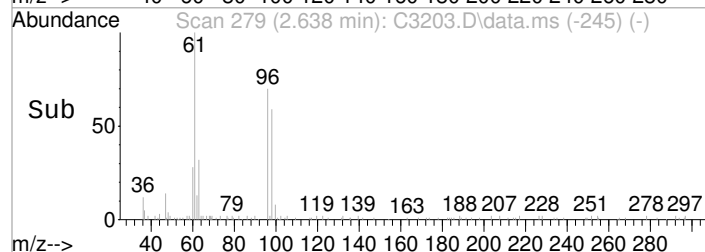
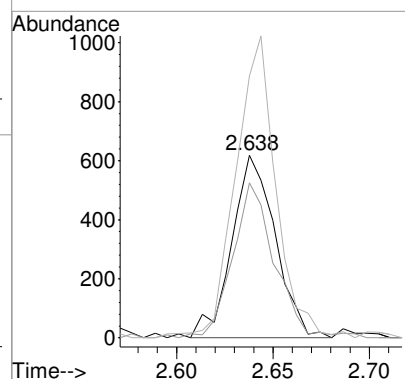
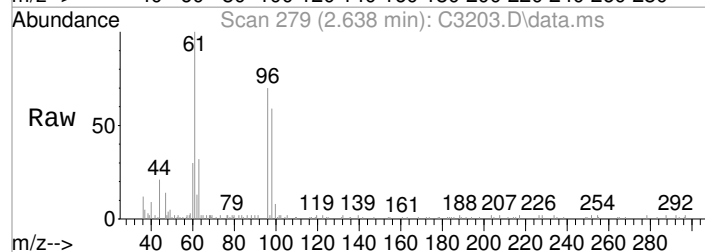
#15
 Acetone
 Concen: 0.49 ug/L
 RT: 2.052 min Scan# 183
 Delta R.T. 0.005 min
 Lab File: C3203.D
 Acq: 21 Nov 2017 8:21 pm

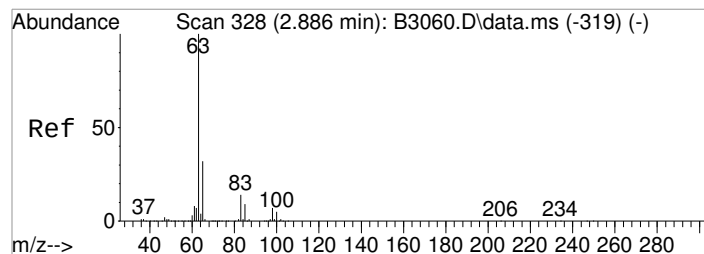
Tgt Ion:	43	Resp:	437
Ion Ratio		Lower	Upper
43	100		
58	32.1	8.6	48.6
42	9.8	0.0	25.7



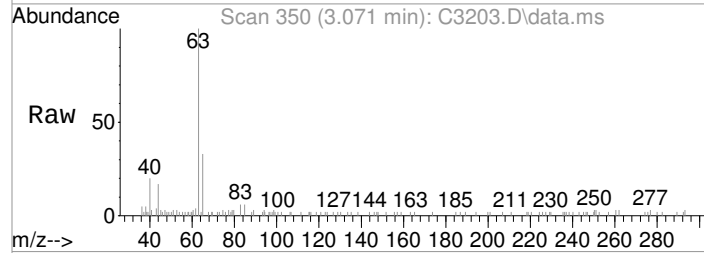
#26
 trans-1,2-Dichloroethene
 Concen: 0.80 ug/L
 RT: 2.638 min Scan# 279
 Delta R.T. -0.005 min
 Lab File: C3203.D
 Acq: 21 Nov 2017 8:21 pm

Tgt Ion:	96	Resp:	969
Ion Ratio		Lower	Upper
96	100		
98	84.8	41.4	81.4#
61	143.5	127.1	167.1

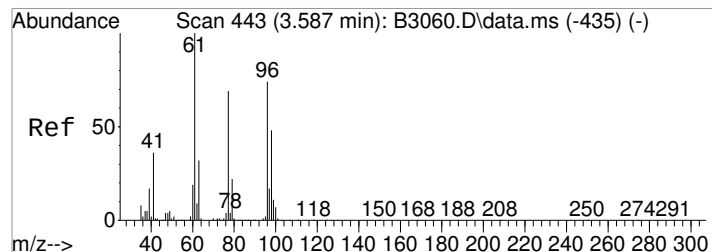
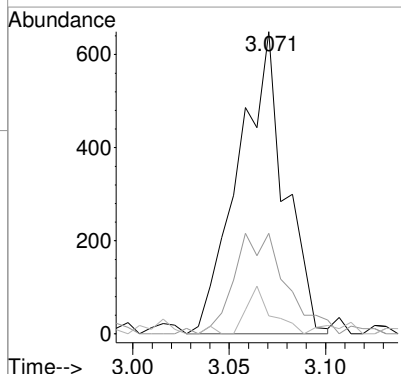
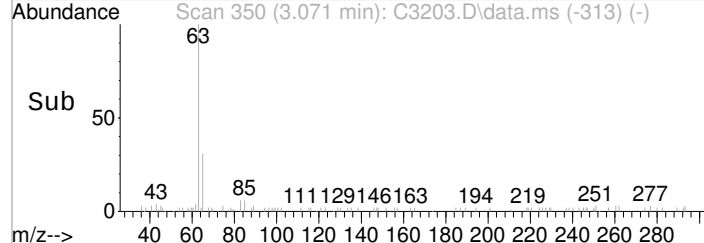




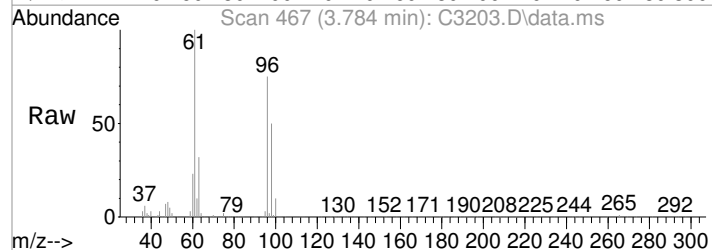
#27
 1,1-Dicethane
 Concen: 0.45 ug/L
 RT: 3.071 min Scan# 350
 Delta R.T. 0.001 min
 Lab File: C3203.D
 Acq: 21 Nov 2017 8:21 pm



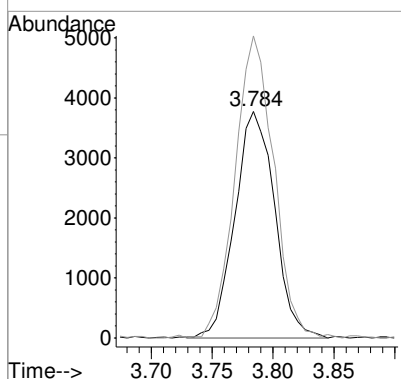
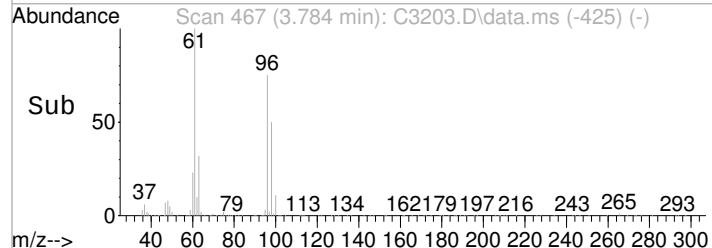
Tgt Ion: 63 Resp: 1086
 Ion Ratio Lower Upper
 63 100
 65 33.3 11.6 51.6
 83 6.0 0.0 32.7

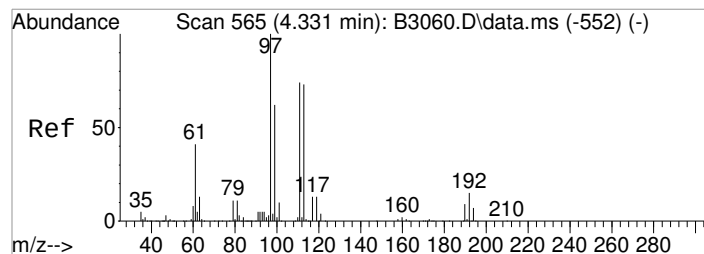


#33
 cis-1,2-Dichloroethene
 Concen: 5.97 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3203.D
 Acq: 21 Nov 2017 8:21 pm

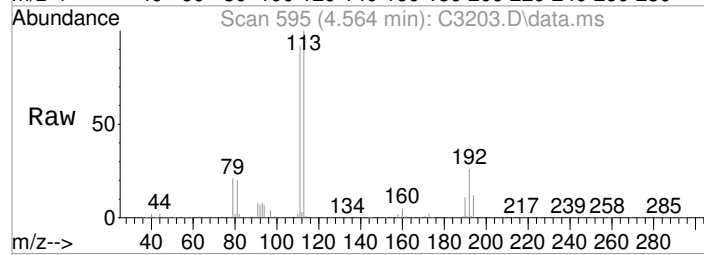


Tgt Ion: 96 Resp: 8579
 Ion Ratio Lower Upper
 96 100
 61 133.3 123.7 163.7

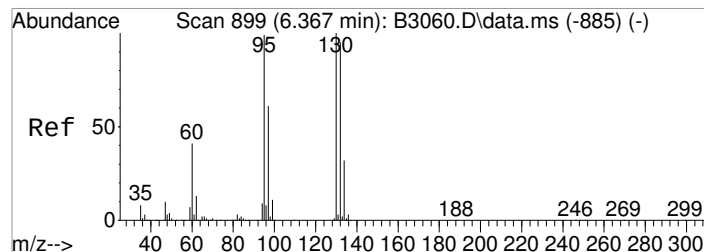
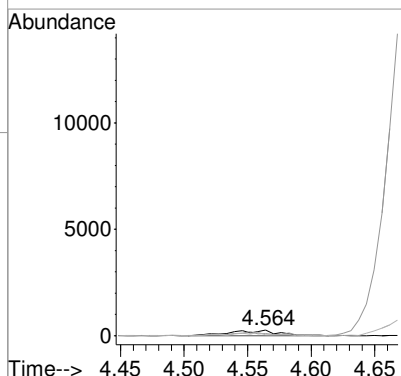
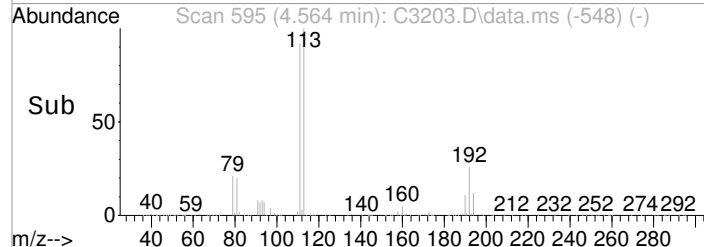




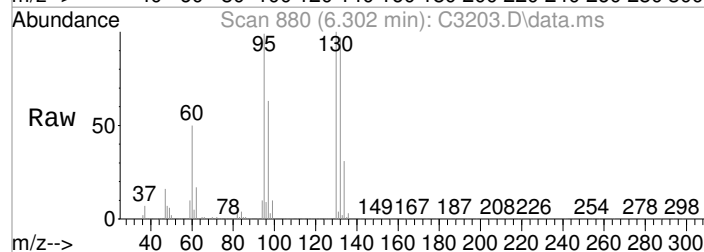
#40
 1,1,1-Trichloroethane
 Concen: 0.36 ug/L m
 RT: 4.564 min Scan# 595
 Delta R.T. 0.009 min
 Lab File: C3203.D
 Acq: 21 Nov 2017 8:21 pm



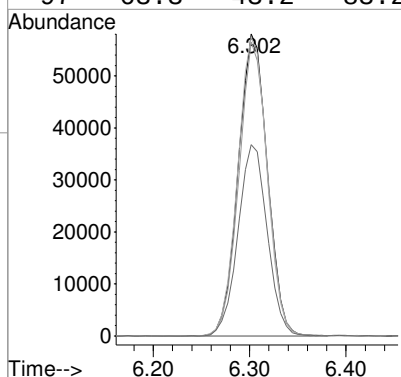
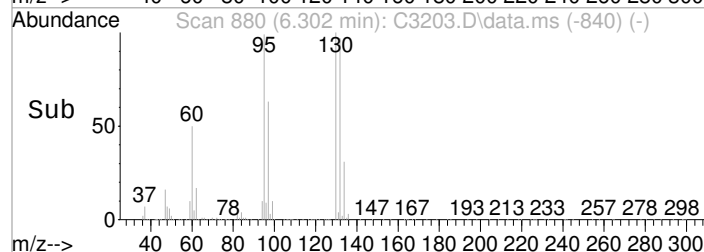
Tgt Ion: 97 Resp: 659
 Ion Ratio Lower Upper
 97 100
 99 36.8 44.2 84.2#
 61 12.6 27.0 67.0#

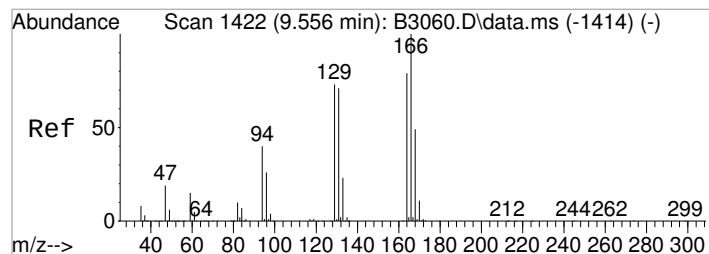


#53
 Trichloroethene
 Concen: 85.67 ug/L
 RT: 6.302 min Scan# 880
 Delta R.T. -0.005 min
 Lab File: C3203.D
 Acq: 21 Nov 2017 8:21 pm

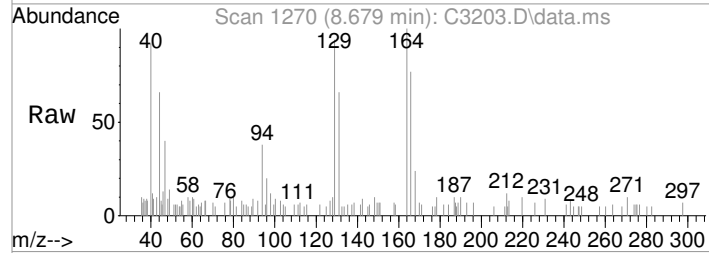


Tgt Ion: 130 Resp: 121827
 Ion Ratio Lower Upper
 130 100
 132 97.3 82.3 122.3
 95 98.9 75.5 115.5
 97 63.3 43.2 83.2

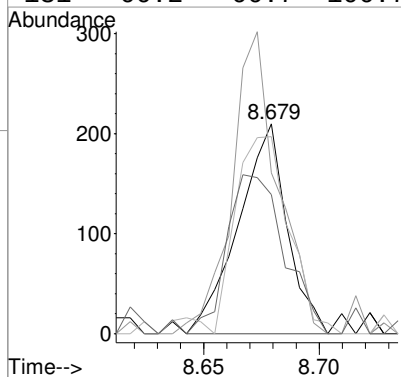
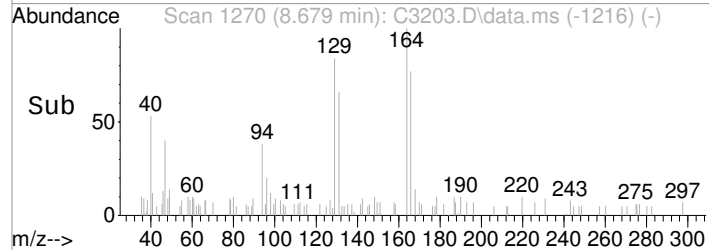




#71
 Tetrachloroethene
 Concen: 0.28 ug/L
 RT: 8.679 min Scan# 1270
 Delta R.T. 0.003 min
 Lab File: C3203.D
 Acq: 21 Nov 2017 8:21 pm



Tgt Ion:	164	Resp:	307
Ion Ratio		Lower	Upper
164	100		
166	76.7	109.9	149.9#
129	93.8	70.1	110.1
131	66.2	66.7	106.7#



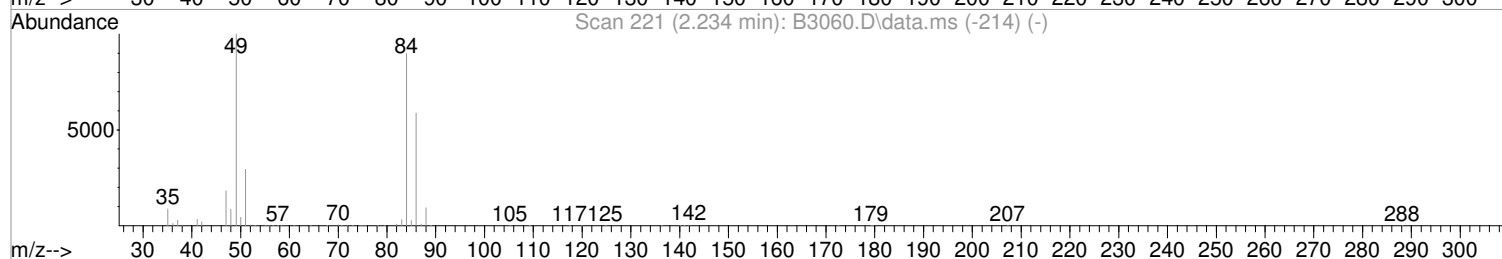
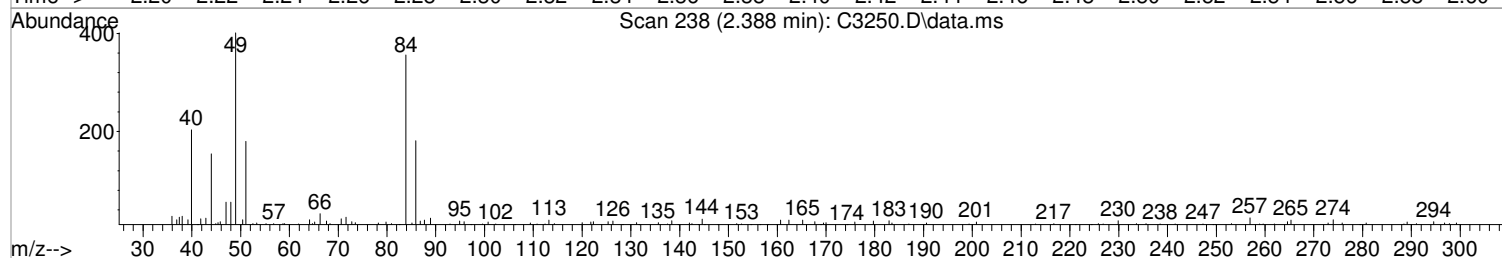
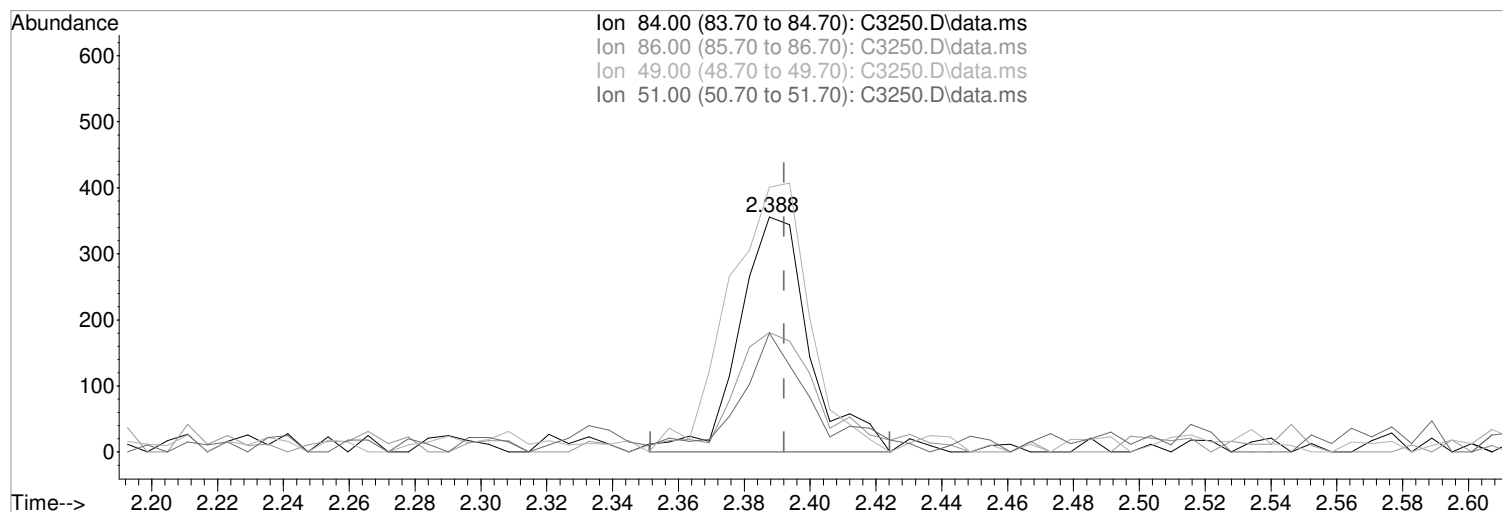
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
Data File : C3250.D
Acq On : 22 Nov 2017 3:40 pm
Operator : F. NAEGLER
Sample : R1710784-020|1.0
Misc : ECOLOGY 16560 T2
ALS Vial : 12 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 16:18:40 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



(22) Methylene Chloride (P)

2.388min (-0.004) 0.37 ug/L m

response 522

Ion	Exp%	Act%
84.00	100	100
86.00	64.80	50.84
49.00	138.10	112.64#
51.00	42.50	50.56

Manual Integration:

After

Peak not found.

11/27/17

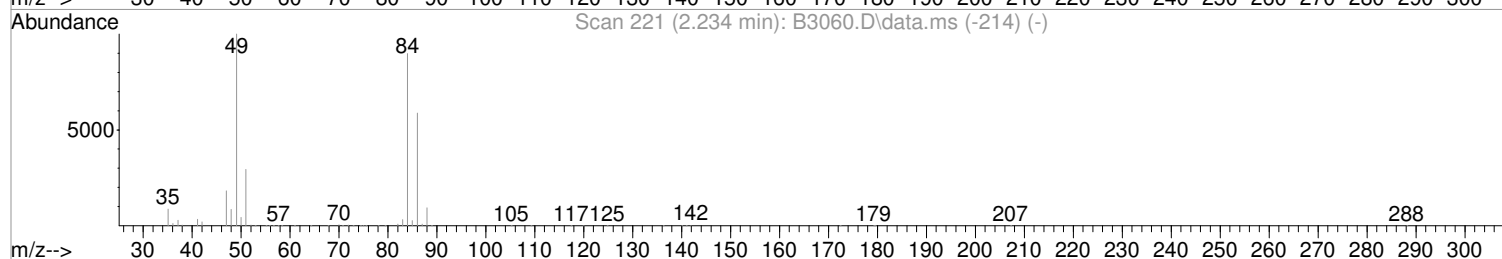
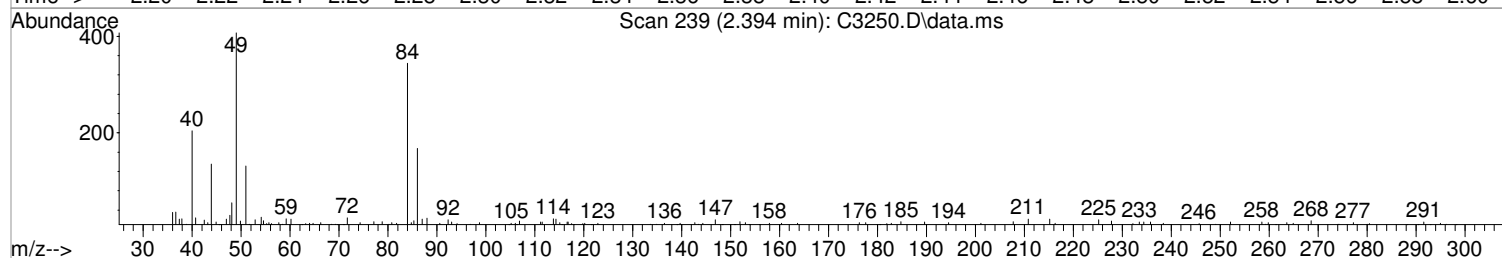
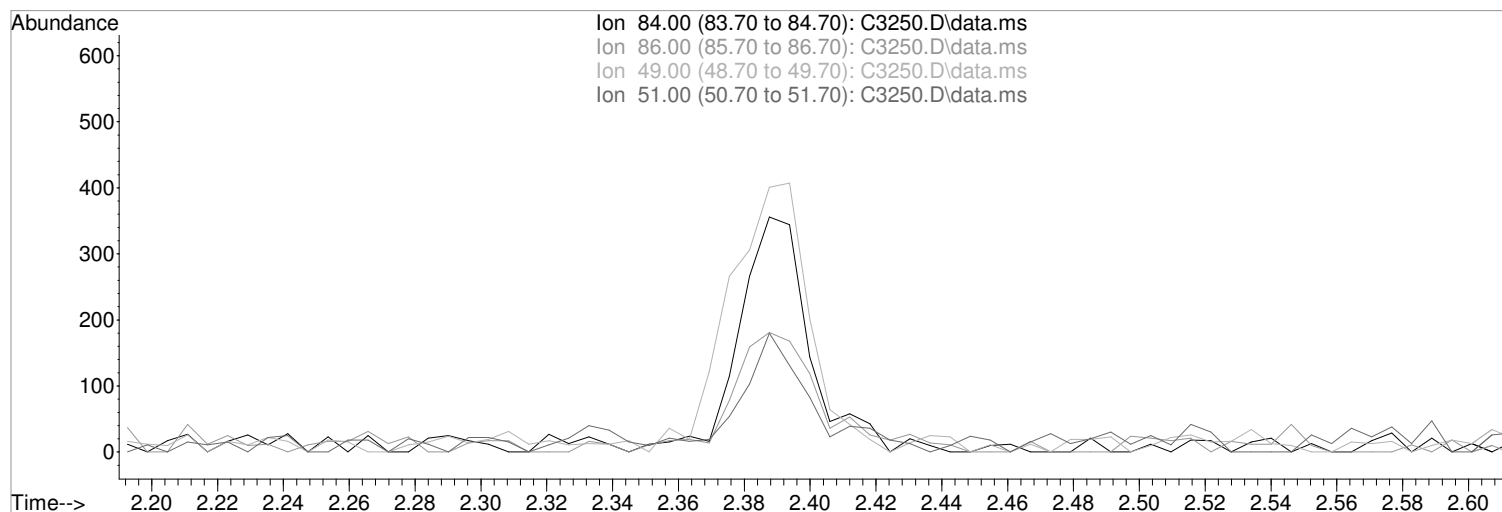
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
Data File : C3250.D
Acq On : 22 Nov 2017 3:40 pm
Operator : F. NAEGLER
Sample : R1710784-020|1.0
Misc : ECOLOGY 16560 T2
ALS Vial : 12 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 16:18:40 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



(22) Methylene Chloride (P)

Manual Integration:

2.392min (-2.392) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
84.00	100	0.00
86.00	64.80	0.00#
49.00	138.10	0.00#
51.00	42.50	0.00#

11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3250.D
 Acq On : 22 Nov 2017 3:40 pm
 Operator : F. NAEGLER
 Sample : R1710784-020|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 12 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 27 14:36:43 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

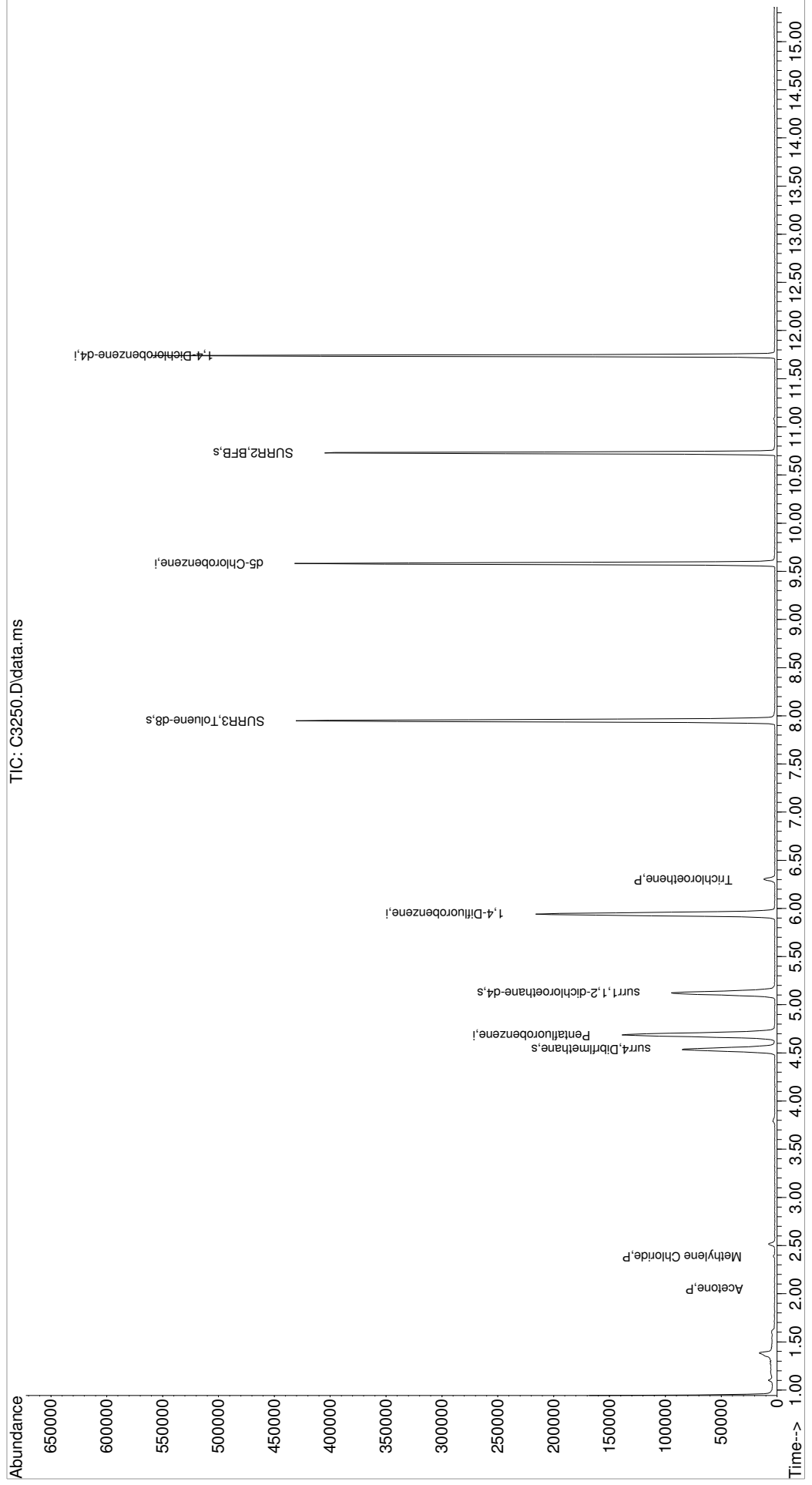
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

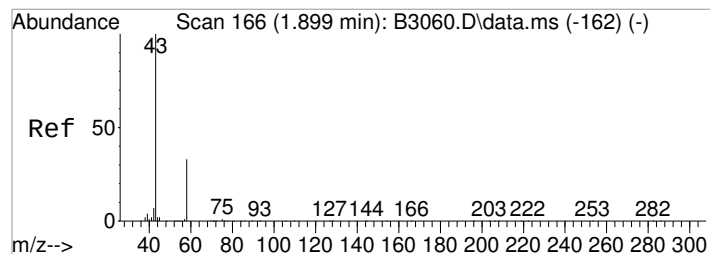
Internal Standards						
1) Pentafluorobenzene	4.686	168	136798	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	201780	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	180857	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	101652	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	64773	47.80	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery =	95.60%		
47) surr1,1,2-dichloroetha...	5.125	65	93645	50.83	ug/L	0.00
Spiked Amount 50.000	Range 73 - 125		Recovery =	101.66%		
64) SURR3,Toluene-d8	7.948	98	259599	48.64	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery =	97.28%		
69) SURR2,BFB	10.727	95	97761	47.96	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery =	95.92%		
Target Compounds						
15) Acetone	2.046	43	302	0.32	ug/L #	Qvalue 69
22) Methylene Chloride	2.388	84	522m	0.37	ug/L	
53) Trichloroethene	6.302	130	3821	2.63	ug/L #	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSV0A14\Data\112217\
 Data File : C3250.D
 Acq On : 22 Nov 2017 3:40 pm
 Operator : F. NAEGLER
 Sample : R1710784-020|1.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 12 Sample Multiplier: 1
 Inst : MSV0A14

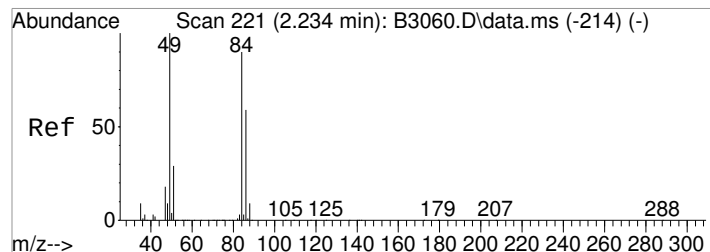
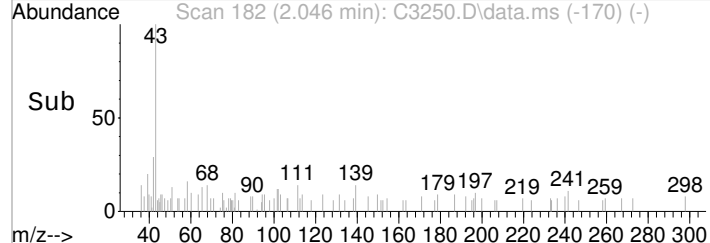
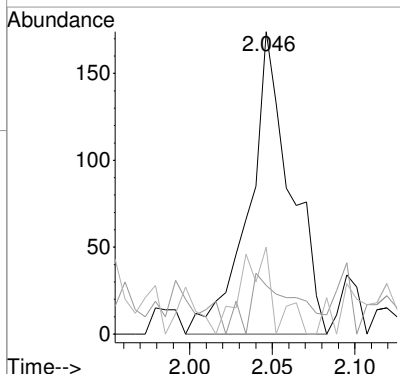
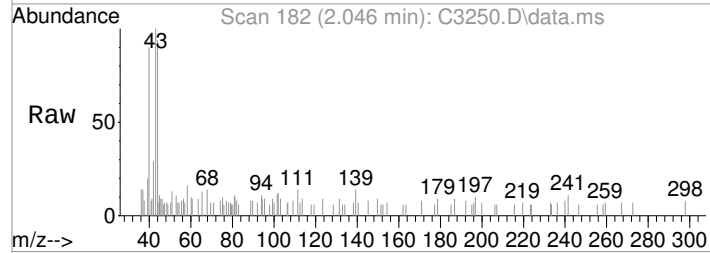
Quant Time: Nov 27 14:36:43 2017
 Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration





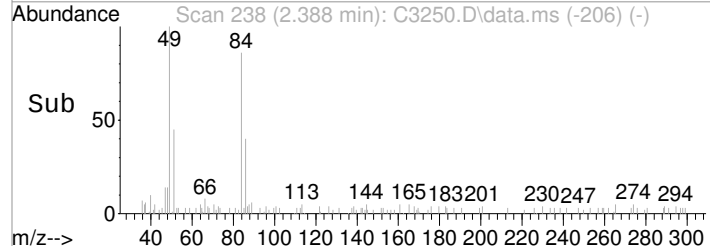
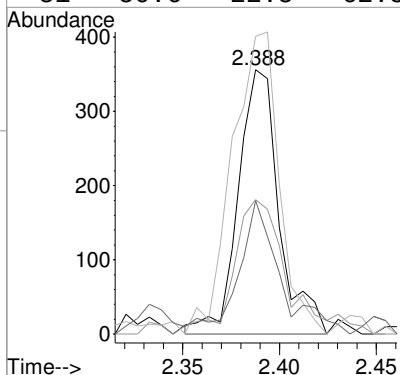
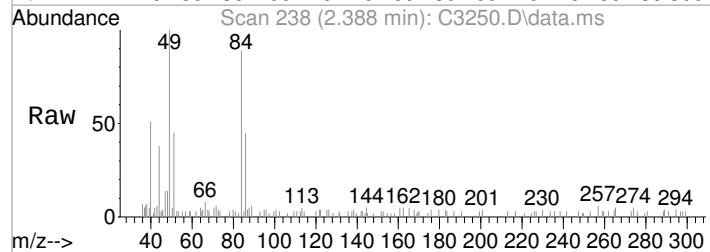
#15
 Acetone
 Concen: 0.32 ug/L
 RT: 2.046 min Scan# 182
 Delta R.T. -0.002 min
 Lab File: C3250.D
 Acq: 22 Nov 2017 3:40 pm

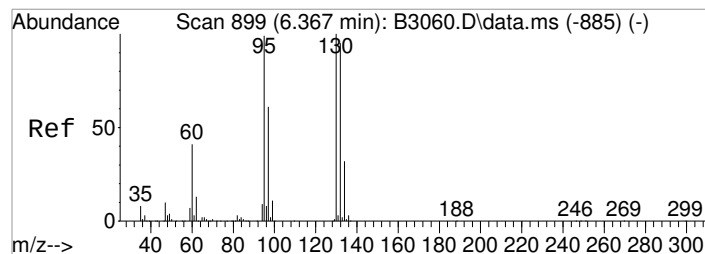
Tgt Ion: 43 Resp: 302
 Ion Ratio Lower Upper
 43 100
 58 16.1 8.6 48.6
 42 28.7 0.0 25.7#



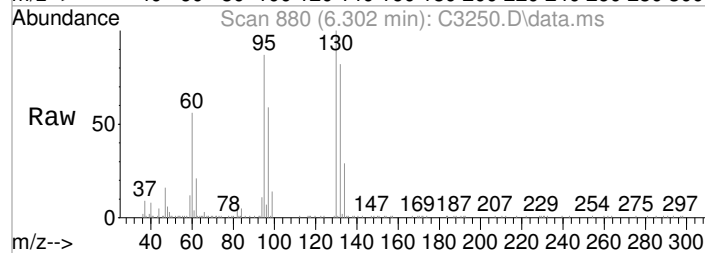
#22
 Methylene Chloride
 Concen: 0.37 ug/L m
 RT: 2.388 min Scan# 238
 Delta R.T. -0.004 min
 Lab File: C3250.D
 Acq: 22 Nov 2017 3:40 pm

Tgt Ion: 84 Resp: 522
 Ion Ratio Lower Upper
 84 100
 86 50.8 44.8 84.8
 49 112.6 118.1 158.1#
 51 50.6 22.5 62.5

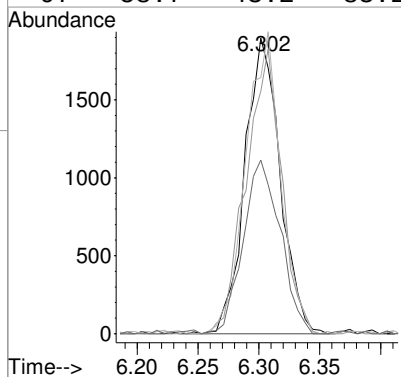
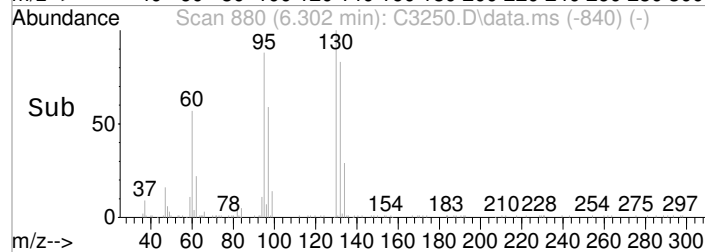




#53
 Trichloroethene
 Concen: 2.63 ug/L
 RT: 6.302 min Scan# 880
 Delta R.T. -0.005 min
 Lab File: C3250.D
 Acq: 22 Nov 2017 3:40 pm



Tgt Ion:	130	Resp:	3821
Ion Ratio		Lower	Upper
130	100		
132	82.1	82.3	122.3#
95	86.7	75.5	115.5
97	58.7	43.2	83.2



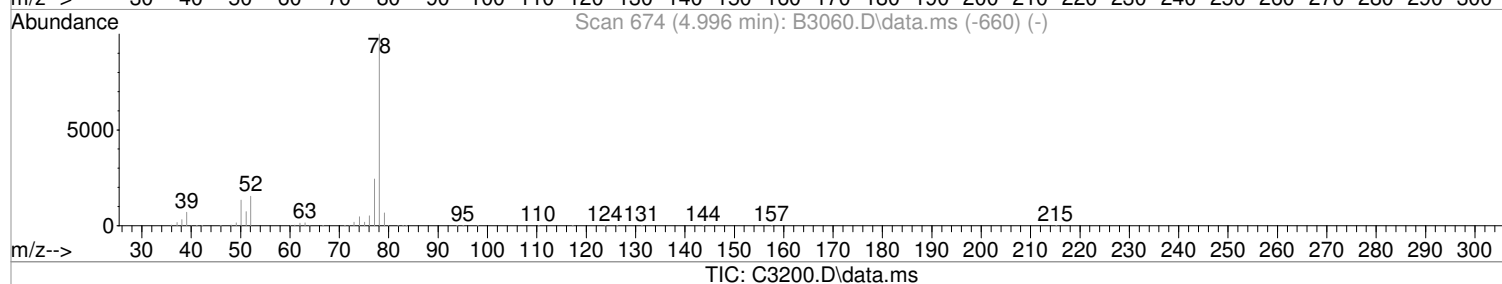
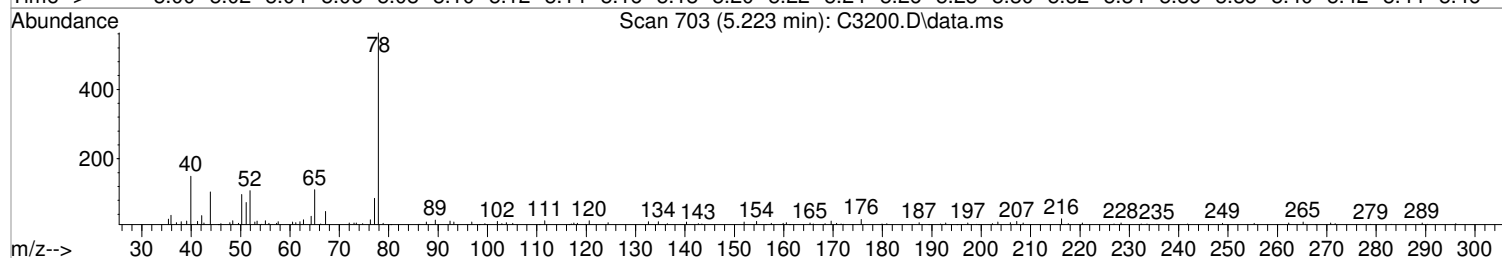
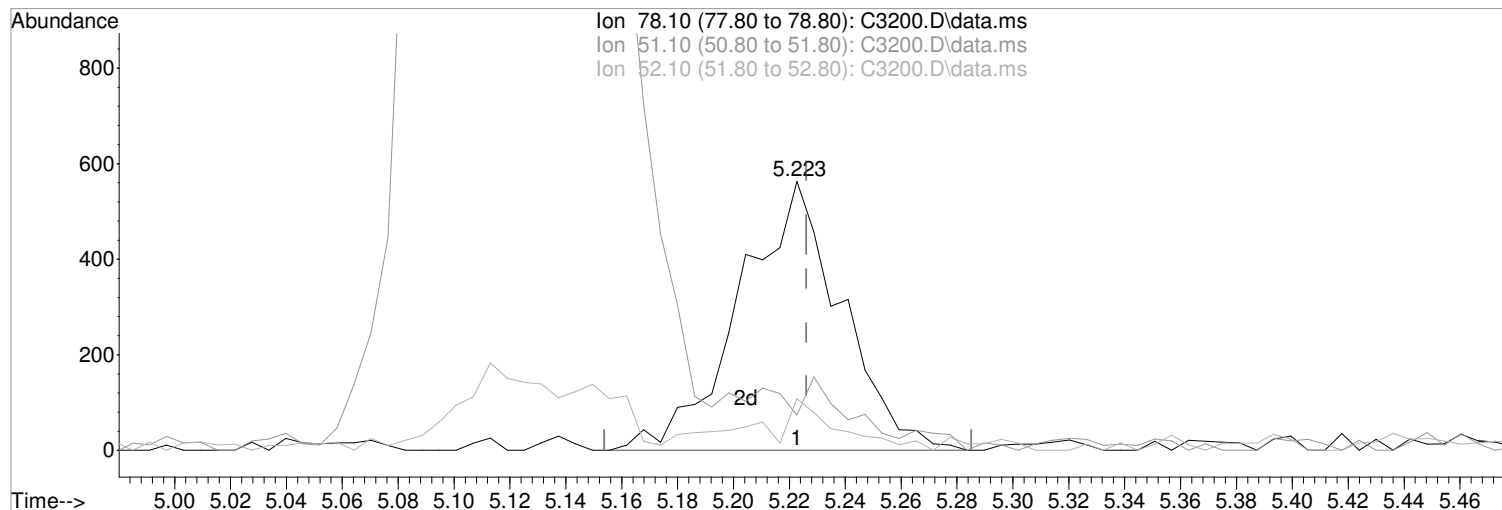
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3200.D
Acq On : 21 Nov 2017 7:14 pm
Operator : F. NAEGLER
Sample : R1710784-021|2.0
Misc : ECOLOGY 16560 T2
ALS Vial : 24 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 09:25:15 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



(48) Benzene (P)

5.223min (-0.003) 0.27 ug/L m

response 1419

Ion	Exp%	Act%
78.10	100	100
51.10	17.70	13.14
52.10	16.10	19.18
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

11/27/17

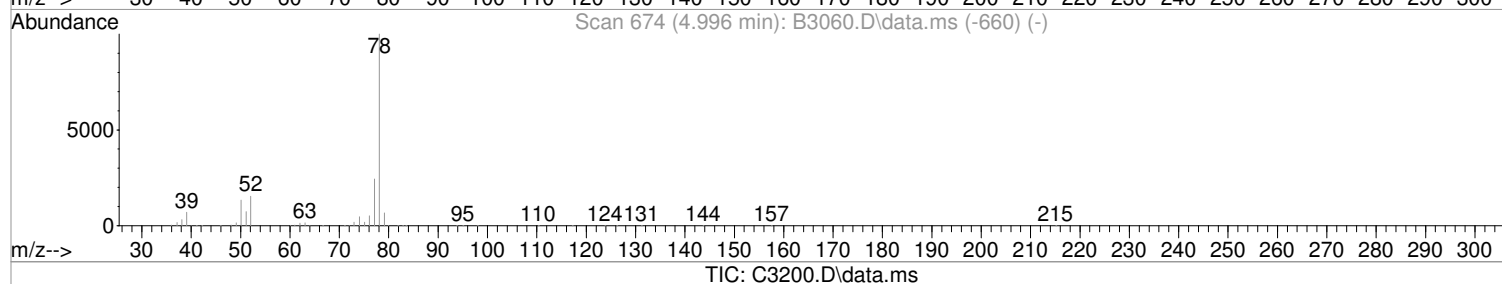
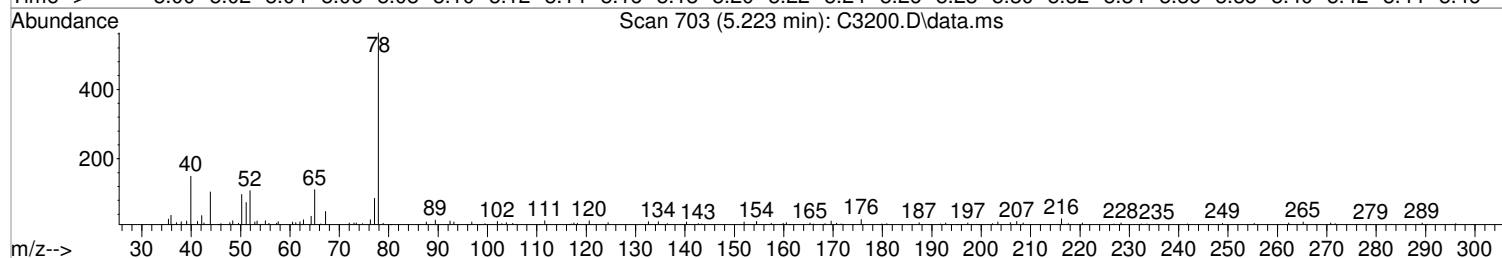
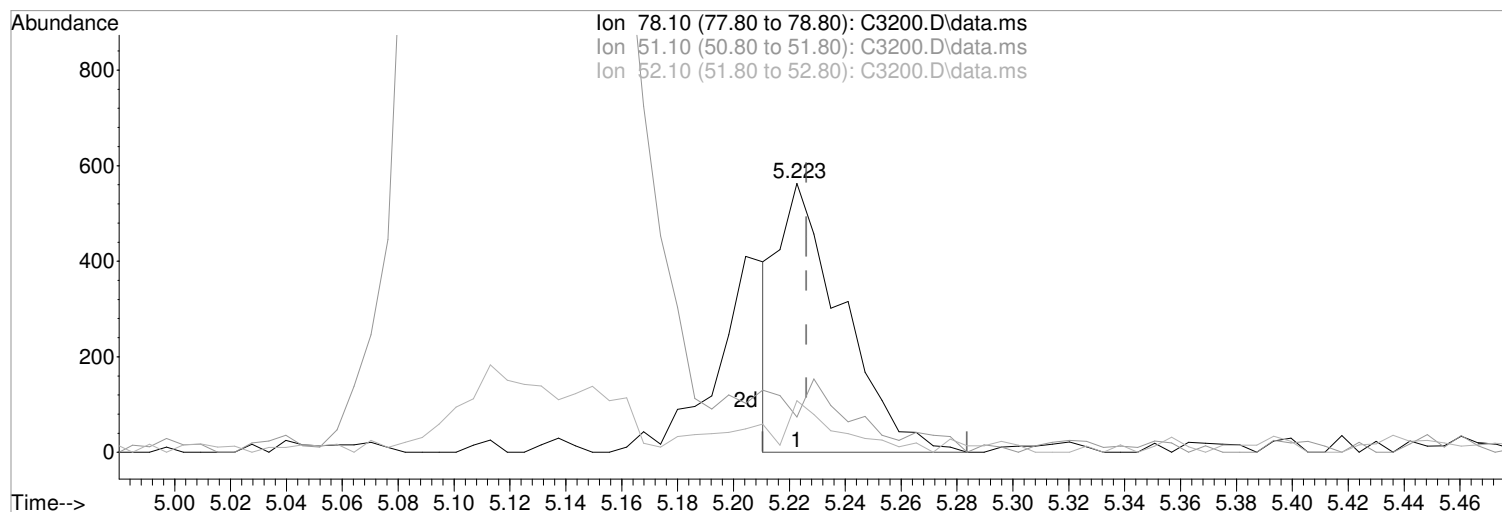
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3200.D
Acq On : 21 Nov 2017 7:14 pm
Operator : F. NAEGLER
Sample : R1710784-021|2.0
Misc : ECOLOGY 16560 T2
ALS Vial : 24 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 09:25:15 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



(48) Benzene (P)

Manual Integration:

5.223min (-0.003) 0.17 ug/L

Before

response 896

Ion	Exp%	Act%
78.10	100	100
51.10	17.70	13.14
52.10	16.10	19.18
0.00	0.00	0.00

11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3200.D
 Acq On : 21 Nov 2017 7:14 pm
 Operator : F. NAEGLER
 Sample : R1710784-021|2.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 24 Sample Multiplier: 1

Inst : MSVOA14

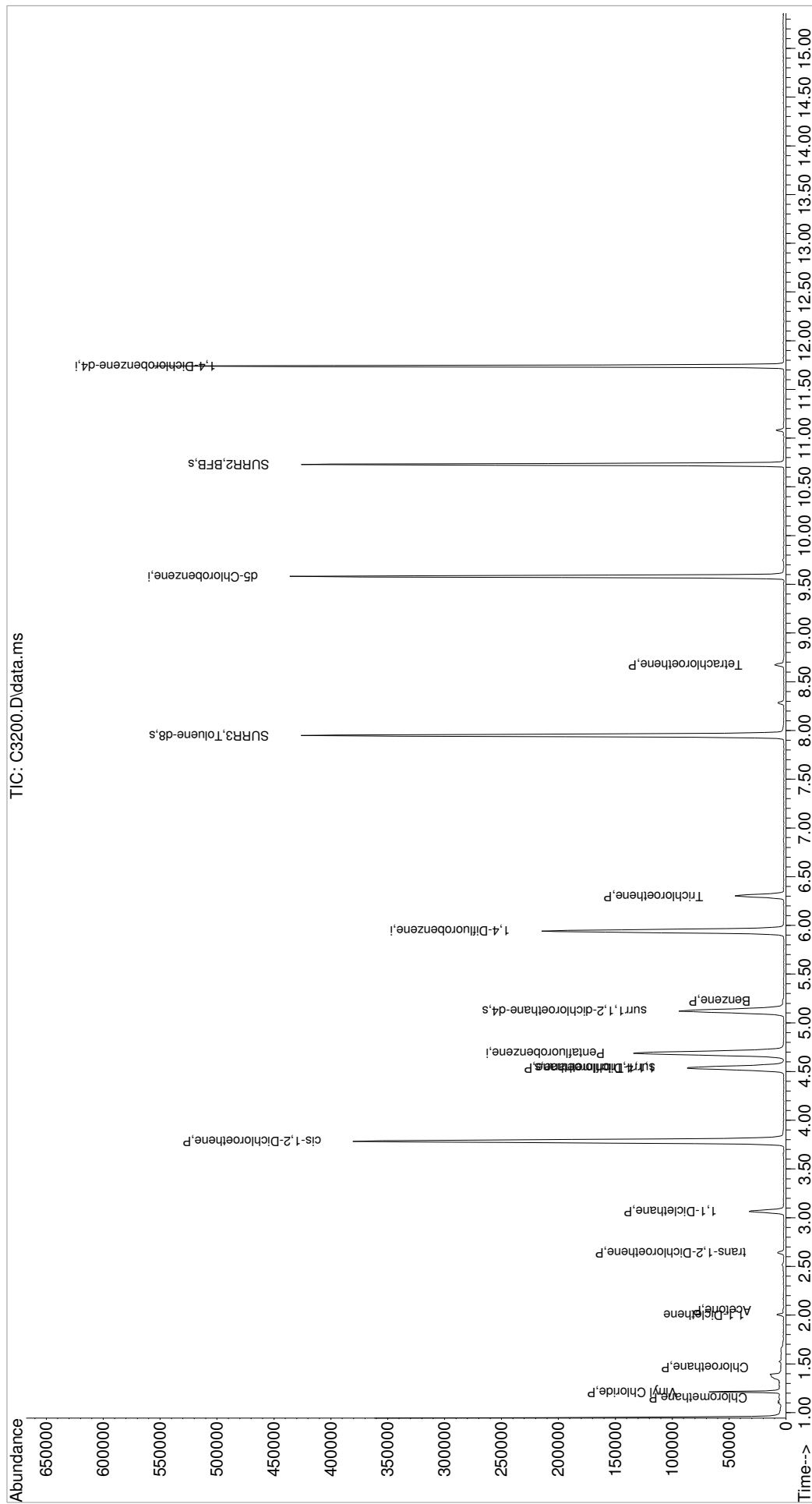
Quant Time: Nov 27 12:42:24 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

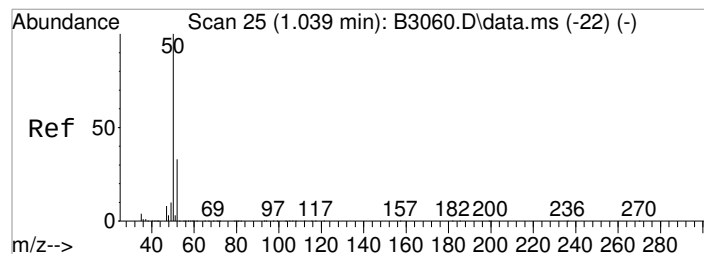
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	133352	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	199089	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.582	117	185356	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	101340	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	65948	49.33	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 98.66%			
47) surr1,1,2-dichloroetha...	5.119	65	91424	50.29	ug/L	0.00
Spiked Amount 50.000	Range 73 - 125		Recovery = 100.58%			
64) SURR3,Toluene-d8	7.948	98	259339	49.25	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 98.50%			
69) SURR2,BFB	10.728	95	100629	50.04	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 100.08%			
Target Compounds						
3) Chloromethane	1.150	50	475	0.25	ug/L	Qvalue # 63
4) Vinyl Chloride	1.211	62	30195	17.74	ug/L	98
6) Chloroethane	1.467	64	291	0.27	ug/L	75
13) 1,1-Dicethene	2.004	96	1471	1.28	ug/L	93
15) Acetone	2.046	43	578	0.63	ug/L	86
26) trans-1,2-Dichloroethene	2.644	96	1810	1.47	ug/L	96
27) 1,1-Dicethane	3.065	63	28128	11.54	ug/L	95
33) cis-1,2-Dichloroethene	3.784	96	183322	125.63	ug/L	96
40) 1,1,1-Trichloroethane	4.540	97	2678	1.44	ug/L	85
48) Benzene	5.223	78	1419m	0.27	ug/L	
53) Trichloroethene	6.302	130	16436	11.45	ug/L	97
71) Tetrachloroethene	8.673	164	1757	1.62	ug/L	Qvalue # 88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

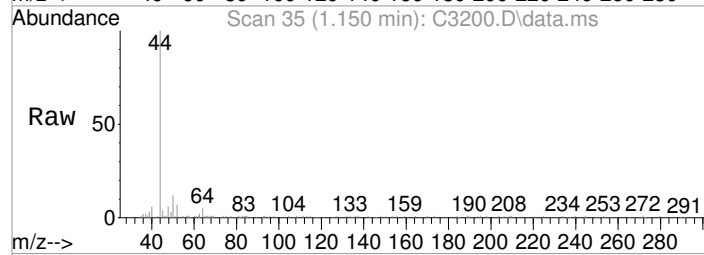
Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3200.D
Acq On : 21 Nov 2017 7:14 pm
Operator : F. NAEGLER
Sample : R1710784-021|2.0
Misc : ECOLOGY 16560 T2
ALS Vial : 24 Sample Multiplier: 1
Inst : MSVOA14

Quant Time: Nov 27 12:42:24 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration

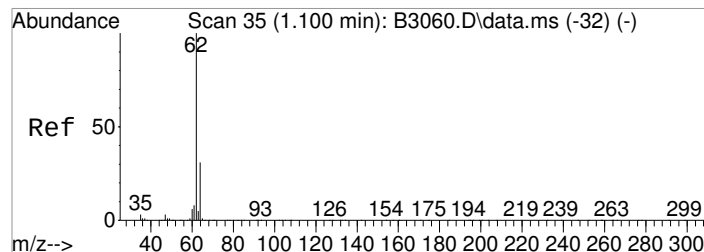
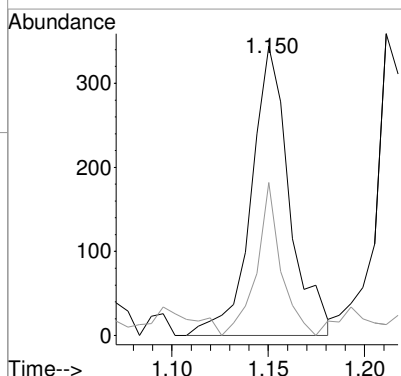
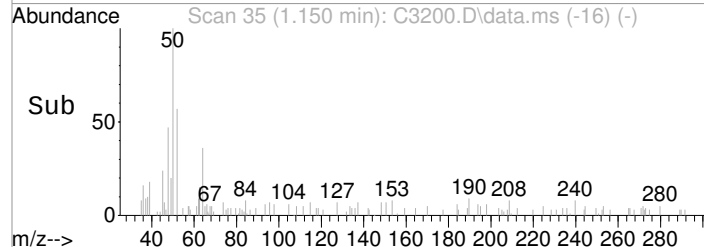




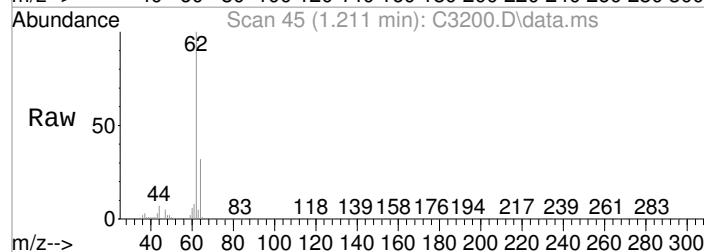
#3
 Chloromethane
 Concen: 0.25 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. 0.000 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm



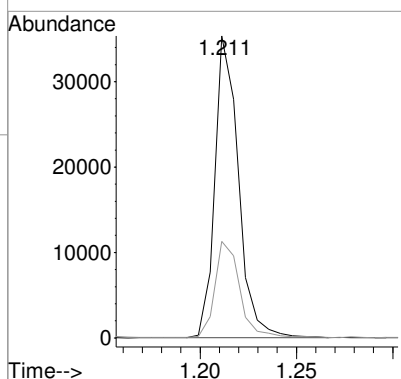
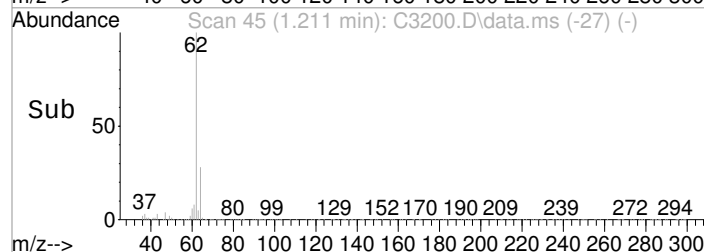
Tgt Ion: 50 Resp: 475
 Ion Ratio Lower Upper
 50 100
 52 52.9 12.1 52.1#

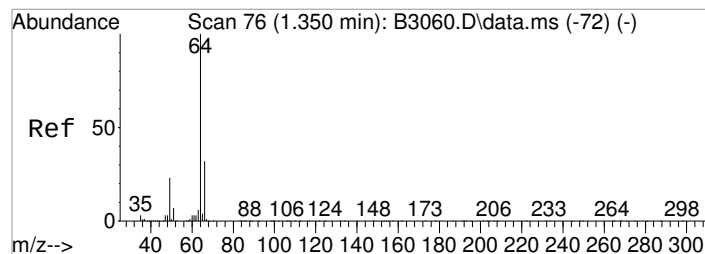


#4
 Vinyl Chloride
 Concen: 17.74 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm

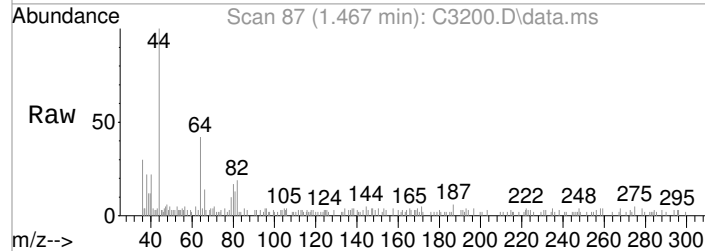


Tgt Ion: 62 Resp: 30195
 Ion Ratio Lower Upper
 62 100
 64 32.0 10.9 50.9

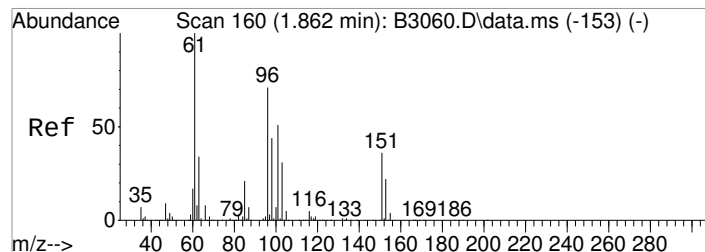
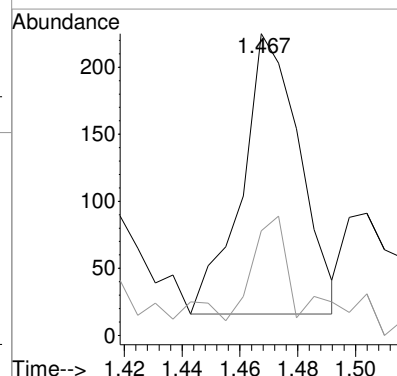
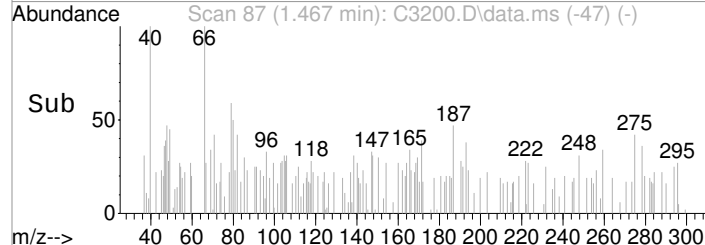




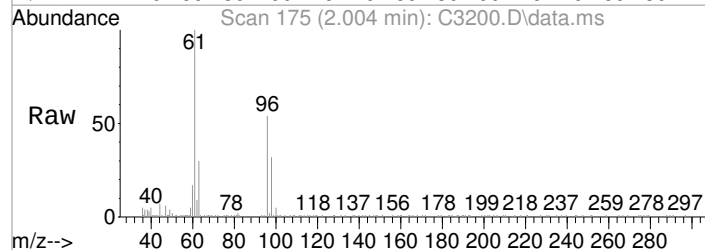
#6
 Chloroethane
 Concen: 0.27 ug/L
 RT: 1.467 min Scan# 87
 Delta R.T. -0.003 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm



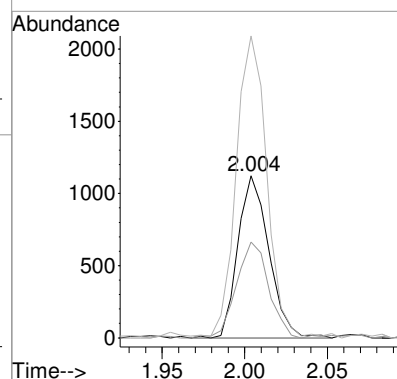
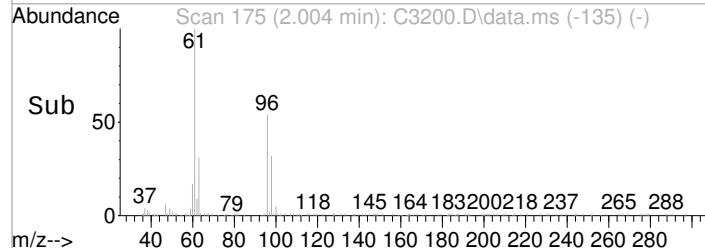
Tgt Ion: 64 Resp: 291
 Ion Ratio Lower Upper
 64 100
 66 42.2 9.1 49.1

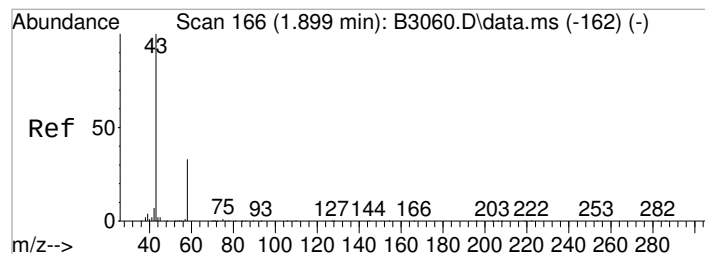


#13
 1,1-Dicethene
 Concen: 1.28 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm



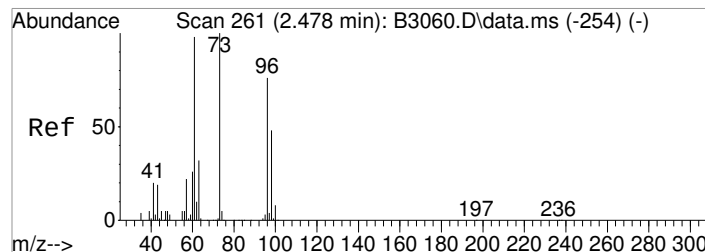
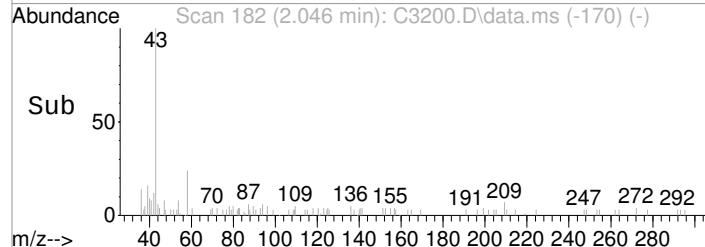
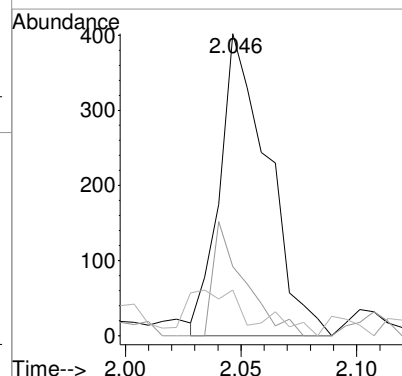
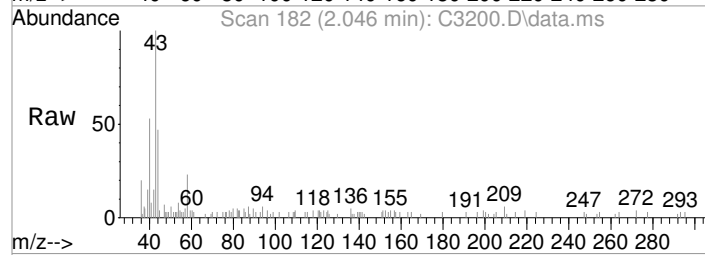
Tgt Ion: 96 Resp: 1471
 Ion Ratio Lower Upper
 96 100
 98 59.2 47.9 87.9
 61 186.2 157.9 197.9





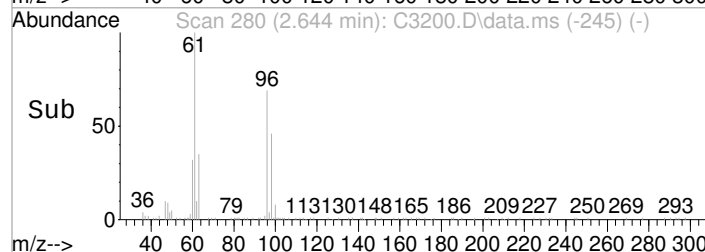
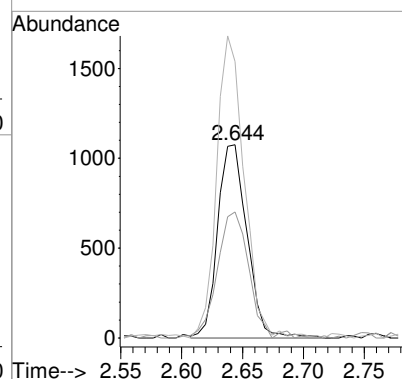
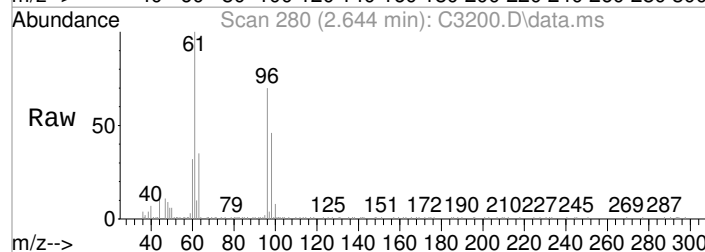
#15
 Acetone
 Concen: 0.63 ug/L
 RT: 2.046 min Scan# 182
 Delta R.T. -0.001 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm

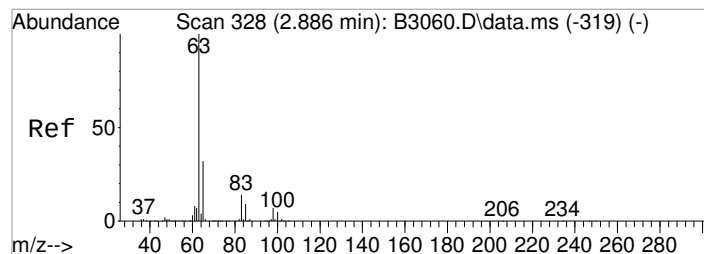
Tgt Ion: 43 Resp: 578
 Ion Ratio Lower Upper
 43 100
 58 22.9 8.6 48.6
 42 15.2 0.0 25.7



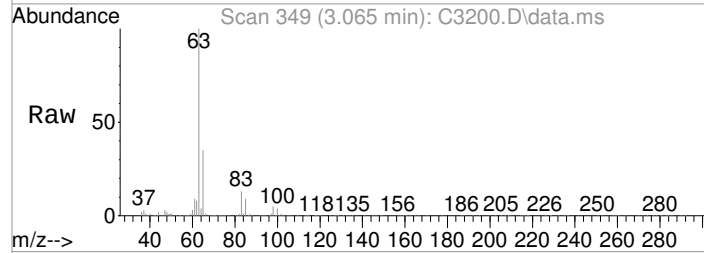
#26
 trans-1,2-Dichloroethene
 Concen: 1.47 ug/L
 RT: 2.644 min Scan# 280
 Delta R.T. 0.001 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm

Tgt Ion: 96 Resp: 1810
 Ion Ratio Lower Upper
 96 100
 98 65.1 41.4 81.4
 61 142.9 127.1 167.1

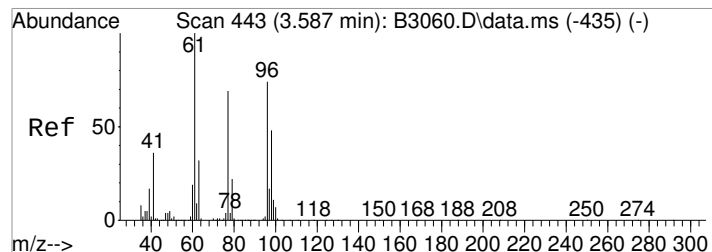
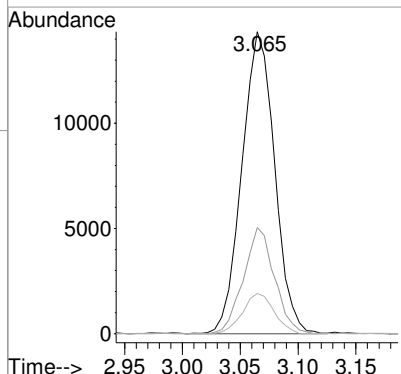
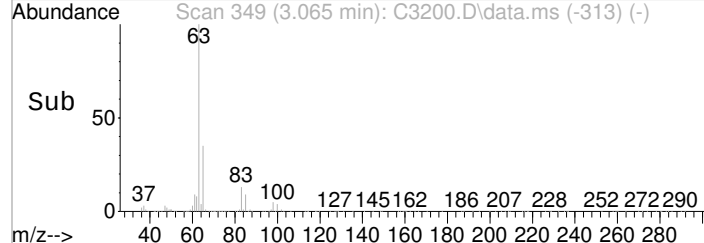




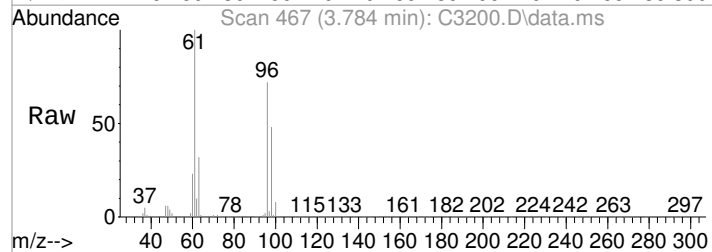
#27
 1,1-Dicethane
 Concen: 11.54 ug/L
 RT: 3.065 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm



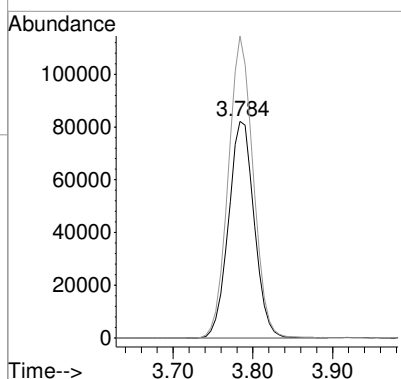
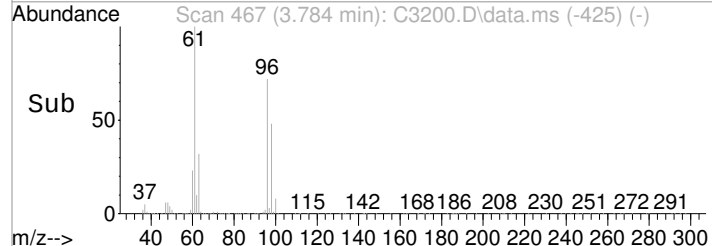
Tgt Ion: 63 Resp: 28128
 Ion Ratio Lower Upper
 63 100
 65 35.2 11.6 51.6
 83 13.3 0.0 32.7

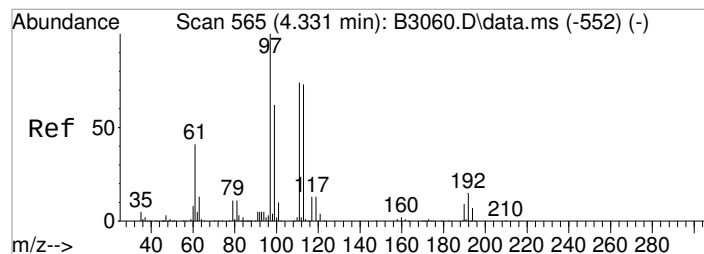


#33
 cis-1,2-Dichloroethene
 Concen: 125.63 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm



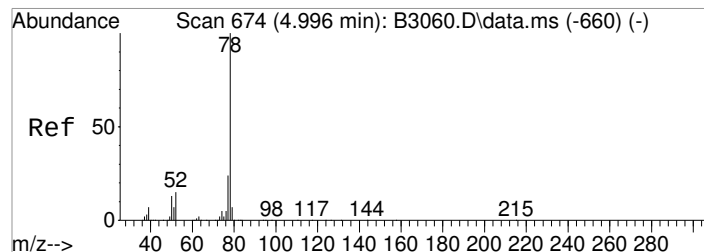
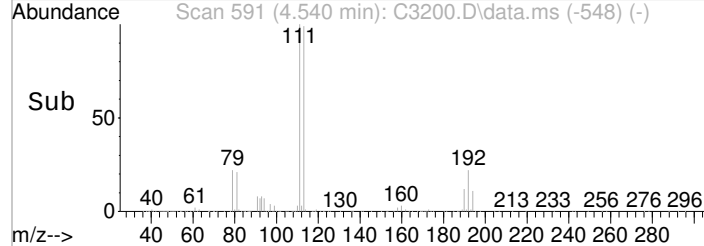
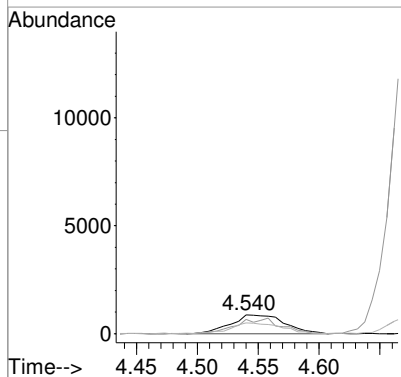
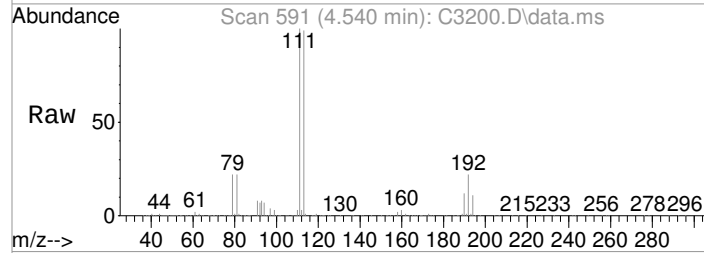
Tgt Ion: 96 Resp: 183322
 Ion Ratio Lower Upper
 96 100
 61 139.3 123.7 163.7





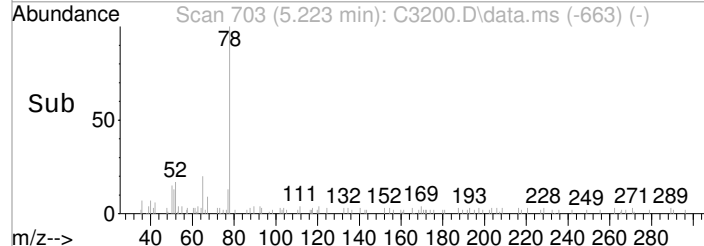
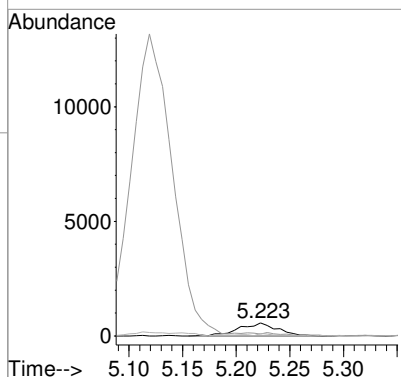
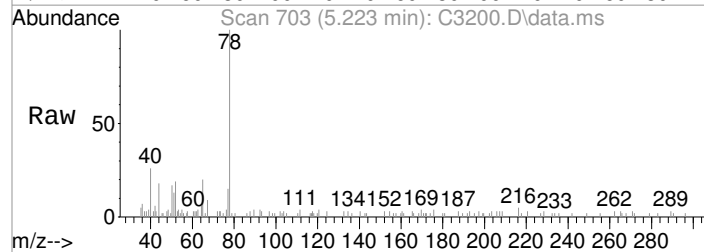
#40
 1,1,1-Trichloroethane
 Concen: 1.44 ug/L
 RT: 4.540 min Scan# 591
 Delta R.T. -0.016 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm

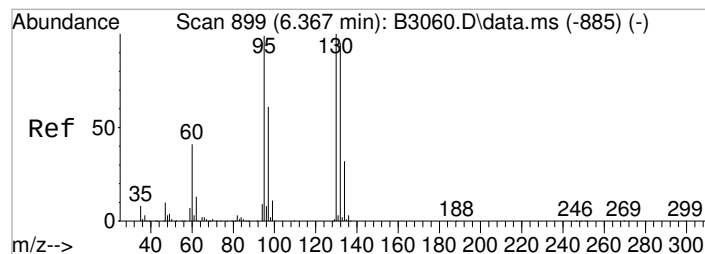
Tgt Ion:	97	Resp:	2678
Ion Ratio		Lower	Upper
97	100		
99	75.2	44.2	84.2
61	57.7	27.0	67.0



#48
 Benzene
 Concen: 0.27 ug/L m
 RT: 5.223 min Scan# 703
 Delta R.T. -0.003 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm

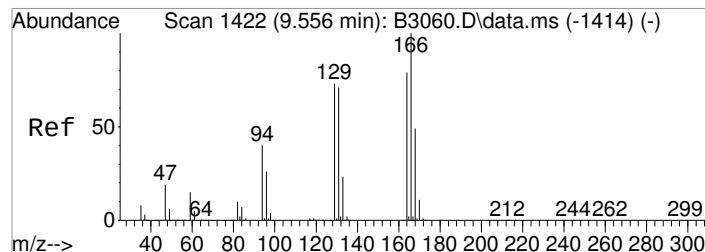
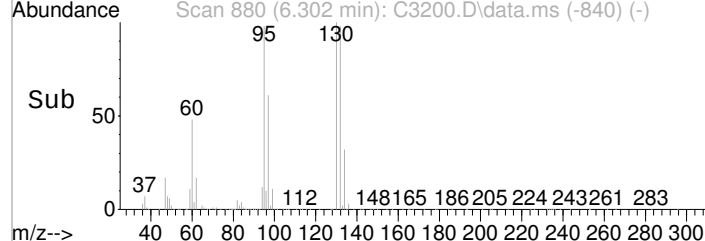
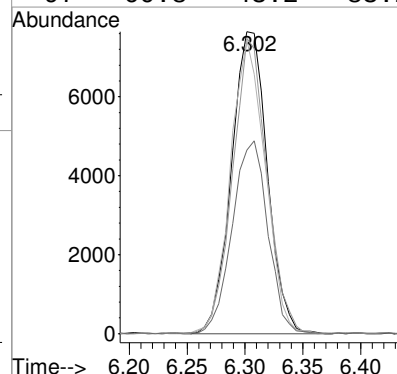
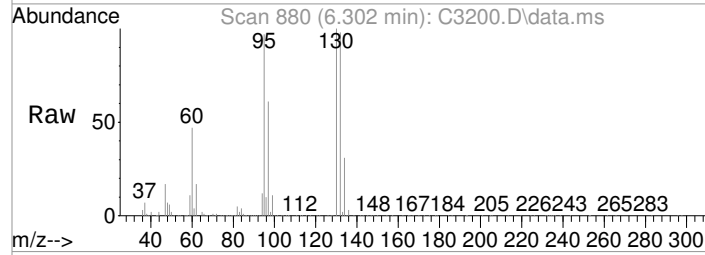
Tgt Ion:	78	Resp:	1419
Ion Ratio		Lower	Upper
78	100		
51	13.1	0.0	37.7
52	19.2	0.0	36.1





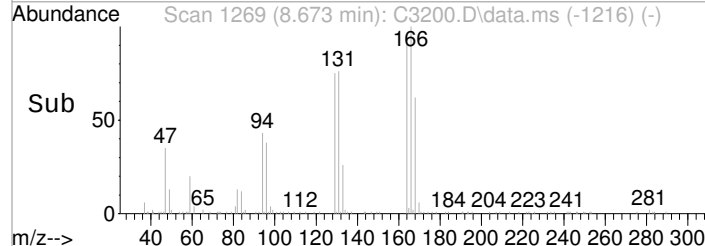
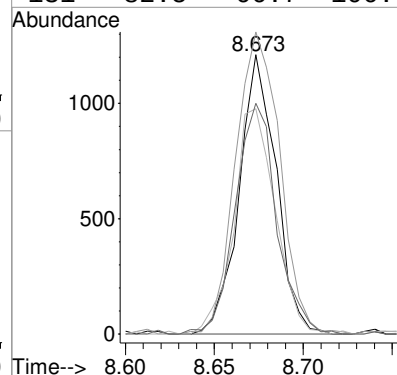
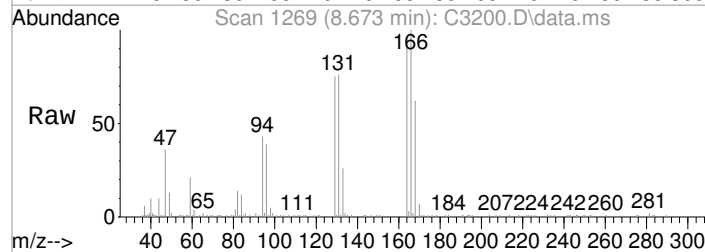
#53
 Trichloroethene
 Concen: 11.45 ug/L
 RT: 6.302 min Scan# 880
 Delta R.T. -0.005 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm

Tgt Ion	Ratio	Resp	Lower	Upper
130	100			
132	97.7	82.3	122.3	
95	97.3	75.5	115.5	
97	60.8	43.2	83.2	



#71
 Tetrachloroethene
 Concen: 1.62 ug/L
 RT: 8.673 min Scan# 1269
 Delta R.T. -0.003 min
 Lab File: C3200.D
 Acq: 21 Nov 2017 7:14 pm

Tgt Ion	Ratio	Resp	Lower	Upper
164	100			
166	108.1	109.9	149.9#	
129	80.6	70.1	110.1	
131	82.5	66.7	106.7	



Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3201.D
 Acq On : 21 Nov 2017 7:36 pm
 Operator : F. NAEGLER
 Sample : R1710784-022|2.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 25 Sample Multiplier: 1

Inst : MSVOA14

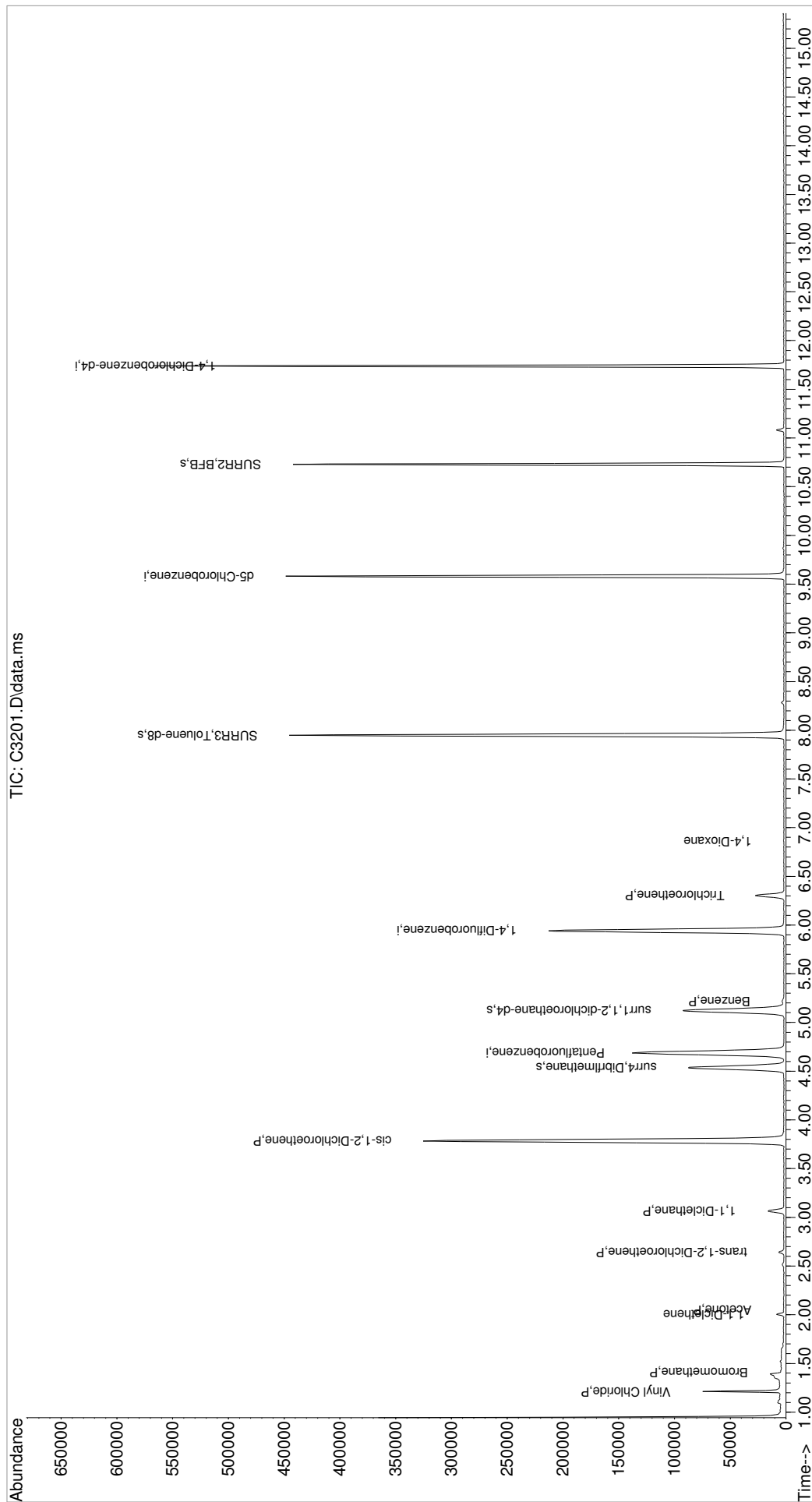
Quant Time: Nov 27 12:44:05 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

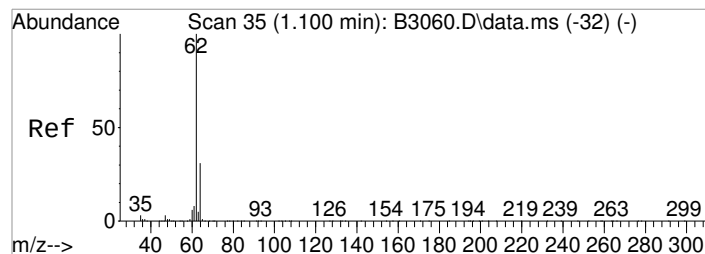
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	135871	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	204857	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	191908	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	101829	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	67371	48.97	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	97.94%	
47) surr1,1,2-dichloroetha...	5.125	65	92986	49.71	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	99.42%	
64) SURR3,Toluene-d8	7.948	98	267121	49.30	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	98.60%	
69) SURR2,BFB	10.727	95	103128	49.84	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	99.68%	
Target Compounds						
4) Vinyl Chloride	1.211	62	34141	19.68	ug/L	Qvalue 100
5) Bromomethane	1.406	94	298	0.28	ug/L	# 56
13) 1,1-Dicethene	2.004	96	1656	1.42	ug/L	# 87
15) Acetone	2.046	43	447	0.48	ug/L	81
26) trans-1,2-Dichloroethene	2.644	96	1410	1.12	ug/L	85
27) 1,1-Dicethane	3.064	63	13803	5.56	ug/L	98
33) cis-1,2-Dichloroethene	3.784	96	157631	106.02	ug/L	91
48) Benzene	5.216	78	1581	0.30	ug/L	93
53) Trichloroethene	6.308	130	9773	6.62	ug/L	94
57) 1,4-Dioxane	6.856	88	247	8.90	ug/L	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSV0A14\Data\112117\
Data File : C3201.D
Acq On : 21 Nov 2017 7:36 pm
Operator : F. NAEGLER
Sample : R1710784-022|2.0
Misc : ECOLOGY 16560 T2
ALS Vial : 25 Sample Multiplier: 1
Inst : MSV0A14

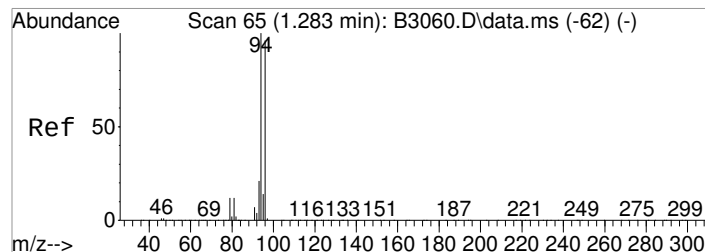
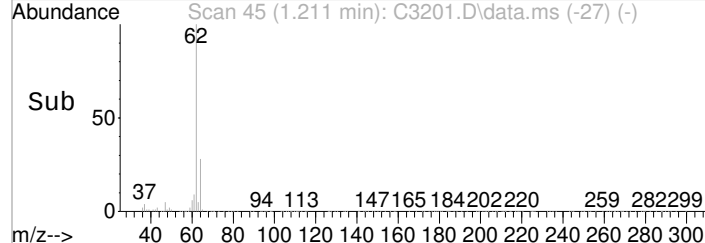
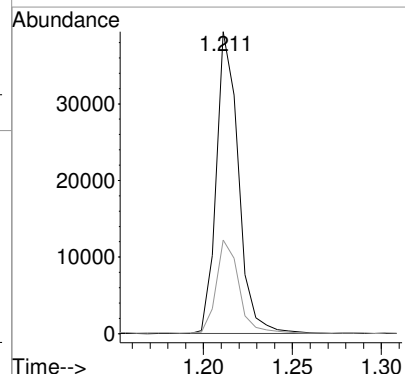
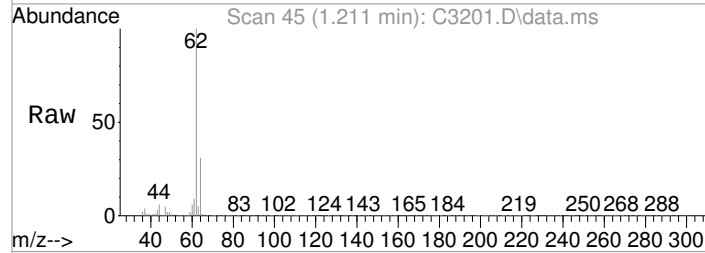
Quant Time: Nov 27 12:44:05 2017
Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration





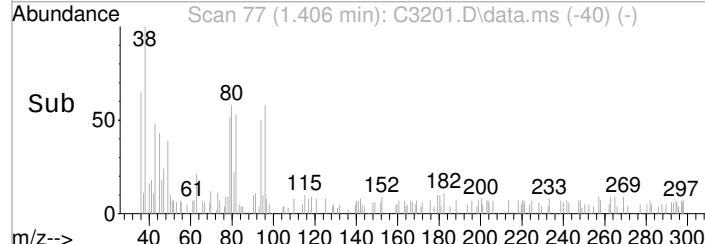
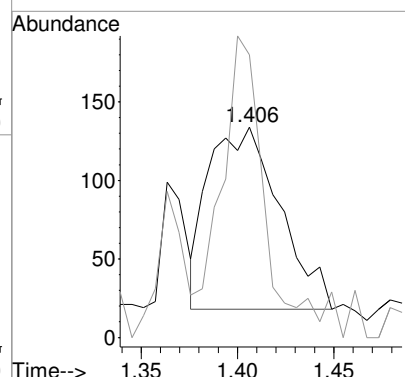
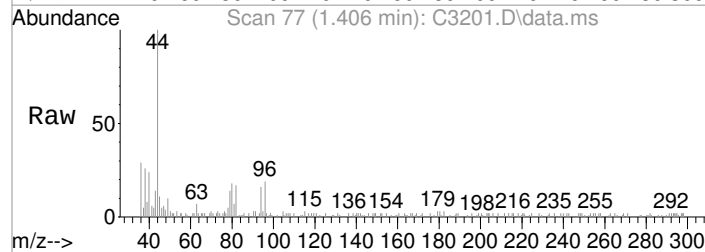
#4
 Vinyl Chloride
 Concen: 19.68 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3201.D
 Acq: 21 Nov 2017 7:36 pm

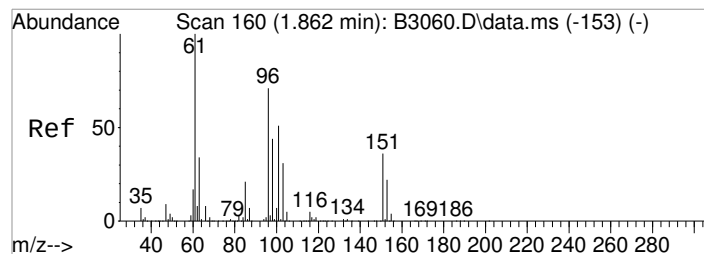
Tgt Ion: 62 Resp: 34141
 Ion Ratio Lower Upper
 62 100
 64 31.0 10.9 50.9



#5
 Bromomethane
 Concen: 0.28 ug/L
 RT: 1.406 min Scan# 77
 Delta R.T. 0.000 min
 Lab File: C3201.D
 Acq: 21 Nov 2017 7:36 pm

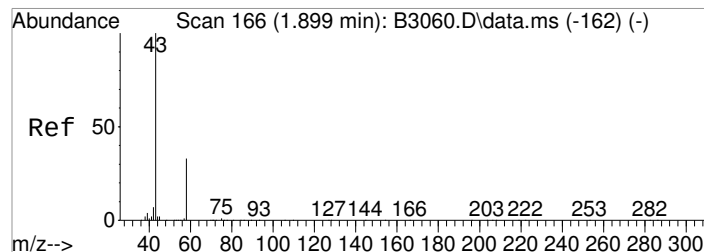
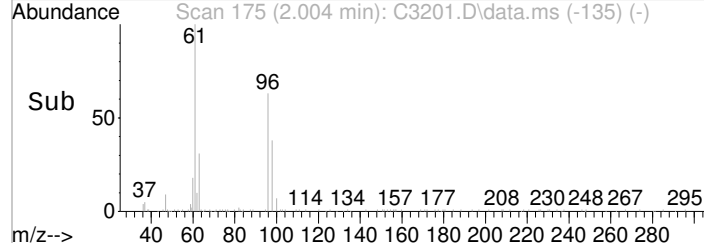
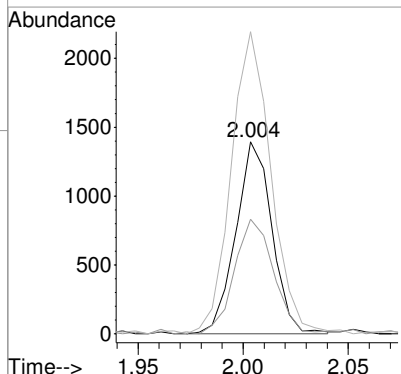
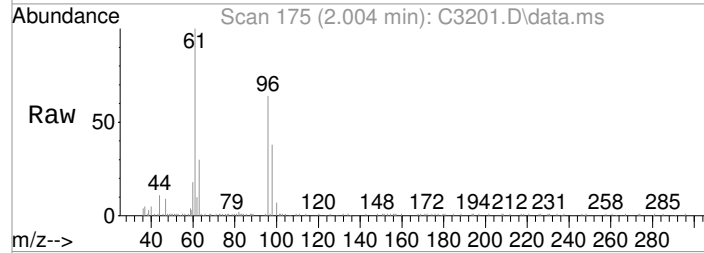
Tgt Ion: 94 Resp: 298
 Ion Ratio Lower Upper
 94 100
 96 134.3 72.2 112.2#





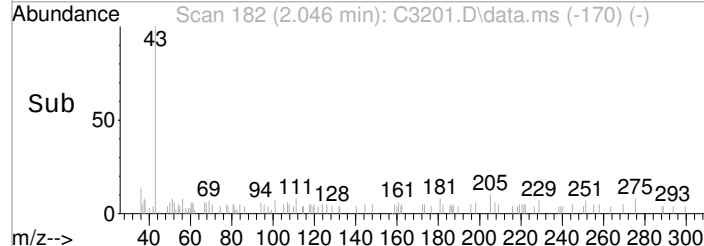
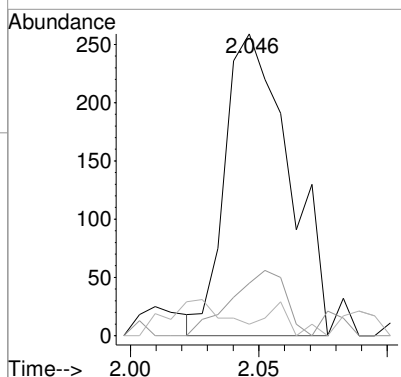
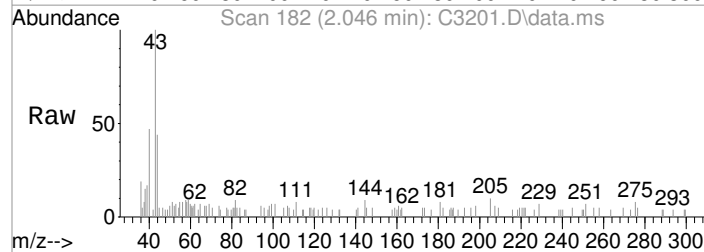
#13
 1,1-Dicethene
 Concen: 1.42 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3201.D
 Acq: 21 Nov 2017 7:36 pm

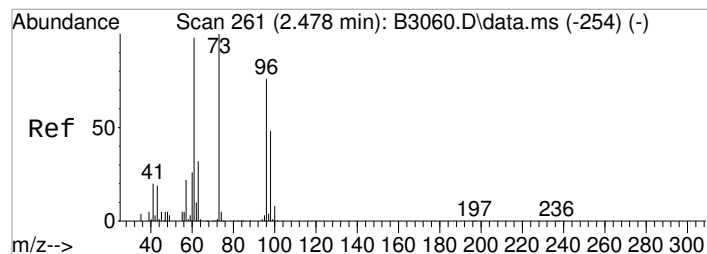
Tgt Ion:	96	Resp:	1656
Ion Ratio		Lower	Upper
96	100		
98	59.6	47.9	87.9
61	157.3	157.9	197.9#



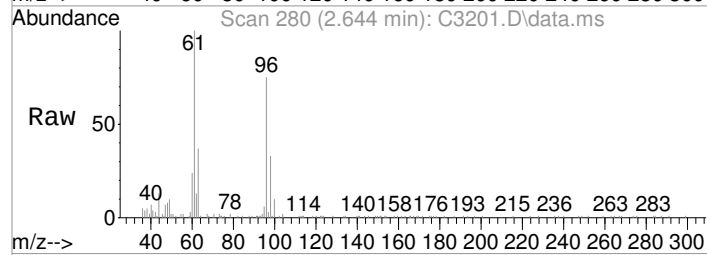
#15
 Acetone
 Concen: 0.48 ug/L
 RT: 2.046 min Scan# 182
 Delta R.T. -0.002 min
 Lab File: C3201.D
 Acq: 21 Nov 2017 7:36 pm

Tgt Ion:	43	Resp:	447
Ion Ratio		Lower	Upper
43	100		
58	17.4	8.6	48.6
42	3.9	0.0	25.7

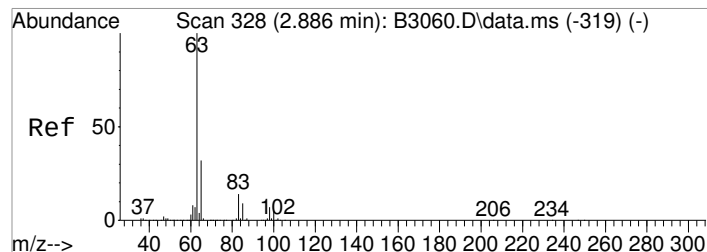
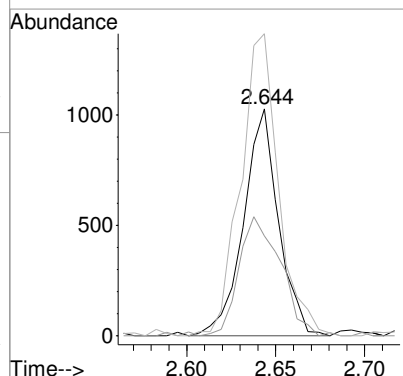
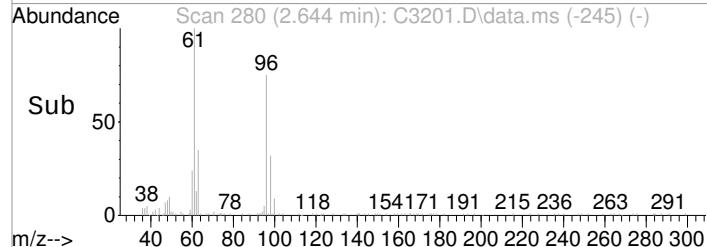




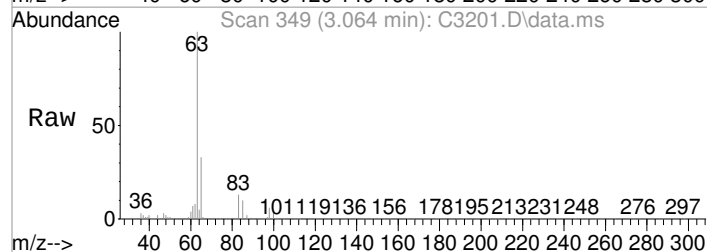
#26
 trans-1,2-Dichloroethene
 Concen: 1.12 ug/L
 RT: 2.644 min Scan# 280
 Delta R.T. 0.001 min
 Lab File: C3201.D
 Acq: 21 Nov 2017 7:36 pm



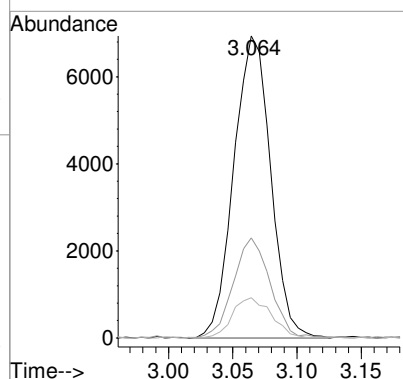
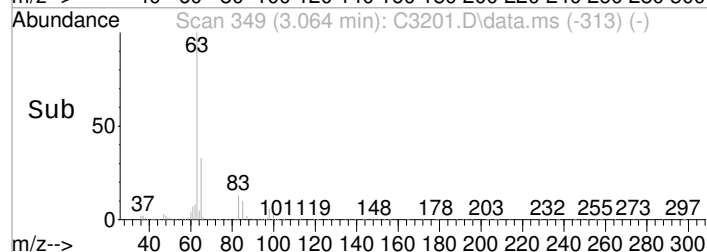
Tgt Ion: 96 Resp: 1410
 Ion Ratio Lower Upper
 96 100
 98 44.0 41.4 81.4
 61 133.1 127.1 167.1

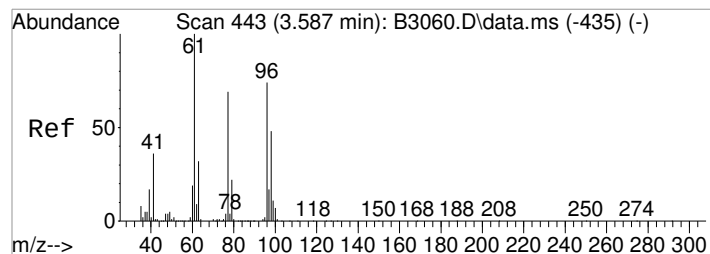


#27
 1,1-Dicethane
 Concen: 5.56 ug/L
 RT: 3.064 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3201.D
 Acq: 21 Nov 2017 7:36 pm



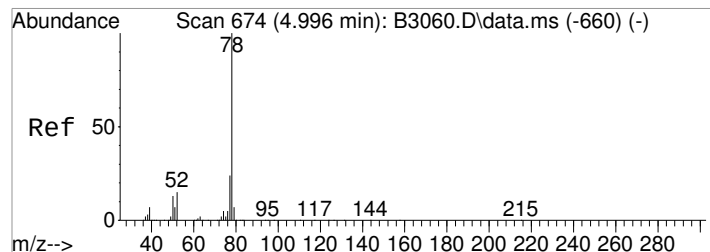
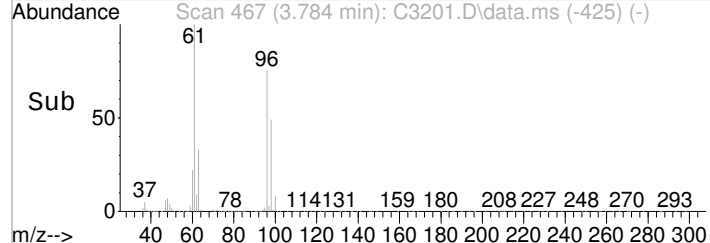
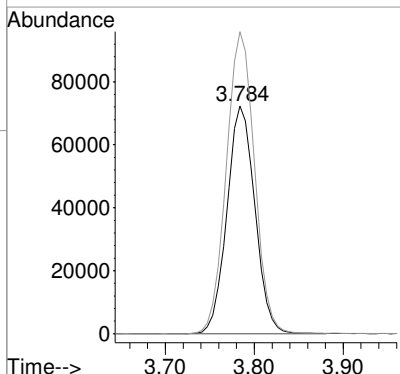
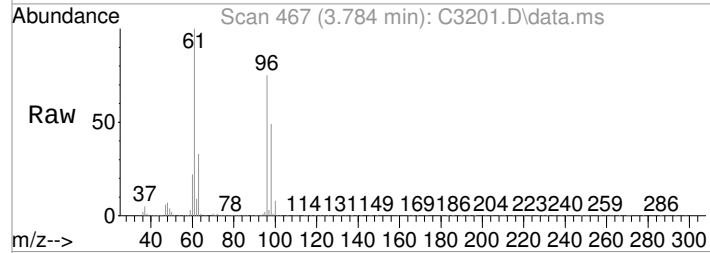
Tgt Ion: 63 Resp: 13803
 Ion Ratio Lower Upper
 63 100
 65 33.1 11.6 51.6
 83 13.4 0.0 32.7





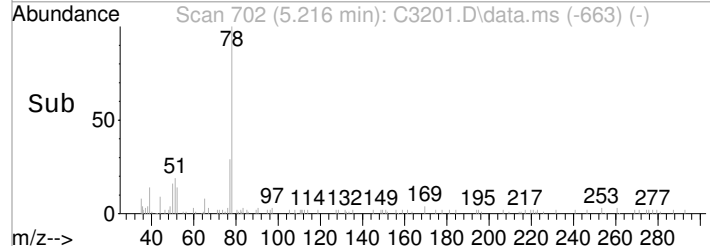
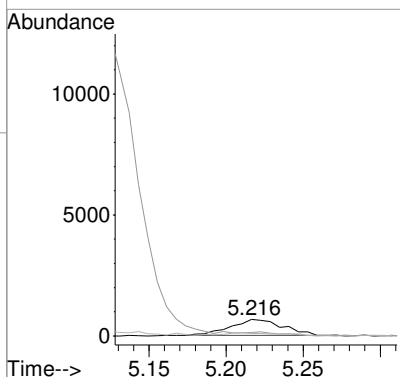
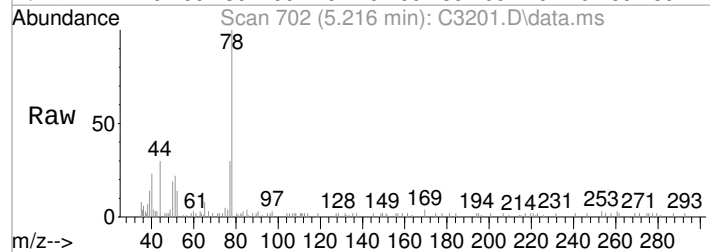
#33
 cis-1,2-Dichloroethene
 Concen: 106.02 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3201.D
 Acq: 21 Nov 2017 7:36 pm

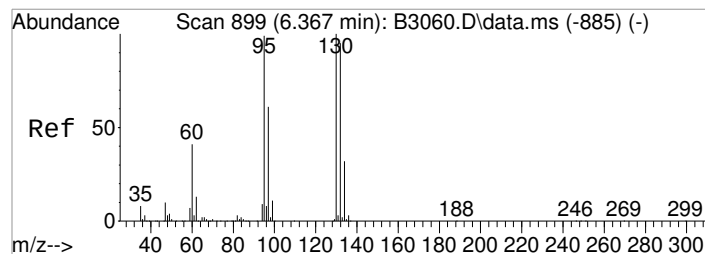
Tgt Ion: 96 Resp: 157631
 Ion Ratio Lower Upper
 96 100
 61 132.6 123.7 163.7



#48
 Benzene
 Concen: 0.30 ug/L
 RT: 5.216 min Scan# 702
 Delta R.T. -0.010 min
 Lab File: C3201.D
 Acq: 21 Nov 2017 7:36 pm

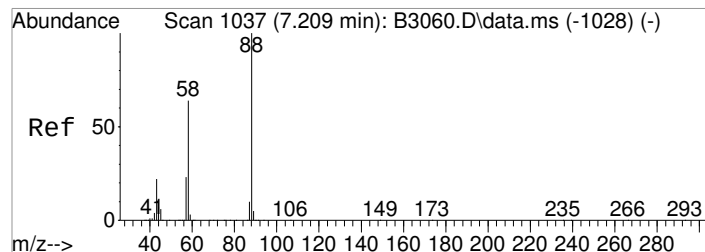
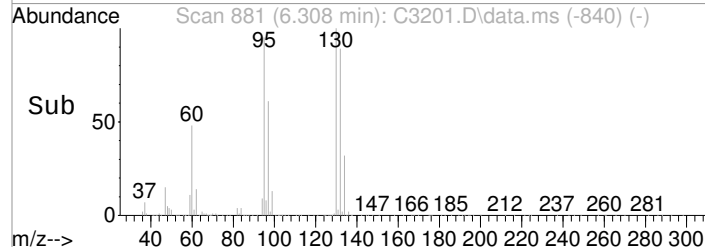
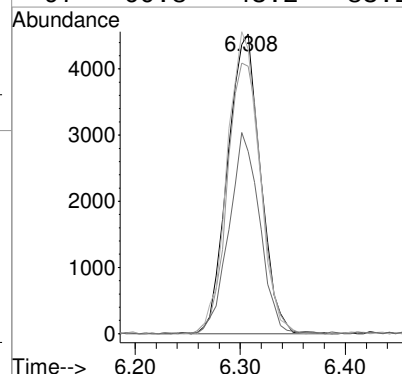
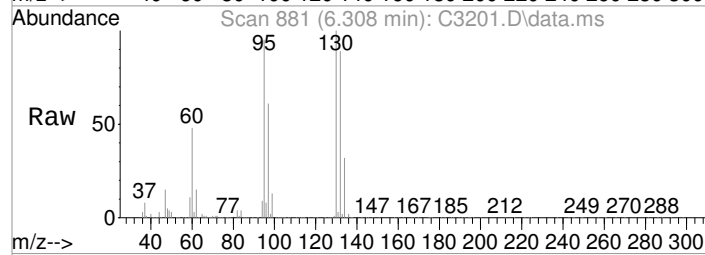
Tgt Ion: 78 Resp: 1581
 Ion Ratio Lower Upper
 78 100
 51 21.5 0.0 37.7
 52 14.1 0.0 36.1





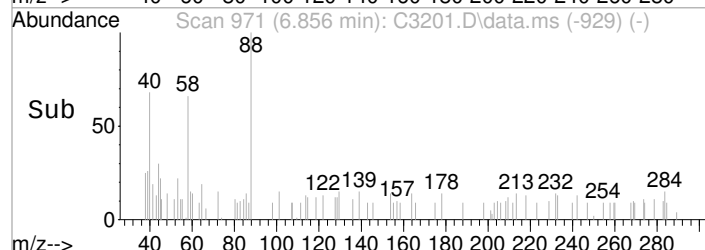
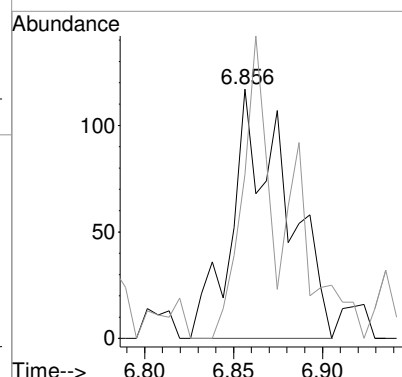
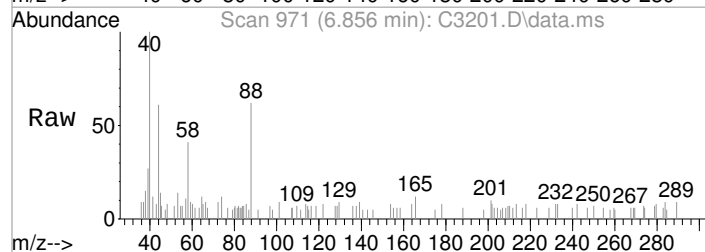
#53
 Trichloroethene
 Concen: 6.62 ug/L
 RT: 6.308 min Scan# 881
 Delta R.T. 0.001 min
 Lab File: C3201.D
 Acq: 21 Nov 2017 7:36 pm

Tgt Ion:130	Resp:	9773
Ion Ratio	Lower	Upper
130	100	
132	89.2	82.3 122.3
95	95.0	75.5 115.5
97	60.8	43.2 83.2



#57
 1,4-Dioxane
 Concen: 8.90 ug/L
 RT: 6.856 min Scan# 971
 Delta R.T. -0.001 min
 Lab File: C3201.D
 Acq: 21 Nov 2017 7:36 pm

Tgt Ion: 88	Resp:	247
Ion Ratio	Lower	Upper
88	100	
58	65.8	56.0 96.0



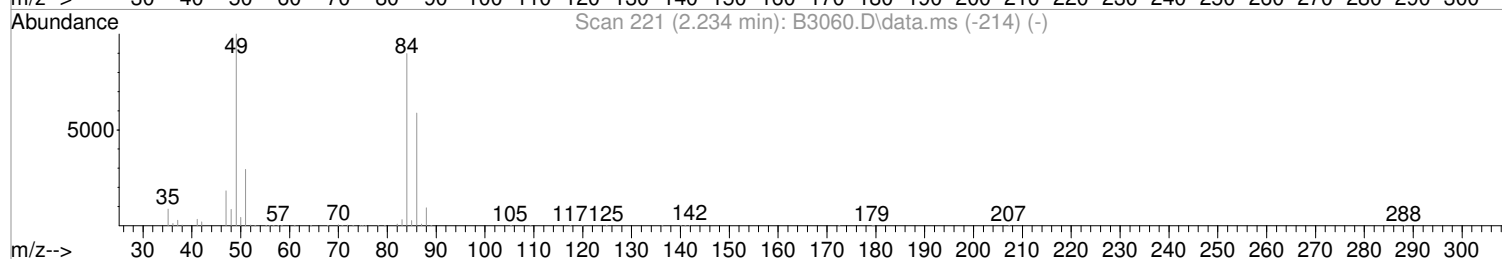
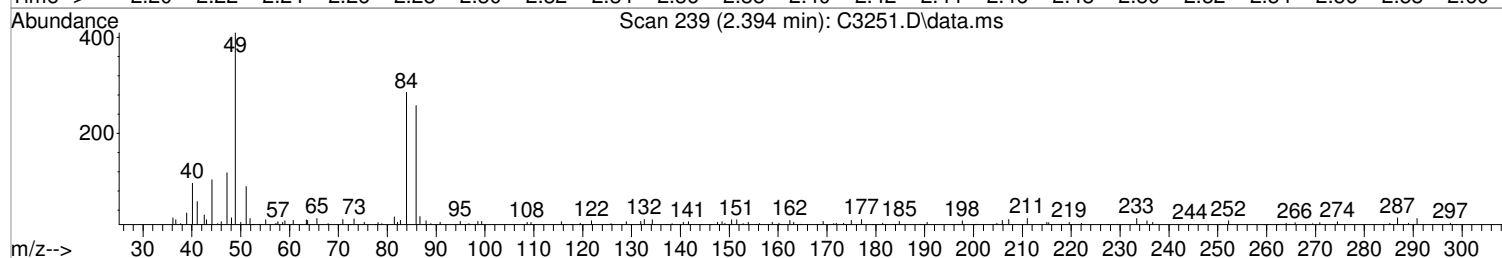
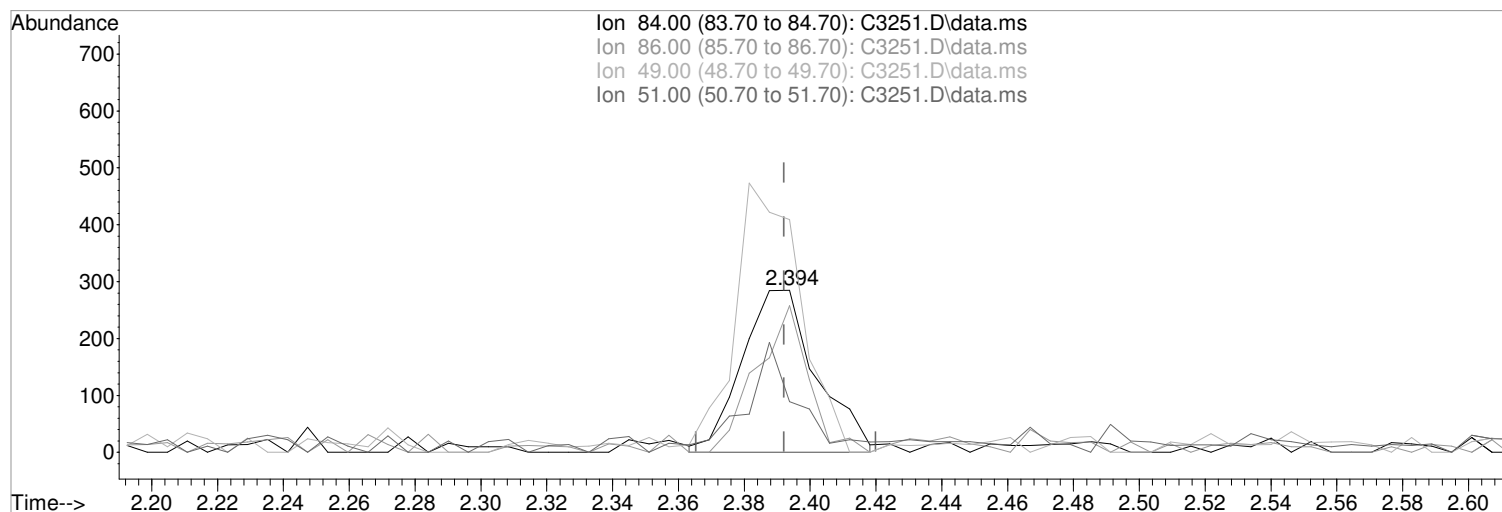
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
Data File : C3251.D
Acq On : 22 Nov 2017 4:03 pm
Operator : F. NAEGLER
Sample : R1710784-023|2.5
Misc : ECOLOGY 16560 T2
ALS Vial : 13 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 16:19:03 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3251.D\data.ms

(22) Methylene Chloride (P)

2.394min (+0.002) 0.32 ug/L m

response 447

Ion	Exp%	Act%
84.00	100	100
86.00	64.80	90.53#
49.00	138.10	143.51
51.00	42.50	31.23

Manual Integration:

After

Peak not found.

11/27/17

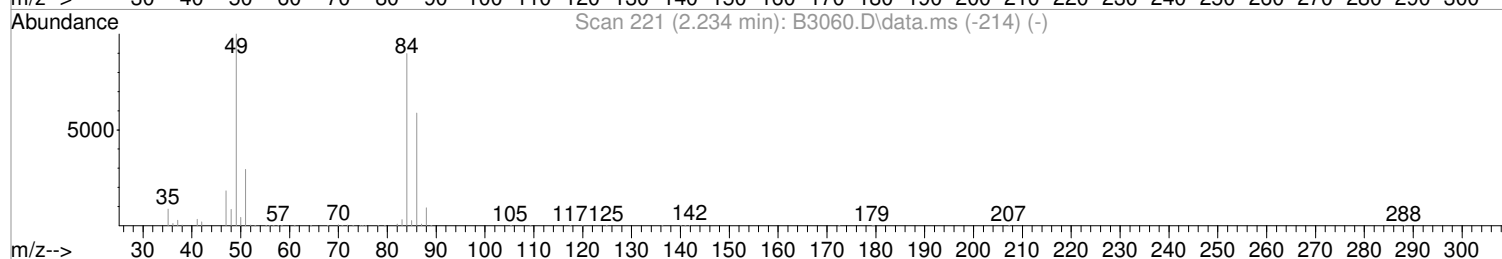
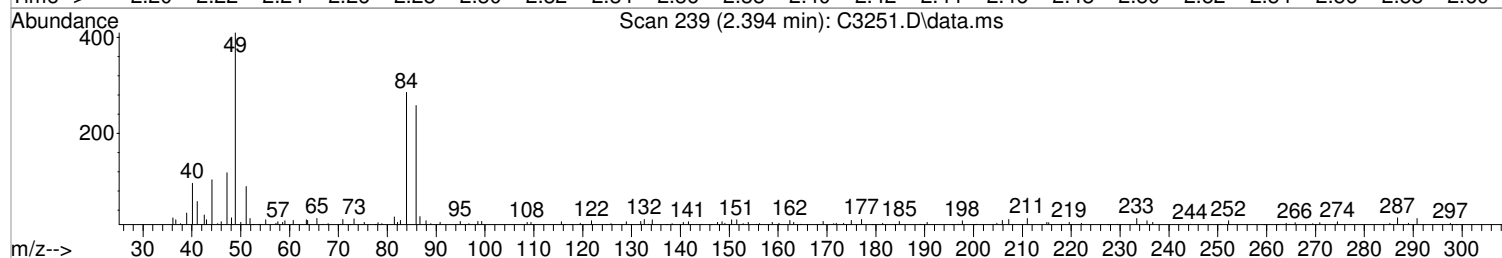
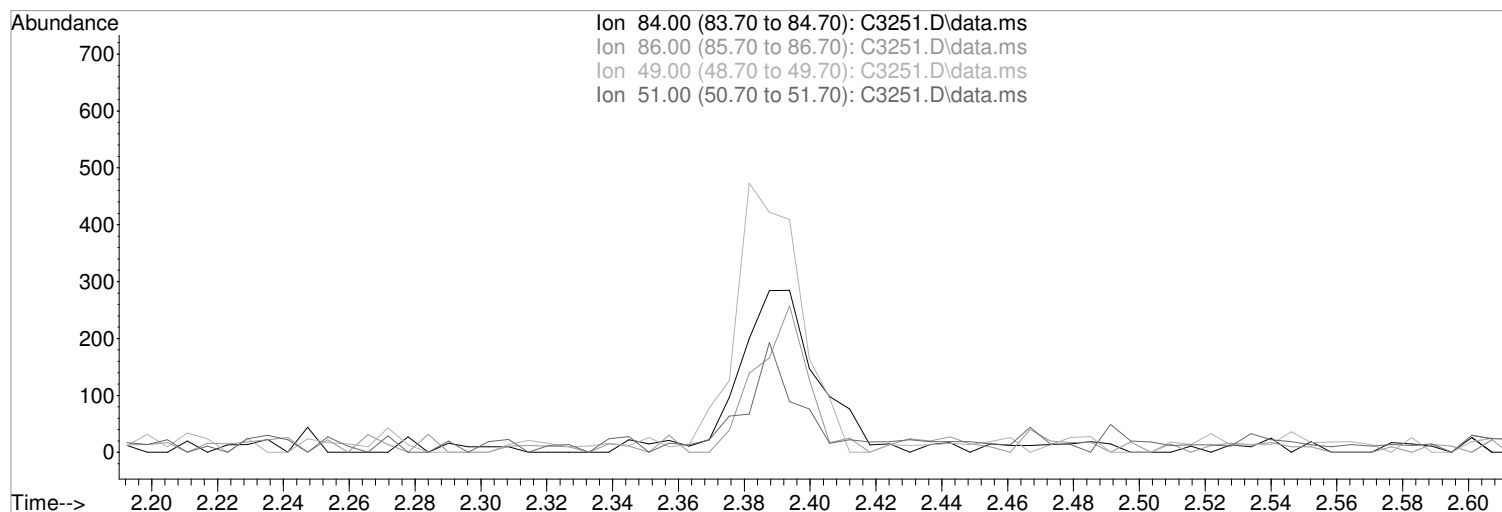
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
Data File : C3251.D
Acq On : 22 Nov 2017 4:03 pm
Operator : F. NAEGLER
Sample : R1710784-023|2.5
Misc : ECOLOGY 16560 T2
ALS Vial : 13 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 16:19:03 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3251.D\data.ms

(22) Methylene Chloride (P)

Manual Integration:

2.392min (-2.392) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
84.00	100	0.00
86.00	64.80	0.00#
49.00	138.10	0.00#
51.00	42.50	0.00#

11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3251.D
 Acq On : 22 Nov 2017 4:03 pm
 Operator : F. NAEGLER
 Sample : R1710784-023|2.5
 Misc : ECOLOGY 16560 T2
 ALS Vial : 13 Sample Multiplier: 1

Inst : MSVOA14

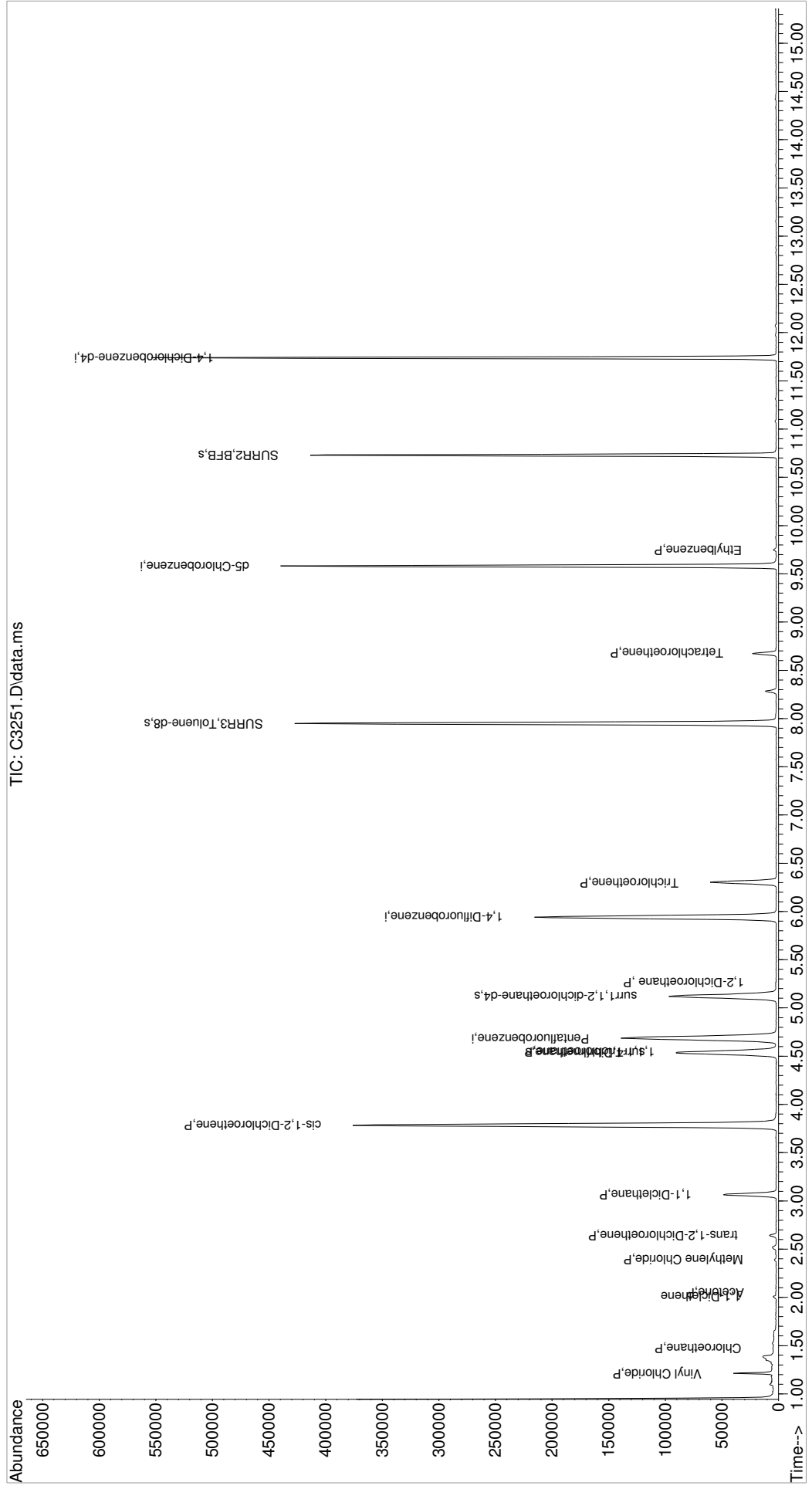
Quant Time: Nov 27 14:38:49 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

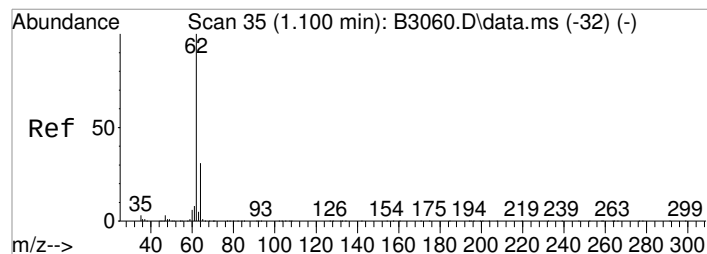
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.686	168	135075	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	201775	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	182358	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.739	152	98589	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	66704	49.23	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	98.46%	
47) surr1,1,2-dichloroetha...	5.119	65	94204	51.13	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	102.26%	
64) SURR3,Toluene-d8	7.948	98	259658	48.65	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	97.30%	
69) SURR2,BFB	10.727	95	98643	48.40	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	96.80%	
Target Compounds						
4) Vinyl Chloride	1.211	62	16511	9.58	ug/L	Qvalue 93
6) Chloroethane	1.473	64	474	0.44	ug/L	90
13) 1,1-Dicethene	2.010	96	793	0.68	ug/L #	67
15) Acetone	2.046	43	632	0.68	ug/L	87
22) Methylene Chloride	2.394	84	447m	0.32	ug/L	
26) trans-1,2-Dichloroethene	2.644	96	1966	1.57	ug/L	88
27) 1,1-Dicethane	3.064	63	43285	17.53	ug/L	99
33) cis-1,2-Dichloroethene	3.784	96	184715	124.97	ug/L	91
40) 1,1,1-Trichloroethane	4.546	97	6102	3.24	ug/L	96
49) 1,2-Dichloroethane	5.265	62	463	0.20	ug/L #	74
53) Trichloroethene	6.301	130	21831	15.00	ug/L	97
71) Tetrachloroethene	8.679	164	4106	3.85	ug/L	94
81) Ethylbenzene	9.746	106	582	0.31	ug/L	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

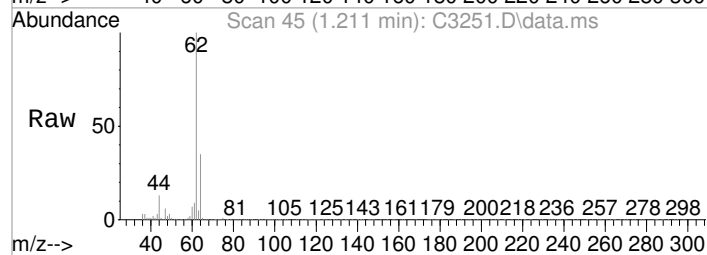
Data Path : I:\ACQUDATA\MSV0A14\Data\112217\
 Data File : C3251.D
 Acq On : 22 Nov 2017 4:03 pm
 Operator : F. NAEGLER
 Sample : R1710784-023|2.5
 Misc : ECOLOGY 16560 T2
 ALS Vial : 13 Sample Multiplier: 1
 Inst : MSV0A14

Quant Time: Nov 27 14:38:49 2017
 Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

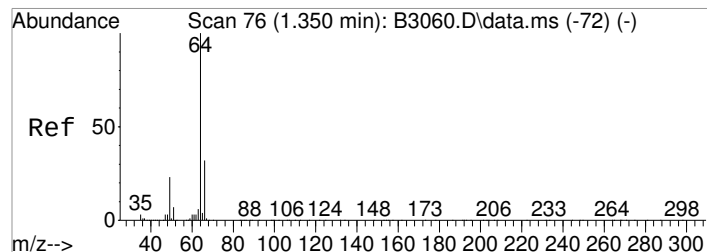
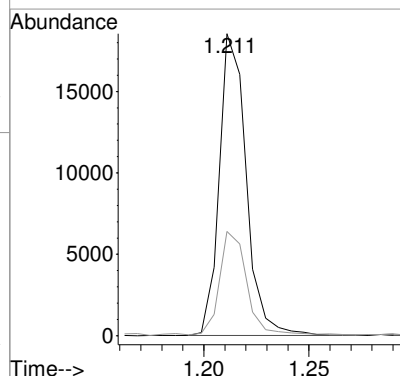
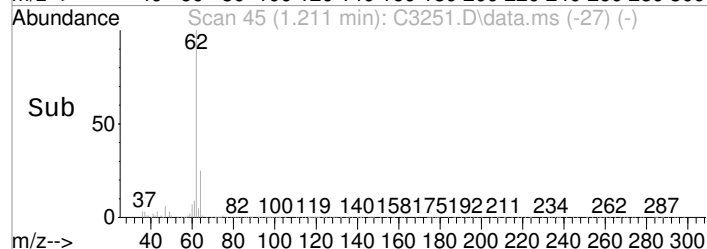




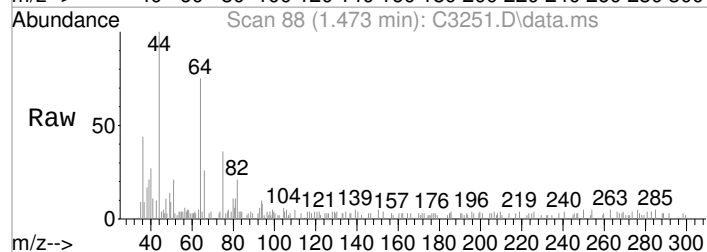
#4
 Vinyl Chloride
 Concen: 9.58 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm



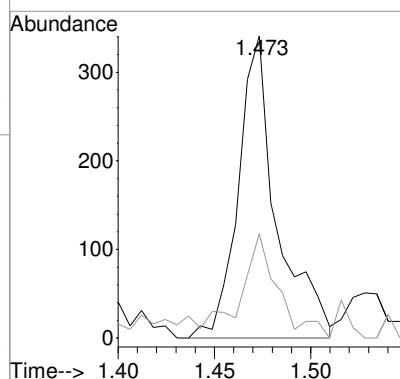
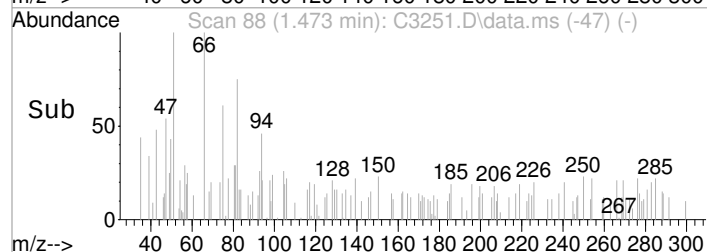
Tgt Ion: 62 Resp: 16511
 Ion Ratio Lower Upper
 62 100
 64 34.5 10.9 50.9

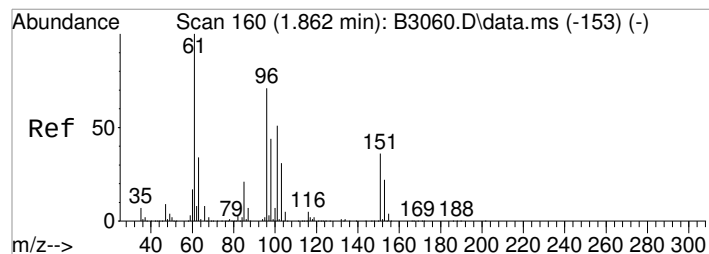


#6
 Chloroethane
 Concen: 0.44 ug/L
 RT: 1.473 min Scan# 88
 Delta R.T. 0.003 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm

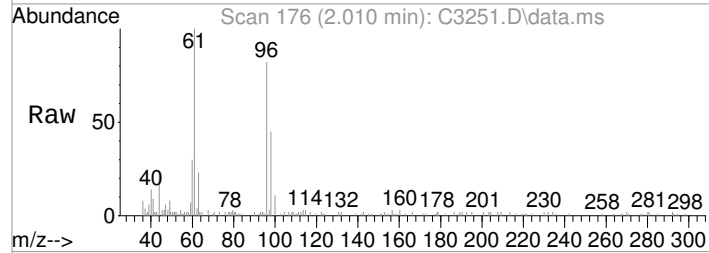


Tgt Ion: 64 Resp: 474
 Ion Ratio Lower Upper
 64 100
 66 34.6 9.1 49.1

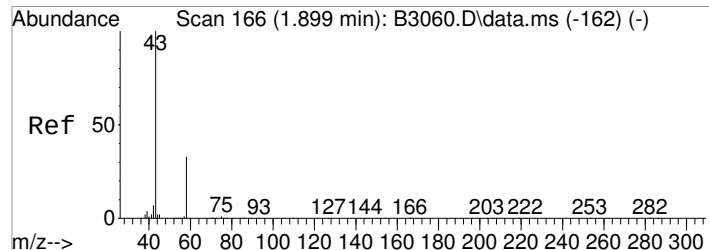
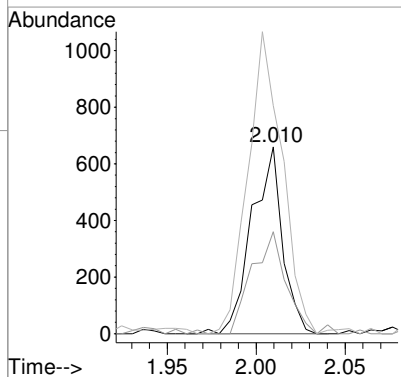
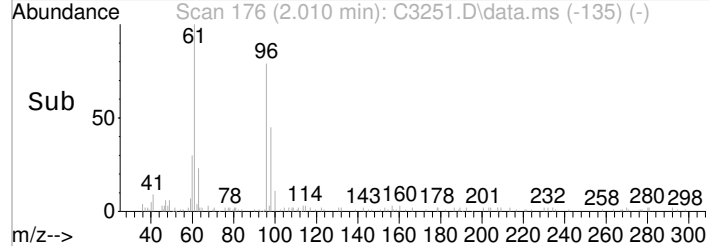




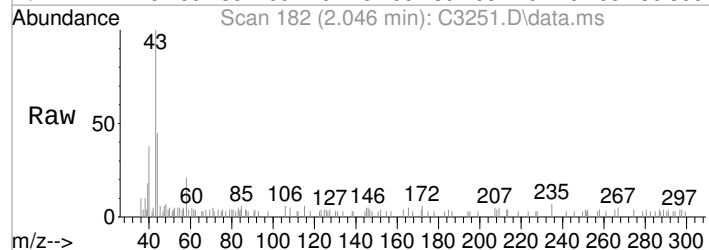
#13
 1,1-Dicloroethene
 Concen: 0.68 ug/L
 RT: 2.010 min Scan# 176
 Delta R.T. 0.001 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm



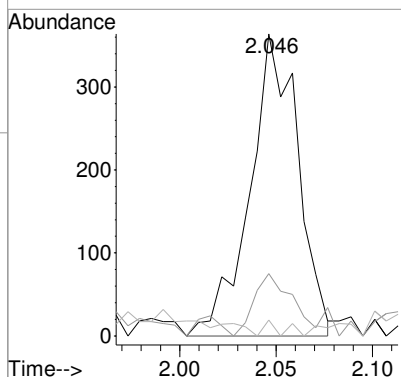
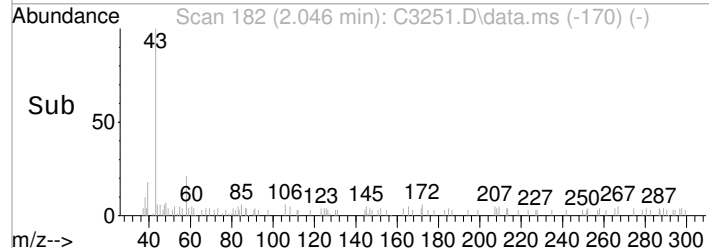
Tgt Ion: 96 Resp: 793
 Ion Ratio Lower Upper
 96 100
 98 54.5 47.9 87.9
 61 122.1 157.9 197.9#

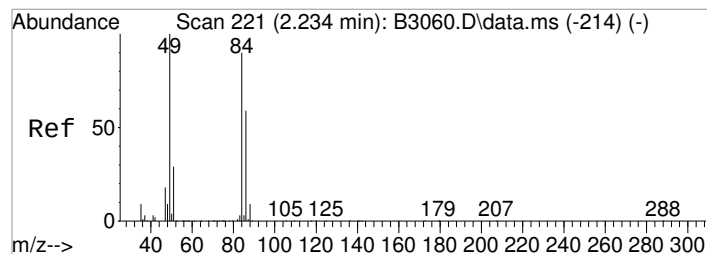


#15
 Acetone
 Concen: 0.68 ug/L
 RT: 2.046 min Scan# 182
 Delta R.T. -0.002 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm



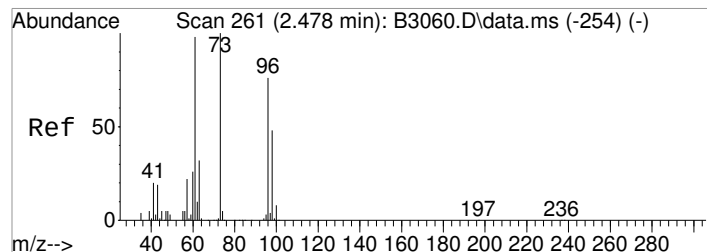
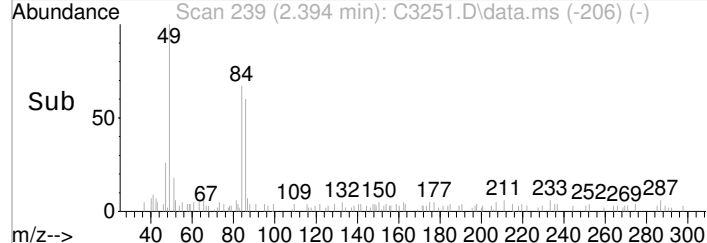
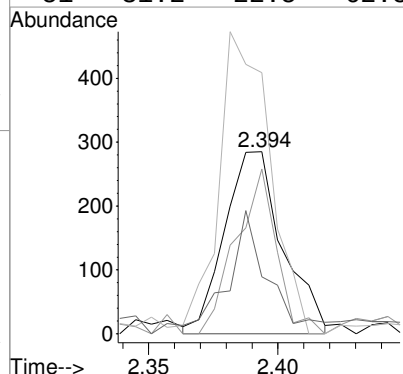
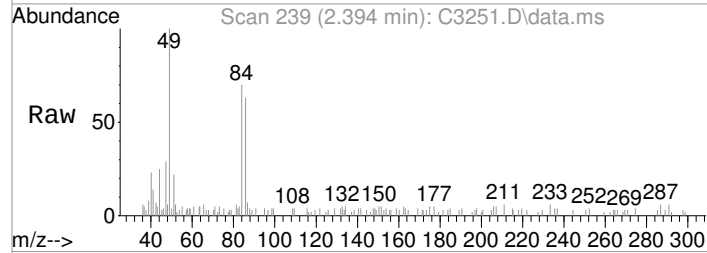
Tgt Ion: 43 Resp: 632
 Ion Ratio Lower Upper
 43 100
 58 20.6 8.6 48.6
 42 5.2 0.0 25.7





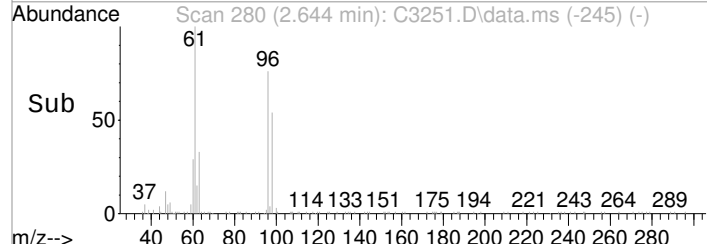
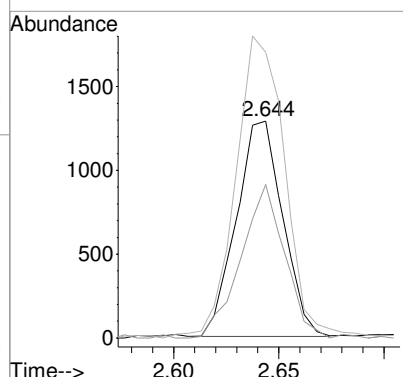
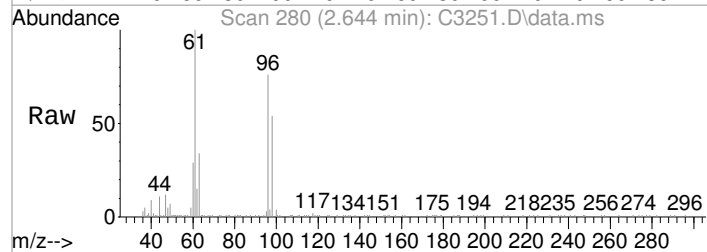
#22
 Methylene Chloride
 Concen: 0.32 ug/L m
 RT: 2.394 min Scan# 239
 Delta R.T. 0.002 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm

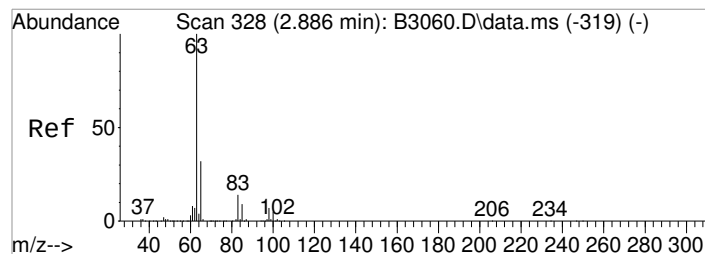
Tgt Ion: 84 Resp: 447
 Ion Ratio Lower Upper
 84 100
 86 90.5 44.8 84.8#
 49 143.5 118.1 158.1
 51 31.2 22.5 62.5



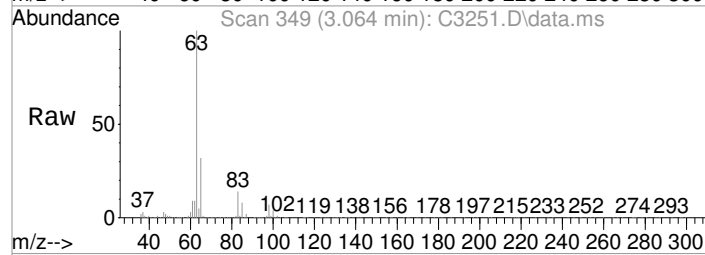
#26
 trans-1,2-Dichloroethene
 Concen: 1.57 ug/L
 RT: 2.644 min Scan# 280
 Delta R.T. 0.000 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm

Tgt Ion: 96 Resp: 1966
 Ion Ratio Lower Upper
 96 100
 98 70.8 41.4 81.4
 61 131.8 127.1 167.1

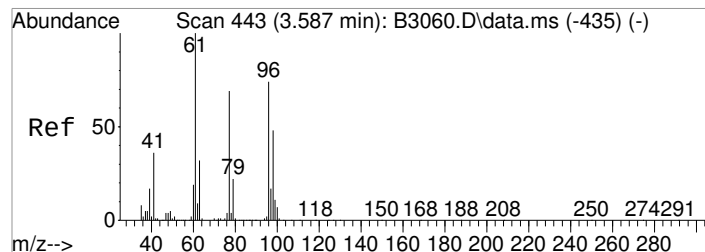
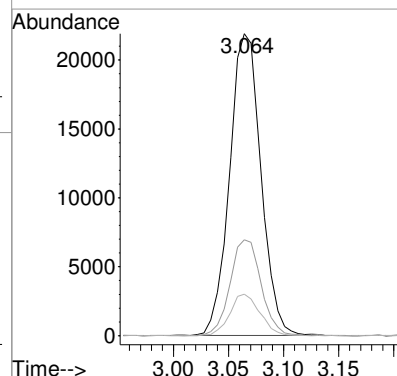
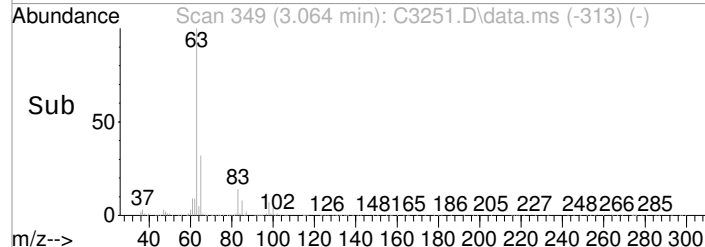




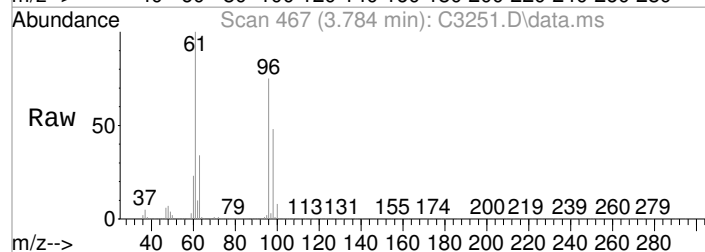
#27
 1,1-Dicethane
 Concen: 17.53 ug/L
 RT: 3.064 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm



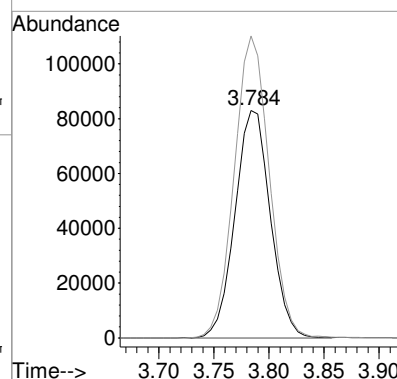
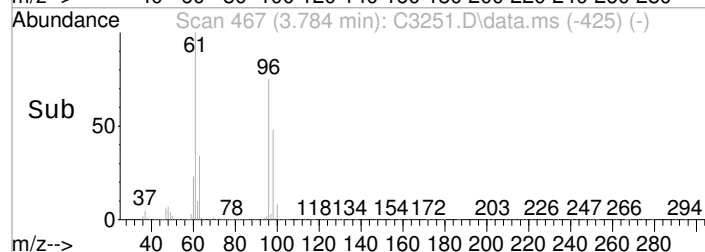
Tgt Ion: 63 Resp: 43285
 Ion Ratio Lower Upper
 63 100
 65 31.7 11.6 51.6
 83 13.7 0.0 32.7

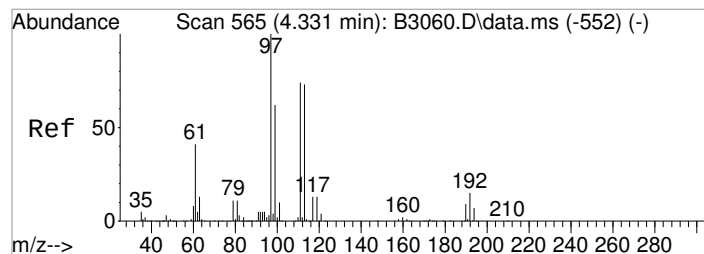


#33
 cis-1,2-Dichloroethene
 Concen: 124.97 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm

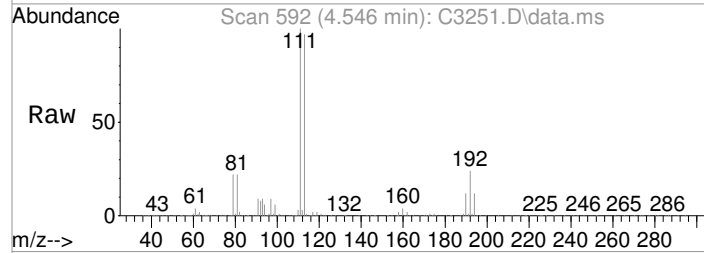


Tgt Ion: 96 Resp: 184715
 Ion Ratio Lower Upper
 96 100
 61 132.7 123.7 163.7

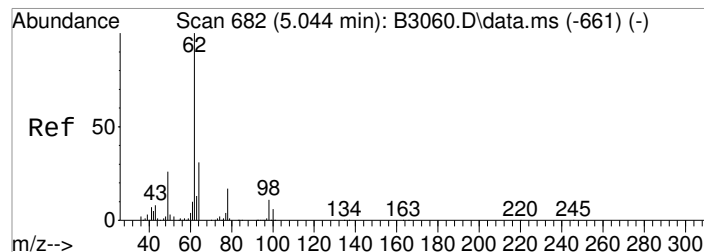
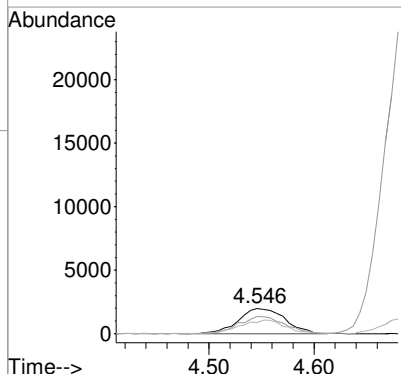
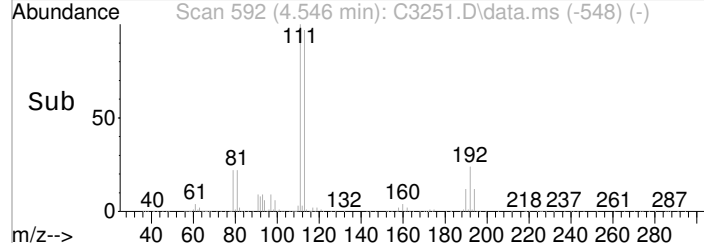




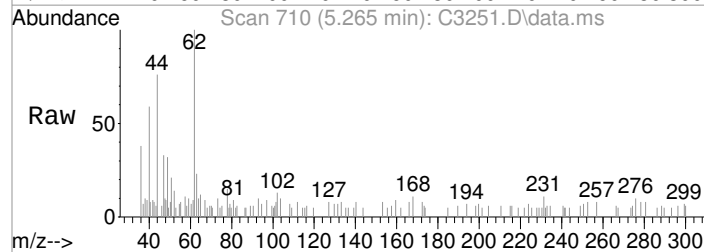
#40
 1,1,1-Trichloroethane
 Concen: 3.24 ug/L
 RT: 4.546 min Scan# 592
 Delta R.T. -0.010 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm



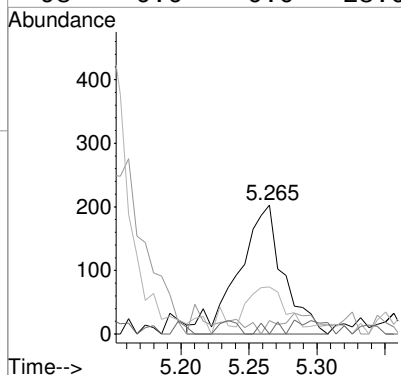
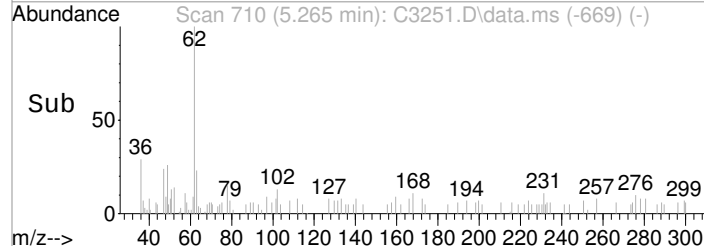
Tgt Ion:	97	Resp:	6102
Ion Ratio	100	Lower	Upper
99	67.3	44.2	84.2
61	44.2	27.0	67.0

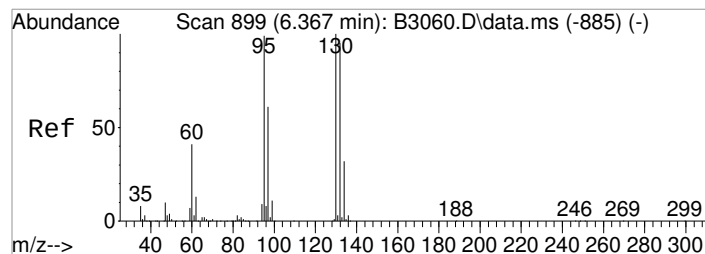


#49
 1,2-Dichloroethane
 Concen: 0.20 ug/L
 RT: 5.265 min Scan# 710
 Delta R.T. 0.001 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm



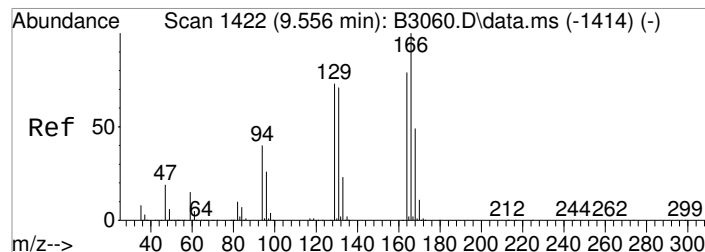
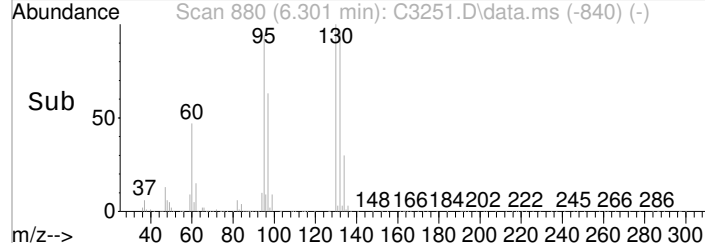
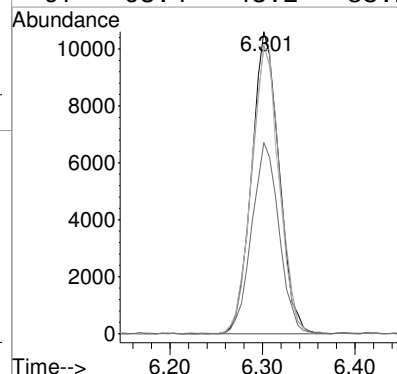
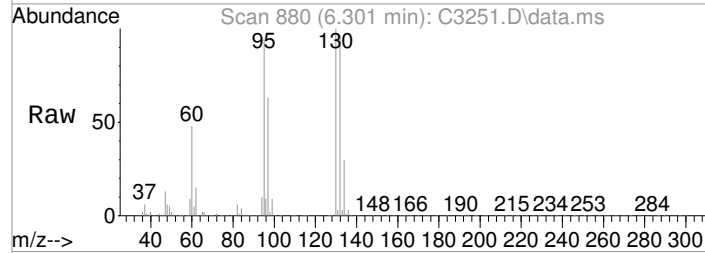
Tgt Ion:	62	Resp:	463
Ion Ratio	100	Lower	Upper
64	10.3	11.5	51.5#
49	36.5	9.5	49.5
98	0.0	0.0	28.0





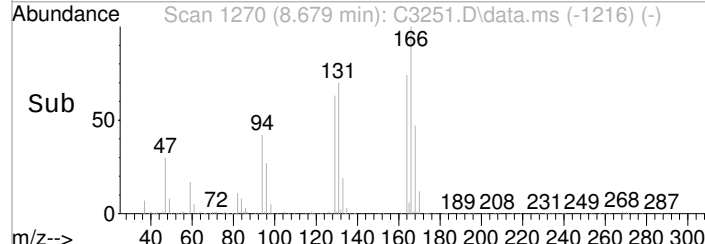
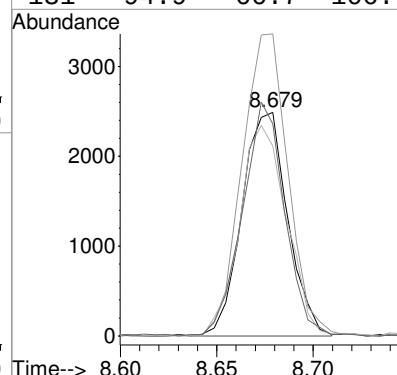
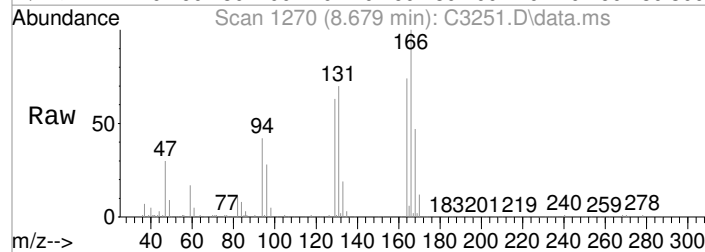
#53
 Trichloroethene
 Concen: 15.00 ug/L
 RT: 6.301 min Scan# 880
 Delta R.T. -0.005 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm

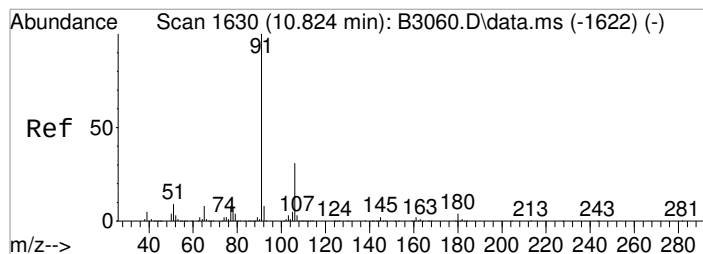
Tgt Ion	Ratio	Resp	Lower	Upper
130	100	21831		
132	95.6	82.3	122.3	
95	94.4	75.5	115.5	
97	63.4	43.2	83.2	



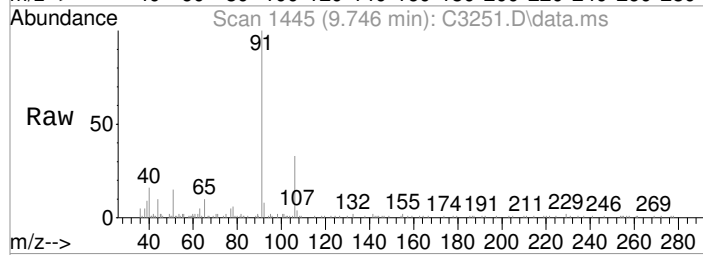
#71
 Tetrachloroethene
 Concen: 3.85 ug/L
 RT: 8.679 min Scan# 1270
 Delta R.T. 0.003 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm

Tgt Ion	Ratio	Resp	Lower	Upper
164	100	4106		
166	135.0	109.9	149.9	
129	84.9	70.1	110.1	
131	94.9	66.7	106.7	

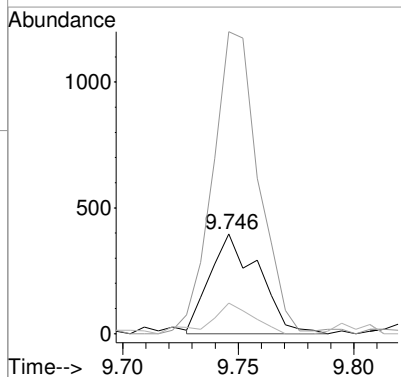
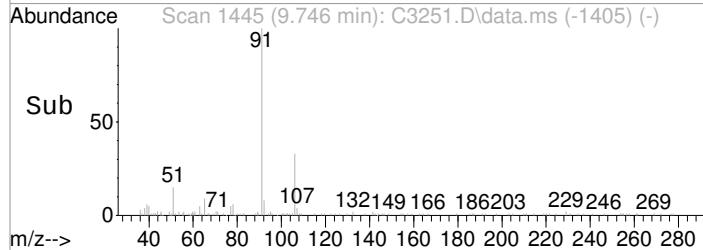




#81
 Ethylbenzene
 Concen: 0.31 ug/L
 RT: 9.746 min Scan# 1445
 Delta R.T. -0.006 min
 Lab File: C3251.D
 Acq: 22 Nov 2017 4:03 pm



Tgt	Ion:106	Resp:	582
Ion	Ratio	Lower	Upper
106	100		
91	302.3	301.2	341.2
65	30.7	7.1	47.1



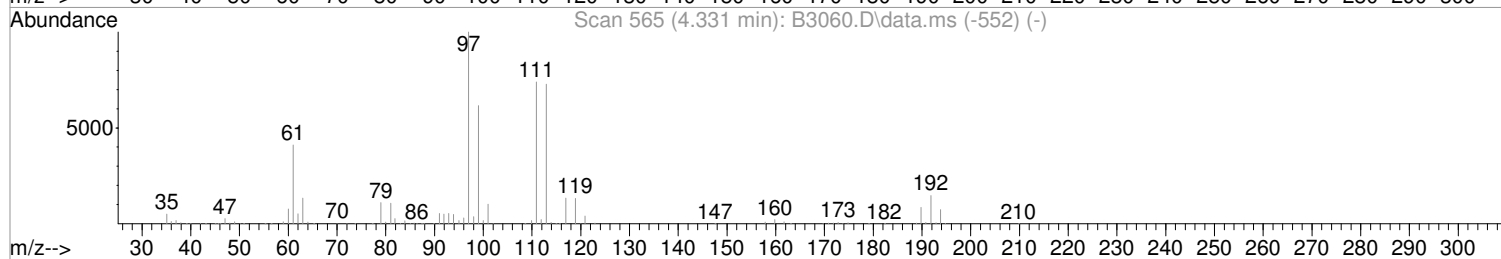
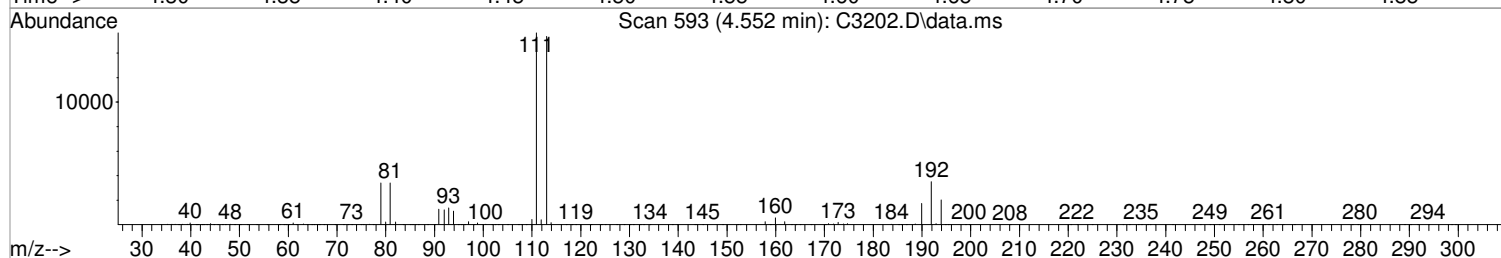
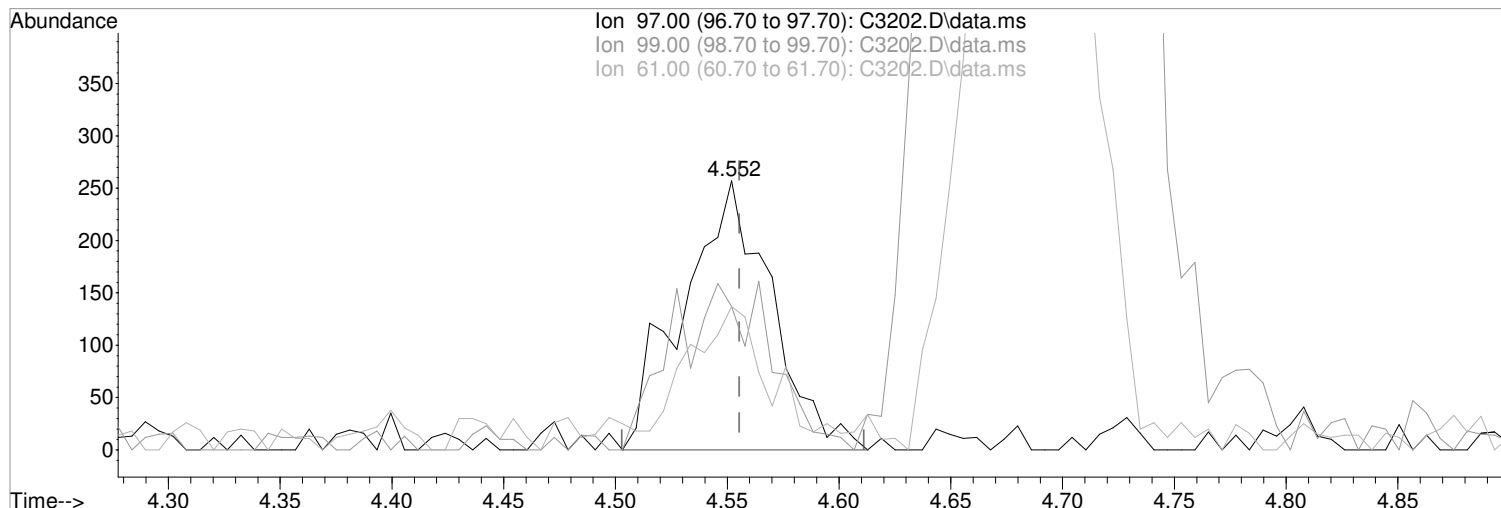
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3202.D
Acq On : 21 Nov 2017 7:59 pm
Operator : F. NAEGLER
Sample : R1710784-024|2.0
Misc : ECOLOGY 16560 T2
ALS Vial : 26 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 09:26:07 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3202.D\data.ms

(40) 1,1,1-Trichloroethane (P)

4.552min (-0.004) 0.37 ug/L m

response 706

Ion	Exp%	Act%
97.00	100	100
99.00	64.20	53.31
61.00	47.00	53.31
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

11/27/17

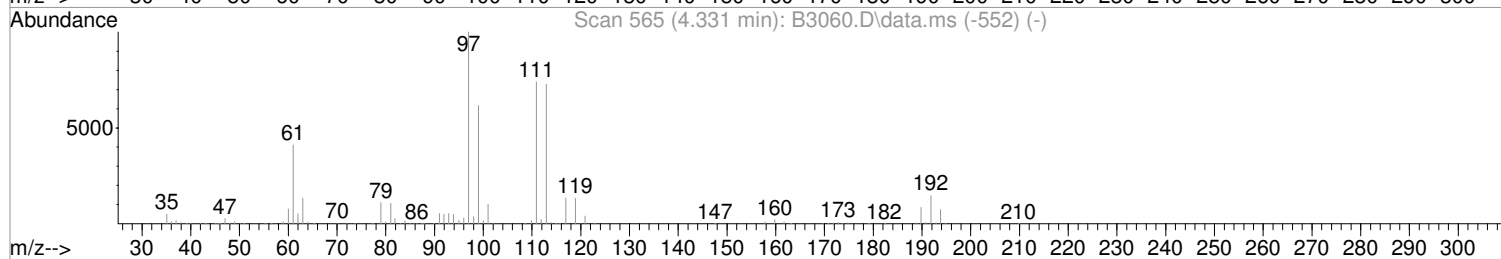
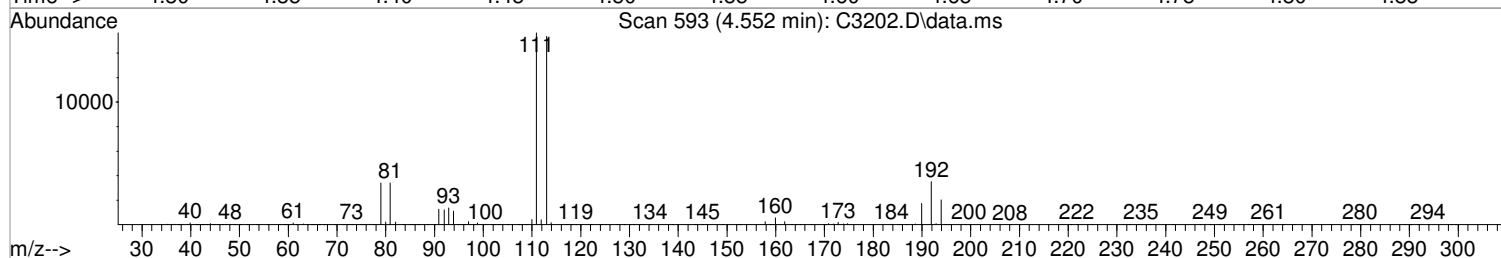
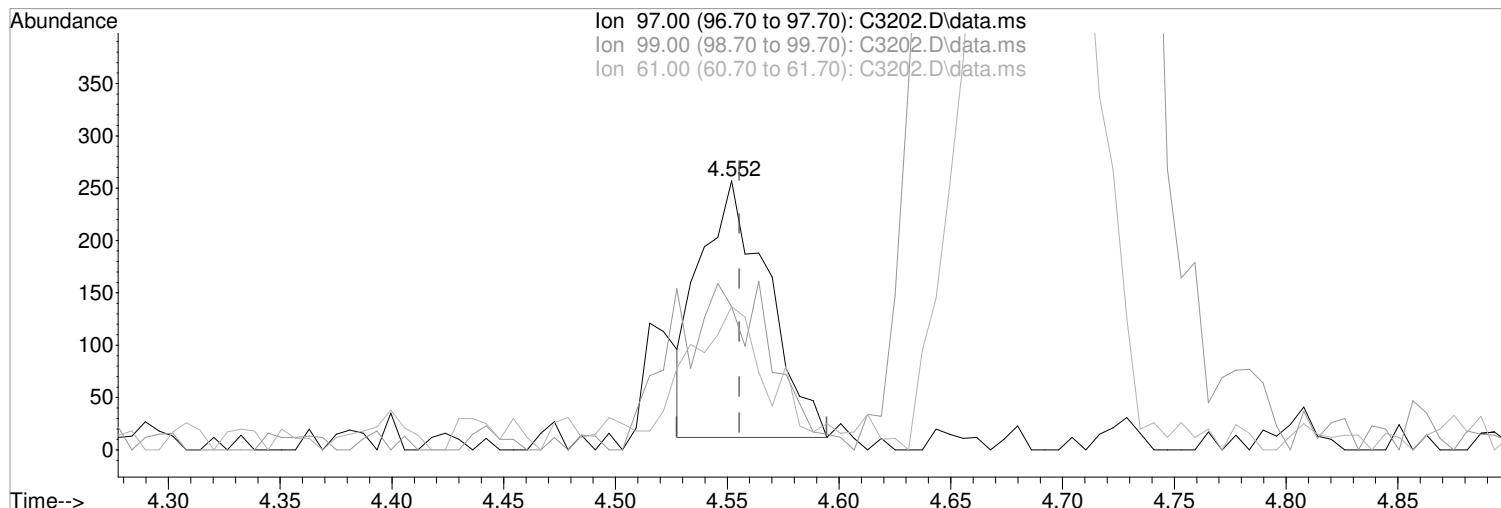
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3202.D
Acq On : 21 Nov 2017 7:59 pm
Operator : F. NAEGLER
Sample : R1710784-024|2.0
Misc : ECOLOGY 16560 T2
ALS Vial : 26 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 09:26:07 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3202.D\data.ms

(40) 1,1,1-Trichloroethane (P)

Manual Integration:

4.552min (-0.004) 0.27 ug/L

Before

response 516

Ion	Exp%	Act%
97.00	100	100
99.00	64.20	53.31
61.00	47.00	57.98
0.00	0.00	0.00

11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3202.D
 Acq On : 21 Nov 2017 7:59 pm
 Operator : F. NAEGLER
 Sample : R1710784-024|2.0
 Misc : ECOLOGY 16560 T2
 ALS Vial : 26 Sample Multiplier: 1

Inst : MSVOA14

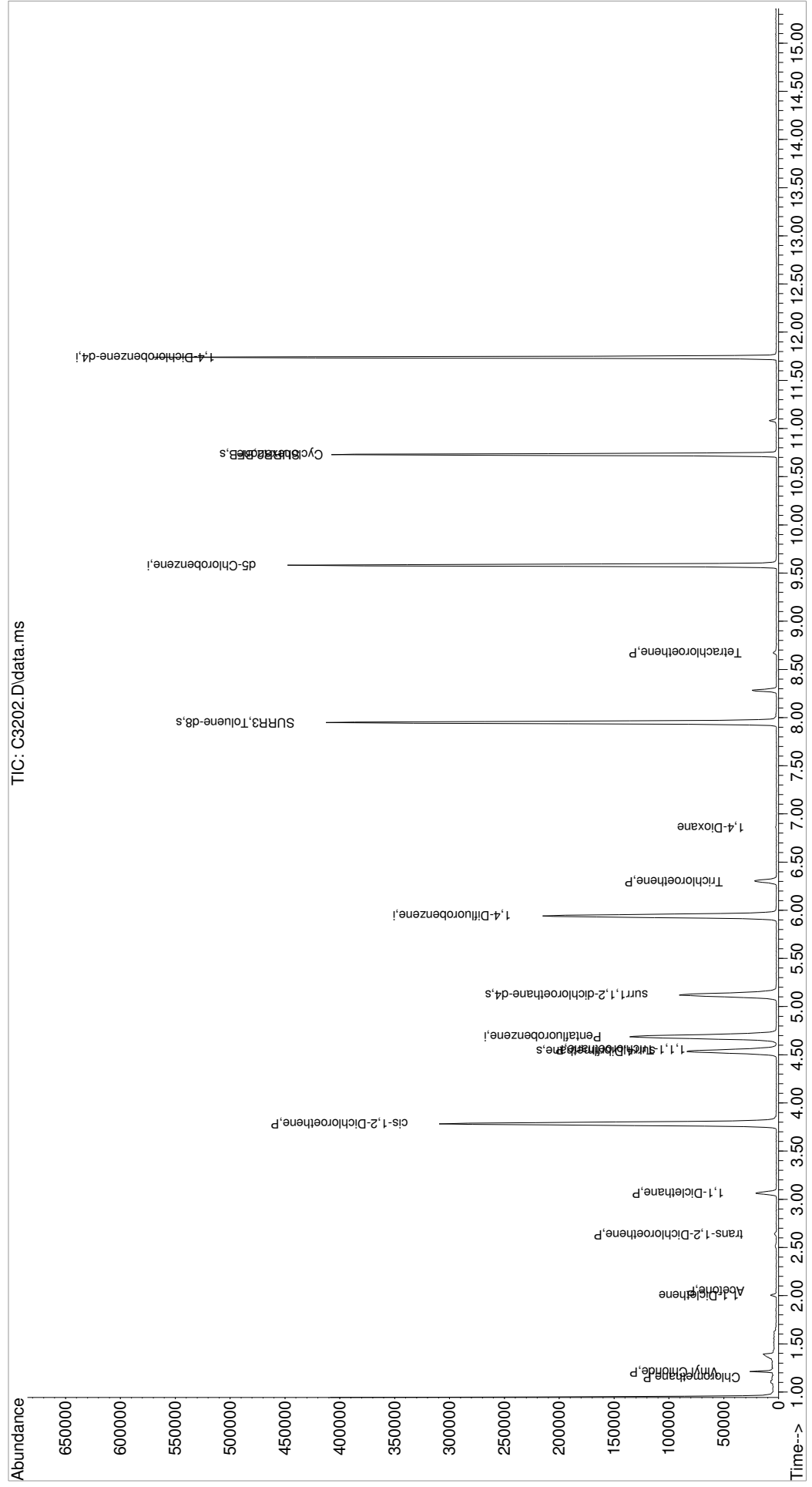
Quant Time: Nov 27 12:53:01 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

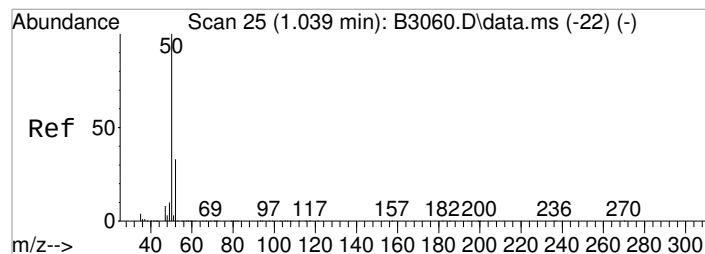
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	135926	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	203672	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	189562	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	103742	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	64324	47.03	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery =	94.06%		
47) surr1,1,2-dichloroetha...	5.119	65	88624	47.65	ug/L	0.00
Spiked Amount 50.000	Range 73 - 125		Recovery =	95.30%		
64) SURR3,Toluene-d8	7.948	98	253241	47.01	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery =	94.02%		
69) SURR2,BFB	10.728	95	95087	46.22	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery =	92.44%		
Target Compounds						
3) Chloromethane	1.150	50	393	0.21	ug/L	Qvalue 82
4) Vinyl Chloride	1.211	62	9694	5.59	ug/L	97
13) 1,1-Dicethene	2.004	96	1335	1.14	ug/L #	83
15) Acetone	2.046	43	498	0.54	ug/L	95
26) trans-1,2-Dichloroethene	2.638	96	649	0.52	ug/L #	76
27) 1,1-Dicethane	3.064	63	17354	6.99	ug/L	100
33) cis-1,2-Dichloroethene	3.784	96	149817	100.73	ug/L	89
40) 1,1,1-Trichloroethane	4.552	97	706m	0.37	ug/L	
53) Trichloroethene	6.302	130	7754	5.28	ug/L	94
57) 1,4-Dioxane	6.856	88	512	18.56	ug/L #	75
71) Tetrachloroethene	8.673	164	623	0.56	ug/L #	75
88) Cyclohexanone	10.734	55	350	7.16	ug/L #	28

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSV0A14\Data\112117\
Data File : C3202.D
Acq On : 21 Nov 2017 7:59 pm
Operator : F. NAEGLER
Sample : R1710784-024|2.0
Misc : ECOLOGY 16560 T2
ALS Vial : 26 Sample Multiplier: 1
Inst : MSV0A14

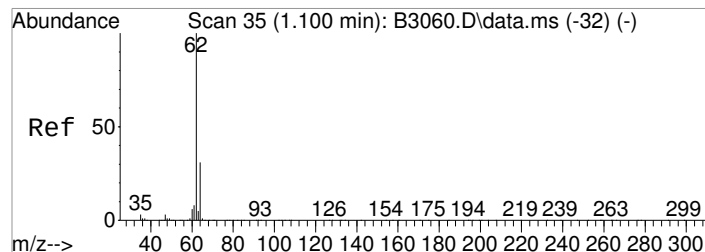
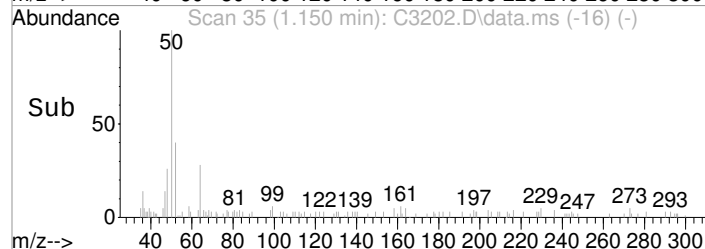
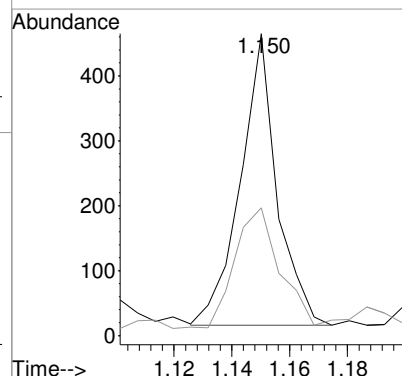
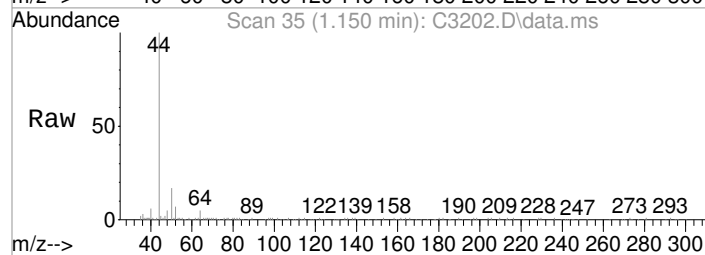
Quant Time: Nov 27 12:53:01 2017
Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration





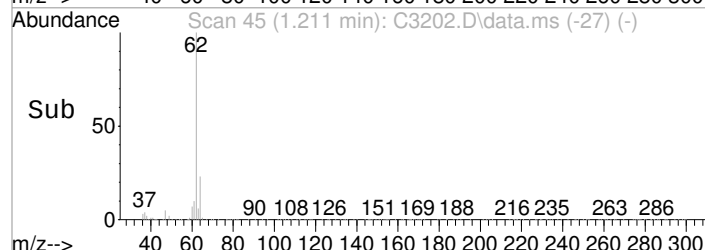
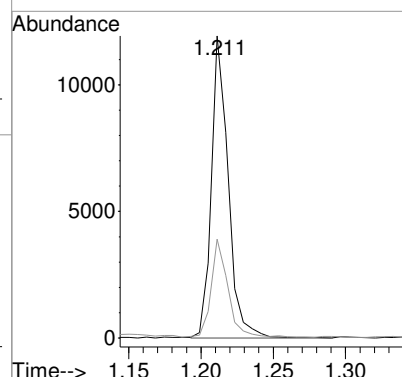
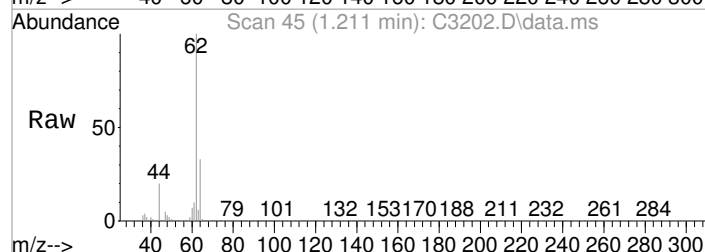
#3
 Chloromethane
 Concen: 0.21 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. -0.000 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm

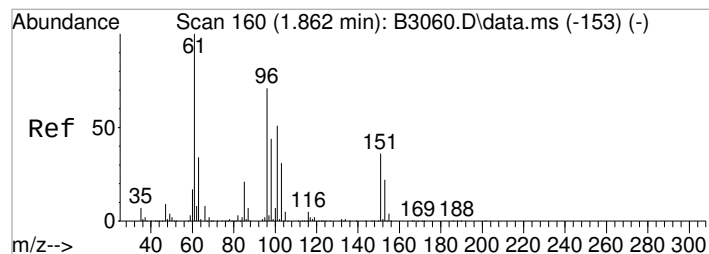
Tgt Ion: 50 Resp: 393
 Ion Ratio Lower Upper
 50 100
 52 42.4 12.1 52.1



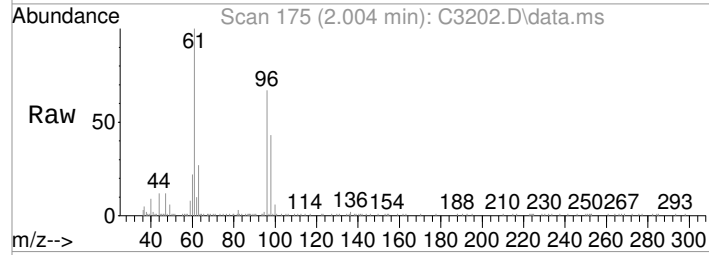
#4
 Vinyl Chloride
 Concen: 5.59 ug/L
 RT: 1.211 min Scan# 45
 Delta R.T. -0.006 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm

Tgt Ion: 62 Resp: 9694
 Ion Ratio Lower Upper
 62 100
 64 32.8 10.9 50.9

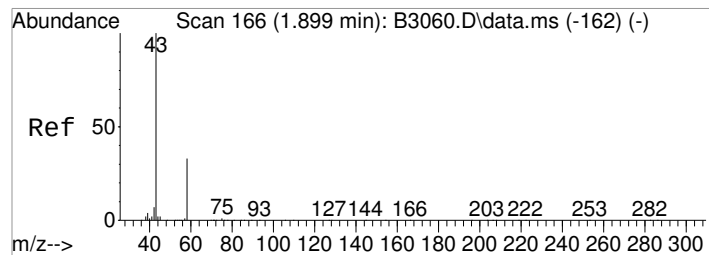
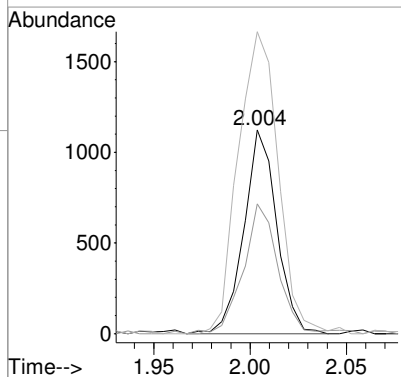
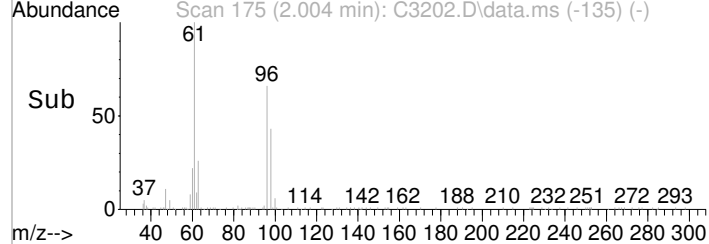




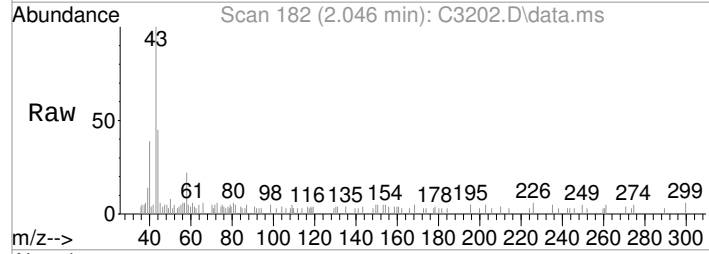
#13
 1,1-Dicethene
 Concen: 1.14 ug/L
 RT: 2.004 min Scan# 175
 Delta R.T. -0.005 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm



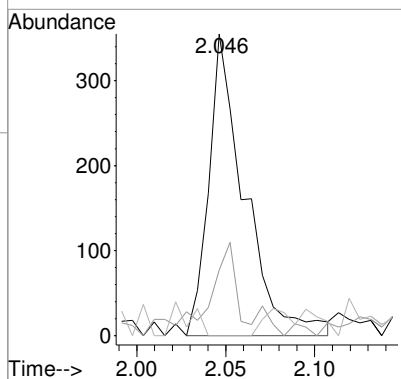
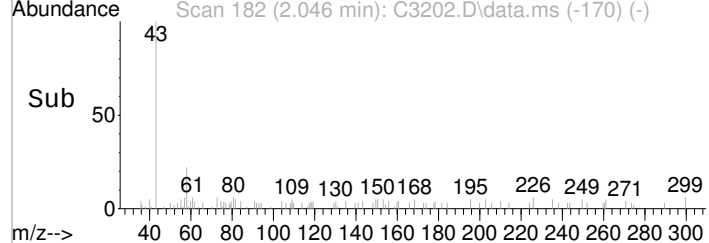
Tgt Ion: 96 Resp: 1335
 Ion Ratio Lower Upper
 96 100
 98 63.8 47.9 87.9
 61 148.3 157.9 197.9#

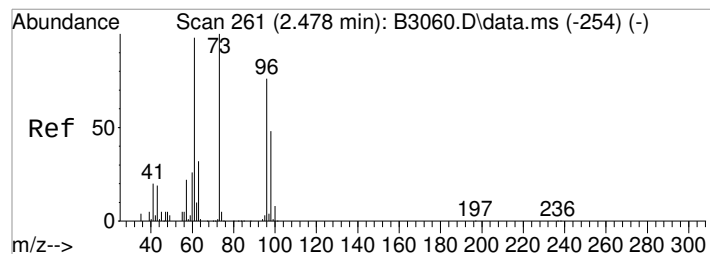


#15
 Acetone
 Concen: 0.54 ug/L
 RT: 2.046 min Scan# 182
 Delta R.T. -0.002 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm

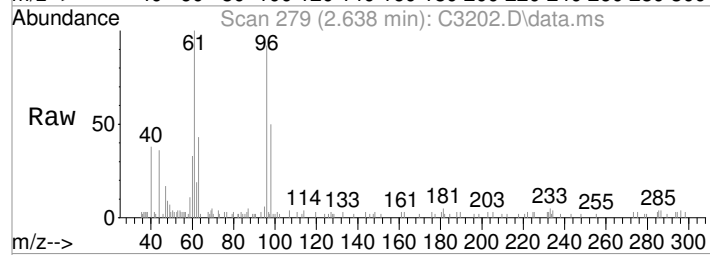


Tgt Ion: 43 Resp: 498
 Ion Ratio Lower Upper
 43 100
 58 27.0 8.6 48.6
 42 0.0 0.0 25.7

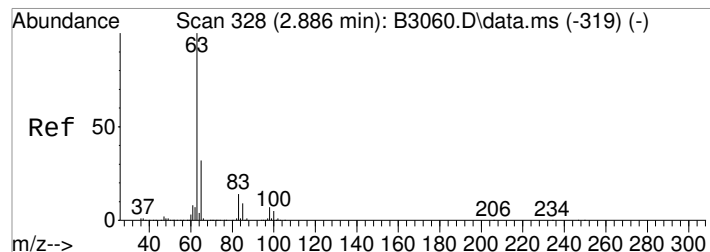
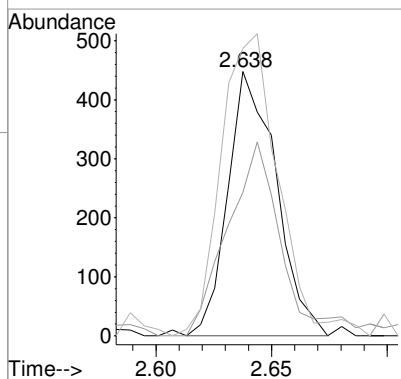
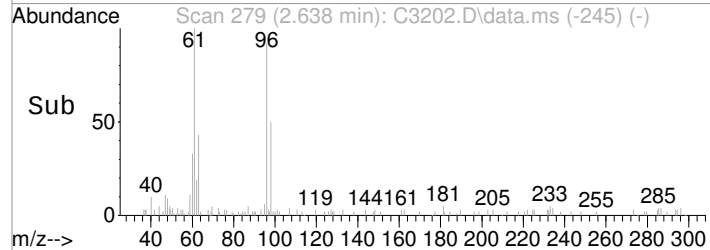




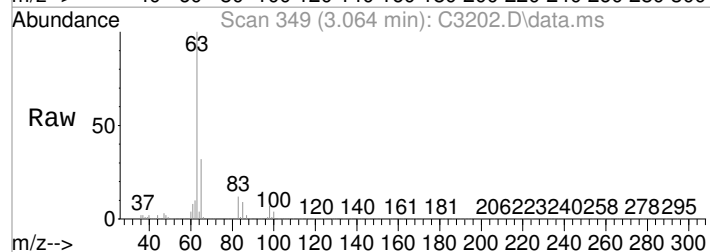
#26
 trans-1,2-Dichloroethene
 Concen: 0.52 ug/L
 RT: 2.638 min Scan# 279
 Delta R.T. -0.006 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm



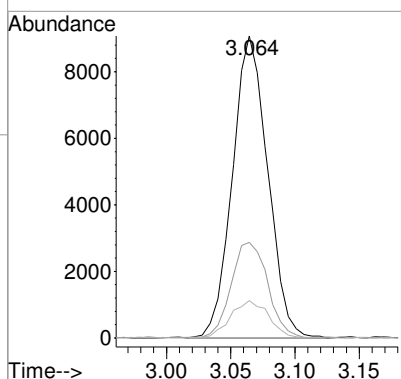
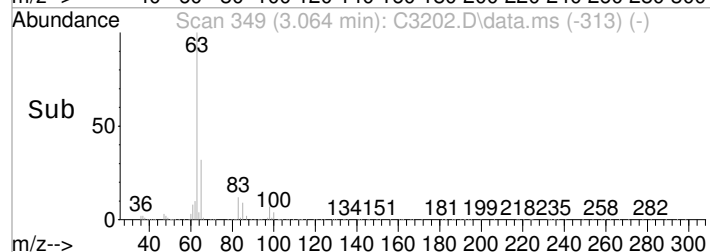
Tgt Ion: 96 Resp: 649
 Ion Ratio Lower Upper
 96 100
 98 54.2 41.4 81.4
 61 108.7 127.1 167.1#

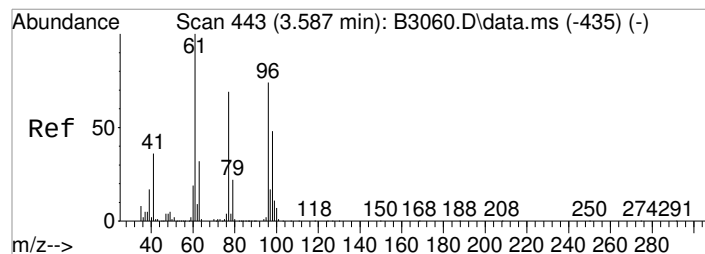


#27
 1,1-Dicethane
 Concen: 6.99 ug/L
 RT: 3.064 min Scan# 349
 Delta R.T. -0.005 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm



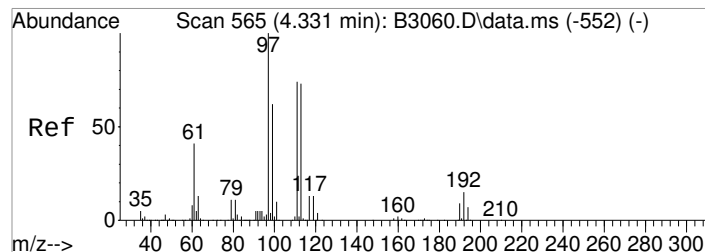
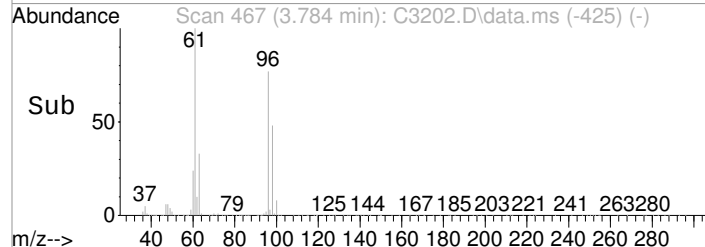
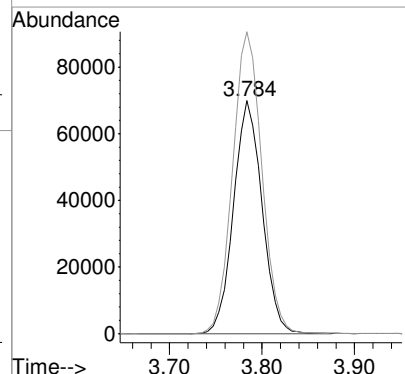
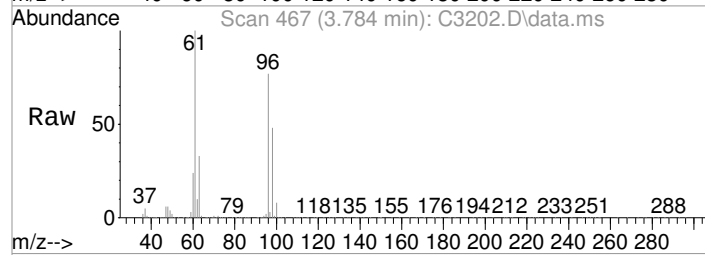
Tgt Ion: 63 Resp: 17354
 Ion Ratio Lower Upper
 63 100
 65 31.7 11.6 51.6
 83 12.3 0.0 32.7





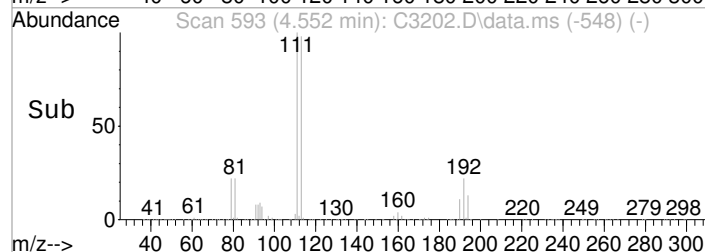
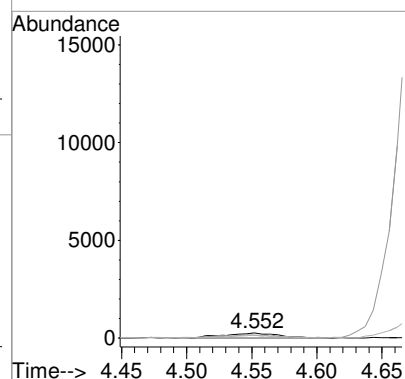
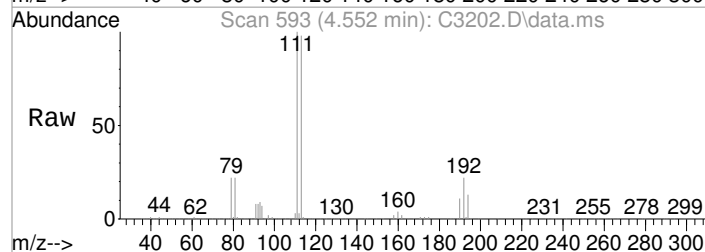
#33
 cis-1,2-Dichloroethene
 Concen: 100.73 ug/L
 RT: 3.784 min Scan# 467
 Delta R.T. -0.005 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm

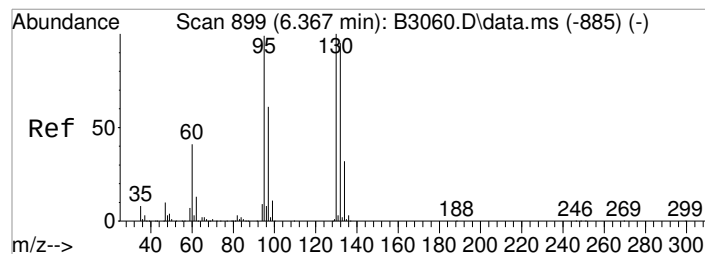
Tgt Ion: 96 Resp: 149817
 Ion Ratio Lower Upper
 96 100
 61 129.5 123.7 163.7



#40
 1,1,1-Trichloroethane
 Concen: 0.37 ug/L m
 RT: 4.552 min Scan# 593
 Delta R.T. -0.004 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm

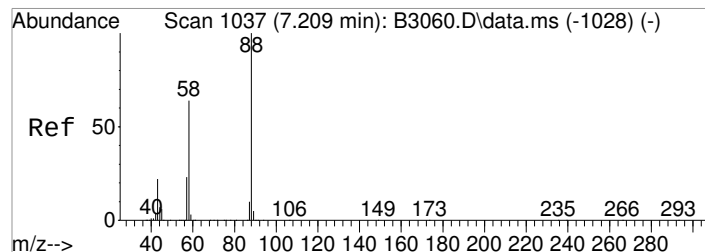
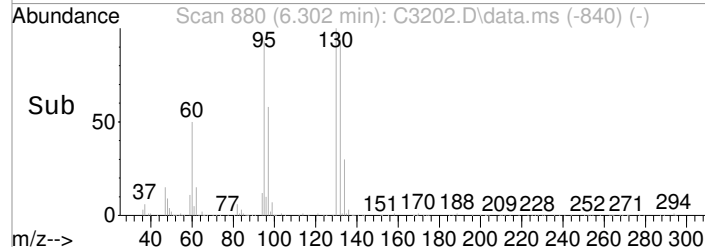
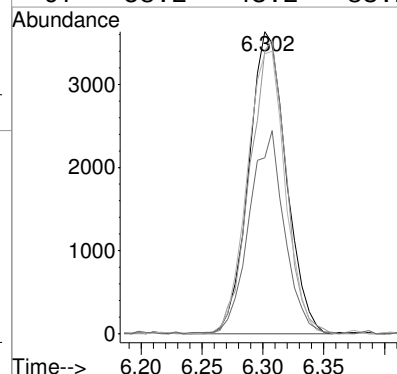
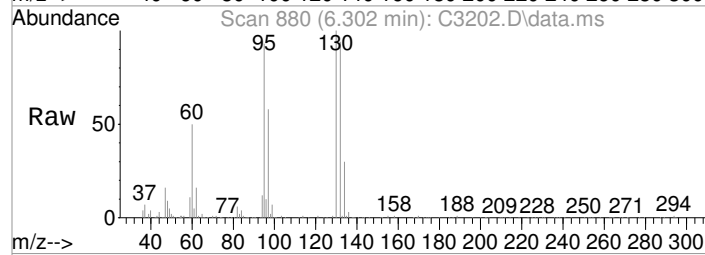
Tgt Ion: 97 Resp: 706
 Ion Ratio Lower Upper
 97 100
 99 53.3 44.2 84.2
 61 53.3 27.0 67.0





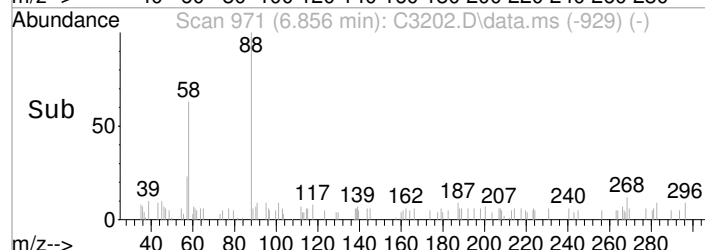
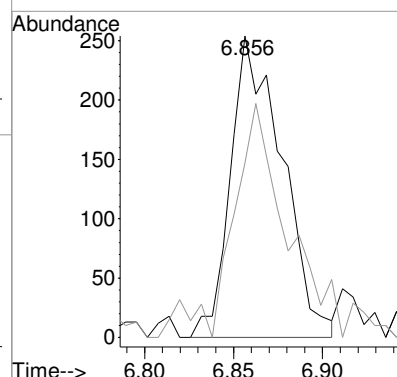
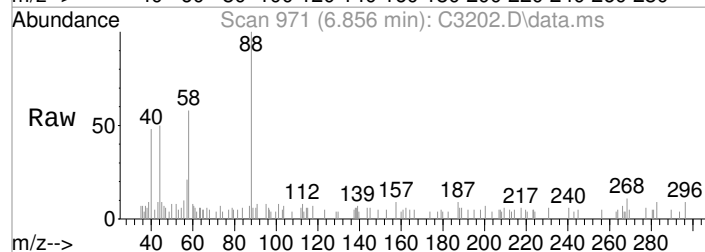
#53
 Trichloroethene
 Concen: 5.28 ug/L
 RT: 6.302 min Scan# 880
 Delta R.T. -0.005 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm

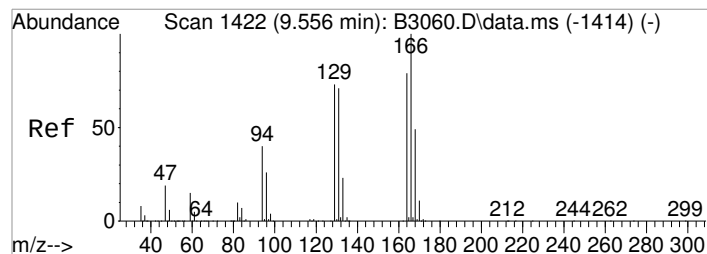
Tgt Ion	Ratio	Resp	Lower	Upper
130	100			
132	93.7	82.3	122.3	
95	92.7	75.5	115.5	
97	58.2	43.2	83.2	



#57
 1,4-Dioxane
 Concen: 18.56 ug/L
 RT: 6.856 min Scan# 971
 Delta R.T. -0.001 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm

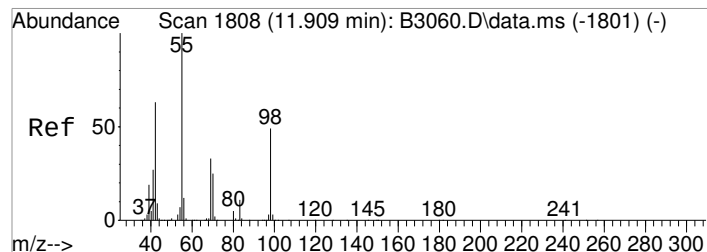
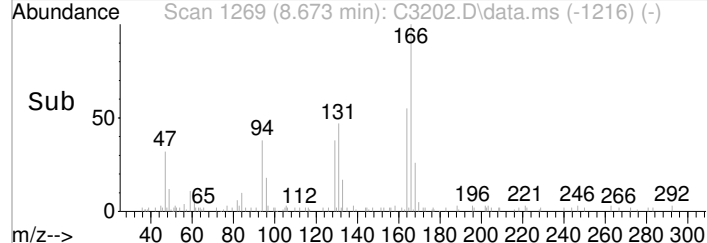
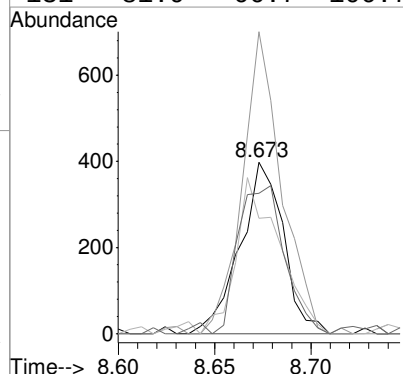
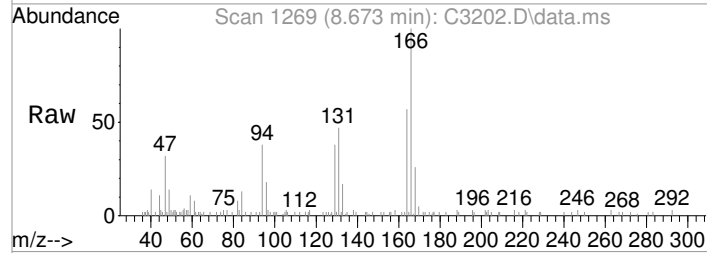
Tgt Ion	Ratio	Resp	Lower	Upper
88	100			
58	54.9	56.0	96.0	#





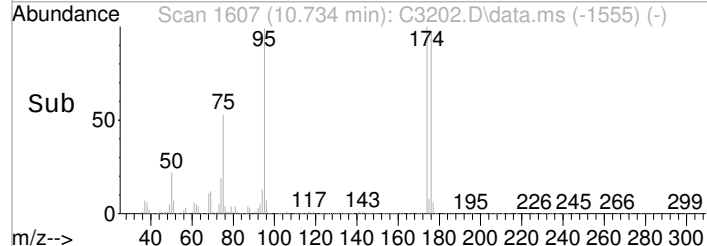
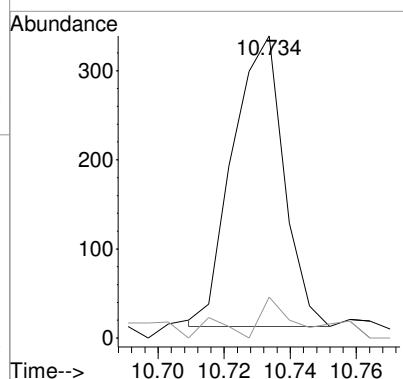
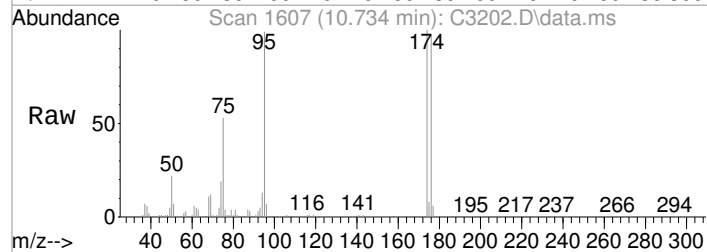
#71
 Tetrachloroethene
 Concen: 0.56 ug/L
 RT: 8.673 min Scan# 1269
 Delta R.T. -0.003 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm

Tgt Ion:164	Resp:	623
Ion Ratio	Lower	Upper
164	100	
166	176.1	109.9 149.9#
129	67.3	70.1 110.1#
131	81.9	66.7 106.7



#88
 Cyclohexanone
 Concen: 7.16 ug/L
 RT: 10.734 min Scan# 1607
 Delta R.T. 0.070 min
 Lab File: C3202.D
 Acq: 21 Nov 2017 7:59 pm

Tgt Ion: 55	Resp:	350
Ion Ratio	Lower	Upper
55	100	
42	13.6	54.6 94.6#



Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14087.D
 Acq On : 17 Nov 2017 9:59 pm
 Operator : K.Ruest
 Sample : VBLK
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:26:33 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

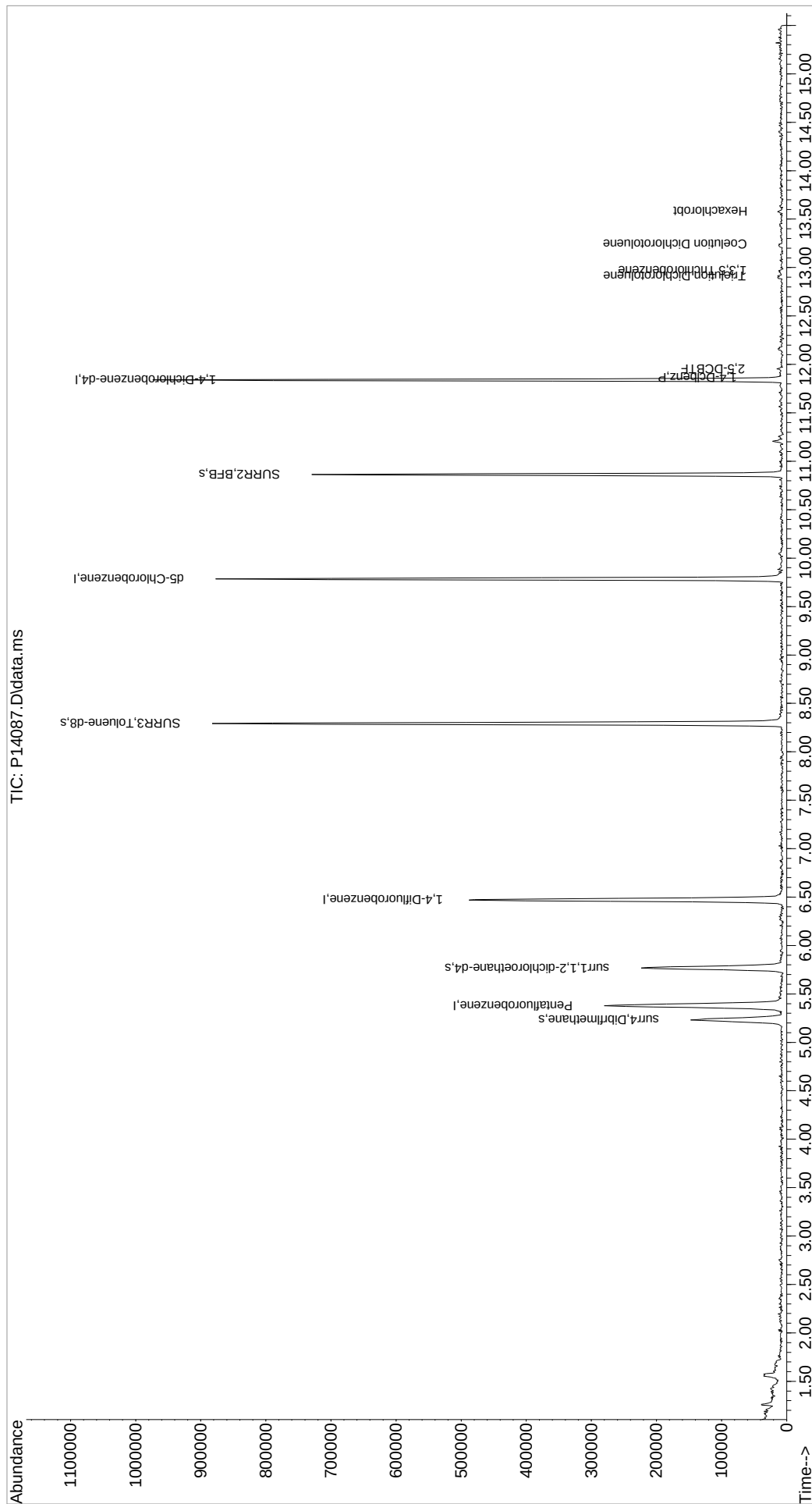
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.377	168	238106	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	388695	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	358730	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	179521	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.231	113	113012	52.14	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	104.28%	
48) surr1,1,2-dichloroetha...	5.767	65	175348	50.75	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	101.50%	
65) SURR3,Toluene-d8	8.291	98	494983	49.42	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	98.84%	
70) SURR2,BFB	10.864	95	190892	48.47	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	96.94%	
Target Compounds						
106) 1,4-Dclbenz	11.864	146	1400	0.22	ppb	Qvalue # 51
108) 2,5-DCBTF	11.955	214	777	0.28	ppb	# 26
112) Trielution Dichlorotol...	12.912	125	2368	0.40	ppb	# 47
113) 1,3,5 Trichlorobenzene	12.967	180	1301	0.28	ppb	# 23
114) Coelution Dichlorotoluene	13.241	125	1644	0.25	ppb	# 94
116) Hexachlorobt	13.583	225	438	0.22	ppb	# 77

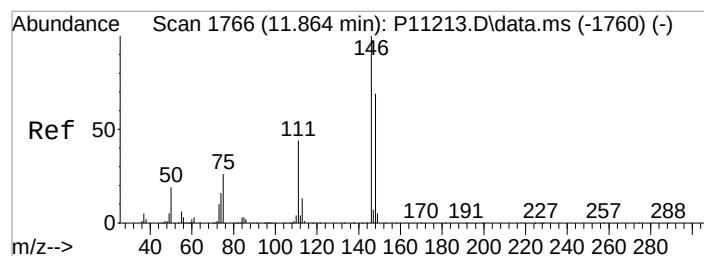
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14087.D
 Acq On : 17 Nov 2017 9:59 pm
 Operator : K.Ruest
 Sample : VBLK
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Inst : MSV0A-12

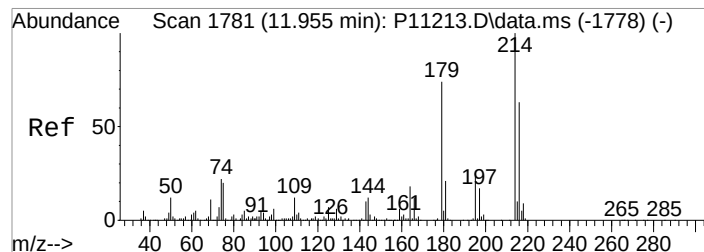
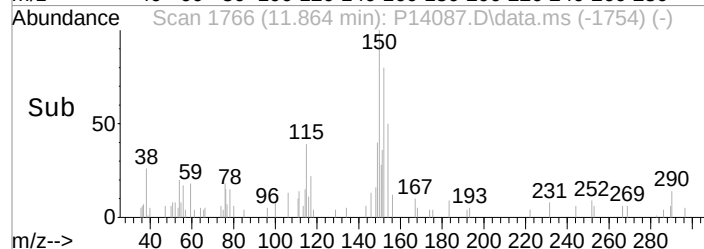
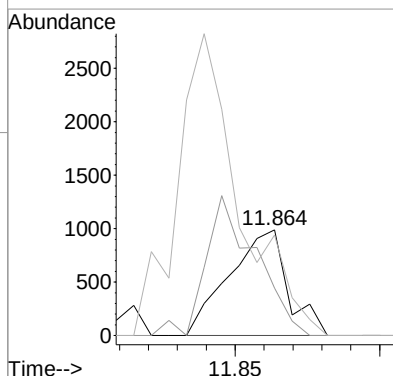
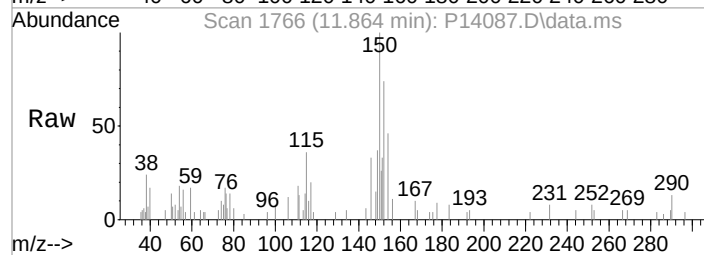
Quant Time: Nov 19 10:26:33 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration





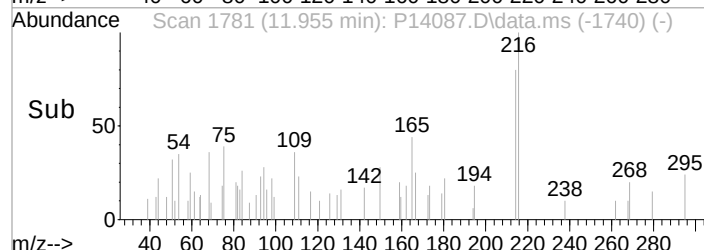
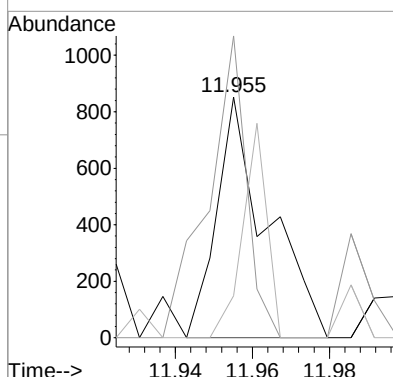
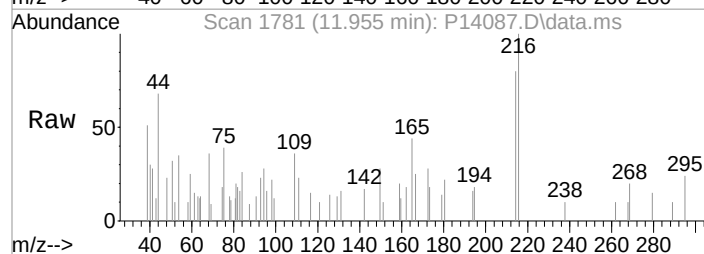
#106
1,4-Diclbz
Concen: 0.22 ppb
RT: 11.864 min Scan# 1766
Delta R.T. 0.004 min
Lab File: P14087.D
Acq: 17 Nov 2017 9:59 pm

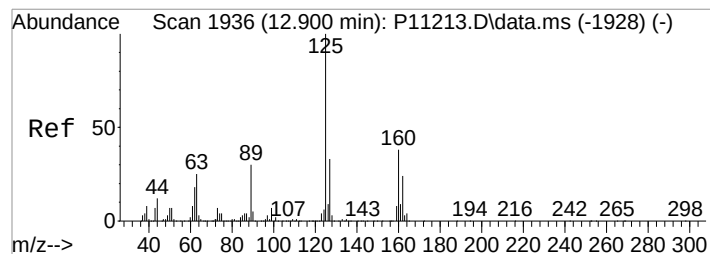
Tgt Ion	146	148	111
Ratio	100	44.8	95.1
Resp	1400	49.4	24.0
Upper		89.4#	64.0#



#108
2,5-DCBTF
Concen: 0.28 ppb
RT: 11.955 min Scan# 1781
Delta R.T. 0.000 min
Lab File: P14087.D
Acq: 17 Nov 2017 9:59 pm

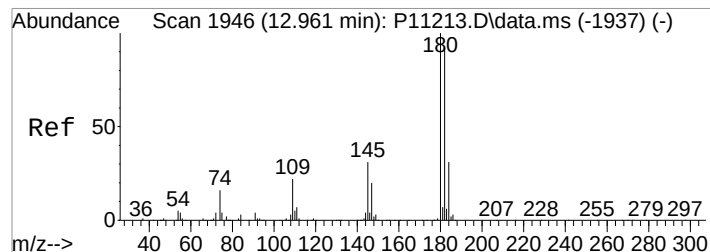
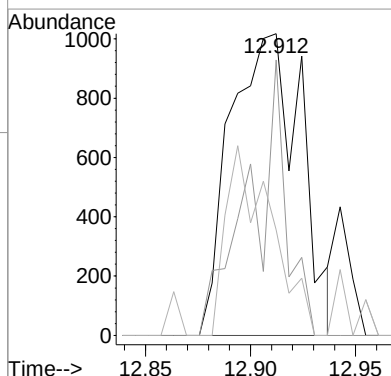
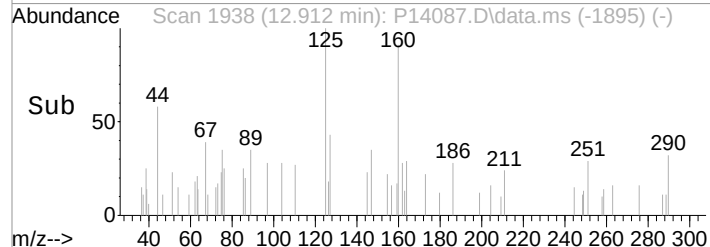
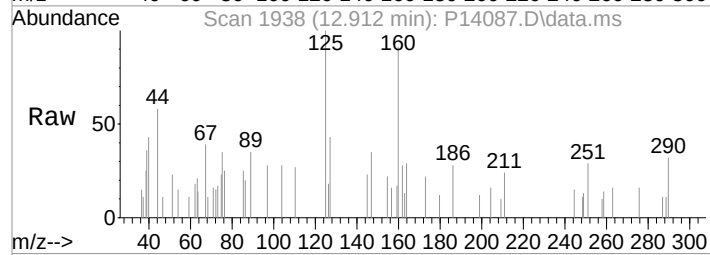
Tgt Ion	214	216	179
Ratio <td>100</td> <td>125.5</td> <td>17.5</td>	100	125.5	17.5
Resp <td>777</td> <td>50.0</td> <td>59.2</td>	777	50.0	59.2
Upper <td></td> <td>75.0#</td> <td>88.8#</td>		75.0#	88.8#





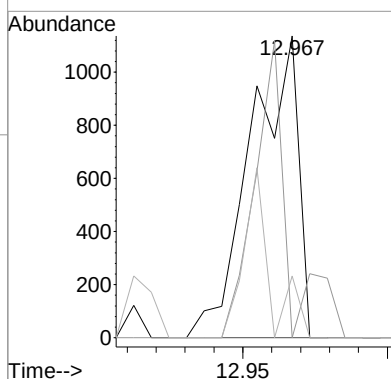
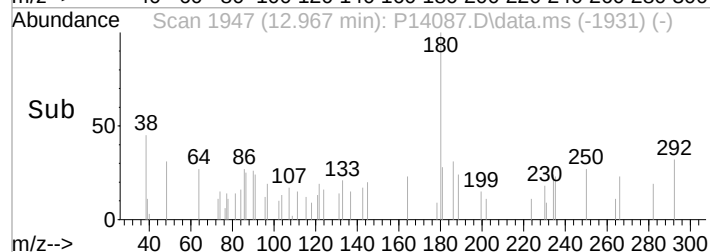
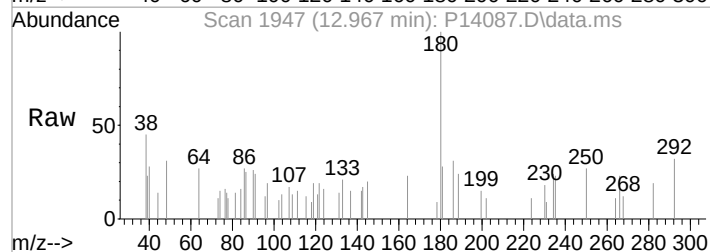
#112
Trielution Dichlorotoluene
Concen: 0.40 ppb
RT: 12.912 min Scan# 1938
Delta R.T. 0.010 min
Lab File: P14087.D
Acq: 17 Nov 2017 9:59 pm

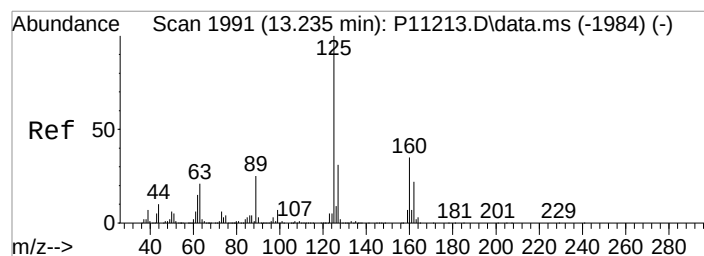
Tgt Ion	Ratio	Resp	Lower	Upper
125	100	2368		
160	91.3	30.6	46.0#	
89	35.0	24.1	36.1	



#113
1,3,5 Trichlorobenzene
Concen: 0.28 ppb
RT: 12.967 min Scan# 1947
Delta R.T. 0.010 min
Lab File: P14087.D
Acq: 17 Nov 2017 9:59 pm

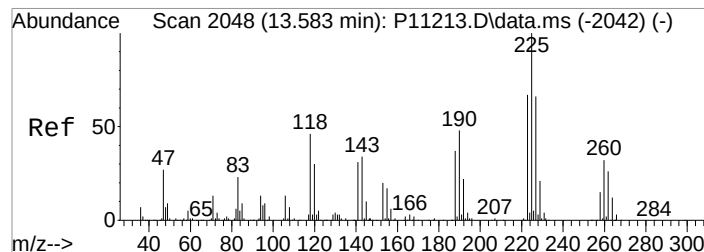
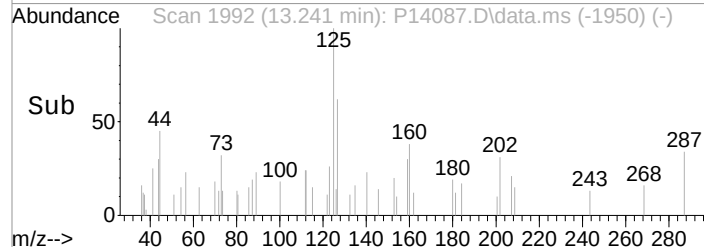
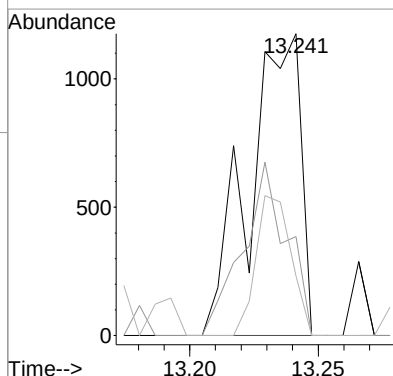
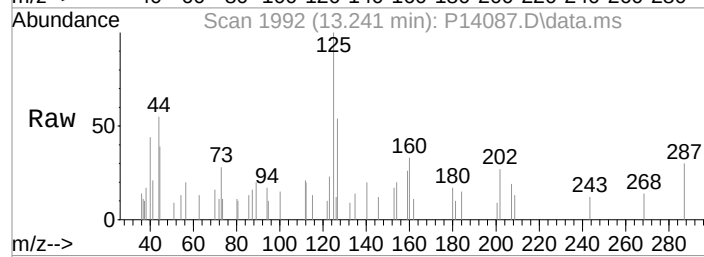
Tgt Ion	Ratio	Resp	Lower	Upper
180	100	1301		
182	0.0	73.5	110.3#	
145	20.5	24.7	37.1#	





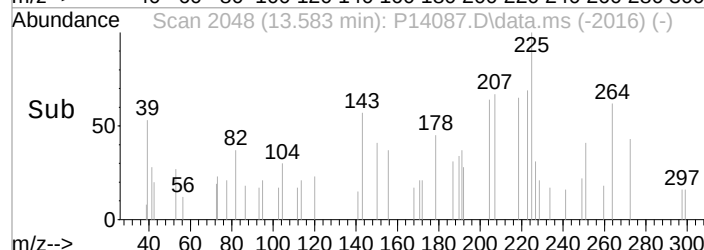
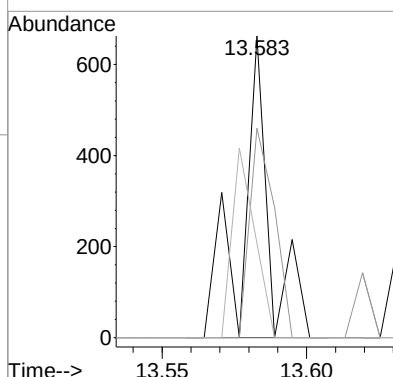
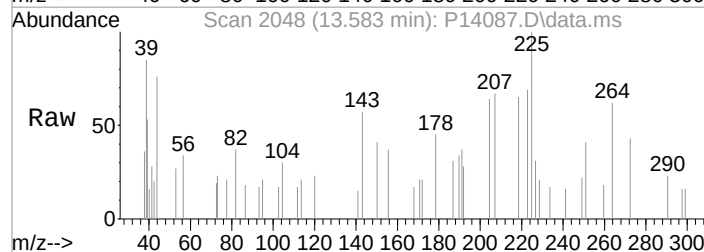
#114
Coelution Dichlorotoluene
Concen: 0.25 ppb
RT: 13.241 min Scan# 1992
Delta R.T. 0.006 min
Lab File: P14087.D
Acq: 17 Nov 2017 9:59 pm

Tgt Ion	Ratio	Lower	Upper
125	100		
160	32.8	27.9	41.9
89	19.7	19.9	29.9#



#116
Hexachlorobt
Concen: 0.22 ppb
RT: 13.583 min Scan# 2048
Delta R.T. 0.004 min
Lab File: P14087.D
Acq: 17 Nov 2017 9:59 pm

Tgt Ion	Ratio	Lower	Upper
225	100		
223	69.4	46.8	86.8
227	31.2	45.6	85.6#



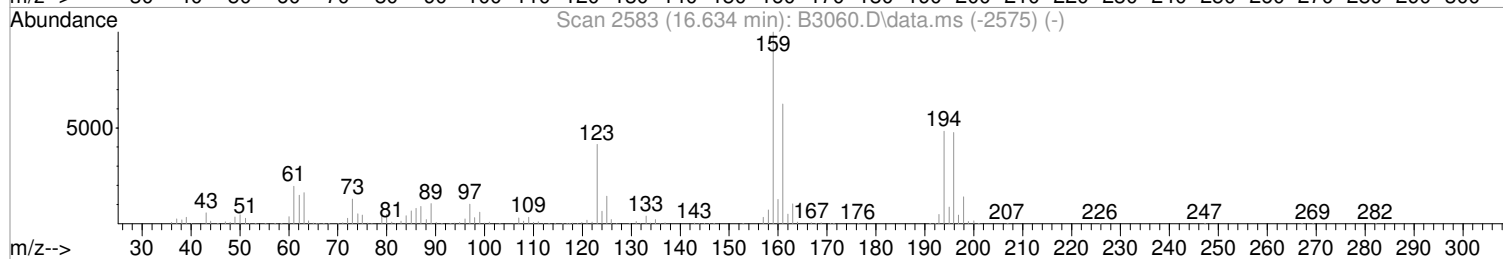
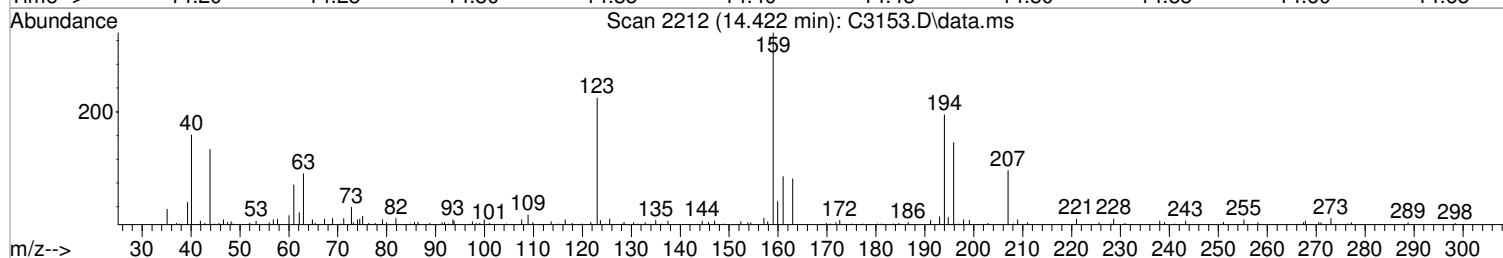
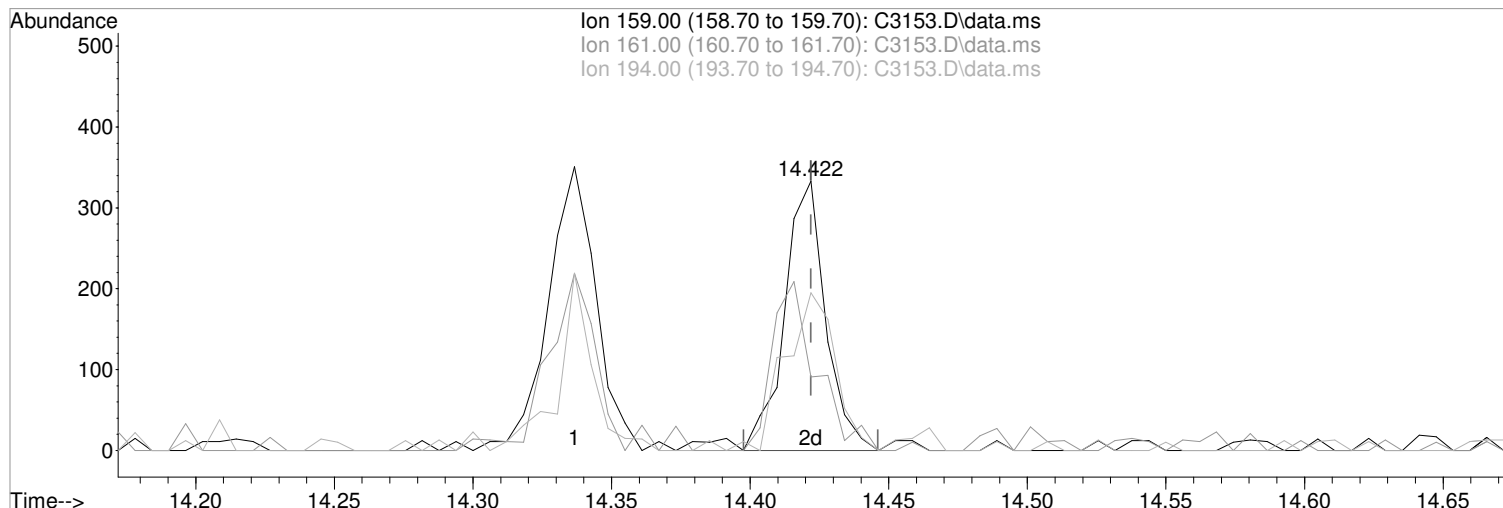
Quantitation Report (Qedit)

1st *FJ* 11/21/17
2nd *RL* 11/26/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3153.D
Acq On : 20 Nov 2017 10:46 pm
Operator : F. NAEGLER
Sample : MBLK
Misc :
ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 08:53:20 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3153.D\data.ms

(119) 2,3,6-Trichlorotoluene

14.422min (-0.000) 0.25 ug/L m

response 342

Ion	Exp%	Act%
159.00	100	100
161.00	63.40	27.33#
194.00	49.30	58.56
0.00	0.00	0.00

Manual Integration:

After

Wrong peak selected.

11/21/17

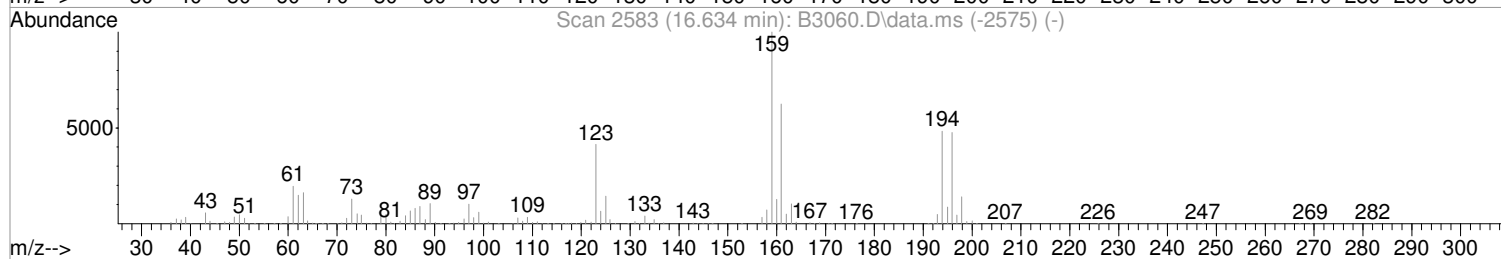
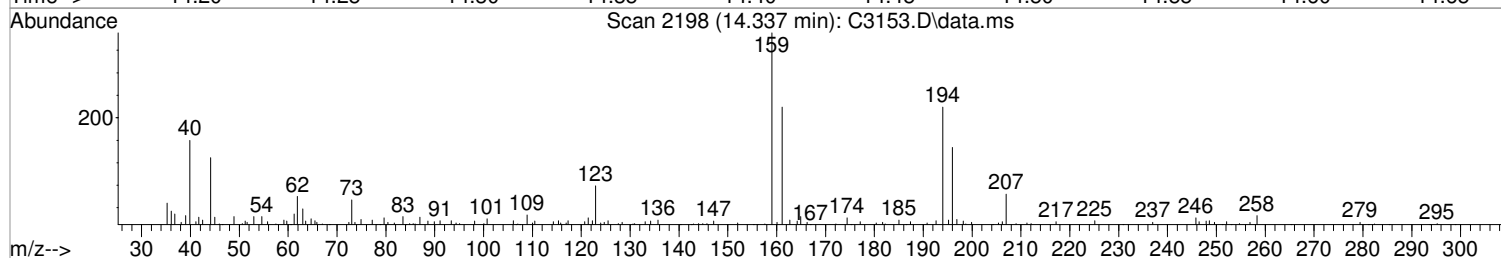
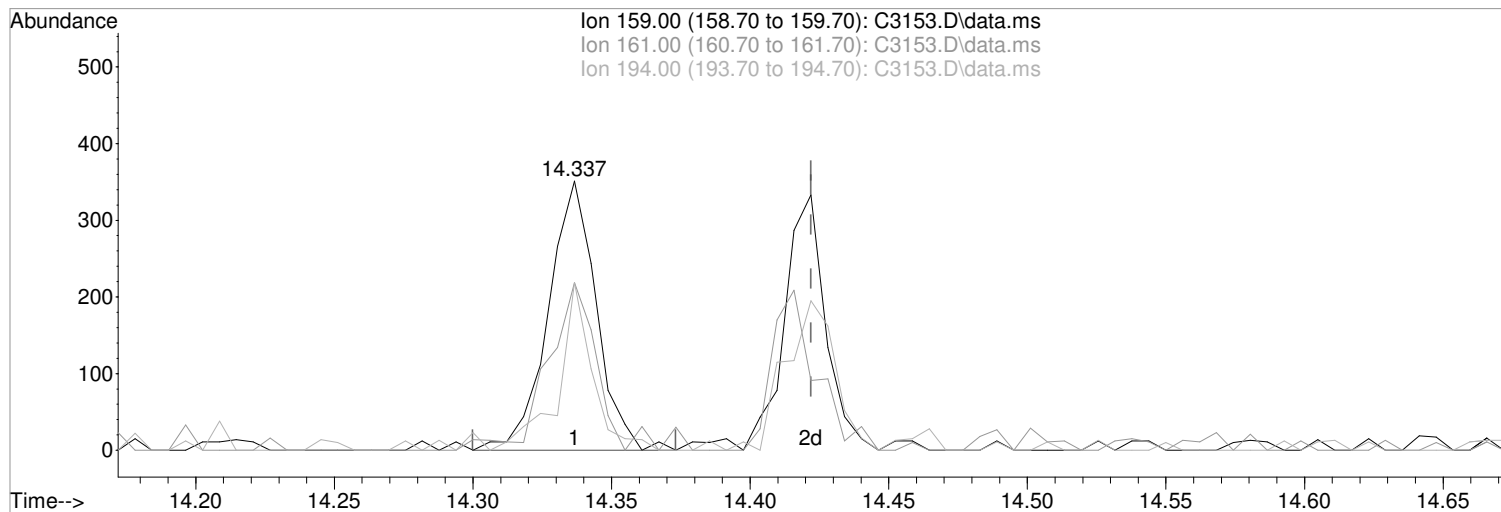
Quantitation Report (Qedit)

1st *FJ* 11/21/17
2nd *RL* 11/26/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3153.D
Acq On : 20 Nov 2017 10:46 pm
Operator : F. NAEGLER
Sample : MBLK
Misc :
ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 08:53:20 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3153.D\data.ms

(119) 2,3,6-Trichlorotoluene

14.337min (-0.085) 0.31 ug/L

response 425

Ion	Exp%	Act%

159.00	100	100

161.00	63.40	62.39

194.00	49.30	62.39

0.00	0.00	0.00

Manual Integration:

Before

11/21/17

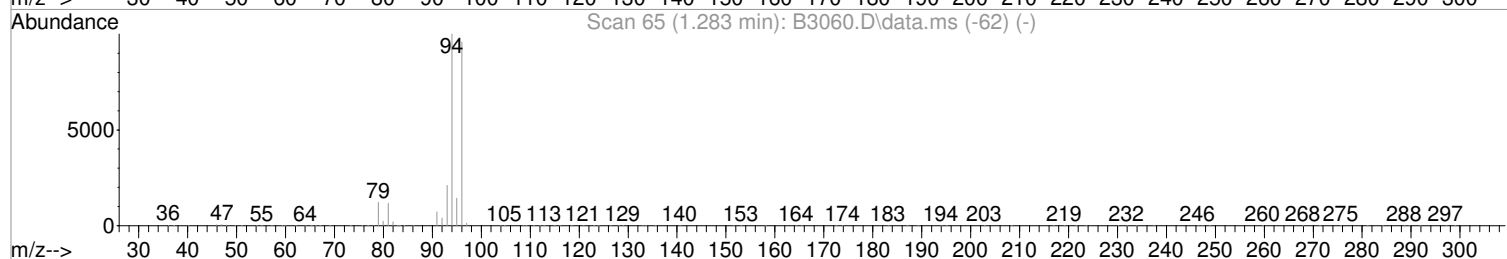
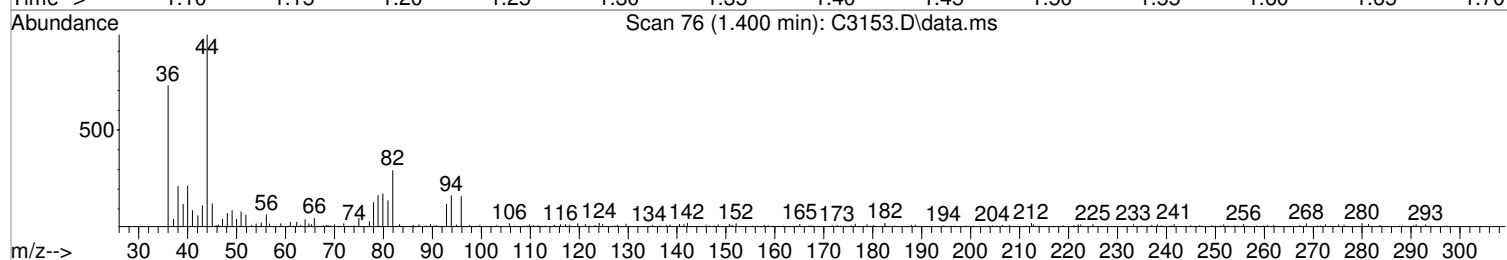
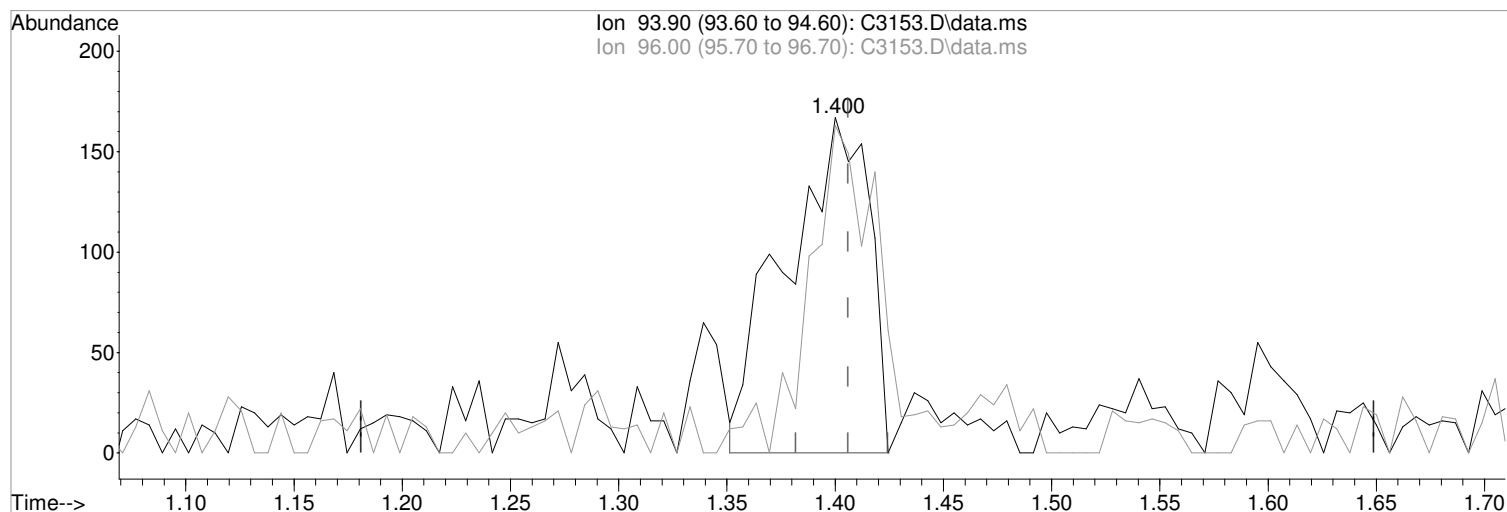
Quantitation Report (Qedit)

1st *FJ* 11/21/17
2nd *RL* 11/26/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3153.D
Acq On : 20 Nov 2017 10:46 pm
Operator : F. NAEGLER
Sample : MBLK
Misc :
ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 08:53:20 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3153.D\data.ms

(5) Bromomethane (P)

1.400min (-0.006) 0.40 ug/L m

response 447

Ion	Exp%	Act%
93.90	100	100
96.00	92.20	97.60
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

11/21/17

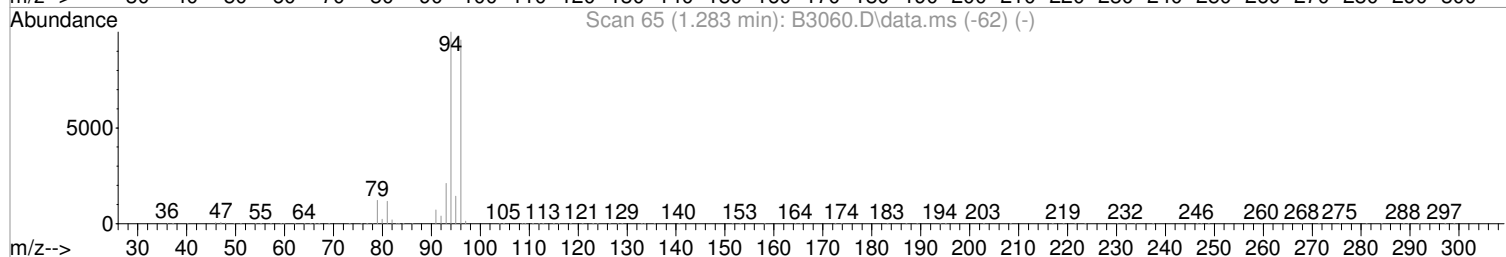
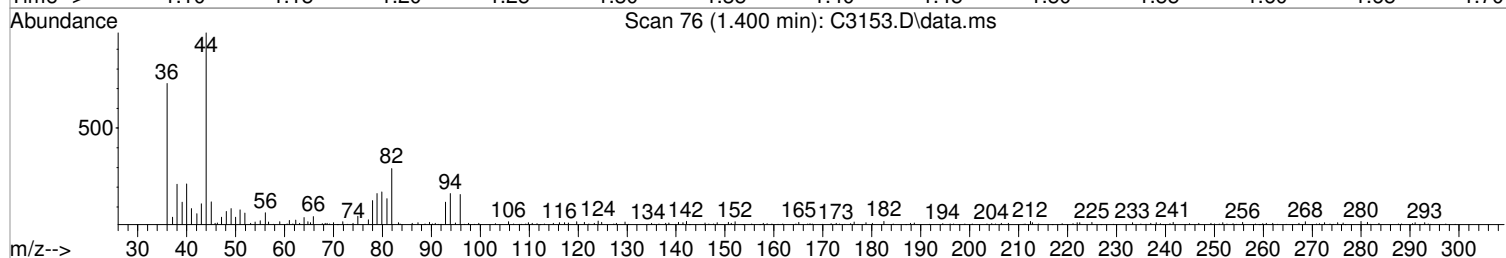
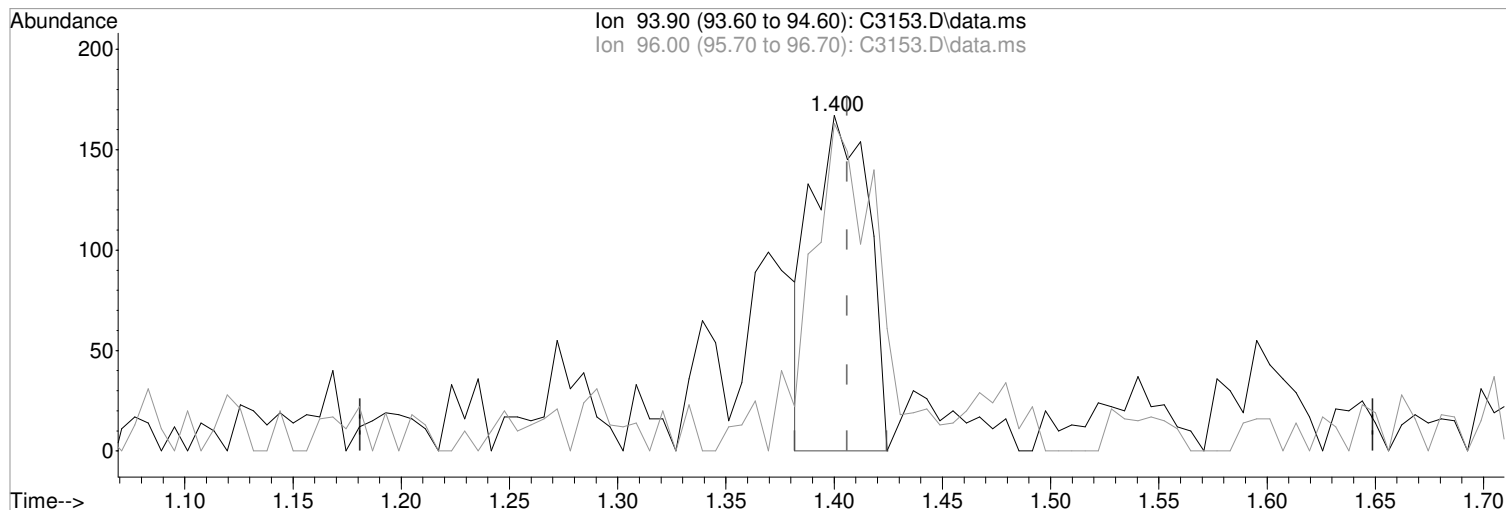
Quantitation Report (Qedit)

1st *FJ* 11/21/17
2nd *RL* 11/26/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3153.D
Acq On : 20 Nov 2017 10:46 pm
Operator : F. NAEGLER
Sample : MBLK
Misc :
ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 08:53:20 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3153.D\data.ms

(5) Bromomethane (P)

Manual Integration:

1.400min (-0.006) 0.27 ug/L

Before

response 302

Ion	Exp%	Act%
93.90	100	100
96.00	92.20	97.60
0.00	0.00	0.00
0.00	0.00	0.00

11/21/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3153.D
 Acq On : 20 Nov 2017 10:46 pm
 Operator : F. NAEGLER
 Sample : MBLK
 Misc :
 ALS Vial : 30 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 16:33:29 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

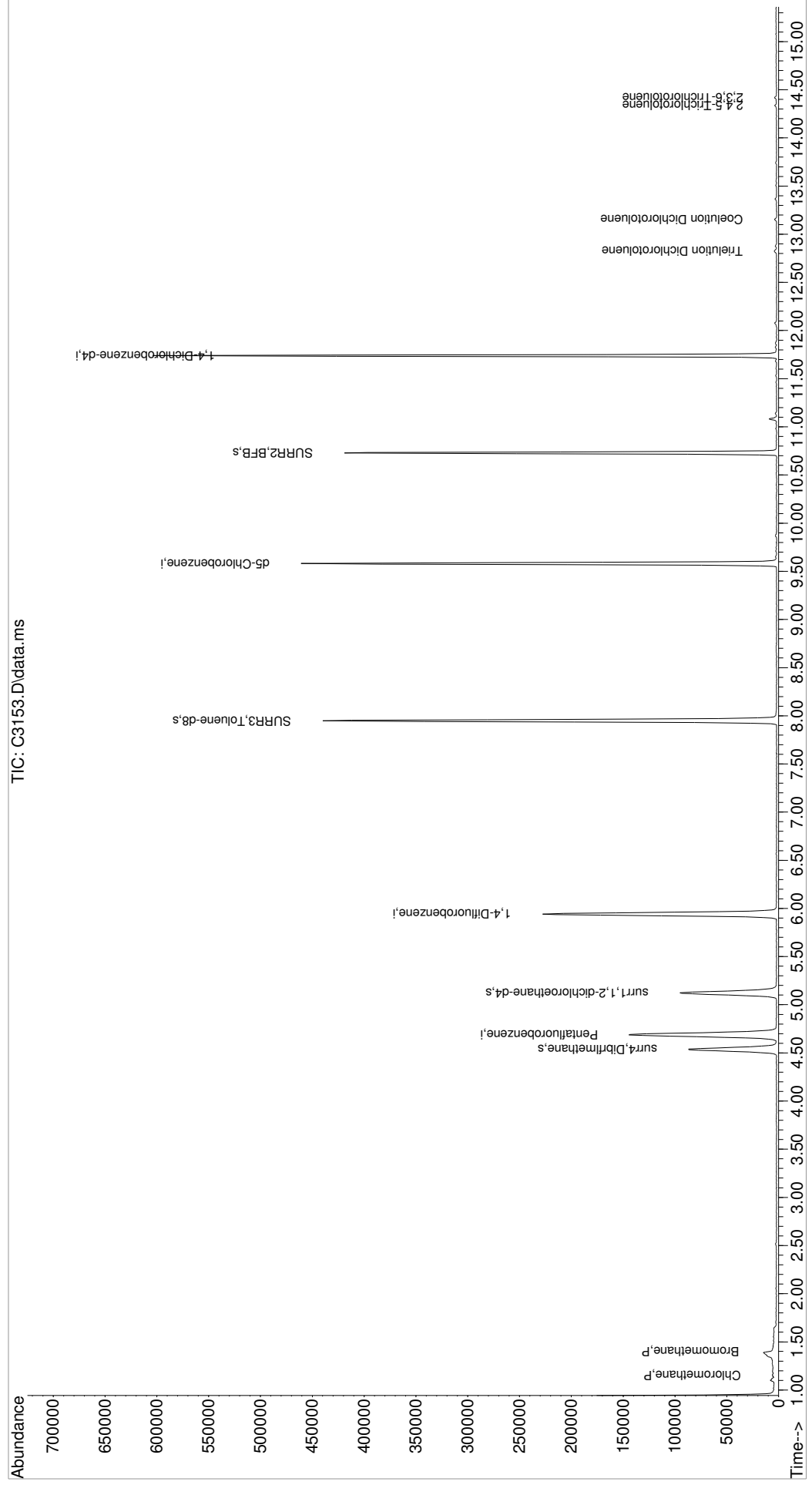
Internal Standards						
1) Pentafluorobenzene	4.692	168	141903	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	212779	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	195050	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	106211	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	66129	46.28	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	92.56%	
47) surr1,1,2-dichloroetha...	5.125	65	93263	48.00	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	96.00%	
64) SURR3,Toluene-d8	7.948	98	268686	47.74	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	95.48%	
69) SURR2,BFB	10.728	95	101223	47.10	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	94.20%	
Target Compounds						
3) Chloromethane	1.150	50	497	0.25	ug/L	Qvalue 73
5) Bromomethane	1.400	94	447m	0.40	ug/L	
111) Trielution Dichlorotol...	12.825	125	1174	0.44	ug/L	97
113) Coelution Dichlorotoluene	13.154	125	662	0.23	ug/L	89
118) 2,4,5-Trichlorotoluene	14.337	159	425	0.29	ug/L #	84
119) 2,3,6-Trichlorotoluene	14.422	159	342m	0.25	ug/L	

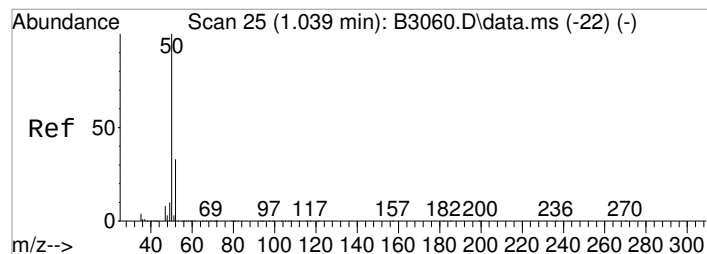
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3153.D
 Acq On : 20 Nov 2017 10:46 pm
 Operator : F. NAEGLER
 Sample : MBLK
 Misc :
 ALS Vial : 30 Sample Multiplier: 1

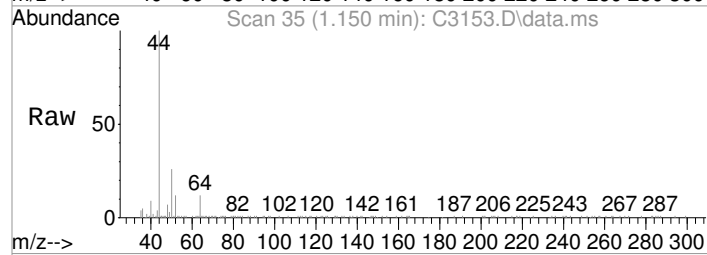
Inst : MSVOA14

Quant Time: Nov 21 16:33:29 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

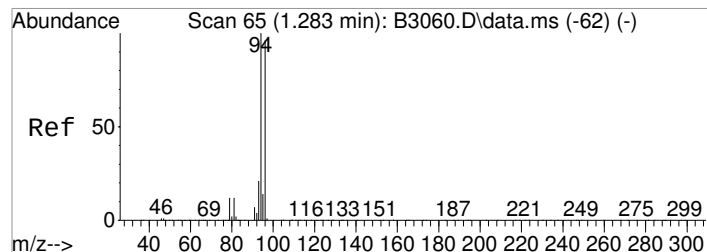
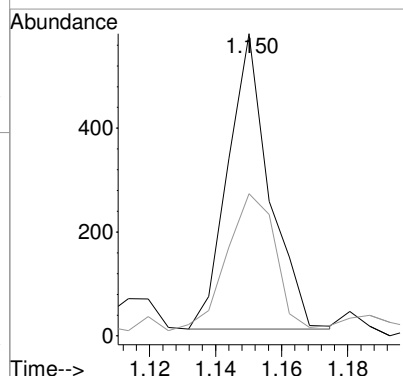
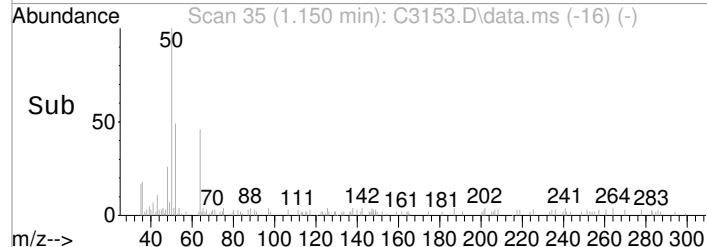




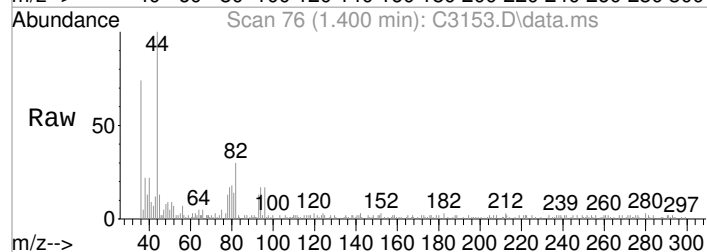
#3
 Chloromethane
 Concen: 0.25 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. -0.000 min
 Lab File: C3153.D
 Acq: 20 Nov 2017 10:46 pm



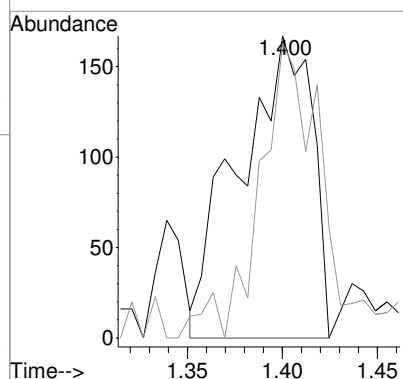
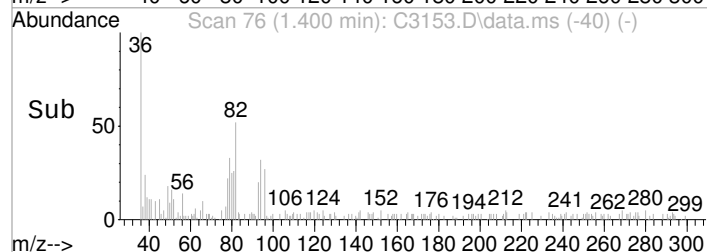
Tgt Ion: 50 Resp: 497
 Ion Ratio Lower Upper
 50 100
 52 47.1 12.1 52.1

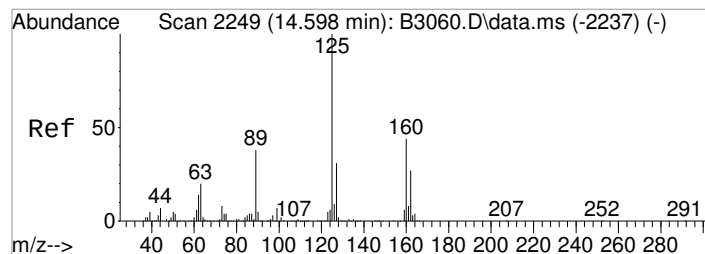


#5
 Bromomethane
 Concen: 0.40 ug/L m
 RT: 1.400 min Scan# 76
 Delta R.T. -0.006 min
 Lab File: C3153.D
 Acq: 20 Nov 2017 10:46 pm



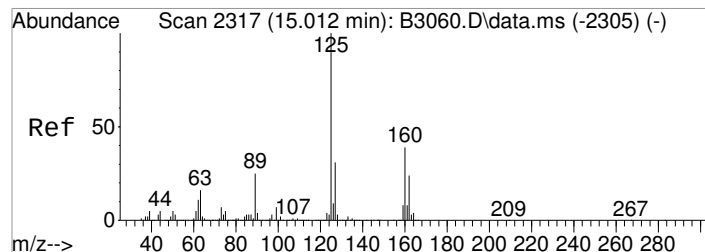
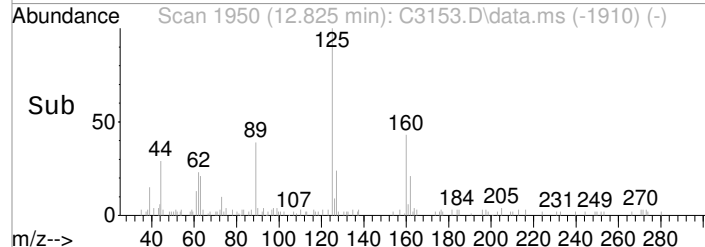
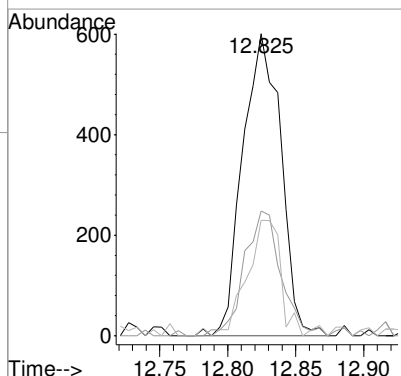
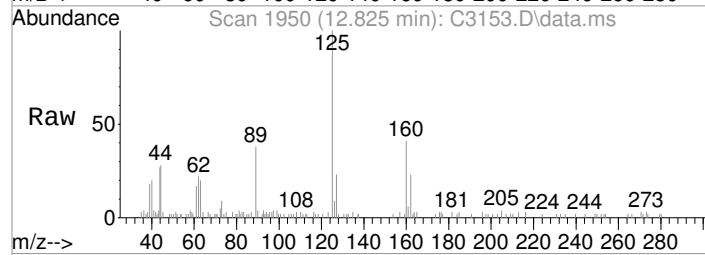
Tgt Ion: 94 Resp: 447
 Ion Ratio Lower Upper
 94 100
 96 97.6 72.2 112.2





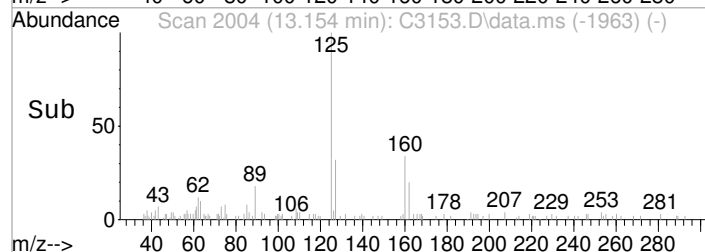
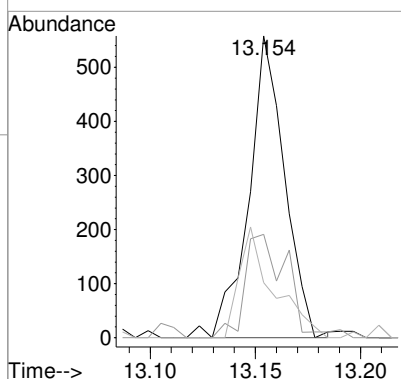
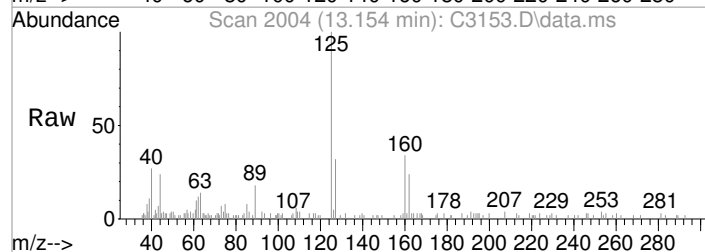
#111
 Trielution Dichlorotoluene
 Concen: 0.44 ug/L
 RT: 12.825 min Scan# 1950
 Delta R.T. -0.005 min
 Lab File: C3153.D
 Acq: 20 Nov 2017 10:46 pm

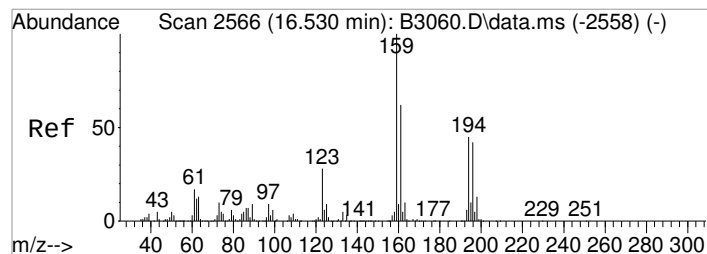
Tgt Ion	125	Resp:	1174
Ion Ratio	Lower	Upper	
125	100		
160	41.3	23.3	63.3
89	38.3	20.1	60.1



#113
 Coelution Dichlorotoluene
 Concen: 0.23 ug/L
 RT: 13.154 min Scan# 2004
 Delta R.T. -0.000 min
 Lab File: C3153.D
 Acq: 20 Nov 2017 10:46 pm

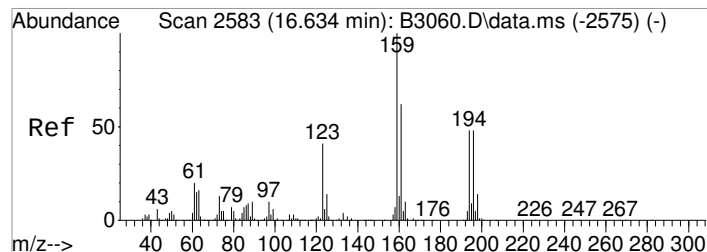
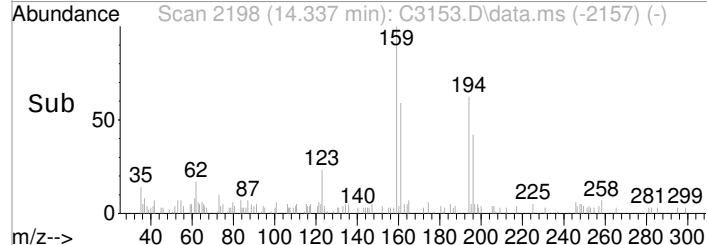
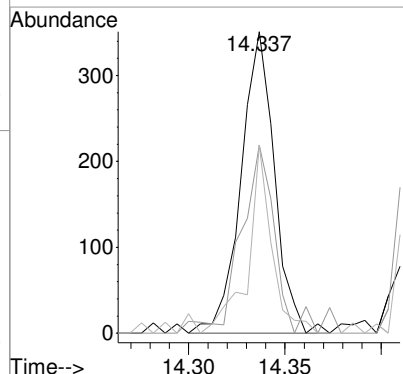
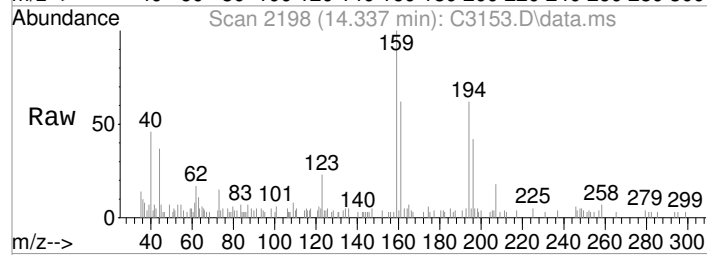
Tgt Ion	125	Resp:	662
Ion Ratio	Lower	Upper	
125	100		
160	34.2	18.2	58.2
89	18.3	7.4	47.4





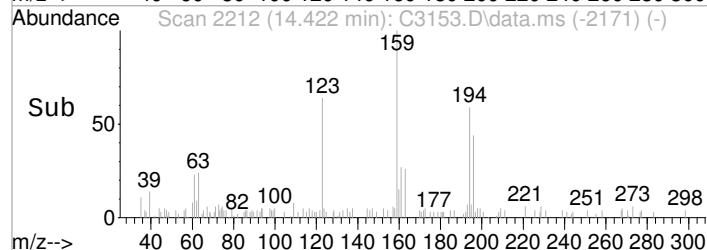
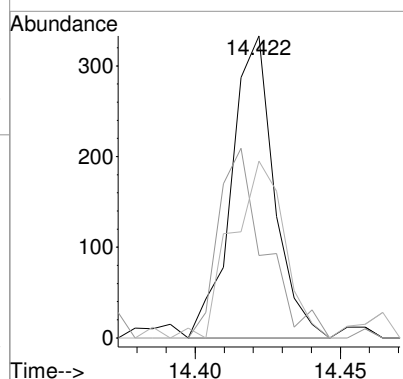
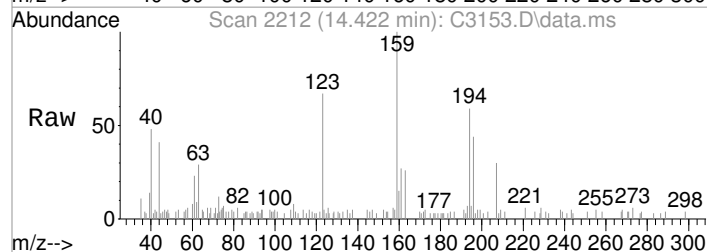
#118
 2,4,5-Trichlorotoluene
 Concen: 0.29 ug/L
 RT: 14.337 min Scan# 2198
 Delta R.T. -0.000 min
 Lab File: C3153.D
 Acq: 20 Nov 2017 10:46 pm

Tgt Ion	159	161	194
Ratio	100	62.4	62.4
Lower		40.0	21.4
Upper		80.0	61.4#



#119
 2,3,6-Trichlorotoluene
 Concen: 0.25 ug/L m
 RT: 14.422 min Scan# 2212
 Delta R.T. -0.000 min
 Lab File: C3153.D
 Acq: 20 Nov 2017 10:46 pm

Tgt Ion	159	161	194
Ratio	100	27.3	58.6
Lower		43.4	29.3
Upper		83.4#	69.3



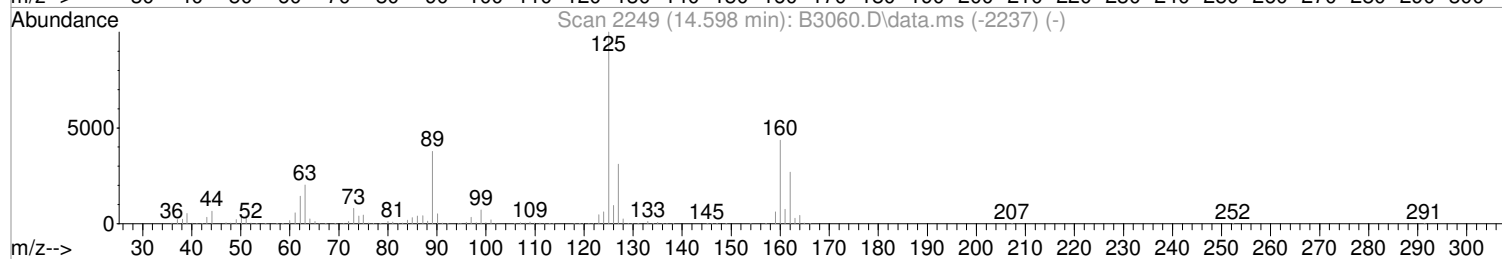
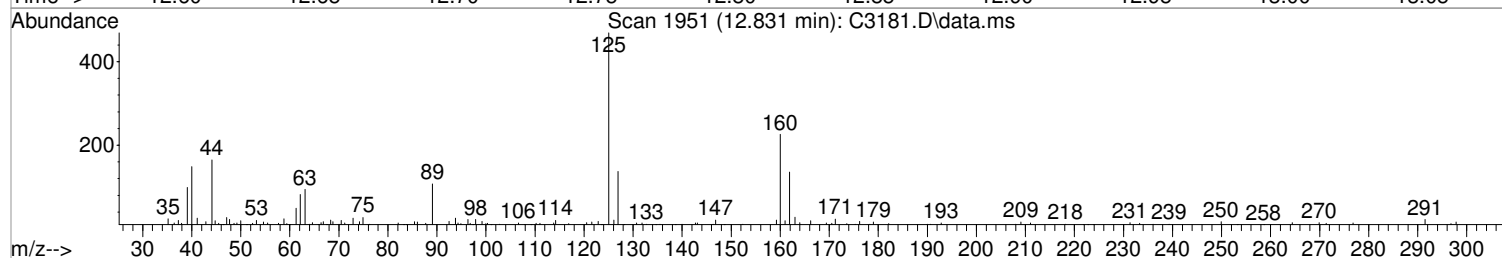
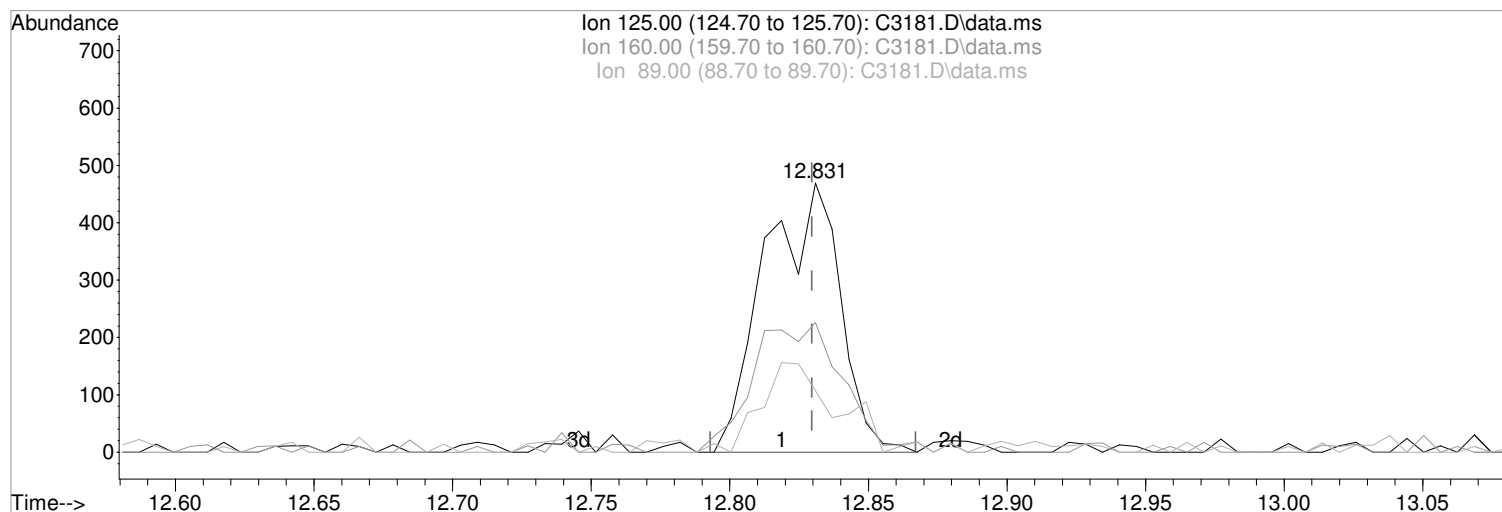
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3181.D
Acq On : 21 Nov 2017 12:11 pm
Operator : F. NAEGLER
Sample : MBLK
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 12:26:24 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3181.D\data.ms

(111) Trilution Dichlorotoluene

12.831min (+0.001) 0.32 ug/L m

response 892

Ion	Exp%	Act%
125.00	100	100
160.00	43.30	48.19
89.00	40.10	22.81
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

11/27/17

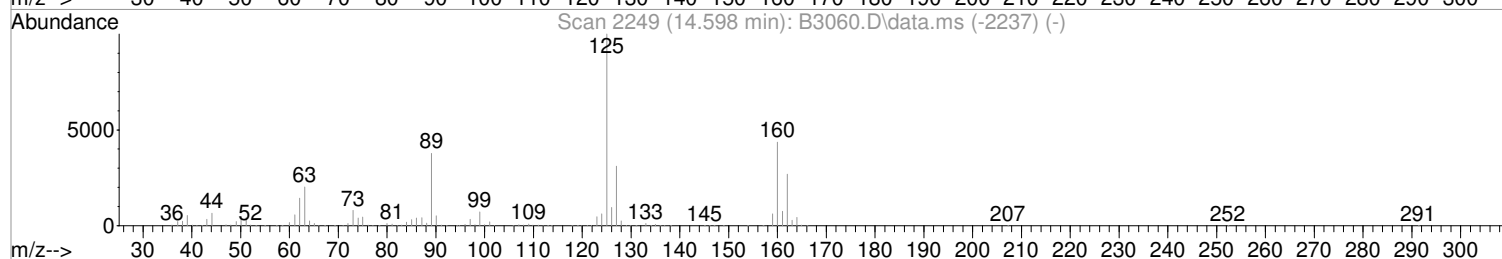
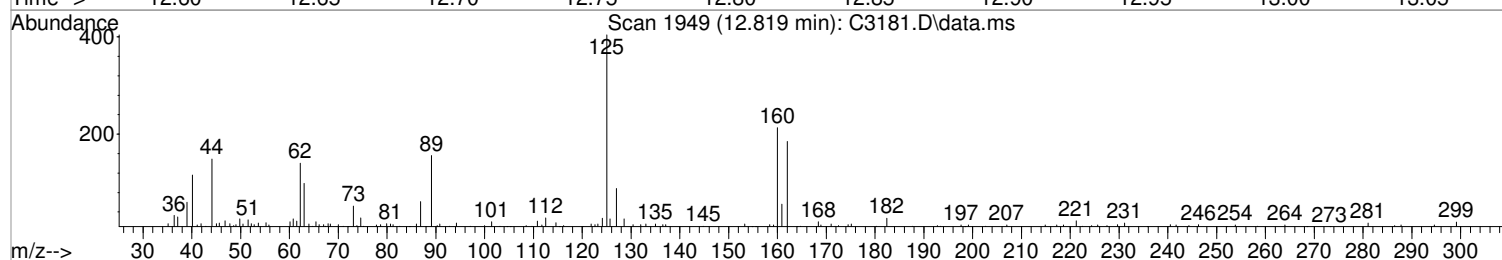
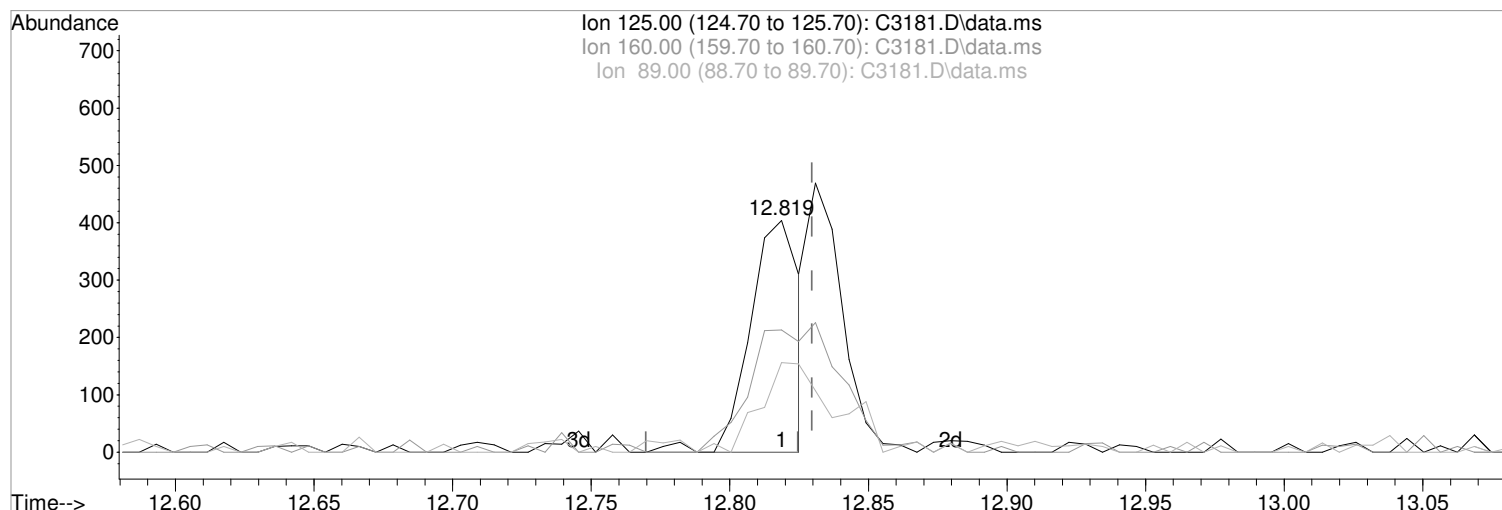
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3181.D
Acq On : 21 Nov 2017 12:11 pm
Operator : F. NAEGLER
Sample : MBLK
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 12:26:24 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3181.D\data.ms

(111) Trilution Dichlorotoluene

Manual Integration:

12.819min (-0.011) 0.18 ug/L

Before

response 499

Ion	Exp%	Act%
125.00	100	100
160.00	43.30	49.53
89.00	40.10	36.28
0.00	0.00	0.00

11/27/17

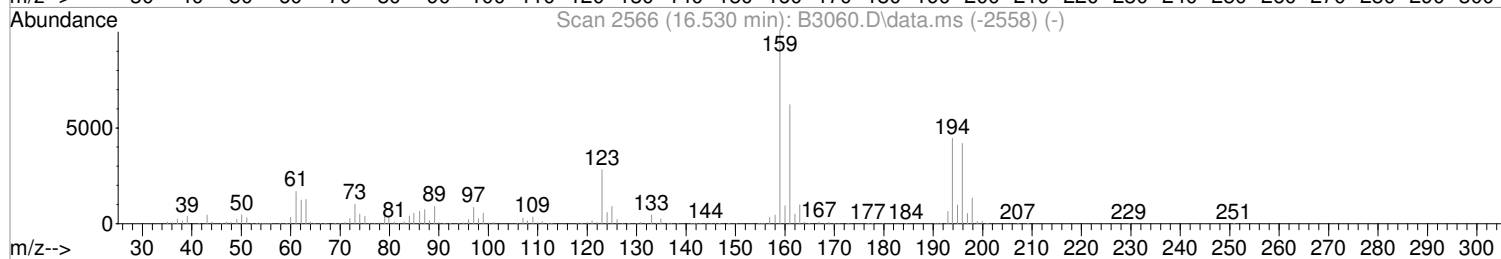
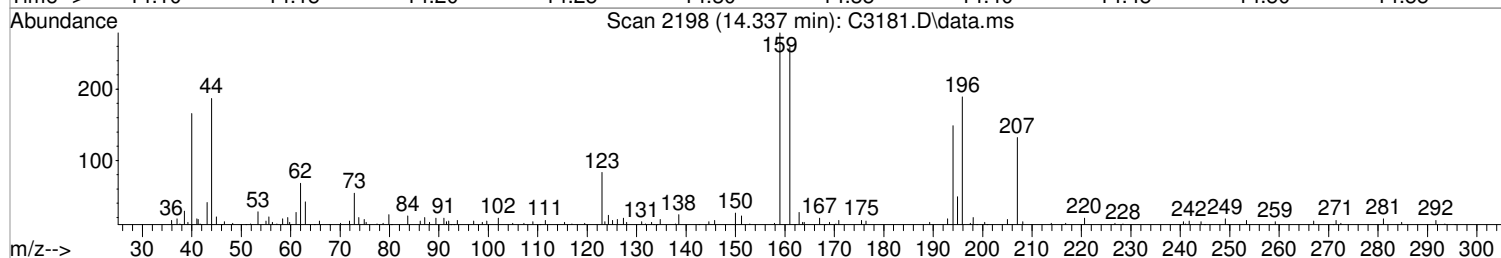
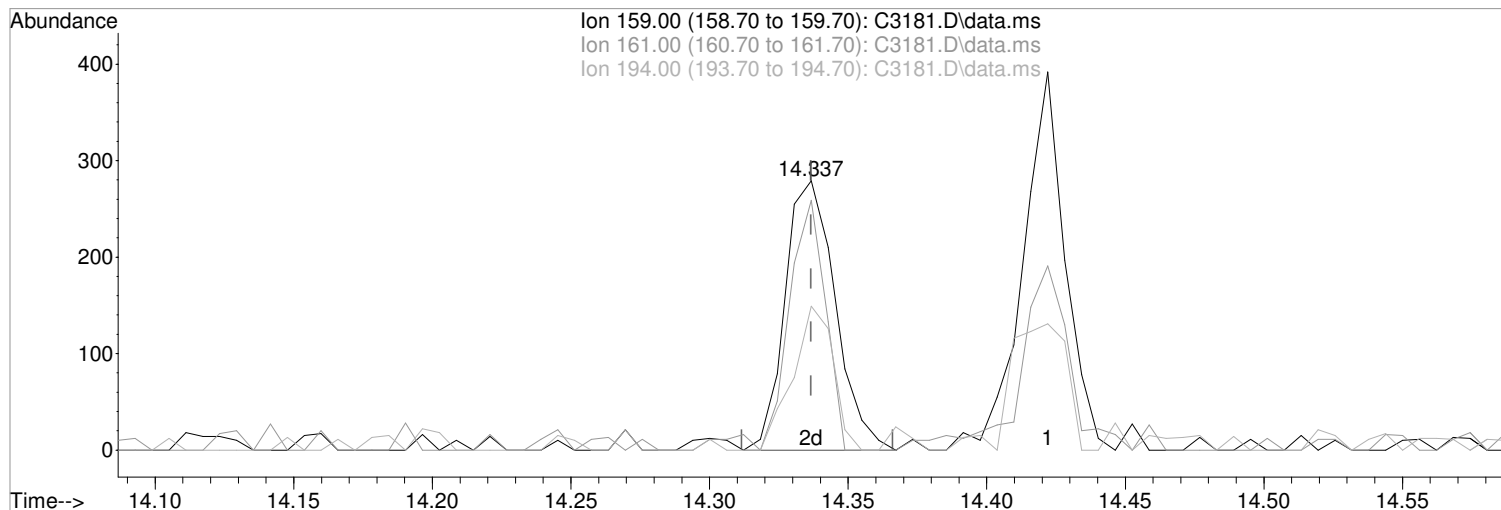
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3181.D
Acq On : 21 Nov 2017 12:11 pm
Operator : F. NAEGLER
Sample : MBLK
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 12:26:24 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3181.D\data.ms

(118) 2,4,5-Trichlorotoluene

14.337min (+0.000) 0.23 ug/L m

response 351

Ion	Exp%	Act%
159.00	100	100
161.00	60.00	92.83#
194.00	41.40	53.41
0.00	0.00	0.00

Manual Integration:

After

Wrong peak selected.

11/27/17

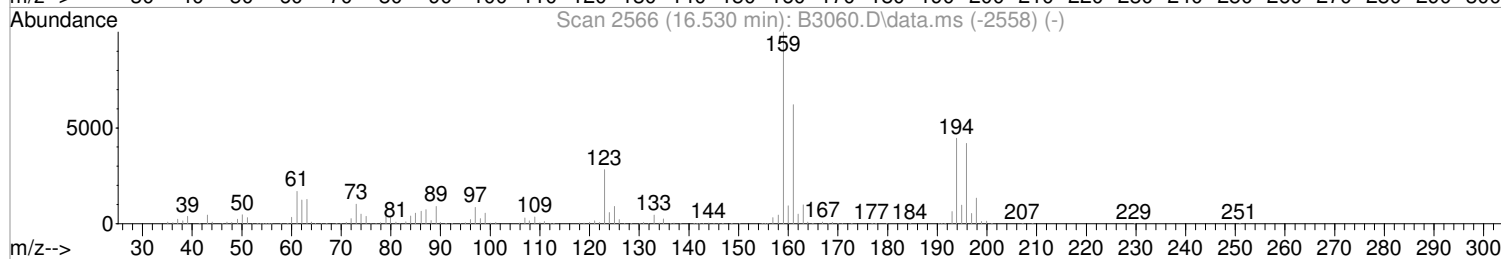
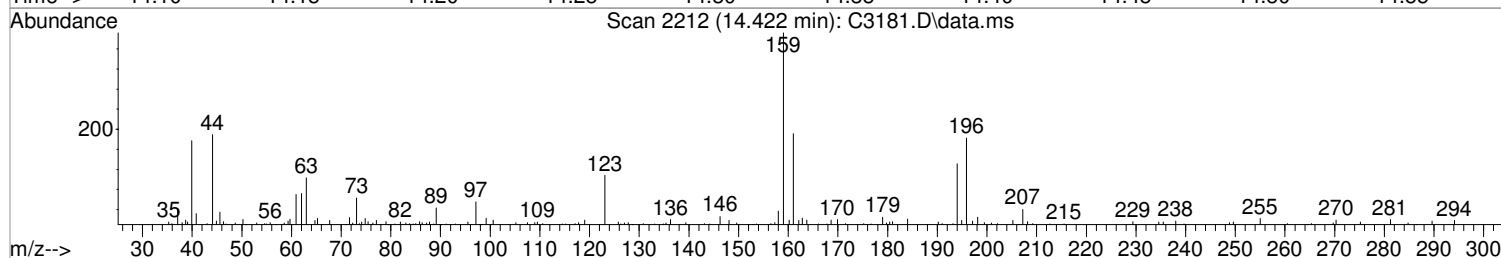
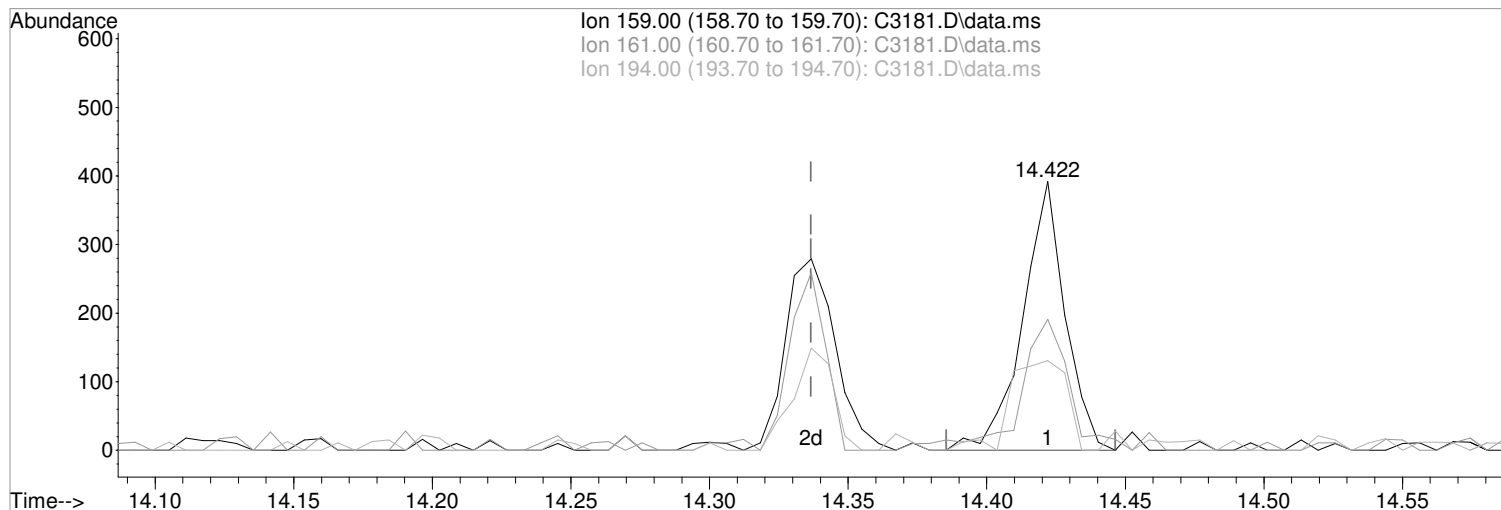
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3181.D
Acq On : 21 Nov 2017 12:11 pm
Operator : F. NAEGLER
Sample : MBLK
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 12:26:24 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3181.D\data.ms

(118) 2,4,5-Trichlorotoluene

Manual Integration:

14.422min (+0.085) 0.27 ug/L

Before

response 417

Ion Exp% Act%

11/27/17

159.00 100 100

161.00 60.00 48.72

194.00 41.40 33.42

0.00 0.00 0.00

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3181.D
 Acq On : 21 Nov 2017 12:11 pm
 Operator : F. NAEGLER
 Sample : MBLK
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 27 10:11:57 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

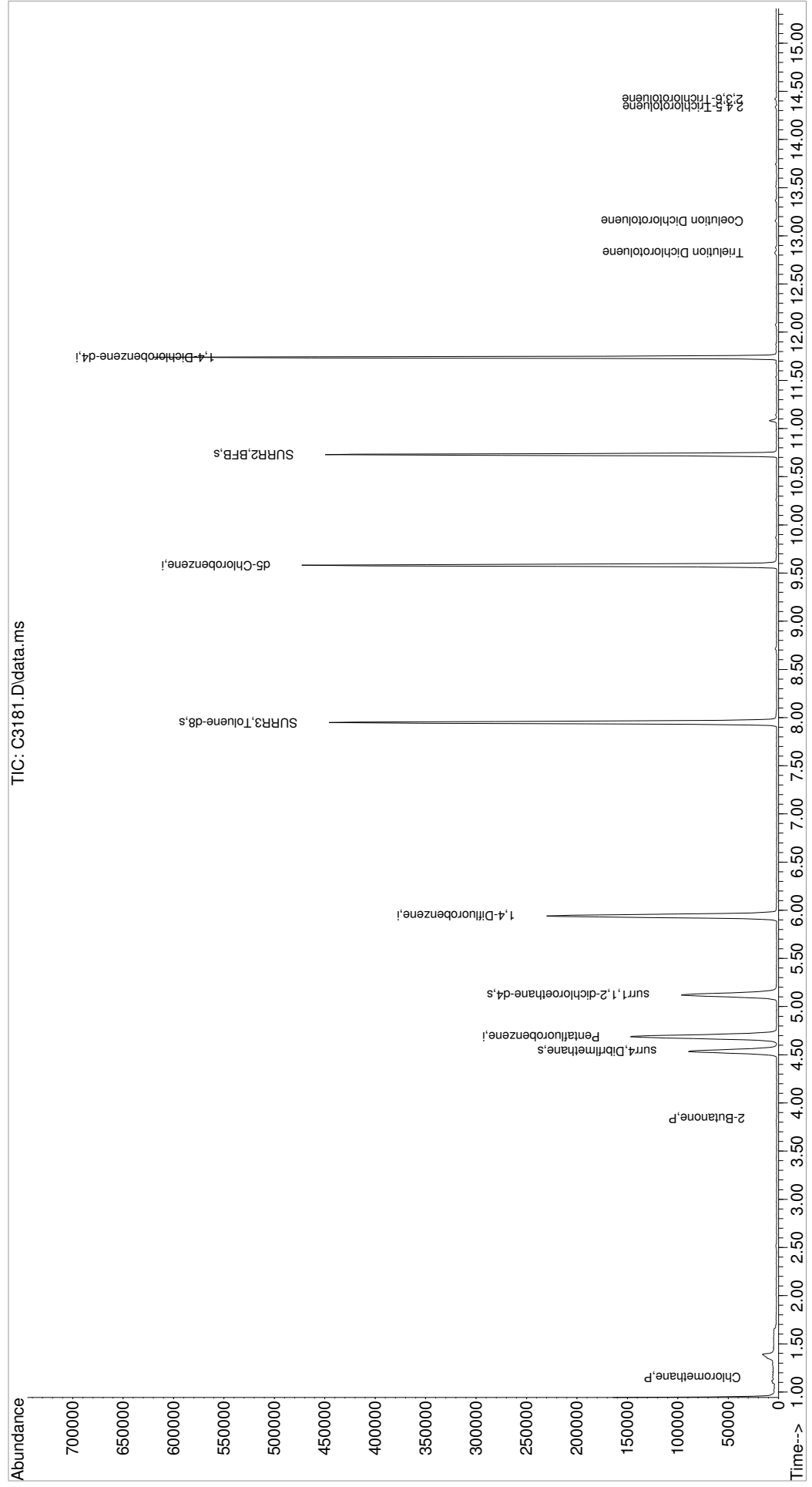
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	145565	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	218488	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	202060	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	111059	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	68154	46.45	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	92.90%	
47) surr1,1,2-dichloroetha...	5.119	65	94824	47.53	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	95.06%	
64) SURR3,Toluene-d8	7.948	98	272972	47.23	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	94.46%	
69) SURR2,BFB	10.728	95	107019	48.49	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	96.98%	
Target Compounds						
3) Chloromethane	1.150	50	622	0.30	ug/L	96
34) 2-Butanone	3.839	43	324	0.25	ug/L	85
111) Trielution Dichlorotol...	12.831	125	892m	0.32	ug/L	
113) Coelution Dichlorotoluene	13.154	125	625	0.20	ug/L	91
118) 2,4,5-Trichlorotoluene	14.337	159	351m	0.23	ug/L	
119) 2,3,6-Trichlorotoluene	14.422	159	417	0.29	ug/L	79

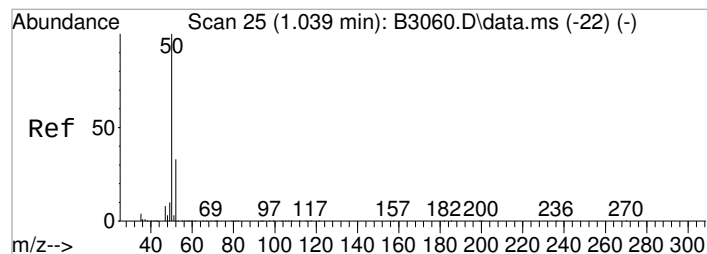
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3181.D
 Acq On : 21 Nov 2017 12:11 pm
 Operator : F. NAEGLER
 Sample : MBLK
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

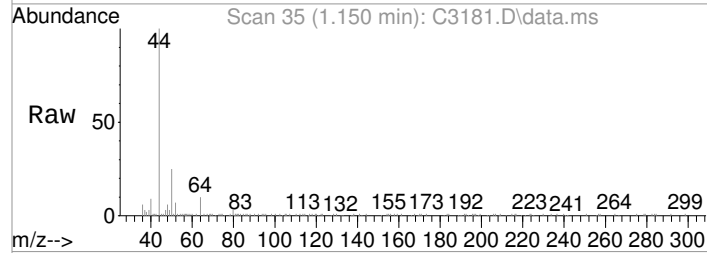
Inst : MSVOA14

Quant Time: Nov 27 10:11:57 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

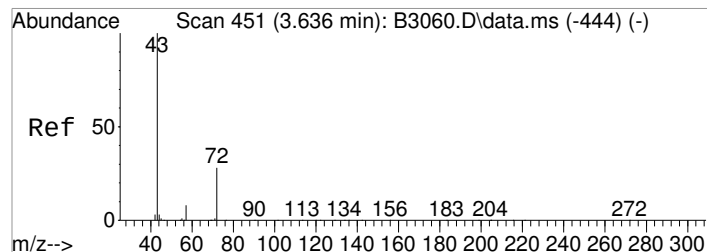
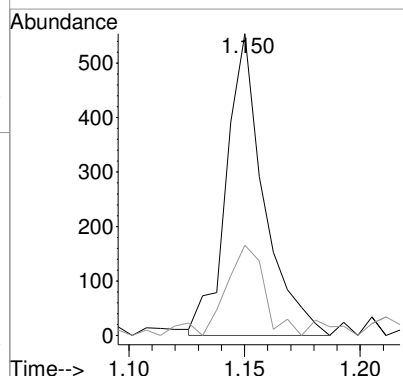
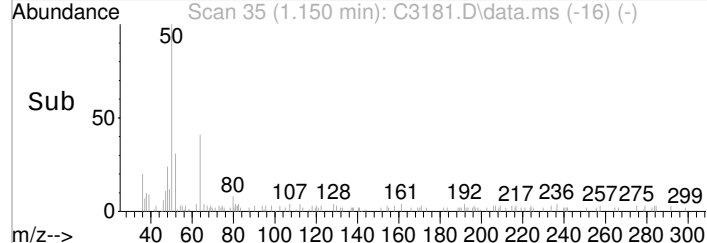




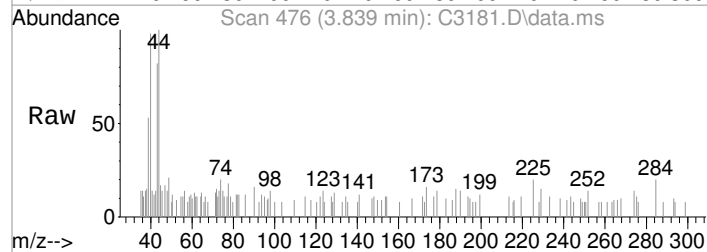
#3
 Chloromethane
 Concen: 0.30 ug/L
 RT: 1.150 min Scan# 35
 Delta R.T. 0.000 min
 Lab File: C3181.D
 Acq: 21 Nov 2017 12:11 pm



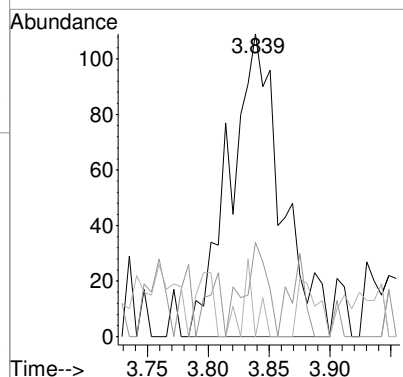
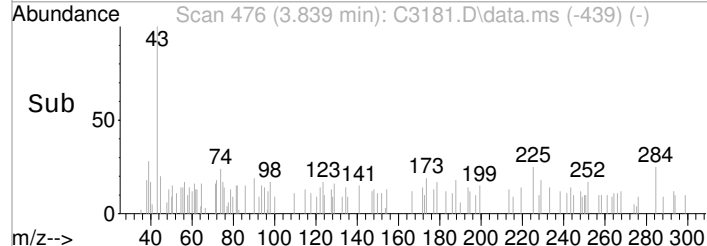
Tgt Ion: 50 Resp: 622
 Ion Ratio Lower Upper
 50 100
 52 30.0 12.1 52.1

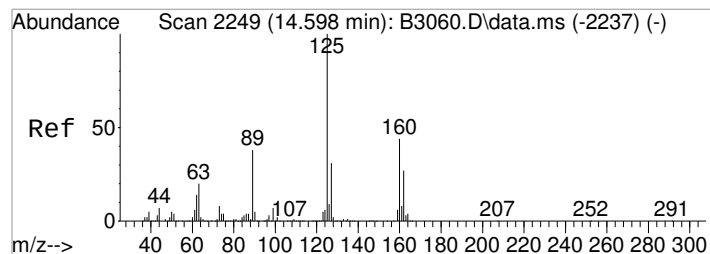


#34
 2-Butanone
 Concen: 0.25 ug/L
 RT: 3.839 min Scan# 476
 Delta R.T. 0.004 min
 Lab File: C3181.D
 Acq: 21 Nov 2017 12:11 pm



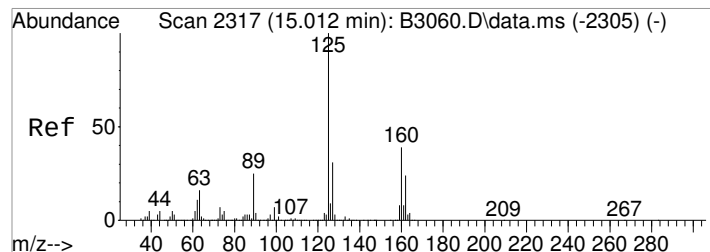
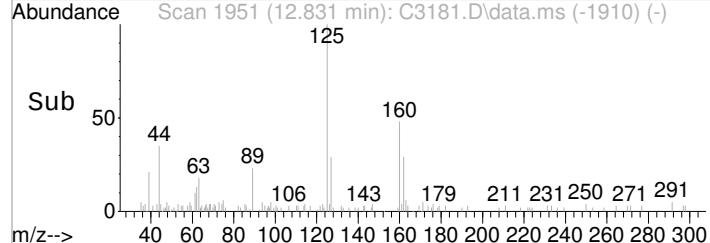
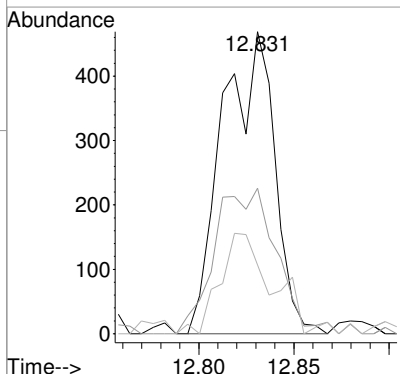
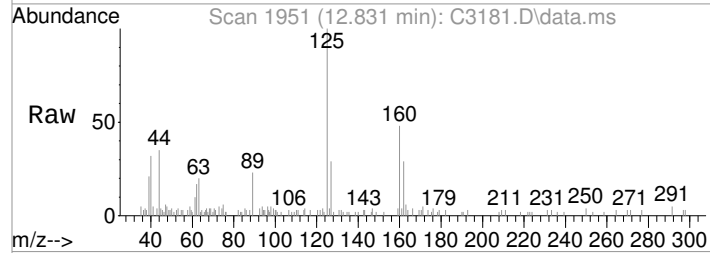
Tgt Ion: 43 Resp: 324
 Ion Ratio Lower Upper
 43 100
 72 31.2 5.0 45.0
 57 0.0 0.0 28.3





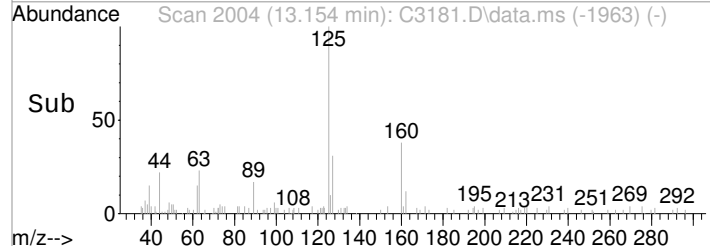
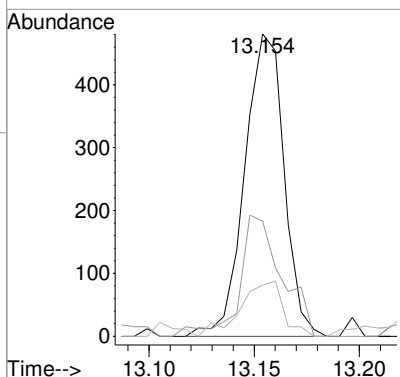
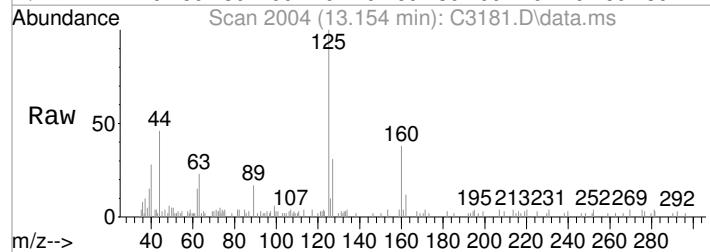
#111
 Trielution Dichlorotoluene
 Concen: 0.32 ug/L m
 RT: 12.831 min Scan# 1951
 Delta R.T. 0.001 min
 Lab File: C3181.D
 Acq: 21 Nov 2017 12:11 pm

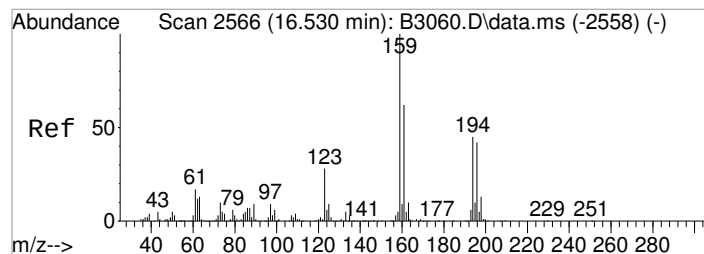
Tgt Ion	125	Resp:	892
Ion Ratio	Lower	Upper	
125	100		
160	48.2	23.3	63.3
89	22.8	20.1	60.1



#113
 Coelution Dichlorotoluene
 Concen: 0.20 ug/L
 RT: 13.154 min Scan# 2004
 Delta R.T. 0.000 min
 Lab File: C3181.D
 Acq: 21 Nov 2017 12:11 pm

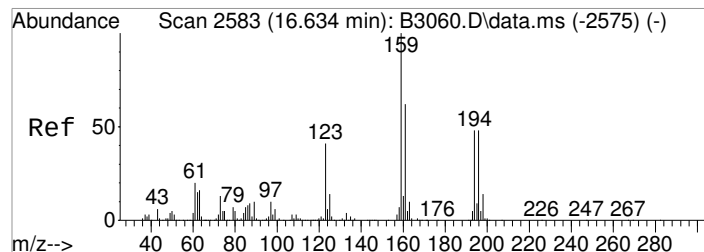
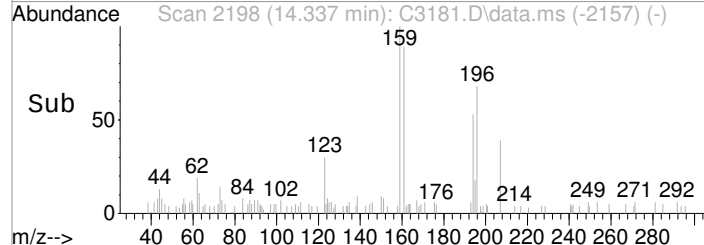
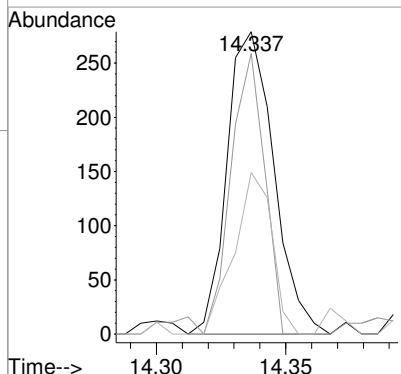
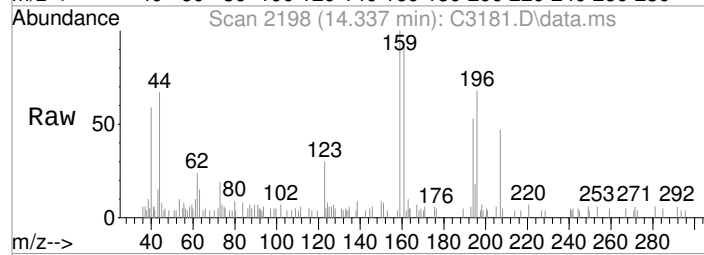
Tgt Ion	125	Resp:	625
Ion Ratio	Lower	Upper	
125	100		
160	38.0	18.2	58.2
89	16.8	7.4	47.4





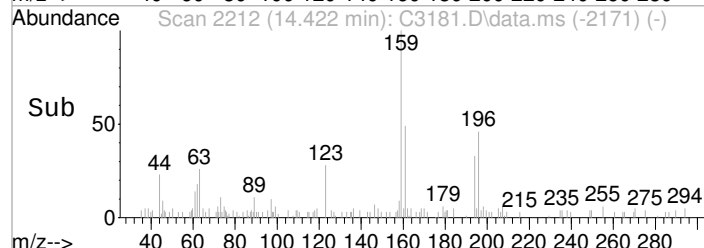
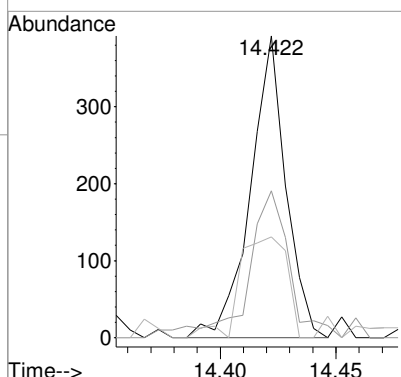
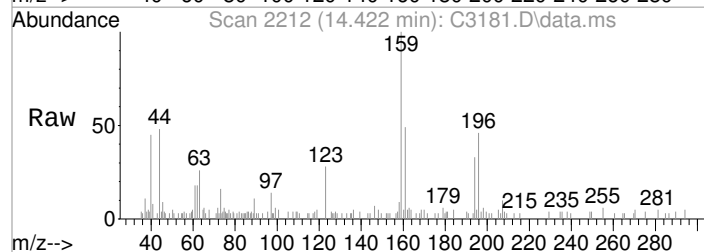
#118
 2,4,5-Trichlorotoluene
 Concen: 0.23 ug/L m
 RT: 14.337 min Scan# 2198
 Delta R.T. 0.000 min
 Lab File: C3181.D
 Acq: 21 Nov 2017 12:11 pm

Tgt Ion	159	Resp	351
Ion Ratio	100	Lower	Upper
161	92.8	40.0	80.0#
194	53.4	21.4	61.4



#119
 2,3,6-Trichlorotoluene
 Concen: 0.29 ug/L
 RT: 14.422 min Scan# 2212
 Delta R.T. 0.000 min
 Lab File: C3181.D
 Acq: 21 Nov 2017 12:11 pm

Tgt Ion	159	Resp	417
Ion Ratio	100	Lower	Upper
161	48.7	43.4	83.4
194	33.4	29.3	69.3



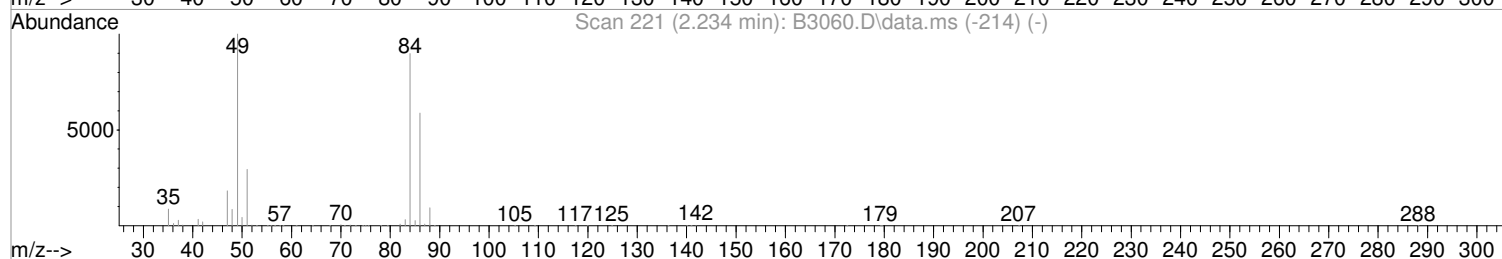
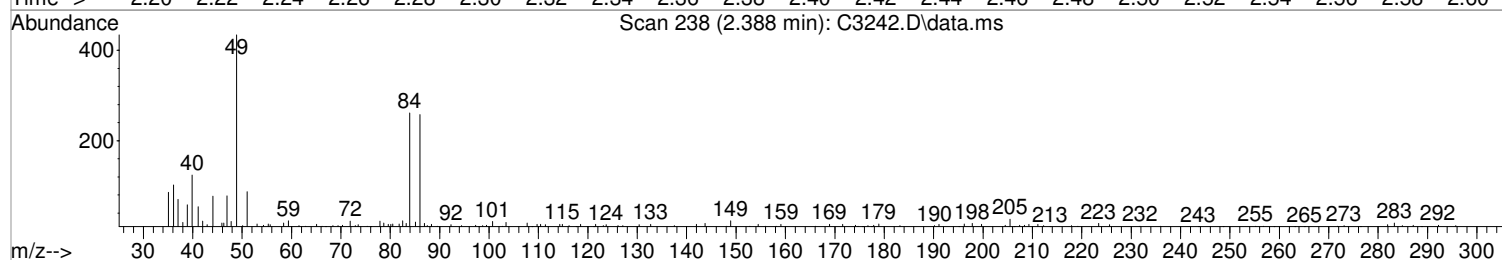
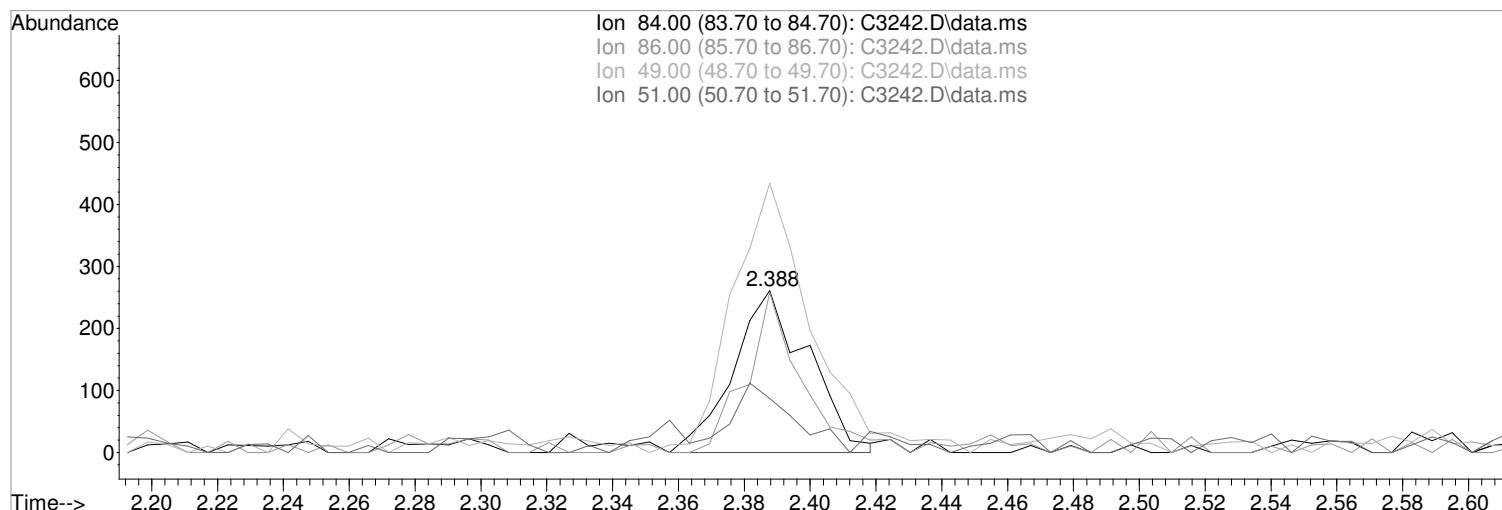
Quantitation Report (Qedit)

1st *FU* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
Data File : C3242.D
Acq On : 22 Nov 2017 12:37 pm
Operator : F. NAEGLER
Sample : MBLK
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 13:32:44 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3242.D\data.ms

(22) Methylene Chloride (P)

2.388min (-0.004) 0.29 ug/L m

response 414

Ion	Exp%	Act%
84.00	100	100
86.00	64.80	98.85#
49.00	138.10	166.28#
51.00	42.50	33.33

Manual Integration:

After

Peak not found.

11/22/17

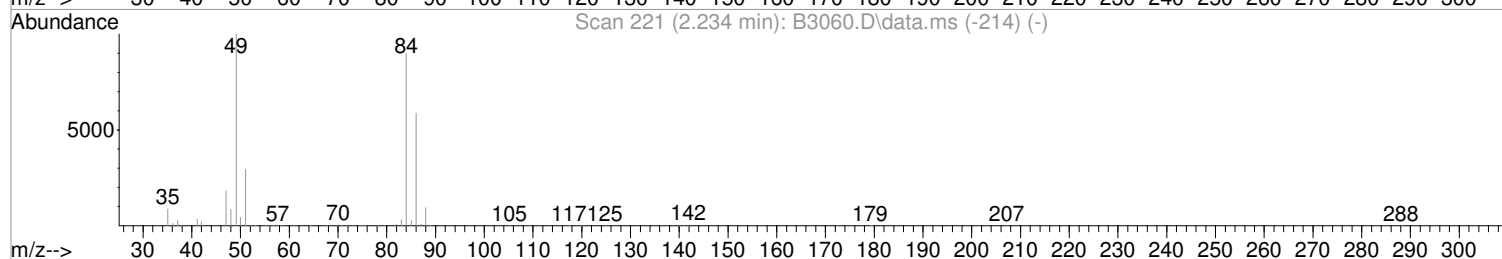
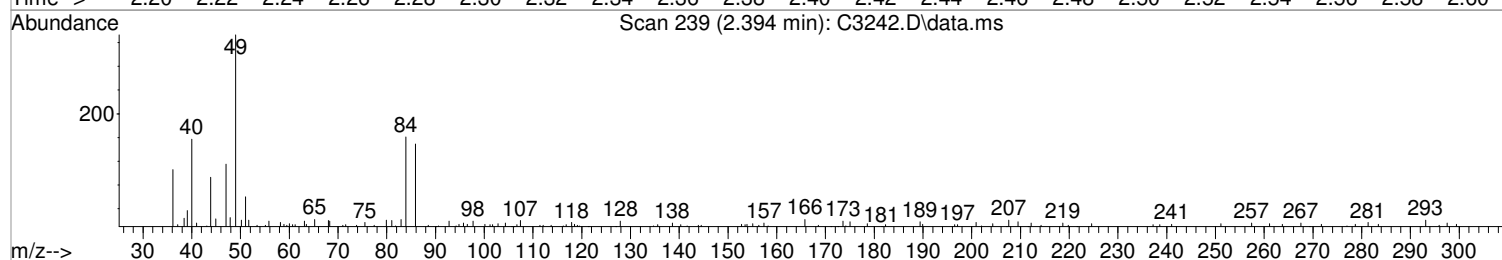
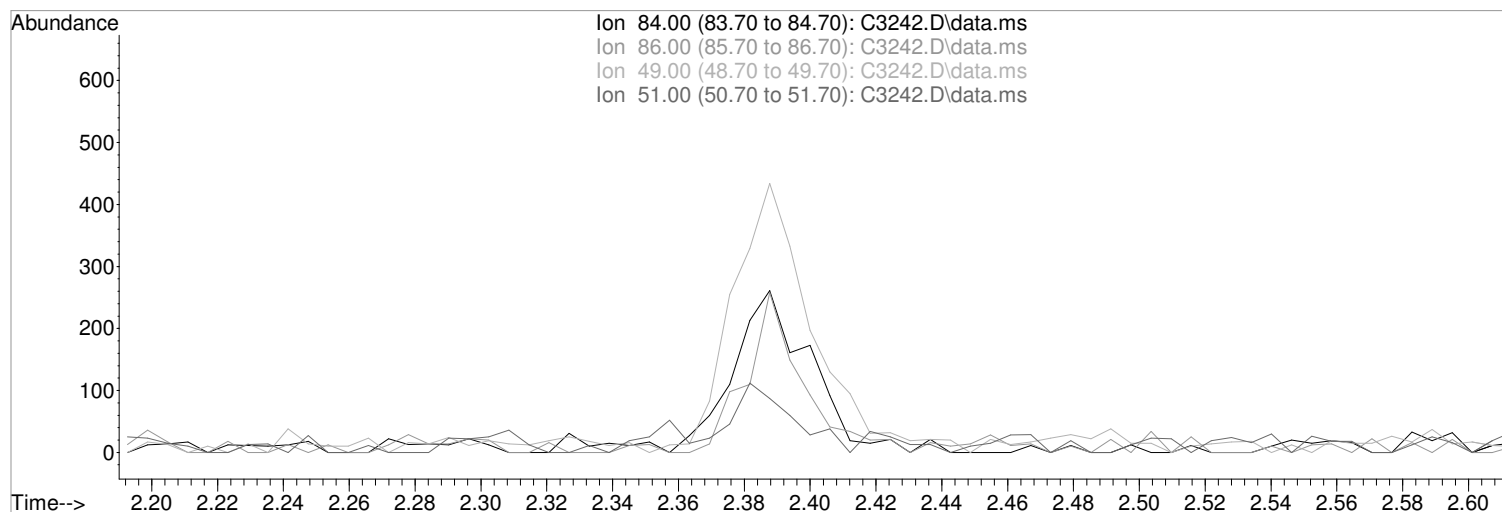
Quantitation Report (Qedit)

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
Data File : C3242.D
Acq On : 22 Nov 2017 12:37 pm
Operator : F. NAEGLER
Sample : MBLK
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 13:32:44 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3242.D\data.ms

(22) Methylene Chloride (P)

Manual Integration:

2.392min (-2.392) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
84.00	100	0.00
86.00	64.80	0.00#
49.00	138.10	0.00#
51.00	42.50	0.00#

11/22/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3242.D
 Acq On : 22 Nov 2017 12:37 pm
 Operator : F. NAEGLER
 Sample : MBLK
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 27 13:34:15 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

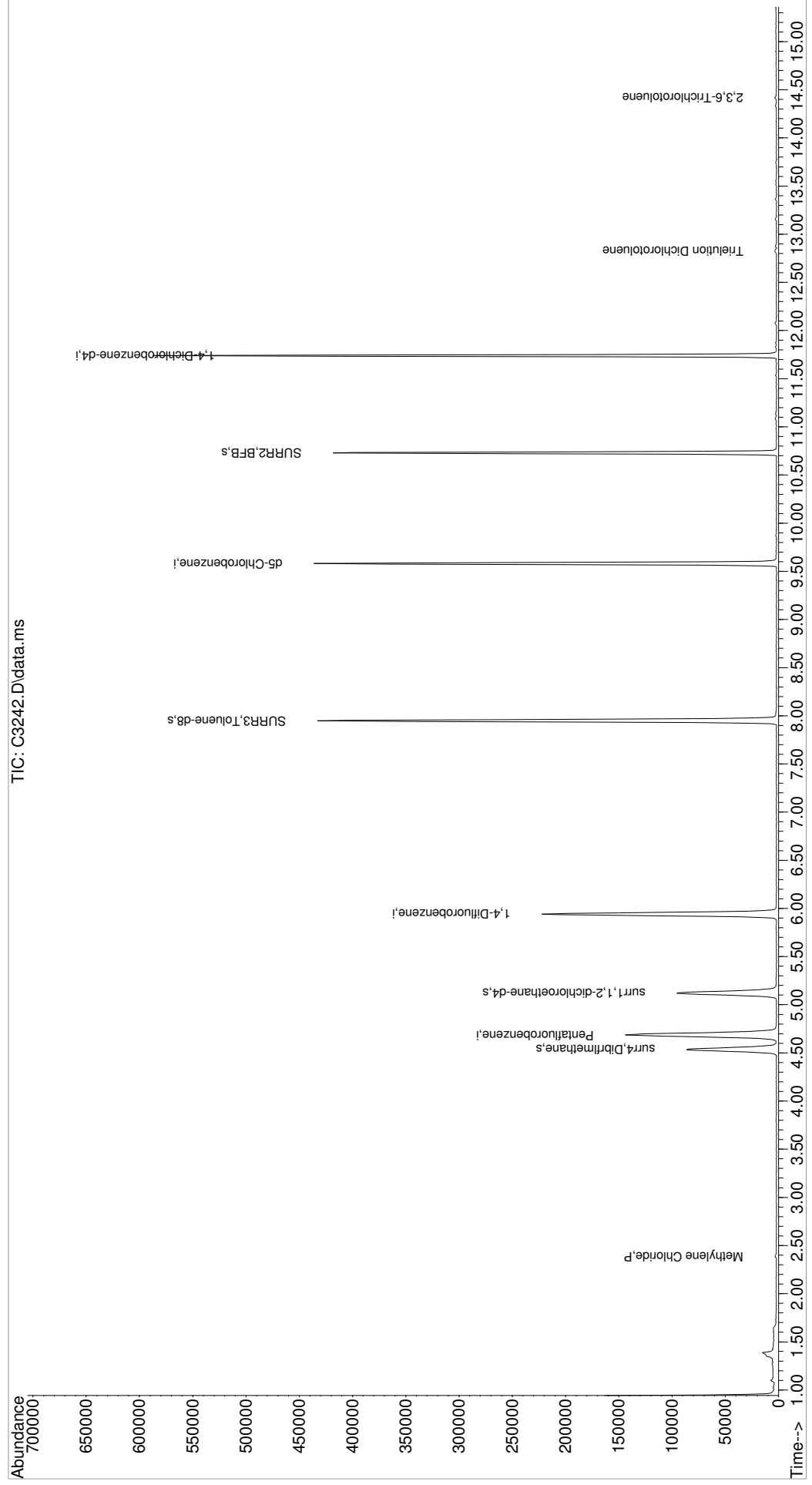
Internal Standards						
1) Pentafluorobenzene	4.686	168	140964	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	207777	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	186764	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	103453	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	66555	47.70	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	95.40%	
47) surr1,1,2-dichloroetha...	5.119	65	94751	49.94	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	99.88%	
64) SURR3,Toluene-d8	7.948	98	263716	47.98	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	95.96%	
69) SURR2,BFB	10.728	95	100684	47.97	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	95.94%	
Target Compounds						
22) Methylene Chloride	2.388	84	414m	0.29	ug/L	
111) Trielution Dichlorotol...	12.831	125	774	0.30	ug/L	79
119) 2,3,6-Trichlorotoluene	14.422	159	372	0.28	ug/L	85

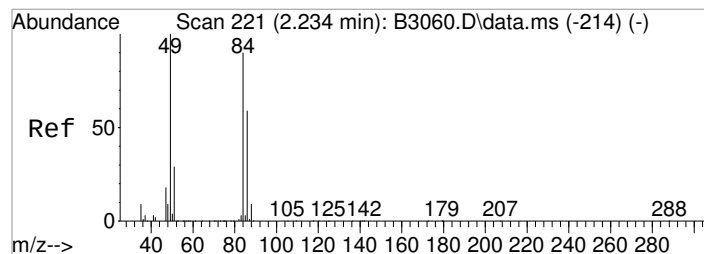
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

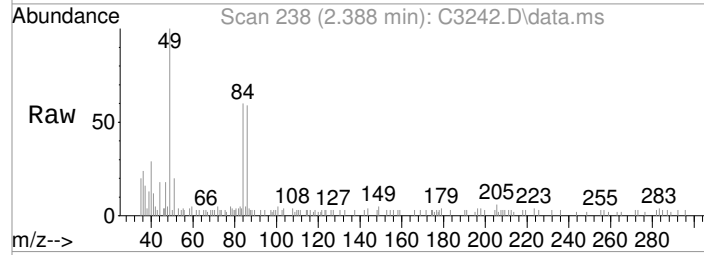
Data Path : I:\ACQUDATA\MSV0A14\Data\112217\
 Data File : C3242.D
 Acq On : 22 Nov 2017 12:37 pm
 Operator : F. NAEGLER
 Sample : MBLK
 Misc :
 ALS Vial : 4 Sample Multiplier: 1
 Inst : MSV0A14

Quant Time: Nov 27 13:34:15 2017
 Quant Method : I:\ACQUDATA\MSV0A14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 Qlast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

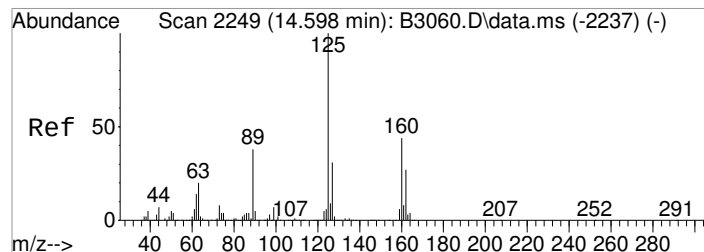
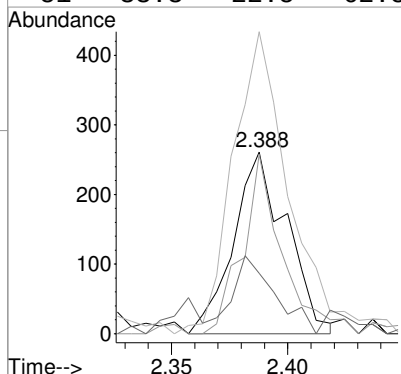
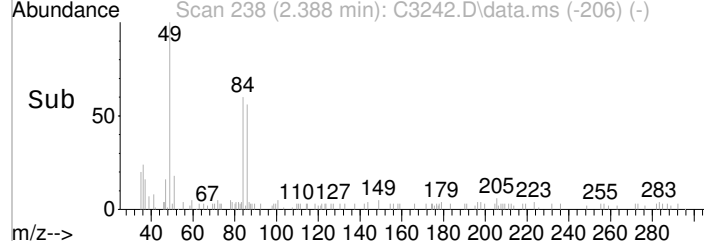




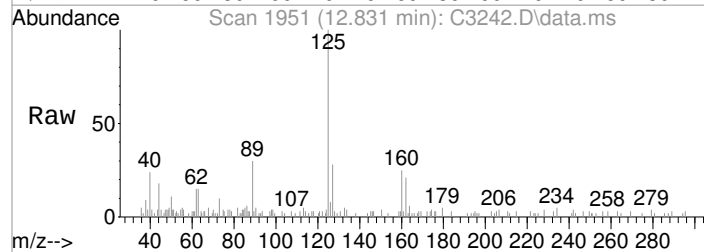
#22
 Methylene Chloride
 Concen: 0.29 ug/L m
 RT: 2.388 min Scan# 238
 Delta R.T. -0.004 min
 Lab File: C3242.D
 Acq: 22 Nov 2017 12:37 pm



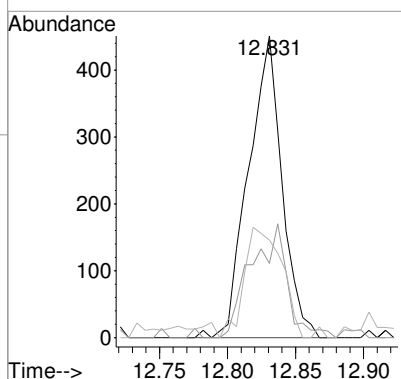
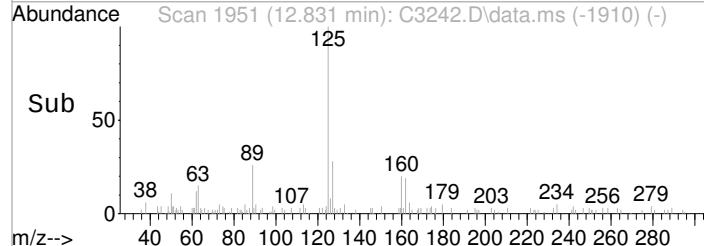
Tgt Ion:	84	Resp:	414
Ion Ratio	Lower	Upper	
84	100		
86	98.9	44.8	84.8#
49	166.3	118.1	158.1#
51	33.3	22.5	62.5

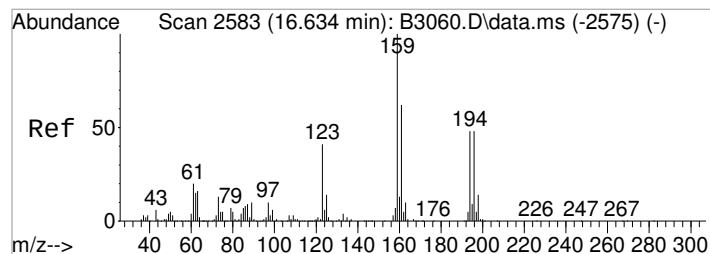


#111
 Trilution Dichlorotoluene
 Concen: 0.30 ug/L
 RT: 12.831 min Scan# 1951
 Delta R.T. 0.001 min
 Lab File: C3242.D
 Acq: 22 Nov 2017 12:37 pm

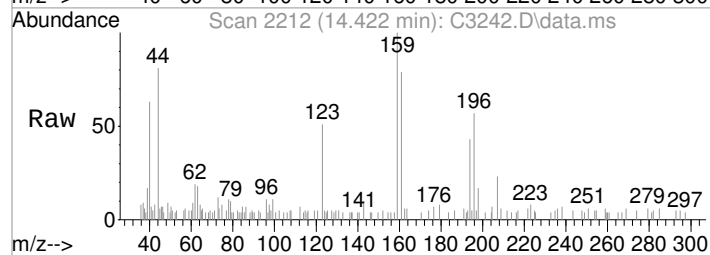


Tgt Ion:	125	Resp:	774
Ion Ratio	Lower	Upper	
125	100		
160	24.6	23.3	63.3
89	32.4	20.1	60.1

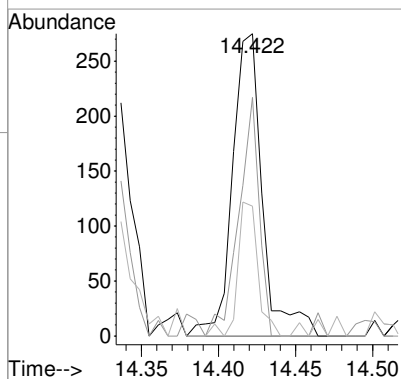
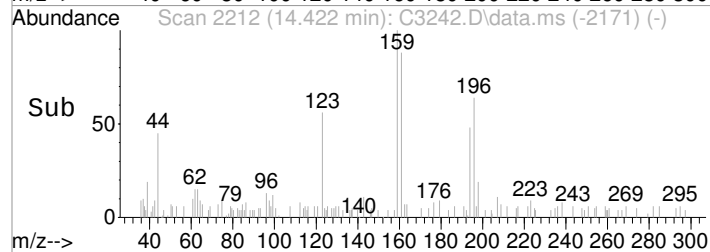




#119
 2,3,6-Trichlorotoluene
 Concen: 0.28 ug/L
 RT: 14.422 min Scan# 2212
 Delta R.T. 0.000 min
 Lab File: C3242.D
 Acq: 22 Nov 2017 12:37 pm



Tgt Ion	Ratio	Lower	Upper
159	100		
161	78.9	43.4	83.4
194	42.9	29.3	69.3



Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14084.D
 Acq On : 17 Nov 2017 8:54 pm
 Operator : K.Ruest
 Sample : LCS
 Misc :
 ALS Vial : 24 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:22:11 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.383	168	235664	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.468	114	393799	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	360387	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	181633	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.237	113	114829	52.29	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	104.58%	
48) surr1,1,2-dichloroetha...	5.767	65	179676	51.33	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	102.66%	
65) SURR3,Toluene-d8	8.291	98	500746	49.34	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	98.68%	
70) SURR2,BFB	10.858	95	202233	50.69	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	101.38%	
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	1.183	85	70856	21.87	ppb	91
3) Chloromethane	1.305	50	129873	21.01	ppb	92
4) Vinyl Chloride	1.384	62	89327	22.16	ppb	97
5) Bromomethane	1.610	94	37163	19.00	ppb	100
6) Chloroethane	1.689	64	50155	23.40	ppb	94
7) Freon 21	1.835	67	119523	21.70	ppb	95
8) Trichlorofluoromethane	1.884	101	88656	21.44	ppb	86
9) Diethyl Ether	2.116	59	83953	22.95	ppb	90
10) Freon 123a	2.116	67	73867	22.49	ppb	89
11) Freon 123	2.170	83	84038	23.02	ppb	94
12) Acrolein	2.213	56	49973	47.31	ppb	96
13) 1,1-Dicethene	2.305	96	51089	19.87	ppb	# 84
14) Freon 113	2.311	101	50736	22.22	ppb	98
15) Acetone	2.347	43	49298	17.17	ppb	99
16) 2-Propanol	2.475	45	249672	418.87	ppb	98
17) Iodomethane	2.439	142	49293	20.88	ppb	98
18) Carbon Disulfide	2.500	76	135547	20.01	ppb	98
19) Acetonitrile	2.597	40	62503	114.21	ppb	88
20) Allyl Chloride	2.634	76	27709	21.95	ppb	# 88
21) Methyl Acetate	2.658	43	117114	15.35	ppb	99
22) Methylene Chloride	2.750	84	60478	21.71	ppb	96
23) TBA	2.878	59	350755	423.19	ppb	88
24) Acrylonitrile	3.000	53	325341	124.31	ppb	96
25) Methyl-t-Butyl Ether	3.054	73	205215	20.52	ppb	94
26) trans-1,2-Dichloroethene	3.042	96	60562	22.87	ppb	# 68
28) 1,1-Dicethane	3.542	63	134089	22.59	ppb	96
29) Vinyl Acetate	3.621	86	16182	26.49	ppb	# 74
30) DIPE	3.664	45	353084	22.85	ppb	89
31) 2-Chloro-1,3-Butadiene	3.664	53	156919	25.13	ppb	92
32) ETBE	4.188	59	281957	22.52	ppb	98
33) 2,2-Dichloropropane	4.365	77	75795	18.41	ppb	95
34) cis-1,2-Dichloroethene	4.371	96	65878	21.23	ppb	# 72
35) 2-Butanone	4.414	43	73126	19.85	ppb	88
36) Propionitrile	4.499	54	122178	110.56	ppb	93
37) Bromochloromethane	4.767	130	40607	21.77	ppb	# 89
38) Methacrylonitrile	4.767	67	35953	19.88	ppb	93
39) Tetrahydrofuran	4.853	42	50676	22.21	ppb	100
40) Chloroform	4.938	83	101133	21.25	ppb	93
41) 1,1,1-Trichloroethane	5.249	97	91537	22.79	ppb	90

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14084.D
 Acq On : 17 Nov 2017 8:54 pm
 Operator : K.Ruest
 Sample : LCS
 Misc :
 ALS Vial : 24 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:22:11 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.096	73	187045	20.06	ppb	93
44) Cyclohexane	5.334	41	94017	22.60	ppb	97
46) Carbontetrachloride	5.517	117	66784	20.30	ppb	83
47) 1,1-Dichloropropene	5.536	75	77136	19.93	ppb	96
49) Benzene	5.847	78	234419	19.99	ppb	95
50) 1,2-Dichloroethane	5.883	62	110531	21.82	ppb	94
51) Iso-Butyl Alcohol	5.859	43	185641	395.22	ppb	100
52) n-Heptane	6.346	43	132701	21.73	ppb	88
53) 1-Butanol	6.822	56	262257	1041.84	ppb	80
54) Trichloroethene	6.804	130	62407	20.82	ppb	87
55) Methylcyclohexane	7.041	55	122273	22.25	ppb	82
56) 1,2-Dichloropropane	7.078	63	76004	20.44	ppb	85
57) Dibromomethane	7.218	93	37783	20.69	ppb	90
58) 1,4-Dioxane	7.285	88	28798	412.79	ppb	# 66
59) Methyl Methacrylate	7.310	69	51822	18.14	ppb	# 77
60) Bromodichloromethane	7.450	83	74157	22.62	ppb	99
61) 2-Nitropropane	7.730	41	55243	38.52	ppb	93
62) 2-Chloroethylvinyl Ether	7.858	63	34082	15.83	ppb	82
63) cis-1,3-Dichloropropene	7.992	75	96123	20.85	ppb	93
64) 4-Methyl-2-pentanone	8.200	43	139617	20.99	ppb	85
66) Toluene	8.364	91	259096	20.58	ppb	92
67) trans-1,3-Dichloropropene	8.633	75	85273	20.28	ppb	99
68) Ethyl Methacrylate	8.779	69	95680	19.49	ppb	88
69) 1,1,2-Trichloroethane	8.822	97	63486	22.67	ppb	96
72) Tetrachloroethene	8.962	164	45445	20.50	ppb	89
73) 2-Hexanone	9.114	43	101855	19.65	ppb	84
74) 1,3-Dichloropropane	8.992	76	102937	18.76	ppb	94
75) Dibromochloromethane	9.218	129	53370	20.55	ppb	99
76) N-Butyl Acetate	9.273	43	212408	21.63	ppb	91
77) 1,2-Dibromoethane	9.315	107	61809	21.90	ppb	95
78) Chlorobenzene	9.815	112	171725	21.46	ppb	92
79) 3-CBTF	9.834	180	81653	21.41	ppb	97
80) 4-CBTF	9.882	180	69565	20.51	ppb	96
81) 1,1,1,2-Tetrachloroethane	9.901	131	54407	20.51	ppb	93
82) Ethylbenzene	9.931	106	90698	20.81	ppb	99
83) (m+p)Xylene	10.047	106	222452	41.54	ppb	95
84) o-Xylene	10.407	106	114486	21.56	ppb	# 86
85) Styrene	10.419	104	188177	22.00	ppb	90
87) Bromoform	10.571	173	31384	20.62	ppb	97
88) 2-CBTF	10.650	180	78096	21.33	ppb	92
89) Isopropylbenzene	10.742	105	274989	20.74	ppb	95
90) Cyclohexanone	10.797	55	356355	293.52	ppb	82
91) trans-1,4-Dichloro-2-B...	11.047	53	30624	19.16	ppb	92
92) 1,1,2,2-Tetrachloroethane	10.998	83	84225	21.10	ppb	87
93) Bromobenzene	10.986	156	66971	20.49	ppb	95
94) 1,2,3-Trichloropropane	11.028	110	30160	20.38	ppb	# 82
95) n-Propylbenzene	11.095	91	318375	20.40	ppb	95
96) 2-Chlorotoluene	11.156	91	206148	20.88	ppb	92
97) 3-Chlorotoluene	11.211	91	210074	20.98	ppb	96
98) 4-Chlorotoluene	11.254	91	235370	20.94	ppb	94
99) 1,3,5-Trimethylbenzene	11.248	105	237336	21.63	ppb	96
100) tert-Butylbenzene	11.522	119	208573	20.90	ppb	96
101) 1,2,4-Trimethylbenzene	11.559	105	238341	20.70	ppb	96
102) 3,4-DCBTF	11.620	214	53527	18.85	ppb	95
103) sec-Butylbenzene	11.705	105	304357	20.90	ppb	93
104) p-Isopropyltoluene	11.827	119	260671	22.17	ppb	99

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14084.D
 Acq On : 17 Nov 2017 8:54 pm
 Operator : K.Ruest
 Sample : LCS
 Misc :
 ALS Vial : 24 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:22:11 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.784	146	130941	20.71	ppb	97
106) 1,4-Dclbenz	11.858	146	141167	22.16	ppb	94
107) 2,4-DCBTF	11.912	214	49691	19.95	ppb	96
108) 2,5-DCBTF	11.955	214	56767	20.16	ppb	94
109) n-Butylbenzene	12.156	91	227573	20.76	ppb	97
110) 1,2-Dclbenz	12.162	146	134070	21.84	ppb	97
111) 1,2-Dibromo-3-chloropr...	12.784	157	19015	18.59	ppb	86
112) Trielution Dichlorotol...	12.900	125	368956	61.35	ppb	96
113) 1,3,5 Trichlorobenzene	12.955	180	89403	19.32	ppb	99
114) Coelution Dichlorotoluene	13.229	125	264893	39.72	ppb	95
115) 1,2,4-Tcbenzene	13.443	180	83325	17.08	ppb	94
116) Hexachlorobt	13.583	225	40925	20.16	ppb	94
117) Naphthalen	13.632	128	271110	17.44	ppb	98
118) 1,2,3-Tclbenzene	13.821	180	85807	17.31	ppb	96
119) 2,4,5-Trichlorotoluene	14.406	159	31176	7.88	ppb	94
120) 2,3,6-Trichlorotoluene	14.491	159	40025	10.85	ppb	93

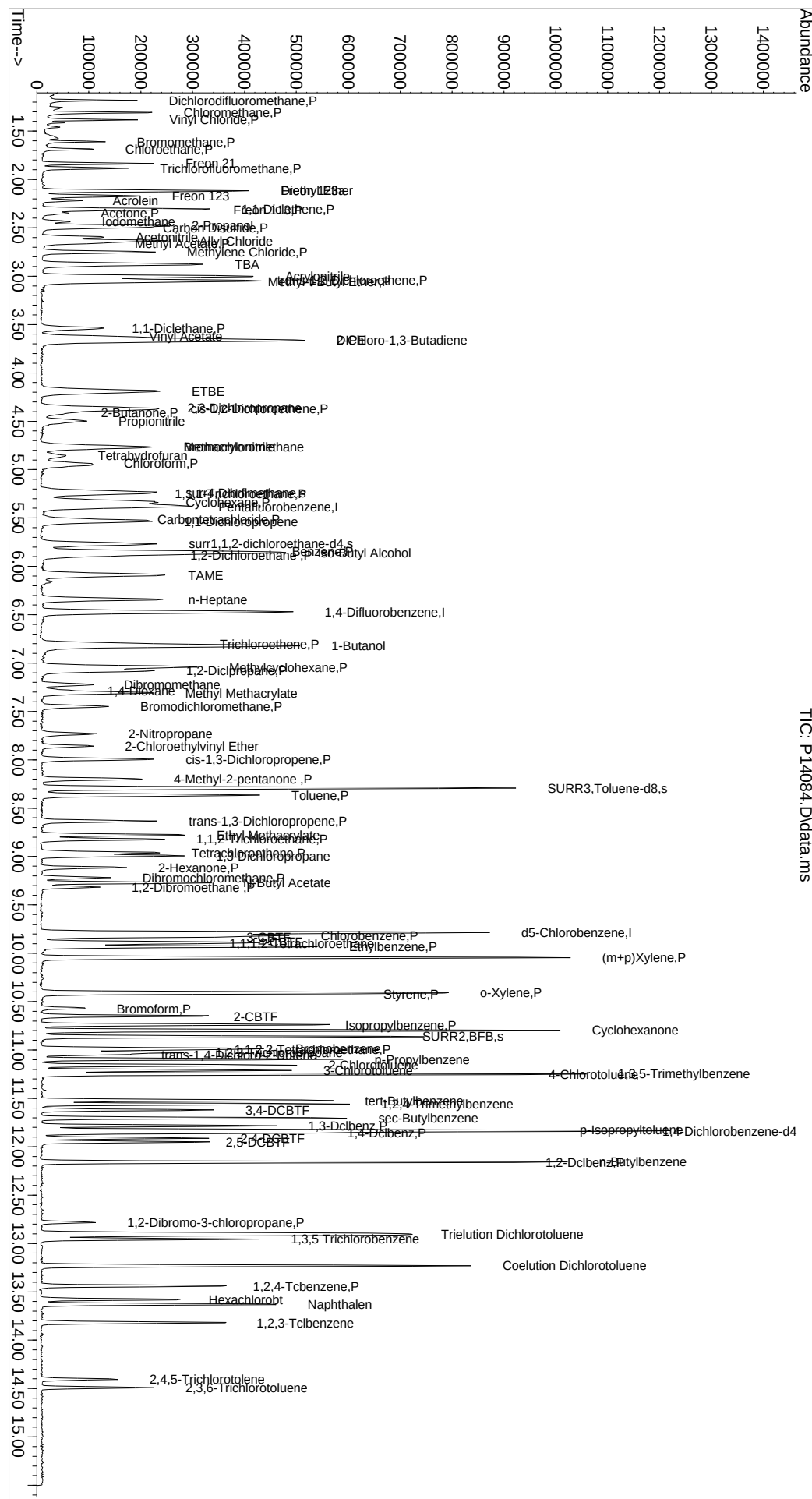
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQDATA\msvoa12\Data\111717\
Data File : P14084.D
Acq On : 17 Nov 2017 8:54 pm
Operator : K.Ruest
Sample : LCS
PALS Vial : 24 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:22:11 2017
Quant Method : I:\ACQDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
Quant Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



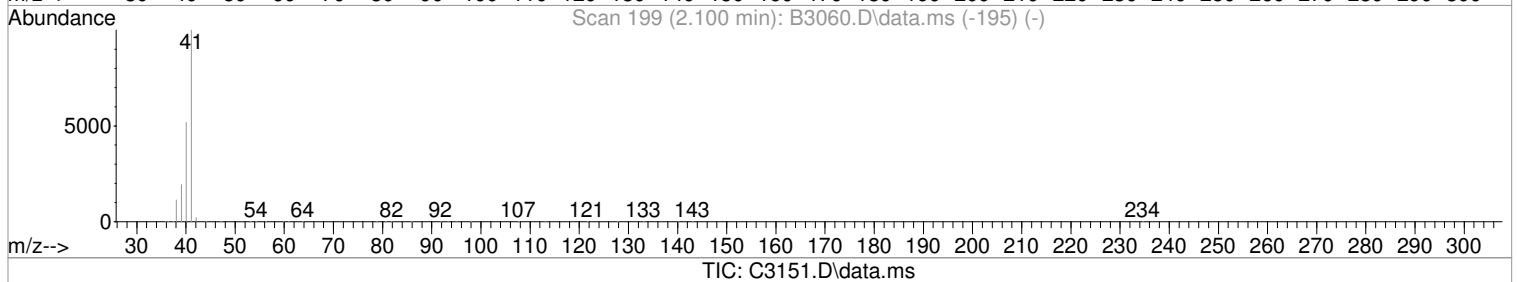
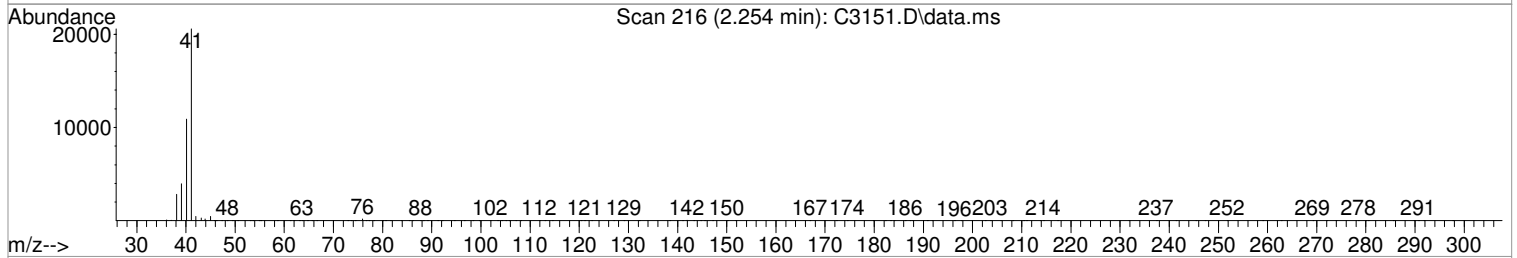
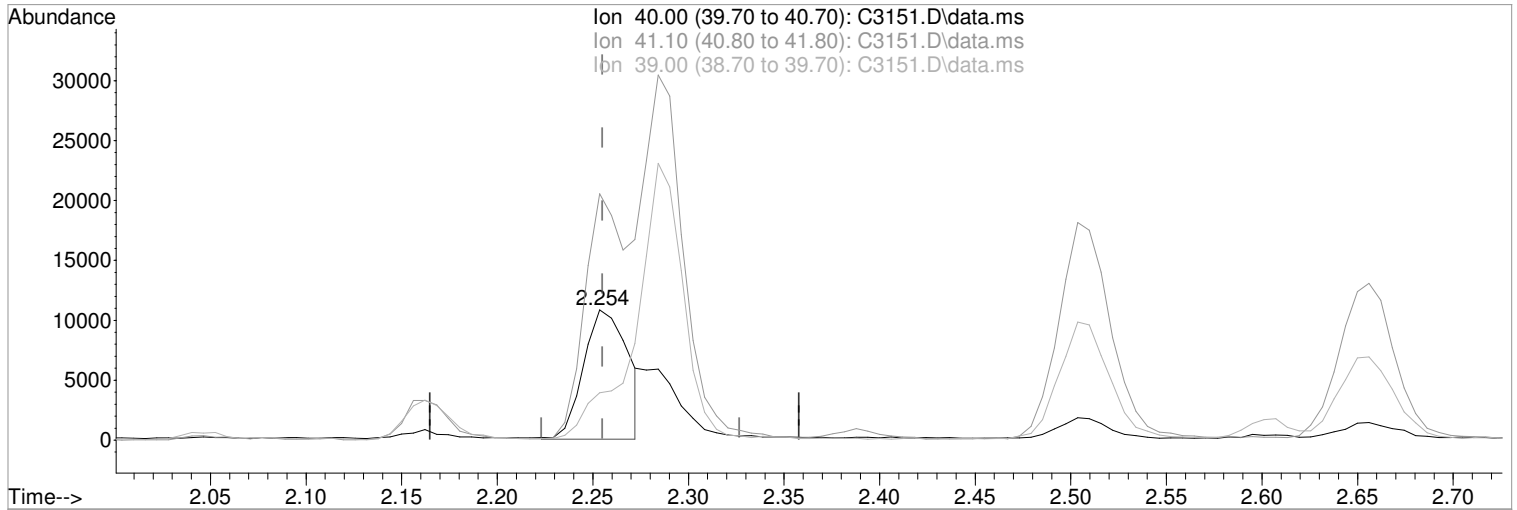
Quantitation Report (Qedit)

1st *FJ* 11/21/17
2nd *RL* 11/26/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3151.D
Acq On : 20 Nov 2017 10:01 pm
Operator : F. NAEGLER
Sample : LCS
Misc :
ALS Vial : 28 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 08:43:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



(19) Acetonitrile

2.254min (-0.001) 109.79 ug/L m

response 17423

Ion	Exp%	Act%
40.00	100	100
41.10	187.10	189.04
39.00	38.40	36.34
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

11/21/17

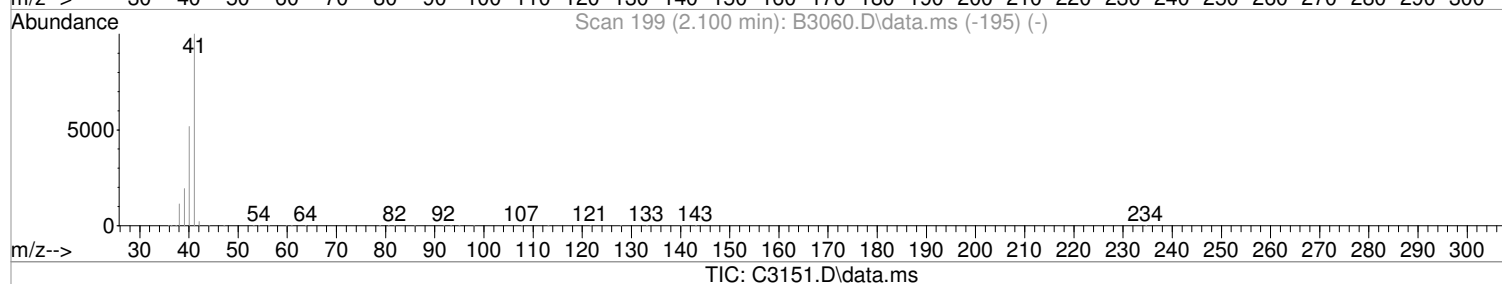
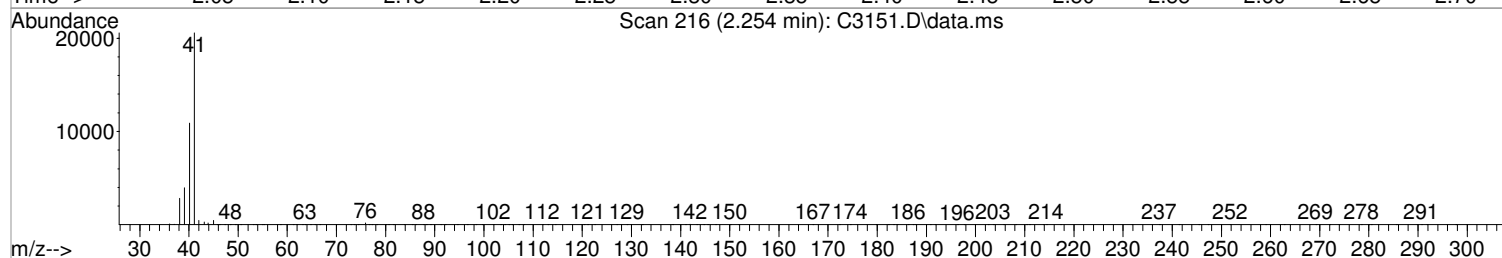
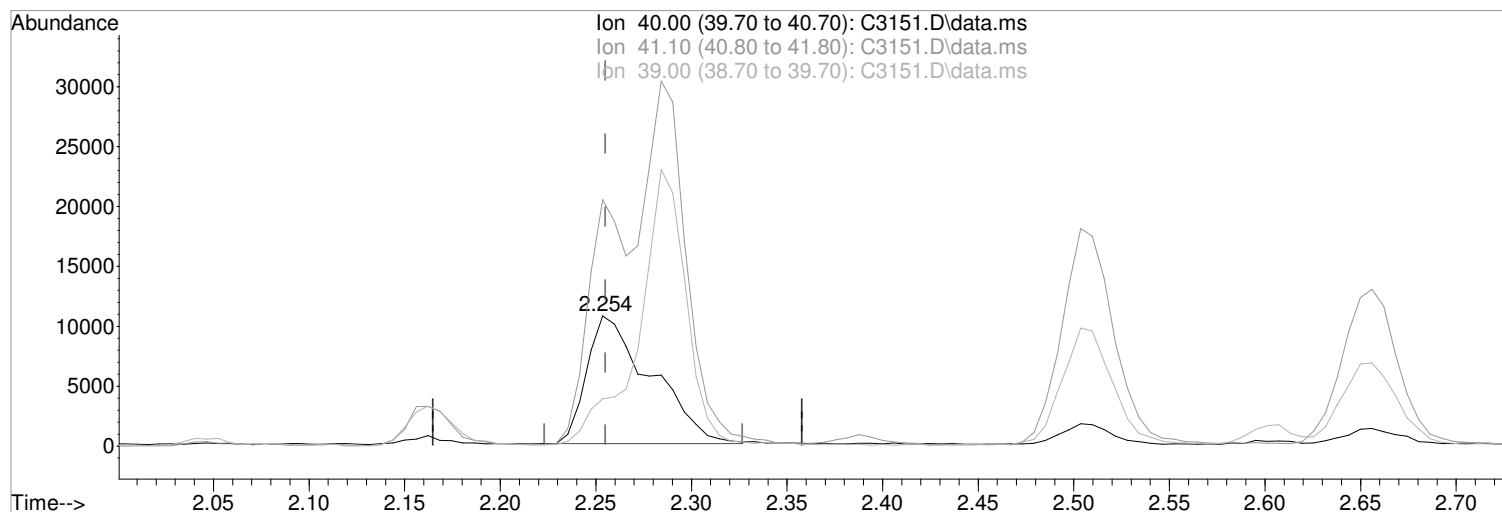
Quantitation Report (Qedit)

1st *FJ* 11/21/17
2nd *RL* 11/26/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3151.D
Acq On : 20 Nov 2017 10:01 pm
Operator : F. NAEGLER
Sample : LCS
Misc :
ALS Vial : 28 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 08:43:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



(19) Acetonitrile

Manual Integration:

2.254min (-0.001) 157.26 ug/L

Before

response 24956

Ion	Exp%	Act%
40.00	100	100
41.10	187.10	189.04
39.00	38.40	36.34
0.00	0.00	0.00

11/21/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3151.D
 Acq On : 20 Nov 2017 10:01 pm
 Operator : F. NAEGLER
 Sample : LCS
 Misc :
 ALS Vial : 28 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 08:44:03 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.686	168	141110	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	213013	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	198909	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	112276	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	75271	52.62	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	105.24%	
47) surr1,1,2-dichloroetha...	5.125	65	101163	52.01	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	104.02%	
64) SURR3,Toluene-d8	7.948	98	294186	52.21	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	104.42%	
69) SURR2,BFB	10.728	95	118670	55.15	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	110.30%	
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	1.040	85	35076	19.05	ug/L	95
3) Chloromethane	1.150	50	39360	19.85	ug/L	98
4) Vinyl Chloride	1.211	62	35257	19.57	ug/L	98
5) Bromomethane	1.400	94	25667	22.82	ug/L	100
6) Chloroethane	1.467	64	21438	18.92	ug/L	90
7) Freon 21	1.601	67	60436	19.21	ug/L	99
8) Trichlorofluoromethane	1.644	101	43001	19.17	ug/L	98
9) Diethyl Ether	1.845	59	28995	21.37	ug/L	94
10) Freon 123a	1.845	67	40813	23.51	ug/L	99
11) Freon 123	1.888	83	42911	22.56	ug/L	97
12) Acrolein	1.931	56	15814	39.39	ug/L	100
13) 1,1-Dicethene	2.004	96	24875	20.52	ug/L	98
14) Freon 113	2.010	101	23703	20.23	ug/L	91
15) Acetone	2.046	43	21397	22.15	ug/L	97
16) 2-Propanol	2.162	45	58611	437.08	ug/L	87
17) Iodomethane	2.113	142	22056	24.29	ug/L	97
18) Carbon Disulfide	2.168	76	51627	15.75	ug/L	98
19) Acetonitrile	2.254	40	17423m	109.79	ug/L	
20) Allyl Chloride	2.290	76	12864	20.94	ug/L	# 92
21) Methyl Acetate	2.308	43	31444	18.22	ug/L	98
22) Methylene Chloride	2.388	84	32093	22.18	ug/L	98
23) TBA	2.510	59	100360	432.43	ug/L	79
24) Acrylonitrile	2.601	53	93859	115.08	ug/L	99
25) Methyl-t-Butyl Ether	2.656	73	92637	20.71	ug/L	99
26) trans-1,2-Dichloroethene	2.644	96	28138	21.57	ug/L	96
27) 1,1-Dicethane	3.064	63	53505	20.74	ug/L	99
28) Vinyl Acetate	3.144	86	4655	17.87	ug/L	# 83
29) DIPE	3.180	45	82766	15.96	ug/L	95
30) 2-Chloro-1,3-Butadiene	3.174	53	45042	20.76	ug/L	96
31) ETBE	3.638	59	70106	15.71	ug/L	96
32) 2,2-Dichloropropane	3.784	77	27029	17.12	ug/L	95
33) cis-1,2-Dichloroethene	3.784	96	33586	21.75	ug/L	92
34) 2-Butanone	3.826	43	27075	21.25	ug/L	95
35) Propionitrile	3.894	54	39656	116.74	ug/L	99
36) Bromochloromethane	4.119	130	22367	23.04	ug/L	98
37) Methacrylonitrile	4.119	67	18718	22.71	ug/L	93
38) Tetrahydrofuran	4.217	42	16284	20.76	ug/L	100
39) Chloroform	4.278	83	55897	21.98	ug/L	98
40) 1,1,1-Trichloroethane	4.552	97	40801	20.75	ug/L	99

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3151.D
 Acq On : 20 Nov 2017 10:01 pm
 Operator : F. NAEGLER
 Sample : LCS
 Misc :
 ALS Vial : 28 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 08:44:03 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.515	73	67212	16.18	ug/L	97
43) Cyclohexane	4.637	41	31663	19.02	ug/L	89
45) Carbontetrachloride	4.838	117	30332	20.55	ug/L	94
46) 1,1-Dichloropropene	4.851	75	38276	19.60	ug/L	98
48) Benzene	5.216	78	118028	21.34	ug/L	99
49) 1,2-Dichloroethane	5.259	62	52663	21.96	ug/L	99
50) Iso-Butyl Alcohol	5.265	43	48536	481.82	ug/L	97
51) n-Heptane	5.808	43	28366	15.59	ug/L	95
52) 1-Butanol	6.375	56	61360	1098.64	ug/L	96
53) Trichloroethene	6.302	130	32280	21.01	ug/L	94
54) Methylcyclohexane	6.570	55	39075	20.28	ug/L	99
55) 1,2-Dicloropropane	6.613	63	32947	20.67	ug/L	94
56) Dibromomethane	6.765	93	23399	22.96	ug/L	98
57) 1,4-Dioxane	6.856	88	14393	498.98	ug/L	95
58) Methyl Methacrylate	6.893	69	28139	21.36	ug/L	95
59) Bromodichloromethane	7.027	83	39164	21.72	ug/L	96
60) 2-Nitropropane	7.338	41	15280	46.52	ug/L	92
61) 2-Chloroethylvinyl Ether	7.497	63	5799	12.85	ug/L	95
62) cis-1,3-Dichloropropene	8.332	75	37857	21.08	ug/L	98
63) 4-Methyl-2-pentanone	7.868	43	44075	21.12	ug/L	98
65) Toluene	8.027	91	125509	21.10	ug/L	100
66) trans-1,3-Dichloropropene	8.332	75	37857	21.08	ug/L	98
67) Ethyl Methacrylate	8.508	69	46847	22.66	ug/L	98
68) 1,1,2-Trichloroethane	8.533	97	33104	23.08	ug/L #	83
71) Tetrachloroethene	8.673	164	22516	19.37	ug/L	98
72) 2-Hexanone	8.874	43	33253	19.73	ug/L	96
73) 1,3-Dichloropropane	8.716	76	56922	21.45	ug/L	98
74) Dibromochloromethane	8.966	129	29434	21.85	ug/L	96
75) N-Butyl Acetate	9.057	43	59466	18.24	ug/L	97
76) 1,2-Dibromoethane	9.057	107	33768	23.75	ug/L	100
77) 3-Chlorobenzotrifluoride	9.655	180	36189	17.35	ug/L	98
78) Chlorobenzene	9.612	112	85071	21.14	ug/L	100
79) 4-Chlorobenzotrifluoride	9.716	180	31942	16.99	ug/L	98
80) 1,1,1,2-Tetrachloroethane	9.709	131	27323	21.56	ug/L	98
81) Ethylbenzene	9.752	106	41655	20.25	ug/L	97
82) (m+p)Xylene	9.874	106	104692	41.12	ug/L	100
83) o-Xylene	10.252	106	52122	20.52	ug/L	98
84) Styrene	10.264	104	91846	21.70	ug/L	95
85) Bromoform	10.417	173	20603	23.29	ug/L	99
86) 2-Chlorobenzotrifluoride	10.514	180	37368	18.06	ug/L	94
87) Isopropylbenzene	10.606	105	127426	19.56	ug/L	99
88) Cyclohexanone	10.661	55	150941	398.92	ug/L	94
89) trans-1,4-Dichloro-2-B...	10.935	53	13189	25.25	ug/L #	73
91) 1,1,2,2-Tetrachloroethane	10.886	83	51164	23.47	ug/L	96
92) Bromobenzene	10.850	156	39012	21.81	ug/L	91
93) 1,2,3-Trichloropropane	10.904	110	17691	23.06	ug/L #	90
94) n-Propylbenzene	10.978	91	153573	19.36	ug/L	99
95) 2-Chlorotoluene	11.039	91	99299	20.73	ug/L	99
96) 3-Chlorotoluene	11.093	91	86562	17.27	ug/L	98
97) 4-Chlorotoluene	11.136	91	115585	19.88	ug/L	96
98) 1,3,5-Trimethylbenzene	11.142	105	113201	20.19	ug/L	97
99) tert-Butylbenzene	11.423	119	95159	19.44	ug/L	98
100) 1,2,4-Trimethylbenzene	11.465	105	115751	20.84	ug/L	98
101) 3,4-Dichlorobenzotrifl...	11.532	214	30785	17.68	ug/L	92
102) sec-Butylbenzene	11.612	105	135730	19.09	ug/L	97
103) p-Isopropyltoluene	11.740	119	118277	19.97	ug/L	99

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
 Data File : C3151.D
 Acq On : 20 Nov 2017 10:01 pm
 Operator : F. NAEGLER
 Sample : LCS
 Misc :
 ALS Vial : 28 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 08:44:03 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	72591	21.60	ug/L	98
105) 1,4-Dclbenz	11.758	146	75153	21.58	ug/L	99
106) 2,4-Dichlorobenzotrifl...	11.831	214	27871	17.99	ug/L	96
107) 2,5-Dichlorobenzotrifl...	11.874	214	31986	18.00	ug/L	93
108) n-Butylbenzene	12.081	91	108075	19.64	ug/L	98
109) 1,2-Dclbenz	12.069	146	75133	22.27	ug/L	96
110) 1,2-Dibromo-3-chloropr...	12.703	157	10256	22.87	ug/L	87
111) Trielution Dichlorotol...	12.831	125	148450	52.79	ug/L	95
112) 1,3,5-Trichlorobenzene	12.880	180	44772	17.86	ug/L	98
113) Coelution Dichlorotoluene	13.154	125	110556	35.62	ug/L	97
114) 1,2,4-Tcbenzene	13.367	180	51239	21.63	ug/L	96
115) Hexachlorobt	13.514	225	18640	18.83	ug/L	89
116) Naphthalen	13.550	128	162372	24.60	ug/L	99
117) 1,2,3-Tclbenzene	13.745	180	51683	22.15	ug/L	97
118) 2,4,5-Trichlorotoluene	14.337	159	26721	17.05	ug/L	88
119) 2,3,6-Trichlorotoluene	14.422	159	37062	25.46	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

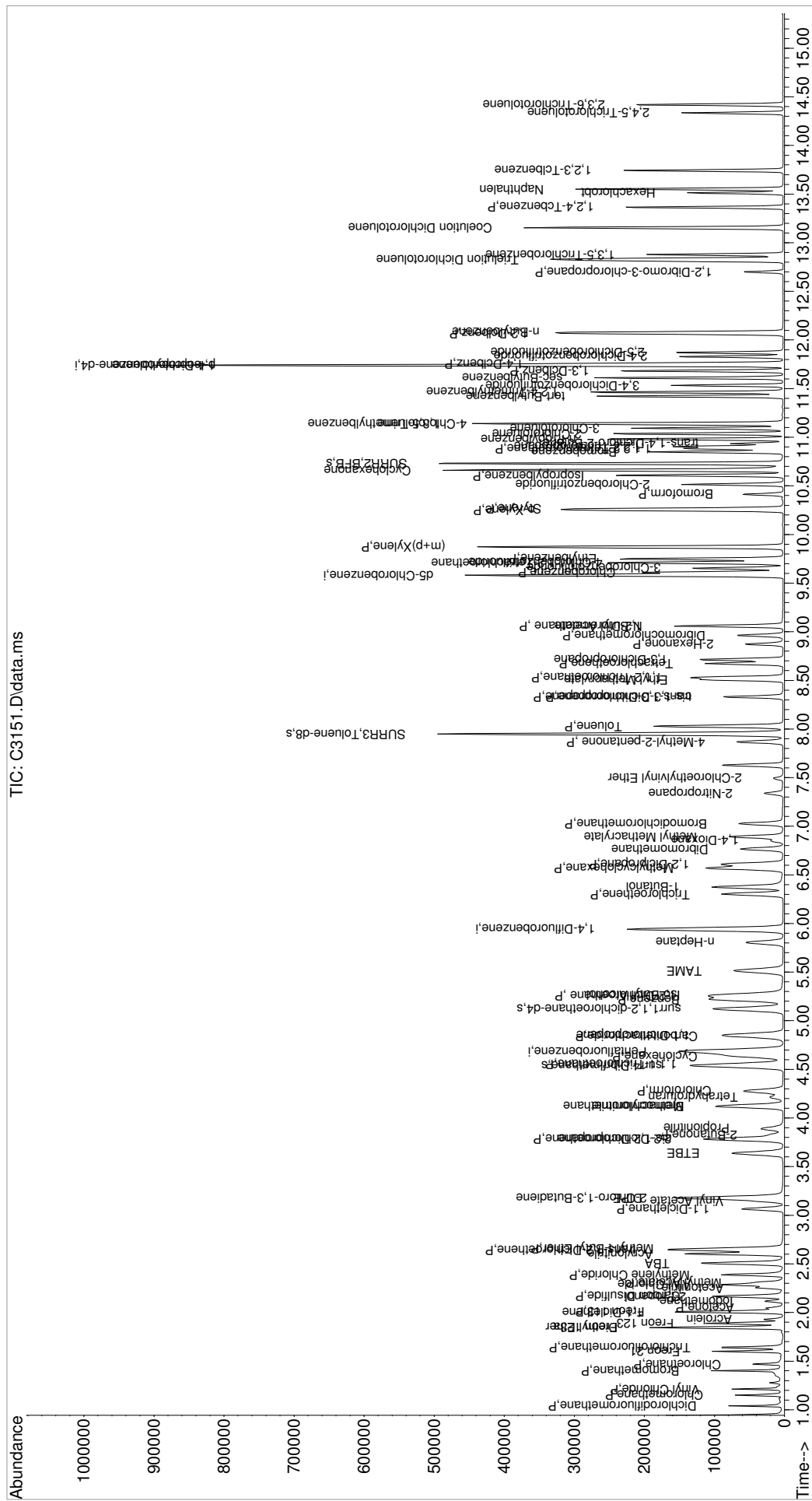
Quantitation Report (QT Reviewed)

Data Path	:	I:\ACQUDATA\MSV0A14\Data\112017\
Data File	:	C3151.D
Acq On	:	20 Nov 2017 10:01 pm
Operator	:	F. NAEGLER
Sample	:	LCS
Misc	:	
ALS Vial	:	28 Sample Multiplier: 1

Inst : MSV0A14

ALS Vial : 28 Sample Multiplier: 1

Quant Time: Nov 21 08:44:03 2017
Quant Method : I:\ACQDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



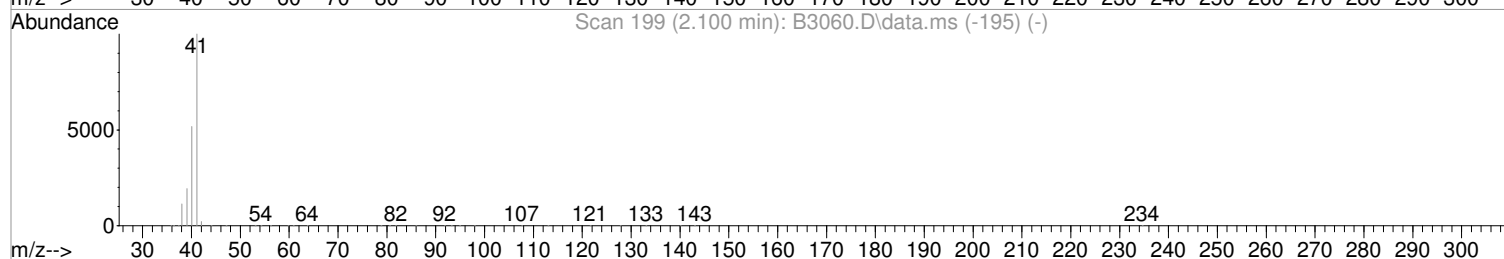
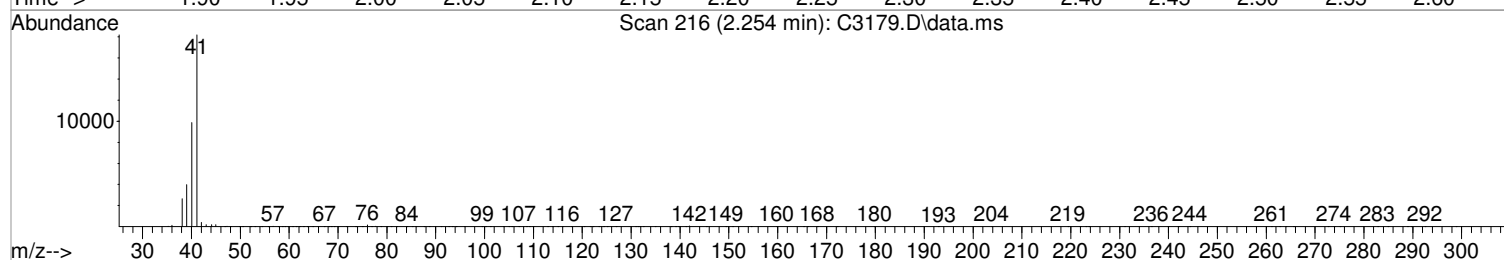
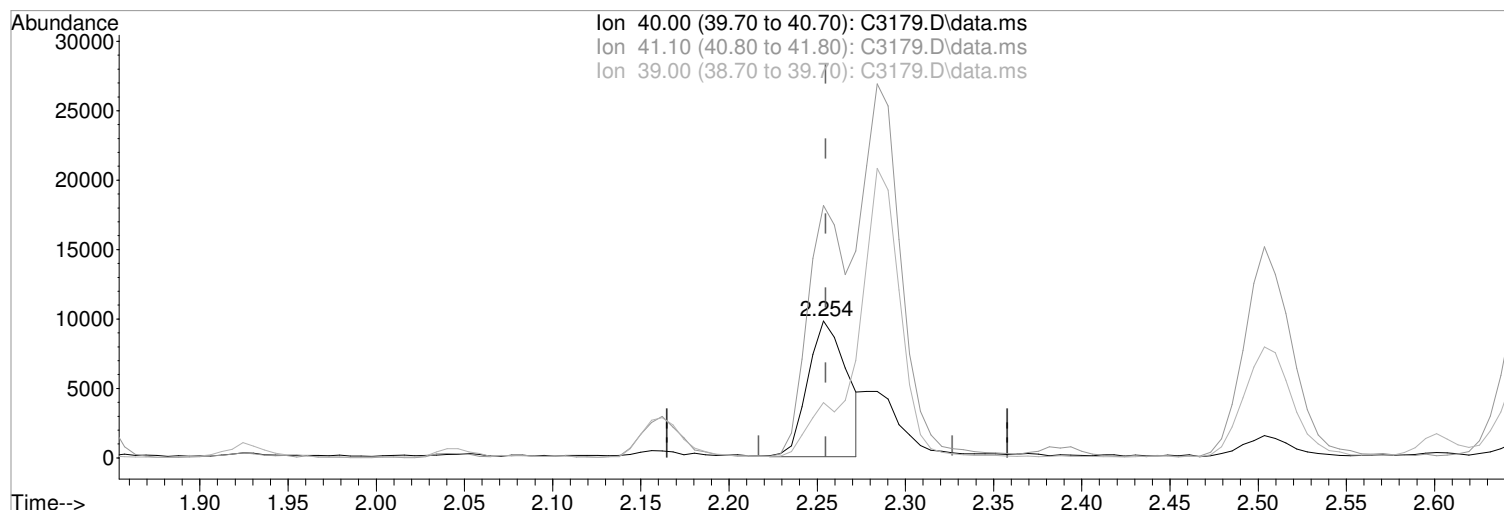
Quantitation Report (Qedit)

1st *FJ* 11/26/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3179.D
Acq On : 21 Nov 2017 11:27 am
Operator : F. NAEGLER
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 12:06:07 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3179.D\data.ms

(19) Acetonitrile

2.254min (-0.001) 90.18 ug/L m

response 15129

Ion	Exp%	Act%
40.00	100	100
41.10	187.10	184.40
39.00	38.40	40.43
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

11/21/17

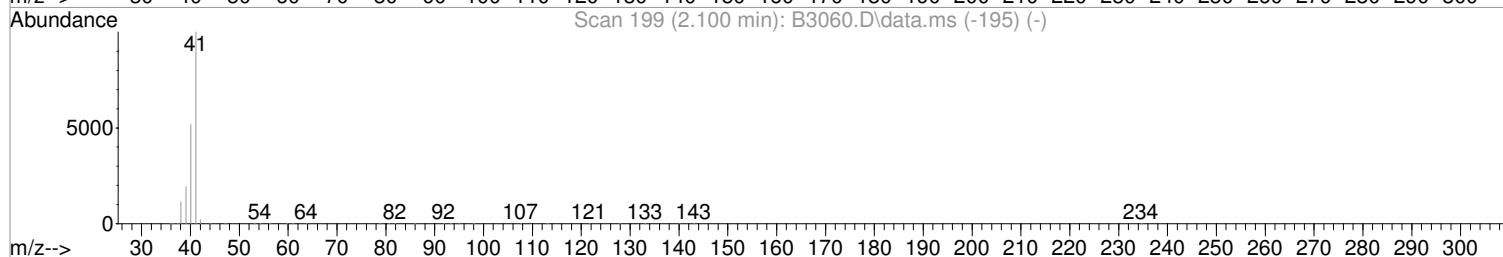
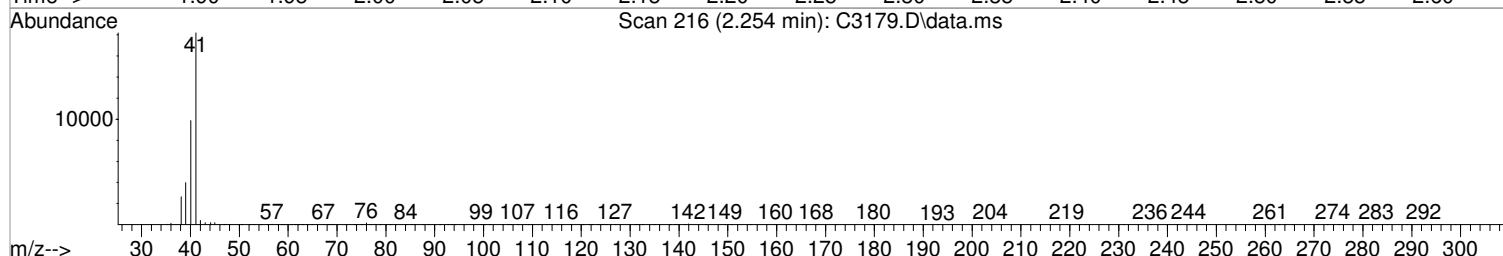
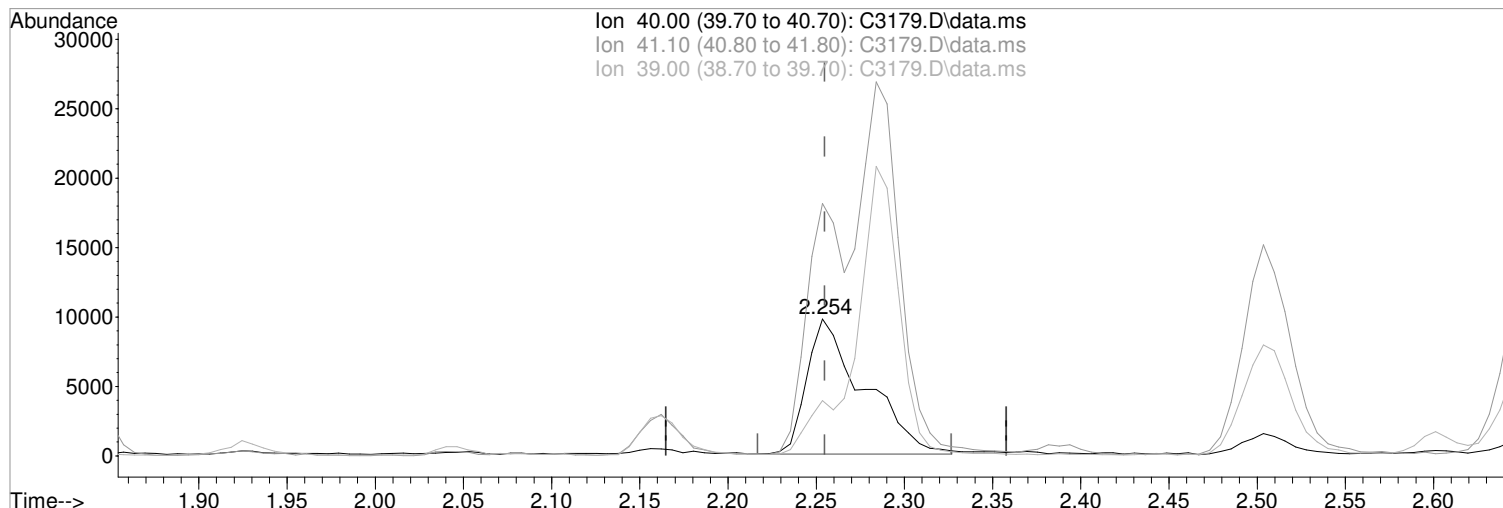
Quantitation Report (Qedit)

1st *FJ* 11/26/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3179.D
Acq On : 21 Nov 2017 11:27 am
Operator : F. NAEGLER
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 12:06:07 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3179.D\data.ms

(19) Acetonitrile

Manual Integration:

2.254min (-0.001) 130.71 ug/L

Before

response 21927

Ion	Exp%	Act%
40.00	100	100
41.10	187.10	184.40
39.00	38.40	40.43
0.00	0.00	0.00

11/21/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3179.D
 Acq On : 21 Nov 2017 11:27 am
 Operator : F. NAEGLER
 Sample : LCS
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 12:16:50 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	4.686	168	149173	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	226888	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	213336	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	122984	50.00	ug/L	0.00

System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	74589	48.95	ug/L	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	97.90%
47) surr1,1,2-dichloroetha...	5.119	65	98448	47.52	ug/L	0.00
Spiked Amount	50.000	Range	73 - 125	Recovery	=	95.04%
64) SURR3,Toluene-d8	7.948	98	291854	48.63	ug/L	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	97.26%
69) SURR2,BFB	10.728	95	119535	52.16	ug/L	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	104.32%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.040	85	28435	14.73	ug/L	97
3) Chloromethane	1.150	50	34489	16.45	ug/L	96
4) Vinyl Chloride	1.211	62	28130	14.77	ug/L	96
5) Bromomethane	1.400	94	23926	20.12	ug/L	100
6) Chloroethane	1.473	64	18636	15.56	ug/L	95
7) Freon 21	1.601	67	61372	18.45	ug/L	99
8) Trichlorofluoromethane	1.644	101	34499	14.55	ug/L	99
9) Diethyl Ether	1.845	59	27439	19.13	ug/L	96
10) Freon 123a	1.845	67	40444	22.04	ug/L	98
11) Freon 123	1.888	83	42673	21.22	ug/L	95
12) Acrolein	1.931	56	16619	39.15	ug/L	98
13) 1,1-Dicethene	2.004	96	20773	16.21	ug/L	95
14) Freon 113	2.010	101	18860	15.22	ug/L	89
15) Acetone	2.046	43	19760	19.35	ug/L	97
16) 2-Propanol	2.162	45	54204	385.29	ug/L	86
17) Iodomethane	2.113	142	25713	26.54	ug/L	98
18) Carbon Disulfide	2.168	76	61261	17.67	ug/L	100
19) Acetonitrile	2.254	40	15129m	90.18	ug/L	
20) Allyl Chloride	2.290	76	11841	18.28	ug/L	# 90
21) Methyl Acetate	2.308	43	30019	16.45	ug/L	97
22) Methylene Chloride	2.388	84	28739	18.79	ug/L	98
23) TBA	2.504	59	86814	353.85	ug/L	78
24) Acrylonitrile	2.601	53	84466	97.96	ug/L	97
25) Methyl-t-Butyl Ether	2.656	73	88786	18.78	ug/L	98
26) trans-1,2-Dichloroethene	2.638	96	24705	17.91	ug/L	98
27) 1,1-Dicethane	3.064	63	46461	17.04	ug/L	98
28) Vinyl Acetate	3.144	86	7516	26.60	ug/L	99
29) DIPE	3.180	45	93583	17.07	ug/L	94
30) 2-Chloro-1,3-Butadiene	3.174	53	49231	21.46	ug/L	94
31) ETBE	3.638	59	77796	16.49	ug/L	97
32) 2,2-Dichloropropane	3.778	77	28164	16.88	ug/L	98
33) cis-1,2-Dichloroethene	3.784	96	30765	18.85	ug/L	99
34) 2-Butanone	3.826	43	26728	19.84	ug/L	97
35) Propionitrile	3.887	54	35979	100.19	ug/L	99
36) Bromochloromethane	4.119	130	20887	20.35	ug/L	98
37) Methacrylonitrile	4.119	67	16617	19.07	ug/L	91
38) Tetrahydrofuran	4.217	42	13924	16.80	ug/L	85
39) Chloroform	4.272	83	50048	18.62	ug/L	96
40) 1,1,1-Trichloroethane	4.546	97	33920	16.32	ug/L	99

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3179.D
 Acq On : 21 Nov 2017 11:27 am
 Operator : F. NAEGLER
 Sample : LCS
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 12:16:50 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.509	73	72489	16.51	ug/L	96
43) Cyclohexane	4.631	41	31847	17.96	ug/L	90
45) Carbontetrachloride	4.838	117	24473	15.74	ug/L	95
46) 1,1-Dichloropropene	4.851	75	31507	15.15	ug/L	99
48) Benzene	5.216	78	103068	17.50	ug/L	98
49) 1,2-Dichloroethane	5.259	62	49119	19.23	ug/L	96
50) Iso-Butyl Alcohol	5.265	43	41484	392.08	ug/L	97
51) n-Heptane	5.802	43	26172	13.50	ug/L	94
52) 1-Butanol	6.375	56	55530	945.94	ug/L	99
53) Trichloroethene	6.302	130	24878	15.21	ug/L	95
54) Methylcyclohexane	6.570	55	41242	20.09	ug/L	99
55) 1,2-Dicloropropane	6.606	63	30177	17.77	ug/L	100
56) Dibromomethane	6.765	93	22292	20.54	ug/L	96
57) 1,4-Dioxane	6.850	88	13359	434.81	ug/L	88
58) Methyl Methacrylate	6.893	69	25753	18.42	ug/L	99
59) Bromodichloromethane	7.027	83	36411	18.96	ug/L	99
60) 2-Nitropropane	7.338	41	15658	44.93	ug/L	91
61) 2-Chloroethylvinyl Ether	7.490	63	5706	11.87	ug/L	88
62) cis-1,3-Dichloropropene	8.332	75	38427	20.15	ug/L	98
63) 4-Methyl-2-pentanone	7.868	43	42139	18.96	ug/L	98
65) Toluene	8.027	91	108277	17.09	ug/L	99
66) trans-1,3-Dichloropropene	8.332	75	38427	20.15	ug/L	98
67) Ethyl Methacrylate	8.502	69	43377	19.81	ug/L	89
68) 1,1,2-Trichloroethane	8.527	97	31160	20.40	ug/L	88
71) Tetrachloroethene	8.673	164	19447	15.60	ug/L	97
72) 2-Hexanone	8.868	43	32014	17.71	ug/L	96
73) 1,3-Dichloropropane	8.716	76	53795	18.90	ug/L	99
74) Dibromochloromethane	8.966	129	28701	19.93	ug/L	98
75) N-Butyl Acetate	9.057	43	57698	16.50	ug/L	99
76) 1,2-Dibromoethane	9.063	107	31710	20.79	ug/L	97
77) 3-Chlorobenzotrifluoride	9.655	180	42729	19.10	ug/L	93
78) Chlorobenzene	9.606	112	77695	18.00	ug/L	96
79) 4-Chlorobenzotrifluoride	9.716	180	37605	18.65	ug/L	91
80) 1,1,1,2-Tetrachloroethane	9.709	131	25926	19.07	ug/L	97
81) Ethylbenzene	9.746	106	35884	16.26	ug/L	94
82) (m+p)Xylene	9.874	106	90708	33.22	ug/L	97
83) o-Xylene	10.252	106	46413	17.04	ug/L	97
84) Styrene	10.264	104	84383	18.59	ug/L	98
85) Bromoform	10.411	173	18905	20.11	ug/L	96
86) 2-Chlorobenzotrifluoride	10.514	180	42472	19.14	ug/L	92
87) Isopropylbenzene	10.606	105	106569	15.25	ug/L	98
88) Cyclohexanone	10.661	55	142169	352.27	ug/L	96
89) trans-1,4-Dichloro-2-B...	10.935	53	12554	22.41	ug/L	79
91) 1,1,2,2-Tetrachloroethane	10.880	83	51559	21.59	ug/L	93
92) Bromobenzene	10.850	156	35887	18.32	ug/L	94
93) 1,2,3-Trichloropropane	10.904	110	15721	18.71	ug/L	96
94) n-Propylbenzene	10.978	91	128430	14.78	ug/L	99
95) 2-Chlorotoluene	11.038	91	88951	16.96	ug/L	98
96) 3-Chlorotoluene	11.093	91	95507	17.40	ug/L	98
97) 4-Chlorotoluene	11.136	91	105841	16.62	ug/L	97
98) 1,3,5-Trimethylbenzene	11.142	105	95753	15.59	ug/L	95
99) tert-Butylbenzene	11.423	119	76118	14.20	ug/L	99
100) 1,2,4-Trimethylbenzene	11.465	105	102319	16.82	ug/L	99
101) 3,4-Dichlorobenzotrifl...	11.532	214	37436	19.62	ug/L	94
102) sec-Butylbenzene	11.612	105	109650	14.08	ug/L	99
103) p-Isopropyltoluene	11.740	119	98366	15.16	ug/L	98

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3179.D
 Acq On : 21 Nov 2017 11:27 am
 Operator : F. NAEGLER
 Sample : LCS
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 12:16:50 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	68410	18.59	ug/L	99
105) 1,4-Dclbenz	11.758	146	71100	18.64	ug/L	99
106) 2,4-Dichlorobenzotrifl...	11.831	214	33346	19.65	ug/L	94
107) 2,5-Dichlorobenzotrifl...	11.874	214	38019	19.54	ug/L	92
108) n-Butylbenzene	12.081	91	90181	14.96	ug/L	98
109) 1,2-Dclbenz	12.063	146	70305	19.03	ug/L	100
110) 1,2-Dibromo-3-chloropr...	12.703	157	9344	19.16	ug/L	94
111) Trielution Dichlorotol...	12.831	125	170505	55.35	ug/L	97
112) 1,3,5-Trichlorobenzene	12.880	180	51273	18.68	ug/L	99
113) Coelution Dichlorotoluene	13.154	125	125000	36.77	ug/L	98
114) 1,2,4-Tcbenzene	13.367	180	47850	18.44	ug/L	98
115) Hexachlorobt	13.514	225	16490	15.21	ug/L	89
116) Naphthalen	13.550	128	151754	20.99	ug/L	99
117) 1,2,3-Tclbenzene	13.745	180	48107	18.82	ug/L	98
118) 2,4,5-Trichlorotoluene	14.337	159	32491	18.93	ug/L	94
119) 2,3,6-Trichlorotoluene	14.422	159	43587	27.33	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

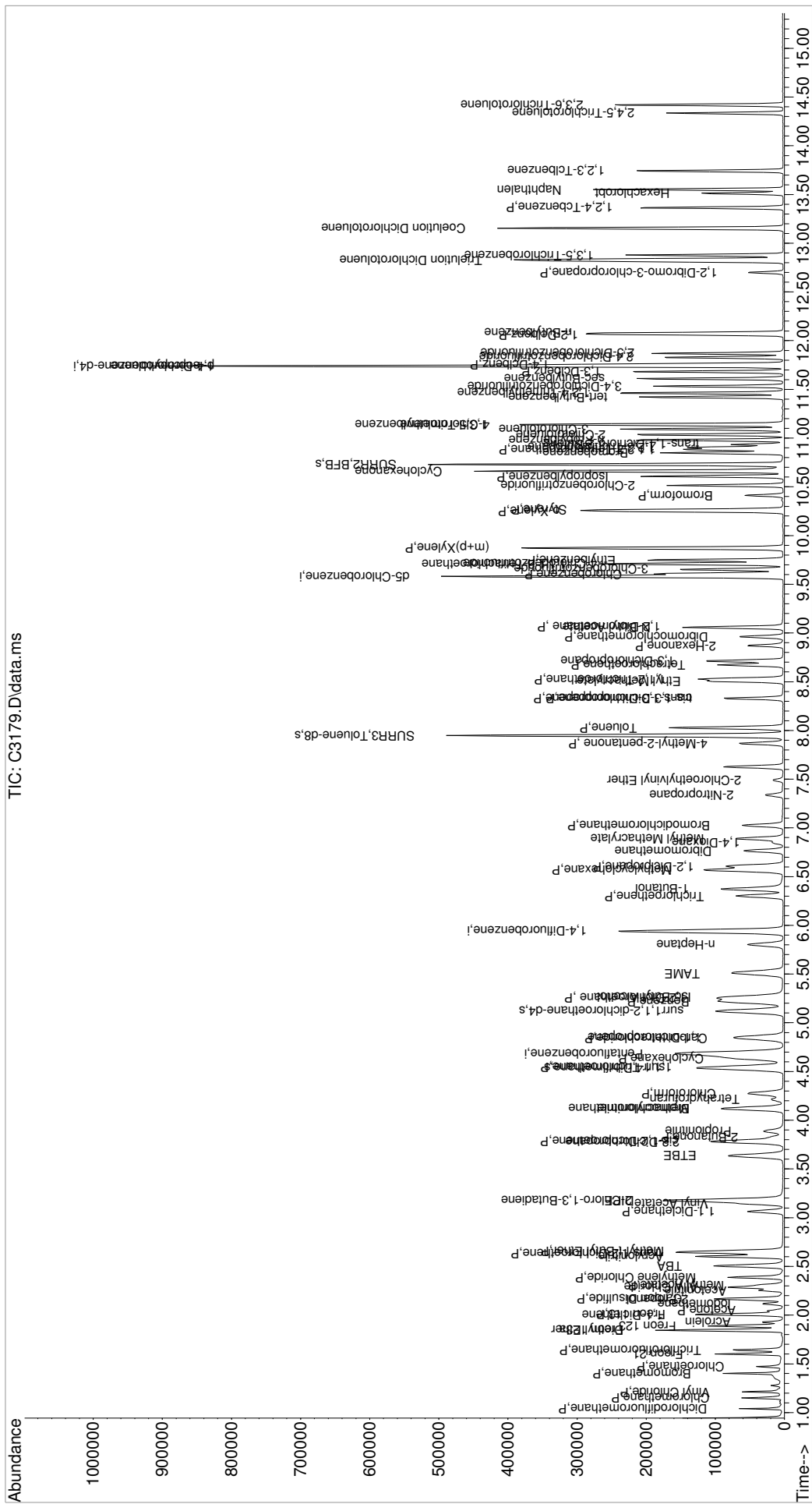
Quantitation Report (QT Reviewed)

```

Data Path      : I:\ACQUDATA\MSVOA14\Data\112117\
Data File     : C3179.D
Acq On       : 21 Nov 2017  11:27 am
Operator      : F. NAEGLER
Sample        : LCS
Misc          :
ALS Vial      : 3      Sample Multiplier: 1

Quant Time: Nov 21 12:16:50 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title  : MS#14 - 8260 WATERS 5mL Purge
Quant Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration

```



Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3240.D
 Acq On : 22 Nov 2017 11:53 am
 Operator : F. NAEGLER
 Sample : LCS
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 12:41:40 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	4.686	168	151990	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	226434	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.582	117	202583	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	116934	50.00	ug/L	0.00

System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	75110	49.40	ug/L	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	98.80%
47) surr1,1,2-dichloroetha...	5.119	65	102594	49.62	ug/L	0.00
Spiked Amount	50.000	Range	73 - 125	Recovery	=	99.24%
64) SURR3,Toluene-d8	7.948	98	292532	48.84	ug/L	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	97.68%
69) SURR2,BFB	10.728	95	114899	50.24	ug/L	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	100.48%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.041	85	35349	17.86	ug/L	98
3) Chloromethane	1.150	50	37375	17.50	ug/L	99
4) Vinyl Chloride	1.211	62	33850	17.45	ug/L	97
5) Bromomethane	1.400	94	26593	21.95	ug/L	95
6) Chloroethane	1.473	64	20952	17.17	ug/L	93
7) Freon 21	1.601	67	55536	16.39	ug/L	100
8) Trichlorofluoromethane	1.644	101	44367	18.37	ug/L	97
9) Diethyl Ether	1.845	59	27293	18.67	ug/L	98
10) Freon 123a	1.845	67	36927	19.75	ug/L	98
11) Freon 123	1.888	83	38310	18.70	ug/L	93
12) Acrolein	1.924	56	16443	38.02	ug/L	99
13) 1,1-Dicethene	2.004	96	24835	19.02	ug/L	99
14) Freon 113	2.010	101	25300	20.04	ug/L	94
15) Acetone	2.040	43	20537	19.74	ug/L	99
16) 2-Propanol	2.156	45	47415	333.42	ug/L	88
17) Iodomethane	2.120	142	31108	30.98	ug/L	95
18) Carbon Disulfide	2.168	76	71560	20.26	ug/L	100
19) Acetonitrile	2.254	40	16518	96.64	ug/L	98
20) Allyl Chloride	2.284	76	13662	20.65	ug/L #	87
21) Methyl Acetate	2.309	43	26594	14.30	ug/L	98
22) Methylene Chloride	2.388	84	30515	19.58	ug/L	98
23) TBA	2.504	59	75950	303.83	ug/L	83
24) Acrylonitrile	2.601	53	76278	86.83	ug/L	94
25) Methyl-t-Butyl Ether	2.650	73	87369	18.14	ug/L	99
26) trans-1,2-Dichloroethene	2.638	96	27505	19.58	ug/L	98
27) 1,1-Dicethane	3.065	63	52087	18.75	ug/L	99
28) Vinyl Acetate	3.144	86	7261	25.31	ug/L #	94
29) DIPE	3.180	45	87692	15.69	ug/L	94
30) 2-Chloro-1,3-Butadiene	3.174	53	57038	24.40	ug/L	97
31) ETBE	3.638	59	76742	15.97	ug/L	92
32) 2,2-Dichloropropane	3.778	77	34457	20.27	ug/L	99
33) cis-1,2-Dichloroethene	3.784	96	32533	19.56	ug/L	100
34) 2-Butanone	3.820	43	25026	18.23	ug/L	95
35) Propionitrile	3.888	54	31781	86.86	ug/L	95
36) Bromochloromethane	4.119	130	21421	20.49	ug/L	96
37) Methacrylonitrile	4.119	67	15653	17.63	ug/L	89
38) Tetrahydrofuran	4.211	42	12459	14.75	ug/L	95
39) Chloroform	4.278	83	54608	19.94	ug/L	99
40) 1,1,1-Trichloroethane	4.552	97	41449	19.57	ug/L	95

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3240.D
 Acq On : 22 Nov 2017 11:53 am
 Operator : F. NAEGLER
 Sample : LCS
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 12:41:40 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.509	73	70621	15.78	ug/L	98
43) Cyclohexane	4.637	41	28212	15.95	ug/L	88
45) Carbontetrachloride	4.845	117	31675	20.20	ug/L	96
46) 1,1-Dichloropropene	4.851	75	38899	18.74	ug/L	94
48) Benzene	5.217	78	115624	19.67	ug/L	97
49) 1,2-Dichloroethane	5.259	62	50441	19.78	ug/L	97
50) Iso-Butyl Alcohol	5.265	43	37408	356.48	ug/L	95
51) n-Heptane	5.802	43	36899	19.08	ug/L	96
52) 1-Butanol	6.375	56	51631	886.18	ug/L	99
53) Trichloroethene	6.302	130	29902	18.31	ug/L	97
54) Methylcyclohexane	6.570	55	36794	17.96	ug/L	99
55) 1,2-Dicloropropane	6.606	63	31789	18.76	ug/L	100
56) Dibromomethane	6.765	93	21381	19.74	ug/L	97
57) 1,4-Dioxane	6.850	88	11626	379.16	ug/L	94
58) Methyl Methacrylate	6.893	69	24131	17.33	ug/L	100
59) Bromodichloromethane	7.027	83	37891	19.77	ug/L	98
60) 2-Nitropropane	7.338	41	13585	39.60	ug/L	92
61) 2-Chloroethylvinyl Ether	7.490	63	5625	11.72	ug/L	95
62) cis-1,3-Dichloropropene	8.332	75	38186	20.07	ug/L	98
63) 4-Methyl-2-pentanone	7.862	43	40202	18.13	ug/L	98
65) Toluene	8.027	91	125346	19.83	ug/L	99
66) trans-1,3-Dichloropropene	8.332	75	38186	20.07	ug/L	99
67) Ethyl Methacrylate	8.509	69	40840	18.74	ug/L	98
68) 1,1,2-Trichloroethane	8.527	97	30926	20.28	ug/L #	85
71) Tetrachloroethene	8.673	164	24220	20.46	ug/L	97
72) 2-Hexanone	8.874	43	31971	18.62	ug/L	92
73) 1,3-Dichloropropane	8.716	76	53369	19.75	ug/L	100
74) Dibromochloromethane	8.960	129	28327	20.69	ug/L	97
75) N-Butyl Acetate	9.057	43	50959	15.35	ug/L	99
76) 1,2-Dibromoethane	9.057	107	30755	21.24	ug/L	93
77) 3-Chlorobenzotrifluoride	9.655	180	33709	15.87	ug/L	96
78) Chlorobenzene	9.606	112	82861	20.21	ug/L	96
79) 4-Chlorobenzotrifluoride	9.716	180	30853	16.11	ug/L	98
80) 1,1,1,2-Tetrachloroethane	9.710	131	27180	21.06	ug/L	96
81) Ethylbenzene	9.746	106	42731	20.39	ug/L	97
82) (m+p)Xylene	9.868	106	106735	41.17	ug/L	96
83) o-Xylene	10.246	106	53050	20.50	ug/L	96
84) Styrene	10.264	104	89820	20.84	ug/L	96
85) Bromoform	10.411	173	18668	20.87	ug/L	100
86) 2-Chlorobenzotrifluoride	10.514	180	34285	16.27	ug/L	94
87) Isopropylbenzene	10.606	105	131796	19.86	ug/L	98
88) Cyclohexanone	10.661	55	140611	366.27	ug/L	93
89) trans-1,4-Dichloro-2-B...	10.935	53	11752	22.09	ug/L	77
91) 1,1,2,2-Tetrachloroethane	10.880	83	47768	21.04	ug/L	96
92) Bromobenzene	10.850	156	37744	20.26	ug/L	94
93) 1,2,3-Trichloropropane	10.904	110	15486	19.38	ug/L	92
94) n-Propylbenzene	10.978	91	159610	19.32	ug/L	99
95) 2-Chlorotoluene	11.039	91	101450	20.34	ug/L	99
96) 3-Chlorotoluene	11.093	91	83739	16.04	ug/L	97
97) 4-Chlorotoluene	11.136	91	117349	19.38	ug/L	97
98) 1,3,5-Trimethylbenzene	11.142	105	119008	20.38	ug/L	99
99) tert-Butylbenzene	11.423	119	99457	19.51	ug/L	99
100) 1,2,4-Trimethylbenzene	11.465	105	120494	20.83	ug/L	99
101) 3,4-Dichlorobenzotrifl...	11.532	214	29825	16.44	ug/L	94
102) sec-Butylbenzene	11.612	105	148388	20.04	ug/L	98
103) p-Isopropyltoluene	11.740	119	129143	20.93	ug/L	98

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3240.D
 Acq On : 22 Nov 2017 11:53 am
 Operator : F. NAEGLER
 Sample : LCS
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 12:41:40 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	74524	21.30	ug/L	96
105) 1,4-Dclbenz	11.758	146	77686	21.42	ug/L	99
106) 2,4-Dichlorobenzotrifl...	11.831	214	27372	16.97	ug/L	98
107) 2,5-Dichlorobenzotrifl...	11.874	214	30686	16.58	ug/L	92
108) n-Butylbenzene	12.081	91	122029	21.30	ug/L	98
109) 1,2-Dclbenz	12.063	146	76428	21.75	ug/L	98
110) 1,2-Dibromo-3-chloropr...	12.703	157	8652	18.68	ug/L	90
111) Trielution Dichlorotol...	12.831	125	140827	48.08	ug/L	98
112) 1,3,5-Trichlorobenzene	12.880	180	42733	16.37	ug/L	98
113) Coelution Dichlorotoluene	13.154	125	104563	32.35	ug/L	98
114) 1,2,4-Tcbenzene	13.367	180	53833	21.82	ug/L	96
115) Hexachlorobt	13.514	225	23374	22.68	ug/L	95
116) Naphthalen	13.550	128	146885	21.37	ug/L	100
117) 1,2,3-Tclbenzene	13.745	180	52470	21.59	ug/L	98
118) 2,4,5-Trichlorotoluene	14.337	159	26122	16.00	ug/L	94
119) 2,3,6-Trichlorotoluene	14.416	159	34558	22.79	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

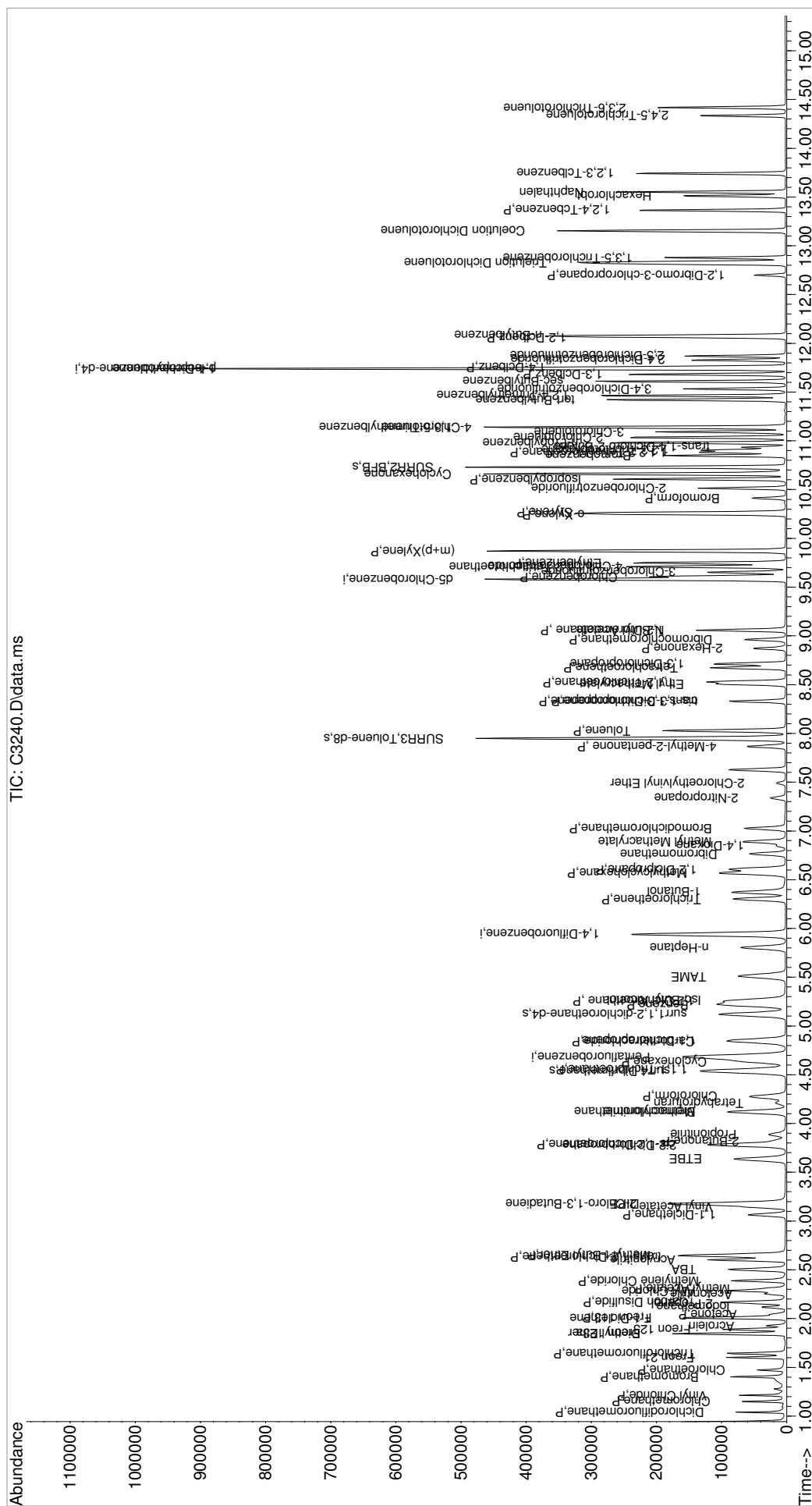
Quantitation Report (QT Reviewed)

Data Path	:	I:\ACQUDATA\MSVOA14\Data\112217\
Data File	:	C3240.D
Acq On	:	22 Nov 2017 11:53 am
Operator	:	F. NAEGLER
Sample	:	LCS
Misc	:	
ALS Vial	:	2 Sample Multiplier: 1

Inst : MSV0A14

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 22 12:41:40 2017
Quant Method : I:\ACQDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



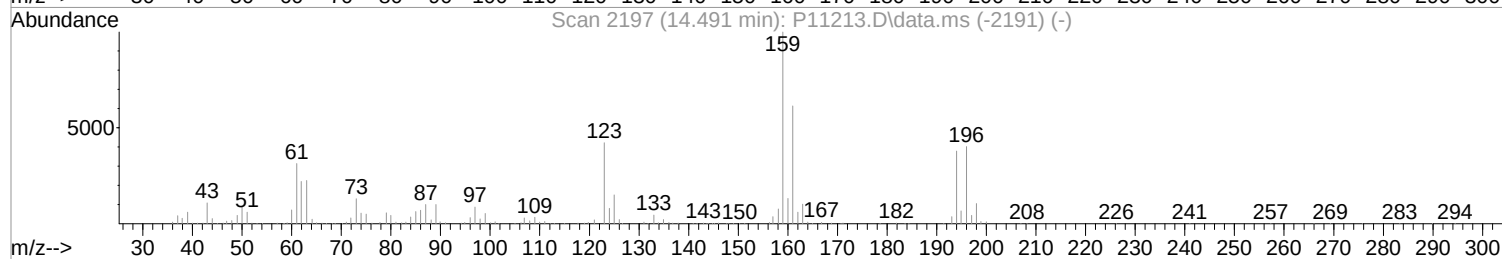
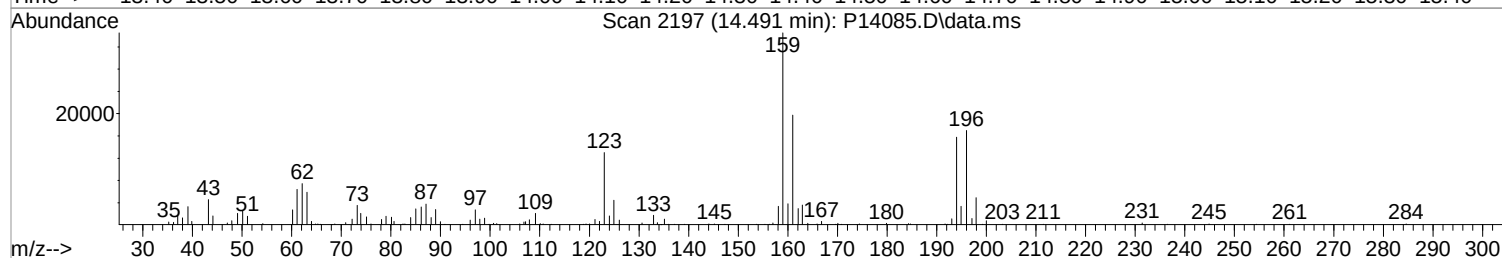
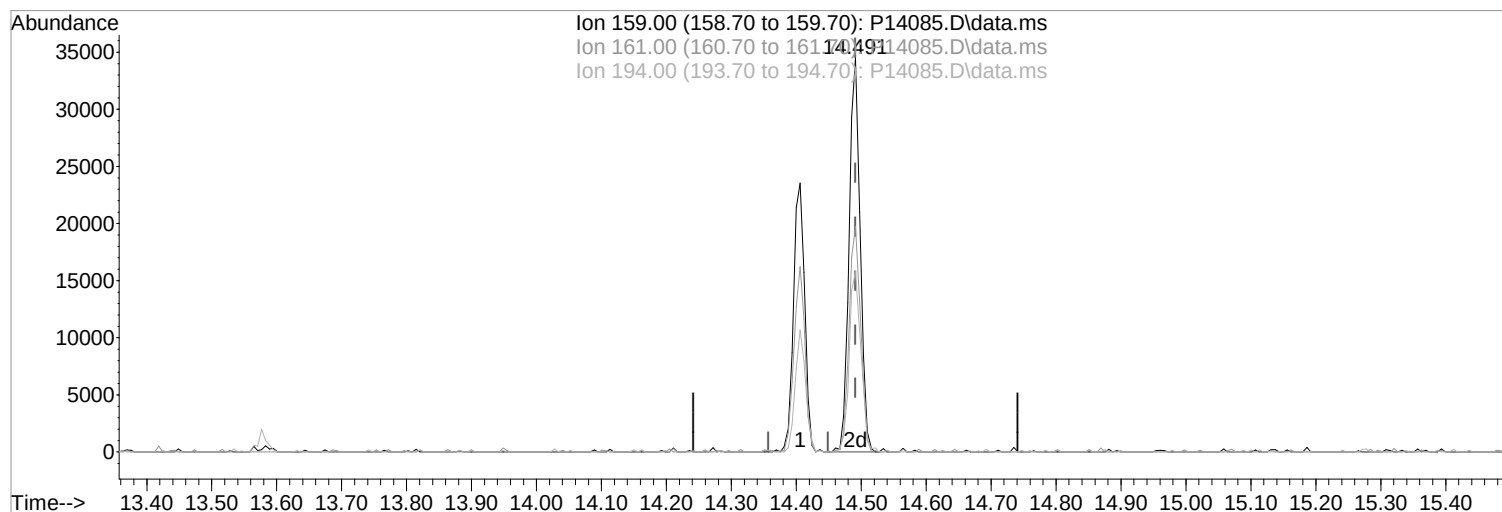
Quantitation Report (Qedit)

1st *MR* 11/19/172nd *MR* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14085.D
Acq On : 17 Nov 2017 9:16 pm
Operator : K.Ruest
Sample : LCSD
Misc :
ALS Vial : 25 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:23:38 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14085.D\data.ms

(120) 2,3,6-Trichlorotoluene

14.491min (+0.000) 11.14 ppb m

response 41027

Ion	Exp%	Act%
159.00	100	100
161.00	61.30	57.16
194.00	37.80	45.68#
0.00	0.00	0.00

Manual Integration:

After

Wrong peak selected.

11/19/17

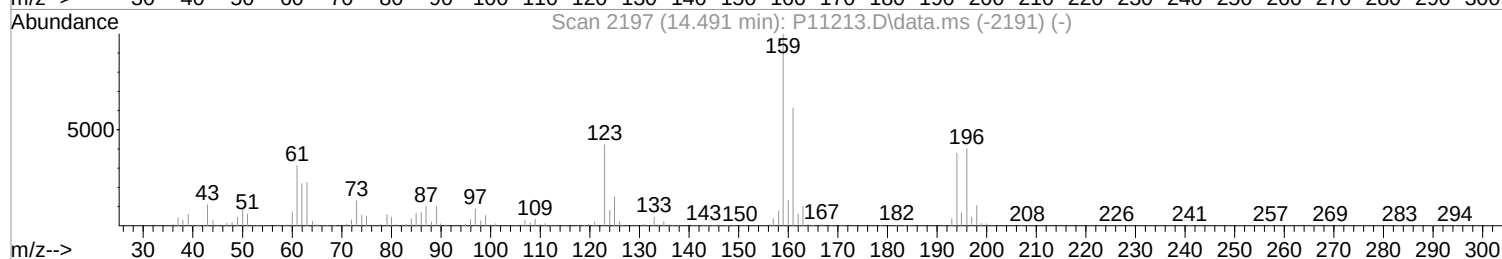
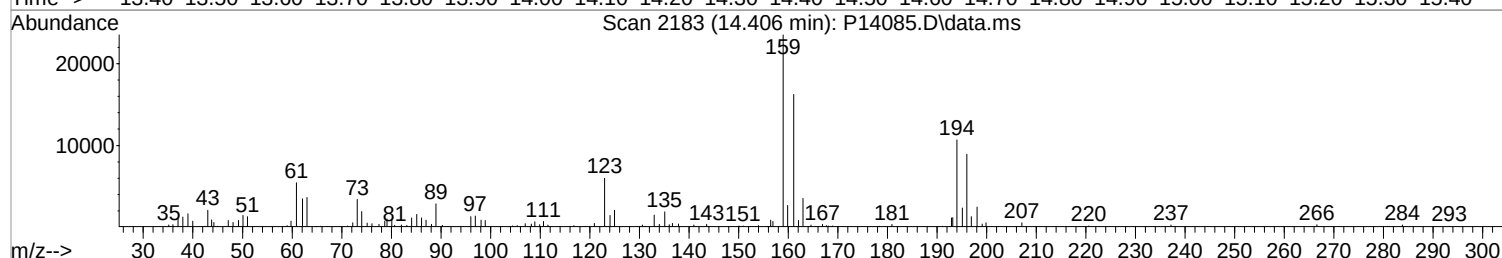
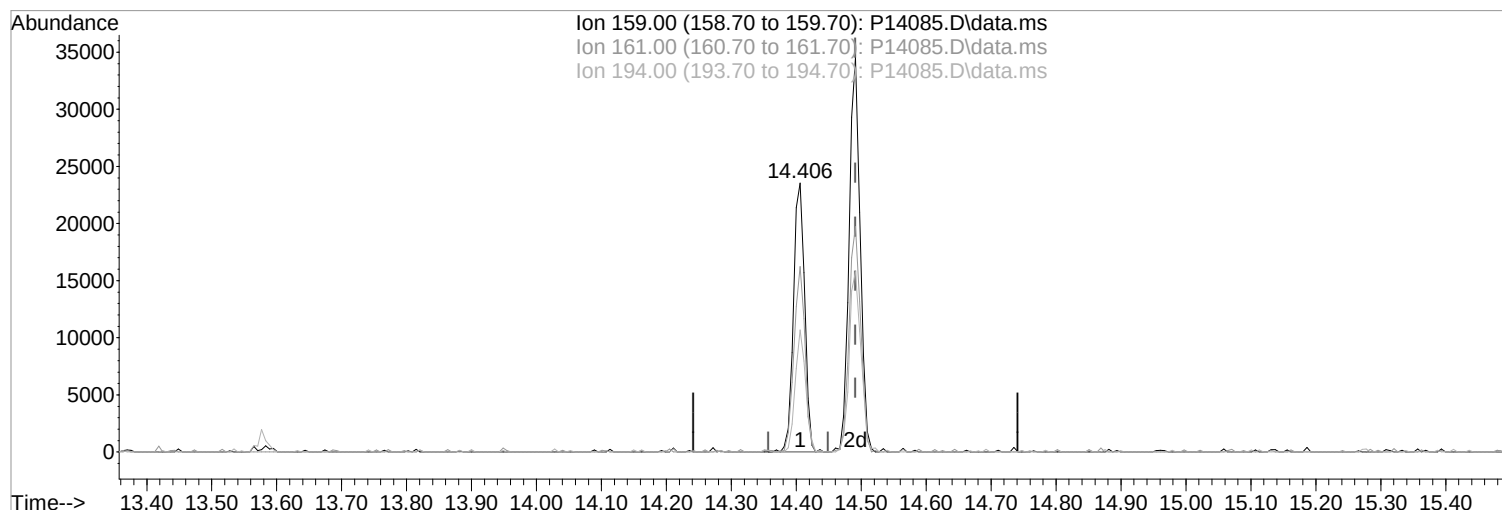
Quantitation Report (Qedit)

1st *MR* 11/19/17
2nd *MMW* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14085.D
Acq On : 17 Nov 2017 9:16 pm
Operator : K.Ruest
Sample : LCSD
Misc :
ALS Vial : 25 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:23:38 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14085.D\data.ms

(120) 2,3,6-Trichlorotoluene

Manual Integration:

14.406min (-0.085) 7.70 ppb

Before

response 28383

Ion Exp% Act%

11/19/17

159.00 100 100

161.00 61.30 68.96

194.00 37.80 45.33

0.00 0.00 0.00

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14085.D
 Acq On : 17 Nov 2017 9:16 pm
 Operator : K.Ruest
 Sample : LCSD
 Misc :
 ALS Vial : 25 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:24:59 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.383	168	233219	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	387236	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	353728	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	181401	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.231	113	113838	52.71	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	105.42%	
48) surr1,1,2-dichloroetha...	5.767	65	180219	52.36	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	104.72%	
65) SURR3,Toluene-d8	8.291	98	498916	50.00	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	100.00%	
70) SURR2,BFB	10.864	95	187870	47.89	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	95.78%	
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	1.183	85	71467	22.29	ppb	86
3) Chloromethane	1.311	50	130069	21.26	ppb	98
4) Vinyl Chloride	1.384	62	86316	21.64	ppb	90
5) Bromomethane	1.610	94	35988	18.54	ppb	94
6) Chloroethane	1.689	64	46546	21.92	ppb	98
7) Freon 21	1.835	67	122858	22.54	ppb	98
8) Trichlorofluoromethane	1.884	101	85714	20.94	ppb	95
9) Diethyl Ether	2.116	59	86854	23.99	ppb	90
10) Freon 123a	2.116	67	77738	23.91	ppb	98
11) Freon 123	2.170	83	80434	22.26	ppb	88
12) Acrolein	2.219	56	51368	49.14	ppb	88
13) 1,1-Dicethene	2.305	96	52050	20.46	ppb	# 82
14) Freon 113	2.317	101	48446	21.44	ppb	85
15) Acetone	2.347	43	62688	22.06	ppb	89
16) 2-Propanol	2.475	45	252518	428.08	ppb	96
17) Iodomethane	2.439	142	55722	23.32	ppb	100
18) Carbon Disulfide	2.500	76	128836	19.22	ppb	98
19) Acetonitrile	2.597	40	62259	114.96	ppb	94
20) Allyl Chloride	2.634	76	29182	23.36	ppb	# 75
21) Methyl Acetate	2.658	43	115161	15.26	ppb	94
22) Methylene Chloride	2.750	84	56062	20.34	ppb	90
23) TBA	2.878	59	353161	430.56	ppb	87
24) Acrylonitrile	3.000	53	306987	118.53	ppb	95
25) Methyl-t-Butyl Ether	3.054	73	202628	20.47	ppb	93
26) trans-1,2-Dichloroethene	3.048	96	56216	21.45	ppb	# 77
28) 1,1-Dicethane	3.536	63	128066	21.80	ppb	98
29) Vinyl Acetate	3.627	86	15253	25.23	ppb	97
30) DIPE	3.664	45	354855	23.21	ppb	99
31) 2-Chloro-1,3-Butadiene	3.658	53	149710	24.23	ppb	92
32) ETBE	4.188	59	269972	21.79	ppb	92
33) 2,2-Dichloropropane	4.365	77	81866	20.10	ppb	95
34) cis-1,2-Dichloroethene	4.371	96	62270	20.27	ppb	93
35) 2-Butanone	4.420	43	84151	23.08	ppb	85
36) Propionitrile	4.499	54	126036	115.25	ppb	98
37) Bromochloromethane	4.761	130	37458	20.29	ppb	# 85
38) Methacrylonitrile	4.774	67	35047	19.58	ppb	# 79
39) Tetrahydrofuran	4.853	42	51993	23.03	ppb	92
40) Chloroform	4.938	83	101470	21.55	ppb	88
41) 1,1,1-Trichloroethane	5.249	97	86607	21.79	ppb	92

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14085.D
 Acq On : 17 Nov 2017 9:16 pm
 Operator : K.Ruest
 Sample : LCSD
 Misc :
 ALS Vial : 25 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:24:59 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.084	73	184238	19.97	ppb	98
44) Cyclohexane	5.334	41	95229	23.28	ppb	87
46) Carbontetrachloride	5.517	117	68851	21.28	ppb	91
47) 1,1-Dichloropropene	5.536	75	77085	20.25	ppb	97
49) Benzene	5.853	78	228469	19.82	ppb	96
50) 1,2-Dichloroethane	5.889	62	105655	21.21	ppb	96
51) Iso-Butyl Alcohol	5.865	43	191364	414.31	ppb	95
52) n-Heptane	6.340	43	128624	21.42	ppb	86
53) 1-Butanol	6.828	56	272439	1100.63	ppb	78
54) Trichloroethene	6.798	130	60222	20.44	ppb	92
55) Methylcyclohexane	7.041	55	125448	23.21	ppb	86
56) 1,2-Dichloropropane	7.078	63	73883	20.20	ppb	95
57) Dibromomethane	7.224	93	35546	19.80	ppb	86
58) 1,4-Dioxane	7.279	88	28695	418.29	ppb	# 62
59) Methyl Methacrylate	7.304	69	59306	21.11	ppb	# 83
60) Bromodichloromethane	7.450	83	72328	22.44	ppb	95
61) 2-Nitropropane	7.730	41	55169	39.12	ppb	97
62) 2-Chloroethylvinyl Ether	7.858	63	32158	15.19	ppb	79
63) cis-1,3-Dichloropropene	7.992	75	87223	19.24	ppb	91
64) 4-Methyl-2-pentanone	8.200	43	133826	20.46	ppb	88
66) Toluene	8.364	91	255200	20.62	ppb	97
67) trans-1,3-Dichloropropene	8.633	75	92452	22.36	ppb	96
68) Ethyl Methacrylate	8.779	69	94566	19.59	ppb	96
69) 1,1,2-Trichloroethane	8.822	97	58096	21.09	ppb	85
72) Tetrachloroethene	8.956	164	42157	19.37	ppb	# 90
73) 2-Hexanone	9.114	43	104200	20.48	ppb	85
74) 1,3-Dichloropropane	8.992	76	97116	18.03	ppb	96
75) Dibromochloromethane	9.218	129	51953	20.38	ppb	91
76) N-Butyl Acetate	9.273	43	218960	22.72	ppb	87
77) 1,2-Dibromoethane	9.315	107	60234	21.74	ppb	93
78) Chlorobenzene	9.815	112	164301	20.92	ppb	95
79) 3-CBTF	9.834	180	77738	20.77	ppb	85
80) 4-CBTF	9.882	180	67268	20.20	ppb	94
81) 1,1,1,2-Tetrachloroethane	9.901	131	55584	21.35	ppb	93
82) Ethylbenzene	9.931	106	84107	19.67	ppb	# 90
83) (m+p)Xylene	10.047	106	211748	40.29	ppb	91
84) o-Xylene	10.407	106	103544	19.86	ppb	94
85) Styrene	10.419	104	180959	21.55	ppb	98
87) Bromoform	10.565	173	34582	22.75	ppb	87
88) 2-CBTF	10.650	180	80431	22.00	ppb	96
89) Isopropylbenzene	10.742	105	284395	21.47	ppb	96
90) Cyclohexanone	10.797	55	518612	427.71	ppb	80
91) trans-1,4-Dichloro-2-B...	11.047	53	34070	21.35	ppb	94
92) 1,1,2,2-Tetrachloroethane	10.998	83	79229	19.87	ppb	94
93) Bromobenzene	10.986	156	67763	20.76	ppb	93
94) 1,2,3-Trichloropropane	11.028	110	31098	21.04	ppb	92
95) n-Propylbenzene	11.096	91	318318	20.42	ppb	96
96) 2-Chlorotoluene	11.156	91	204918	20.78	ppb	95
97) 3-Chlorotoluene	11.211	91	201456	20.15	ppb	99
98) 4-Chlorotoluene	11.248	91	240511	21.43	ppb	94
99) 1,3,5-Trimethylbenzene	11.248	105	233011	21.26	ppb	99
100) tert-Butylbenzene	11.522	119	200223	20.09	ppb	97
101) 1,2,4-Trimethylbenzene	11.559	105	239392	20.82	ppb	98
102) 3,4-DCBTF	11.620	214	51579	18.19	ppb	92
103) sec-Butylbenzene	11.705	105	294406	20.24	ppb	98
104) p-Isopropyltoluene	11.827	119	250682	21.34	ppb	96

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14085.D
Acq On : 17 Nov 2017 9:16 pm
Operator : K.Ruest
Sample : LCSD
Misc :
ALS Vial : 25 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:24:59 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.784	146	128015	20.27	ppb	97
106) 1,4-Dclbenz	11.858	146	139251	21.88	ppb	89
107) 2,4-DCBTF	11.912	214	50771	20.41	ppb	94
108) 2,5-DCBTF	11.955	214	57319	20.38	ppb	97
109) n-Butylbenzene	12.156	91	228893	20.91	ppb	99
110) 1,2-Dclbenz	12.156	146	133052	21.70	ppb	95
111) 1,2-Dibromo-3-chloropr...	12.784	157	18891	18.49	ppb	92
112) Trielution Dichlorotol...	12.906	125	355638	59.21	ppb #	90
113) 1,3,5 Trichlorobenzene	12.955	180	83027	17.96	ppb	94
114) Coelution Dichlorotoluene	13.229	125	252633	37.93	ppb	95
115) 1,2,4-Tcbenzene	13.437	180	84265	17.29	ppb	97
116) Hexachlorobt	13.577	225	44326	21.86	ppb	86
117) Naphthalen	13.632	128	270093	17.40	ppb	98
118) 1,2,3-Tclbenzene	13.821	180	80890	16.34	ppb	97
119) 2,4,5-Trichlorotoluene	14.406	159	28383	7.19	ppb #	84
120) 2,3,6-Trichlorotoluene	14.491	159	41027m	11.14	ppb	

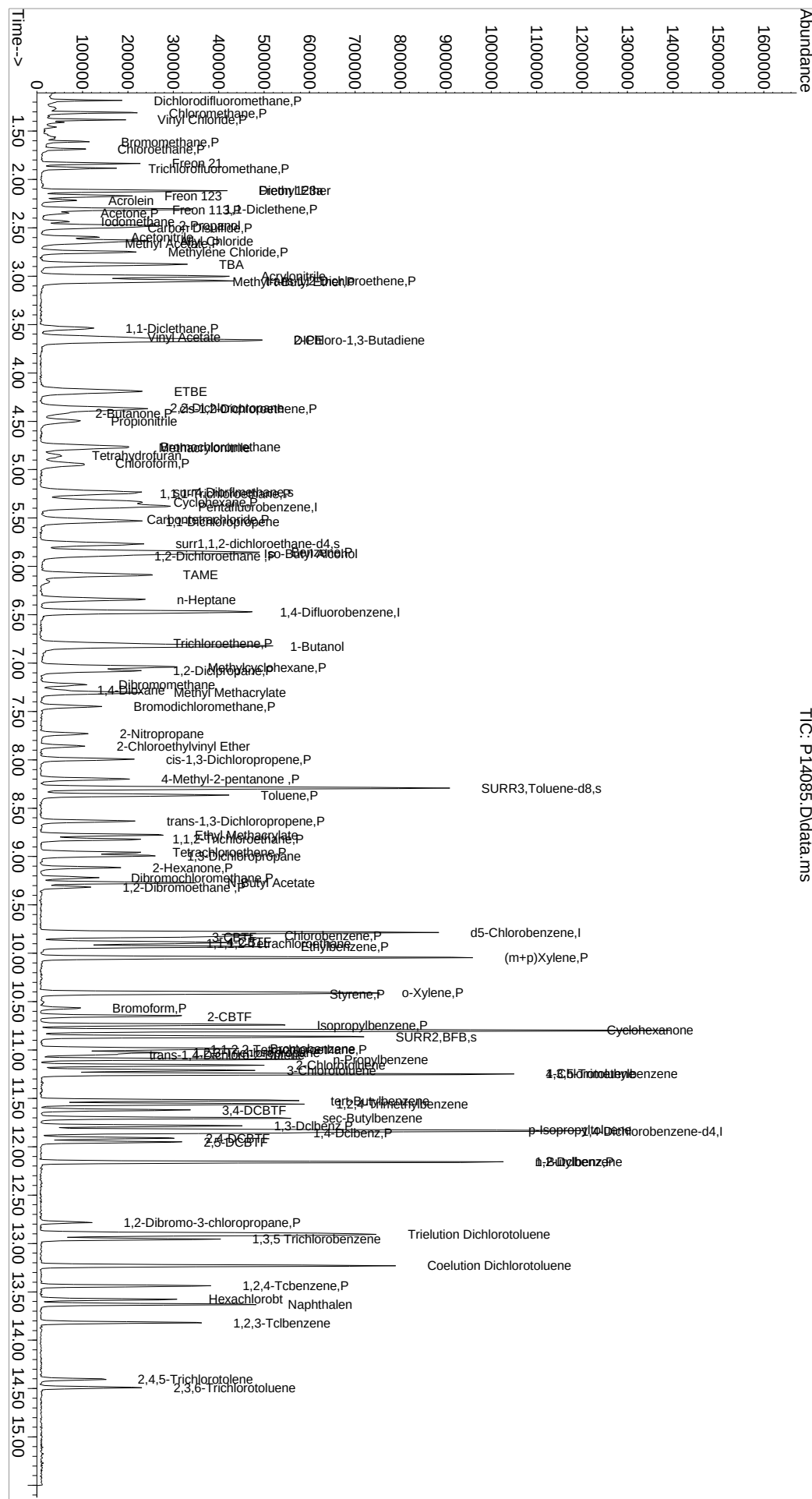
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQDATA\msvoa12\Data\111717\
Data File : P14085.D
Acq On : 17 Nov 2017 9:16 pm
Operator : K.Ruest
Sample : LCSD
PALS Vial : 25 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:24:59 2017
Quant Method : I:\ACQDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
Quant Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



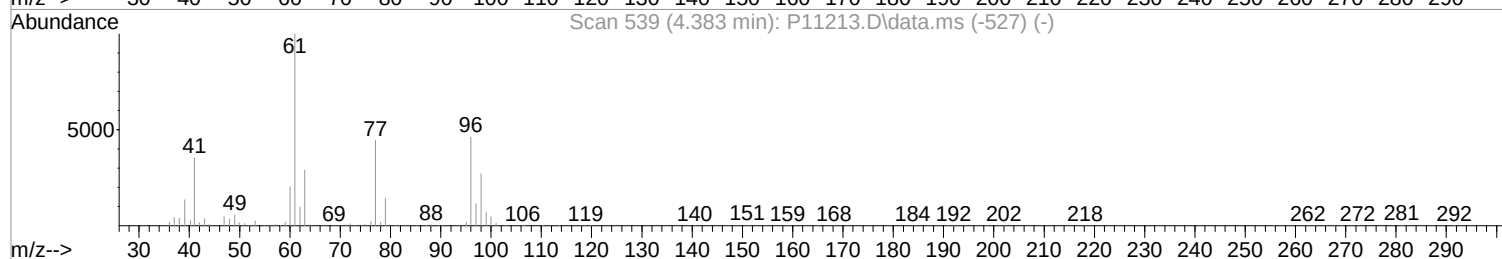
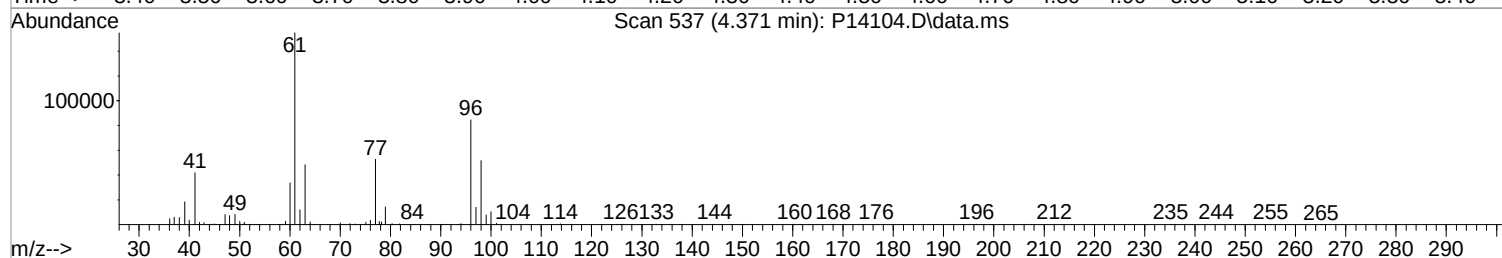
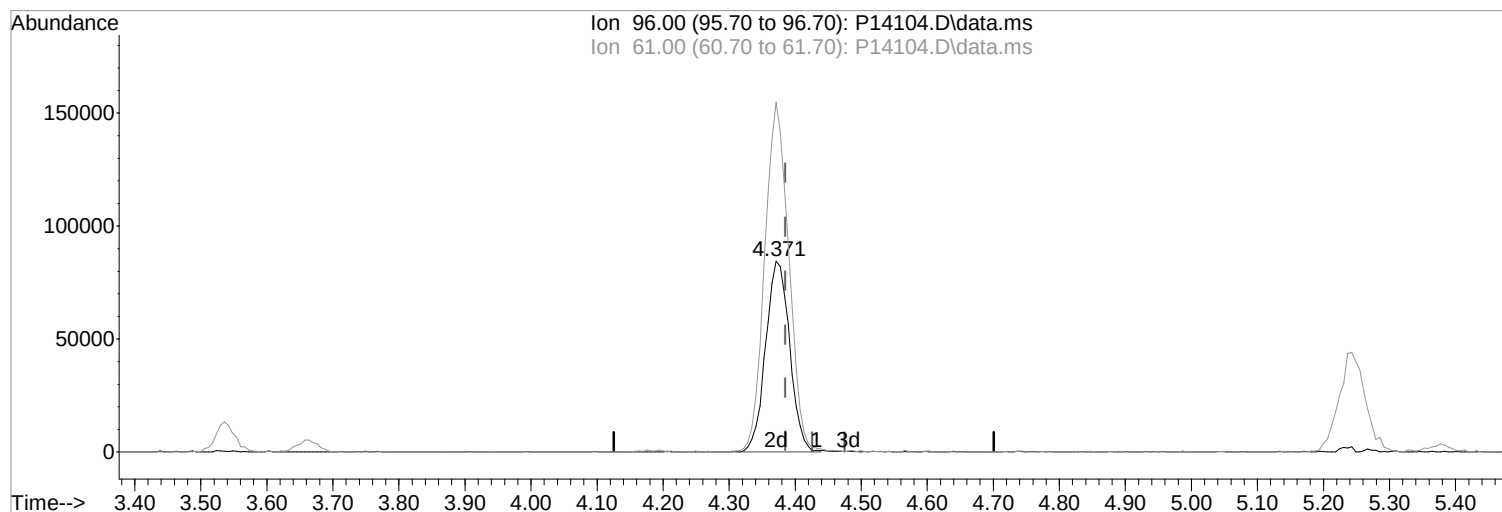
Quantitation Report (Qedit)

1st *102* 11/21/17
2nd *mmc* 11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14104.D
Acq On : 18 Nov 2017 4:09 am
Operator : K.Ruest
Sample : R1710784-007MS|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 44 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:41:40 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14104.D\data.ms

(34) cis-1,2-Dichloroethene (P)

4.371min (-0.014) 67.34 ppb m

response 213496

Ion	Exp%	Act%
96.00	100	100
61.00	217.50	183.34#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

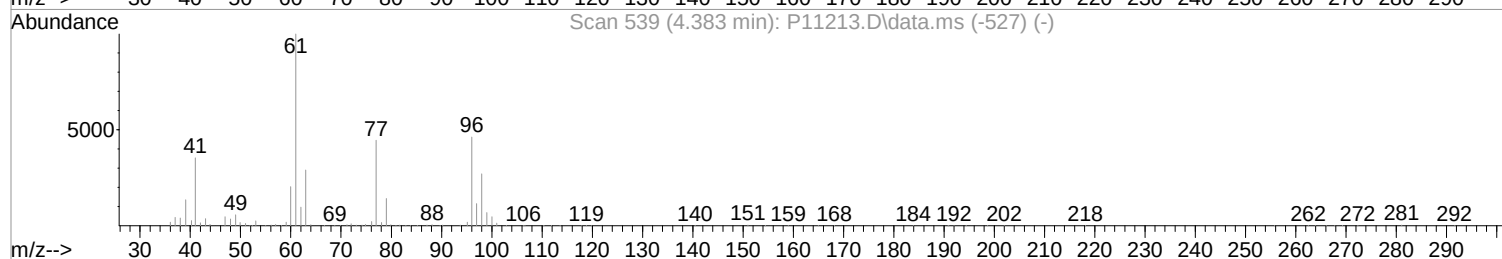
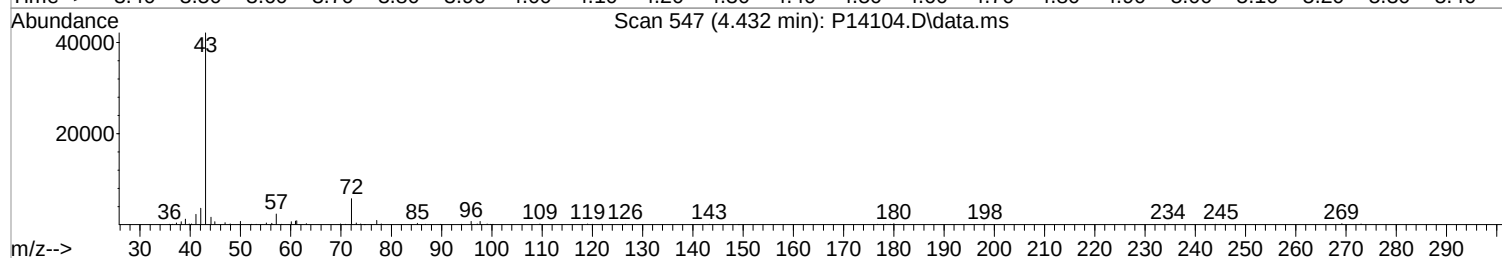
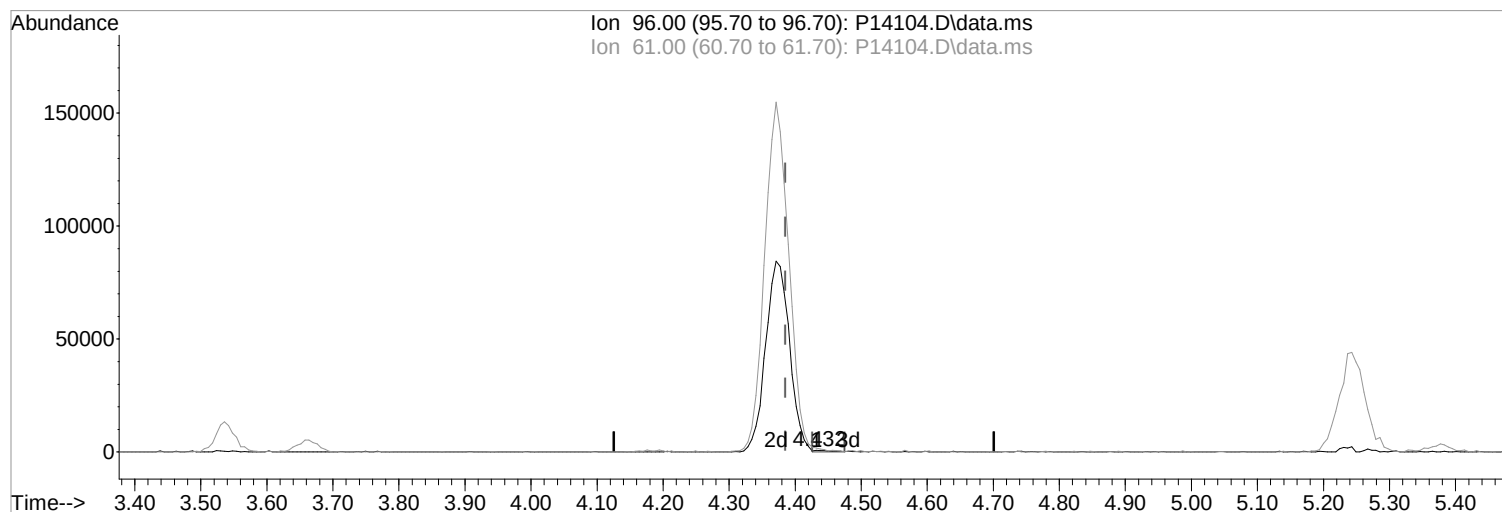
Peak not found.

11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
Data File : P14104.D
Acq On : 18 Nov 2017 4:09 am
Operator : K.Ruest
Sample : R1710784-007MS|1.0
Misc : ECOLOGY 624 T2
ALS Vial : 44 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:41:40 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P14104.D\data.ms

(34) cis-1,2-Dichloroethene (P)

Manual Integration:

4.432min (+0.047) 0.40 ppb

Before

response 1276

Ion	Exp%	Act%
96.00	100	100
61.00	217.50	223.56
0.00	0.00	0.00
0.00	0.00	0.00

11/21/17

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14104.D
 Acq On : 18 Nov 2017 4:09 am
 Operator : K.Ruest
 Sample : R1710784-007MS|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 44 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 21 11:32:11 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.383	168	240740	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	395101	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	358581	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	185934	50.00	ppb	0.00

System Monitoring Compounds						
45) surr4,Dibrflmethane	5.225	113	117112	53.15	ppb	-0.02
Spiked Amount	50.000	Range 89 - 119	Recovery	=	106.30%	
48) surr1,1,2-dichloroetha...	5.773	65	182316	51.91	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	103.82%	
65) SURR3,Toluene-d8	8.291	98	493468	48.47	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	96.94%	
70) SURR2,BFB	10.864	95	190518	47.59	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	95.18%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.183	85	181302	54.77	ppb	93
3) Chloromethane	1.311	50	335170	53.08	ppb	96
4) Vinyl Chloride	1.384	62	218369	53.04	ppb	88
5) Bromomethane	1.603	94	96740	66.13	ppb	98
6) Chloroethane	1.683	64	124575	57.28	ppb	99
7) Freon 21	1.835	67	303639	53.98	ppb	100
8) Trichlorofluoromethane	1.884	101	227119	53.76	ppb	98
9) Diethyl Ether	2.115	59	204140	54.63	ppb	83
10) Freon 123a	2.122	67	199375	59.42	ppb	91
11) Freon 123	2.170	83	209246	56.10	ppb	97
12) Acrolein	2.213	56	117094	108.51	ppb	93
13) 1,1-Dicethene	2.304	96	134359	51.16	ppb	# 86
14) Freon 113	2.310	101	126710	54.32	ppb	96
15) Acetone	2.347	43	124917	42.59	ppb	93
16) 2-Propanol	2.481	45	606705	996.39	ppb	95
17) Iodomethane	2.439	142	153960	55.27	ppb	90
18) Carbon Disulfide	2.499	76	340992	49.28	ppb	97
19) Acetonitrile	2.591	40	146007	261.18	ppb	95
20) Allyl Chloride	2.634	76	70426	54.62	ppb	# 66
21) Methyl Acetate	2.658	43	283882	36.43	ppb	100
22) Methylene Chloride	2.749	84	146172	51.37	ppb	# 90
23) TBA	2.877	59	810355	957.08	ppb	82
24) Acrylonitrile	2.999	53	735232	275.00	ppb	99
25) Methyl-t-Butyl Ether	3.054	73	485737	47.55	ppb	93
26) trans-1,2-Dichloroethene	3.042	96	146965	54.32	ppb	# 78
28) 1,1-Dicethane	3.536	63	337267	55.61	ppb	97
29) Vinyl Acetate	3.633	86	36316	58.19	ppb	# 69
30) DIPE	3.664	45	900781	57.07	ppb	97
31) 2-Chloro-1,3-Butadiene	3.664	53	402350	63.07	ppb	93
32) ETBE	4.188	59	686516	53.68	ppb	89
33) 2,2-Dichloropropane	4.371	77	147147	35.00	ppb	95
34) cis-1,2-Dichloroethene	4.371	96	213496m	67.34	ppb	
35) 2-Butanone	4.420	43	180175	47.87	ppb	92
36) Propionitrile	4.493	54	289085	256.08	ppb	92
37) Bromochloromethane	4.761	130	97326	51.08	ppb	92
38) Methacrylonitrile	4.773	67	88800	48.07	ppb	97
39) Tetrahydrofuran	4.859	42	123086	52.81	ppb	85
40) Chloroform	4.950	83	257472	52.97	ppb	97
41) 1,1,1-Trichloroethane	5.243	97	236856	57.72	ppb	90

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14104.D
 Acq On : 18 Nov 2017 4:09 am
 Operator : K.Ruest
 Sample : R1710784-007MS|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 44 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 21 11:32:11 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.090	73	474072	49.77	ppb	95
44) Cyclohexane	5.328	41	243355	58.32	ppb	93
46) Carbontetrachloride	5.523	117	172907	52.39	ppb	94
47) 1,1-Dichloropropene	5.535	75	198058	51.00	ppb	92
49) Benzene	5.852	78	581440	49.43	ppb	99
50) 1,2-Dichloroethane	5.889	62	262090	51.56	ppb	96
51) Iso-Butyl Alcohol	5.865	43	436791	926.84	ppb	100
52) n-Heptane	6.340	43	283697	46.31	ppb	87
53) 1-Butanol	6.828	56	637818	2525.45	ppb	78
54) Trichloroethene	6.804	130	191312	63.63	ppb	97
55) Methylcyclohexane	7.041	55	335002	60.75	ppb	91
56) 1,2-Dichloropropane	7.078	63	178445	47.82	ppb	96
57) Dibromomethane	7.224	93	87574	47.81	ppb	95
58) 1,4-Dioxane	7.273	88	66596	951.45	ppb	# 64
59) Methyl Methacrylate	7.303	69	135530	47.28	ppb	98
60) Bromodichloromethane	7.450	83	188218	57.22	ppb	99
61) 2-Nitropropane	7.730	41	135699	94.31	ppb	99
62) 2-Chloroethylvinyl Ether	7.858	63	85828	39.73	ppb	85
63) cis-1,3-Dichloropropene	7.992	75	226519	48.96	ppb	93
64) 4-Methyl-2-pentanone	8.200	43	333555	49.97	ppb	89
66) Toluene	8.364	91	639057	50.60	ppb	94
67) trans-1,3-Dichloropropene	8.632	75	206349	48.91	ppb	92
68) Ethyl Methacrylate	8.779	69	242934	49.33	ppb	92
69) 1,1,2-Trichloroethane	8.821	97	147709	52.56	ppb	93
72) Tetrachloroethene	8.962	164	115540	52.37	ppb	95
73) 2-Hexanone	9.114	43	243862	47.27	ppb	82
74) 1,3-Dichloropropane	8.992	76	249430	45.69	ppb	92
75) Dibromochloromethane	9.218	129	137725	53.30	ppb	99
76) N-Butyl Acetate	9.273	43	528625	54.11	ppb	88
77) 1,2-Dibromoethane	9.315	107	141873	50.52	ppb	93
78) Chlorobenzene	9.815	112	412241	51.77	ppb	98
79) 3-CBTF	9.833	180	195997	51.66	ppb	95
80) 4-CBTF	9.888	180	175079	51.87	ppb	96
81) 1,1,1,2-Tetrachloroethane	9.900	131	141318	53.54	ppb	97
82) Ethylbenzene	9.931	106	221866	51.17	ppb	# 90
83) (m+p)Xylene	10.047	106	558037	104.73	ppb	90
84) o-Xylene	10.406	106	275107	52.06	ppb	92
85) Styrene	10.419	104	474951	55.80	ppb	95
87) Bromoform	10.571	173	80410	51.62	ppb	97
88) 2-CBTF	10.650	180	190060	50.72	ppb	98
89) Isopropylbenzene	10.742	105	710969	52.38	ppb	99
90) Cyclohexanone	10.797	55	526694	423.79	ppb	80
91) trans-1,4-Dichloro-2-B...	11.047	53	75751	46.31	ppb	94
92) 1,1,2,2-Tetrachloroethane	10.998	83	203171	49.72	ppb	89
93) Bromobenzene	10.986	156	163543	48.87	ppb	94
94) 1,2,3-Trichloropropane	11.028	110	71430	47.15	ppb	# 84
95) n-Propylbenzene	11.095	91	794981	49.76	ppb	98
96) 2-Chlorotoluene	11.156	91	516948	51.14	ppb	97
97) 3-Chlorotoluene	11.211	91	519796	50.72	ppb	96
98) 4-Chlorotoluene	11.248	91	583788	50.74	ppb	94
99) 1,3,5-Trimethylbenzene	11.248	105	605038	53.86	ppb	96
100) tert-Butylbenzene	11.522	119	523038	51.20	ppb	97
101) 1,2,4-Trimethylbenzene	11.559	105	616867	52.33	ppb	96
102) 3,4-DCBTF	11.620	214	137148	47.18	ppb	93
103) sec-Butylbenzene	11.705	105	755314	50.66	ppb	97
104) p-Isopropyltoluene	11.827	119	653549	54.29	ppb	98

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14104.D
 Acq On : 18 Nov 2017 4:09 am
 Operator : K.Ruest
 Sample : R1710784-007MS|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 44 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 21 11:32:11 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.784	146	328518	50.75	ppb	99
106) 1,4-Dclbenz	11.857	146	332197	50.93	ppb	92
107) 2,4-DCBTF	11.912	214	126474	49.61	ppb	99
108) 2,5-DCBTF	11.955	214	145010	50.31	ppb	90
109) n-Butylbenzene	12.156	91	590411	52.61	ppb	99
110) 1,2-Dclbenz	12.162	146	328961	52.35	ppb	97
111) 1,2-Dibromo-3-chloropr...	12.784	157	48571	46.39	ppb	98
112) Trielution Dichlorotol...	12.906	125	973588	158.14	ppb #	92
113) 1,3,5 Trichlorobenzene	12.955	180	235063	49.61	ppb	90
114) Coelution Dichlorotoluene	13.229	125	699947	102.52	ppb	95
115) 1,2,4-Tcbenzene	13.442	180	234525	46.95	ppb	96
116) Hexachlorobt	13.583	225	112334	54.05	ppb	89
117) Naphthalen	13.631	128	741637	46.60	ppb	98
118) 1,2,3-Tclbenzene	13.820	180	226617	44.67	ppb	98
119) 2,4,5-Trichlorotoluene	14.406	159	108628	26.83	ppb	97
120) 2,3,6-Trichlorotoluene	14.491	159	142461	37.73	ppb	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14105.D
 Acq On : 18 Nov 2017 4:30 am
 Operator : K.Ruest
 Sample : R1710784-007DMS|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 45 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:42:05 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.377	168	237301	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	394747	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	369597	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	183757	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.237	113	114057	51.81	ppb	0.00
Spiked Amount 50.000	Range 89	- 119	Recovery	=	103.62%	
48) surr1,1,2-dichloroetha...	5.767	65	185061	52.74	ppb	0.00
Spiked Amount 50.000	Range 73	- 125	Recovery	=	105.48%	
65) SURR3,Toluene-d8	8.291	98	509169	50.05	ppb	0.00
Spiked Amount 50.000	Range 87	- 121	Recovery	=	100.10%	
70) SURR2,BFB	10.864	95	194293	48.58	ppb	0.00
Spiked Amount 50.000	Range 85	- 122	Recovery	=	97.16%	
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.183	85	176212	54.00	ppb	96
3) Chloromethane	1.305	50	326036	52.38	ppb	96
4) Vinyl Chloride	1.384	62	228948	56.41	ppb	97
5) Bromomethane	1.603	94	88012	57.16	ppb	100
6) Chloroethane	1.683	64	122503	57.15	ppb	95
7) Freon 21	1.835	67	296869	53.54	ppb	100
8) Trichlorofluoromethane	1.884	101	235082	56.45	ppb	95
9) Diethyl Ether	2.116	59	207681	56.39	ppb	80
10) Freon 123a	2.116	67	193043	58.36	ppb	98
11) Freon 123	2.170	83	210254	57.19	ppb	96
12) Acrolein	2.213	56	118090	111.02	ppb	96
13) 1,1-Dicethene	2.305	96	140182	54.16	ppb	# 73
14) Freon 113	2.311	101	127061	55.26	ppb	95
15) Acetone	2.347	43	126621	43.79	ppb	94
16) 2-Propanol	2.481	45	609149	1014.90	ppb	96
17) Iodomethane	2.433	142	171121	61.58	ppb	92
18) Carbon Disulfide	2.500	76	345726	50.69	ppb	99
19) Acetonitrile	2.591	40	145310	263.70	ppb	96
20) Allyl Chloride	2.634	76	75462	59.37	ppb	# 77
21) Methyl Acetate	2.658	43	284292	37.02	ppb	99
22) Methylene Chloride	2.750	84	149183	53.18	ppb	95
23) TBA	2.878	59	830195	994.73	ppb	91
24) Acrylonitrile	3.000	53	733661	278.39	ppb	96
25) Methyl-t-Butyl Ether	3.048	73	481387	47.80	ppb	91
26) trans-1,2-Dichloroethene	3.042	96	144041	54.01	ppb	# 77
28) 1,1-Dicethane	3.536	63	336063	56.21	ppb	97
29) Vinyl Acetate	3.634	86	37543	61.03	ppb	98
30) DIPE	3.664	45	874794	56.22	ppb	97
31) 2-Chloro-1,3-Butadiene	3.664	53	396395	63.04	ppb	88
32) ETBE	4.188	59	674077	53.47	ppb	93
33) 2,2-Dichloropropane	4.365	77	147864	35.68	ppb	96
34) cis-1,2-Dichloroethene	4.377	96	208753	66.80	ppb	# 79
35) 2-Butanone	4.414	43	177423	47.83	ppb	90
36) Propionitrile	4.493	54	294955	265.06	ppb	99
37) Bromochloromethane	4.768	130	95533	50.87	ppb	# 81
38) Methacrylonitrile	4.768	67	81561	44.79	ppb	94
39) Tetrahydrofuran	4.859	42	130460	56.79	ppb	96
40) Chloroform	4.950	83	260004	54.26	ppb	95
41) 1,1,1-Trichloroethane	5.243	97	226751	56.06	ppb	94

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14105.D
 Acq On : 18 Nov 2017 4:30 am
 Operator : K.Ruest
 Sample : R1710784-007DMS|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 45 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:42:05 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.090	73	454917	48.45	ppb	97
44) Cyclohexane	5.328	41	238190	57.13	ppb	84
46) Carbontetrachloride	5.523	117	174103	52.80	ppb	98
47) 1,1-Dichloropropene	5.530	75	200655	51.71	ppb	93
49) Benzene	5.853	78	596272	50.73	ppb	93
50) 1,2-Dichloroethane	5.889	62	266095	52.40	ppb	97
51) Iso-Butyl Alcohol	5.859	43	457041	970.68	ppb	99
52) n-Heptane	6.340	43	293527	47.95	ppb	82
53) 1-Butanol	6.828	56	639044	2532.57	ppb	79
54) Trichloroethene	6.798	130	192471	64.07	ppb	95
55) Methylcyclohexane	7.041	55	327648	59.47	ppb	86
56) 1,2-Dichloropropane	7.078	63	188238	50.49	ppb	97
57) Dibromomethane	7.224	93	91086	49.77	ppb	96
58) 1,4-Dioxane	7.279	88	68379	977.80	ppb	# 79
59) Methyl Methacrylate	7.310	69	138410	48.33	ppb	93
60) Bromodichloromethane	7.450	83	188616	57.40	ppb	99
61) 2-Nitropropane	7.730	41	144133	100.26	ppb	95
62) 2-Chloroethylvinyl Ether	7.858	63	77182	35.76	ppb	74
63) cis-1,3-Dichloropropene	7.992	75	225330	48.75	ppb	96
64) 4-Methyl-2-pentanone	8.200	43	332859	49.91	ppb	88
66) Toluene	8.364	91	638088	50.57	ppb	98
67) trans-1,3-Dichloropropene	8.633	75	206215	48.92	ppb	98
68) Ethyl Methacrylate	8.779	69	234375	47.63	ppb	94
69) 1,1,2-Trichloroethane	8.822	97	141033	50.23	ppb	93
72) Tetrachloroethene	8.962	164	118083	51.93	ppb	91
73) 2-Hexanone	9.114	43	253403	47.66	ppb	84
74) 1,3-Dichloropropane	8.992	76	240473	42.73	ppb	98
75) Dibromochloromethane	9.218	129	138639	52.05	ppb	95
76) N-Butyl Acetate	9.273	43	537067	53.34	ppb	86
77) 1,2-Dibromoethane	9.315	107	146926	50.76	ppb	100
78) Chlorobenzene	9.815	112	423699	51.63	ppb	96
79) 3-CBTF	9.834	180	187348	47.91	ppb	95
80) 4-CBTF	9.882	180	174180	50.06	ppb	95
81) 1,1,1,2-Tetrachloroethane	9.901	131	137536	50.55	ppb	90
82) Ethylbenzene	9.931	106	226801	50.75	ppb	94
83) (m+p)Xylene	10.047	106	559739	101.92	ppb	92
84) o-Xylene	10.401	106	266172	48.87	ppb	96
85) Styrene	10.419	104	453809	51.72	ppb	94
87) Bromoform	10.565	173	82698	53.71	ppb	90
88) 2-CBTF	10.650	180	187351	50.58	ppb	96
89) Isopropylbenzene	10.742	105	715233	53.31	ppb	99
90) Cyclohexanone	10.797	55	524645	427.14	ppb	84
91) trans-1,4-Dichloro-2-B...	11.047	53	75484	46.69	ppb	92
92) 1,1,2,2-Tetrachloroethane	10.998	83	205549	50.90	ppb	89
93) Bromobenzene	10.986	156	162679	49.19	ppb	96
94) 1,2,3-Trichloropropane	11.022	110	74744	49.93	ppb	# 75
95) n-Propylbenzene	11.096	91	803825	50.91	ppb	98
96) 2-Chlorotoluene	11.156	91	531497	53.20	ppb	95
97) 3-Chlorotoluene	11.211	91	500116	49.37	ppb	98
98) 4-Chlorotoluene	11.254	91	581447	51.13	ppb	97
99) 1,3,5-Trimethylbenzene	11.248	105	602452	54.26	ppb	95
100) tert-Butylbenzene	11.522	119	518853	51.39	ppb	98
101) 1,2,4-Trimethylbenzene	11.559	105	627319	53.85	ppb	95
102) 3,4-DCBTF	11.620	214	135275	47.08	ppb	98
103) sec-Butylbenzene	11.705	105	774094	52.53	ppb	97
104) p-Isopropyltoluene	11.827	119	649796	54.61	ppb	99

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14105.D
 Acq On : 18 Nov 2017 4:30 am
 Operator : K.Ruest
 Sample : R1710784-007DMS|1.0
 Misc : ECOLOGY 624 T2
 ALS Vial : 45 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Nov 19 10:42:05 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.784	146	342481	53.54	ppb	99
106) 1,4-Dclbenz	11.858	146	344225	53.40	ppb	94
107) 2,4-DCBTF	11.912	214	125512	49.82	ppb	93
108) 2,5-DCBTF	11.949	214	142507	50.02	ppb	97
109) n-Butylbenzene	12.156	91	588851	53.10	ppb	99
110) 1,2-Dclbenz	12.162	146	332204	53.49	ppb	97
111) 1,2-Dibromo-3-chloropr...	12.784	157	48674	47.04	ppb	94
112) Trielution Dichlorotol...	12.906	125	955805	157.10	ppb	94
113) 1,3,5 Trichlorobenzene	12.955	180	229072	48.92	ppb	96
114) Coelution Dichlorotoluene	13.229	125	701942	104.03	ppb #	95
115) 1,2,4-Tcbenzene	13.443	180	235574	47.72	ppb	98
116) Hexachlorobt	13.577	225	108534	52.84	ppb	90
117) Naphthalen	13.632	128	777892	49.46	ppb	97
118) 1,2,3-Tclbenzene	13.821	180	230032	45.88	ppb	99
119) 2,4,5-Trichlorotoluene	14.406	159	112129	28.03	ppb	96
120) 2,3,6-Trichlorotoluene	14.491	159	151977	40.72	ppb	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

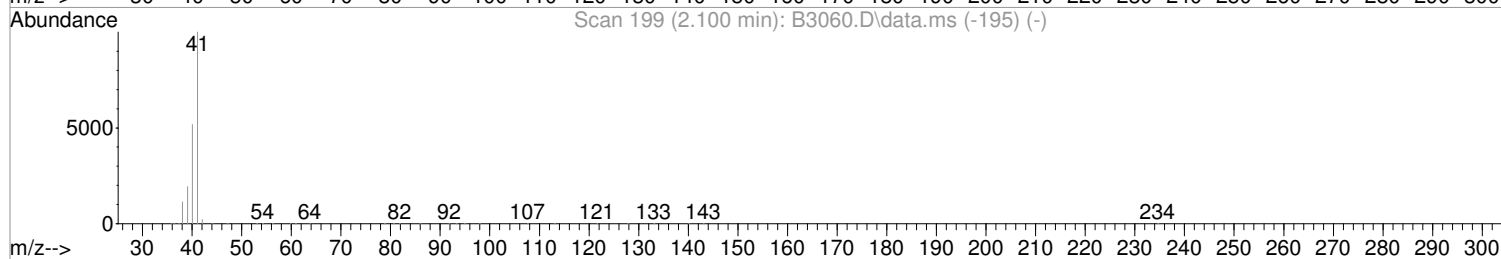
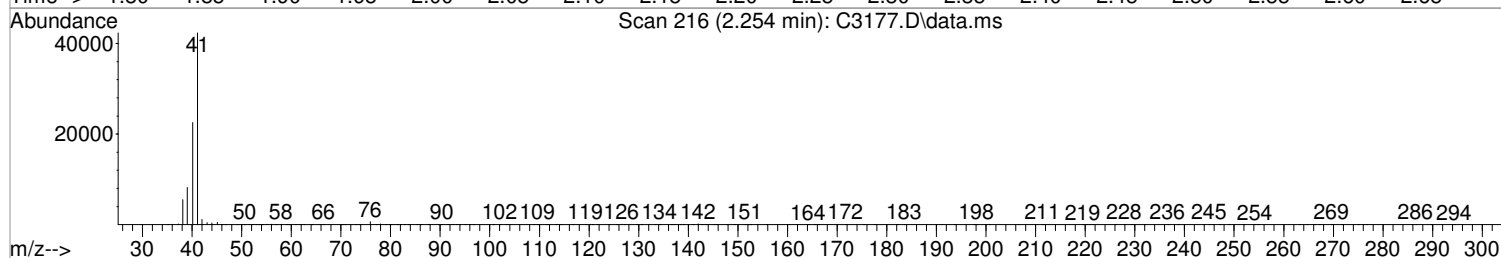
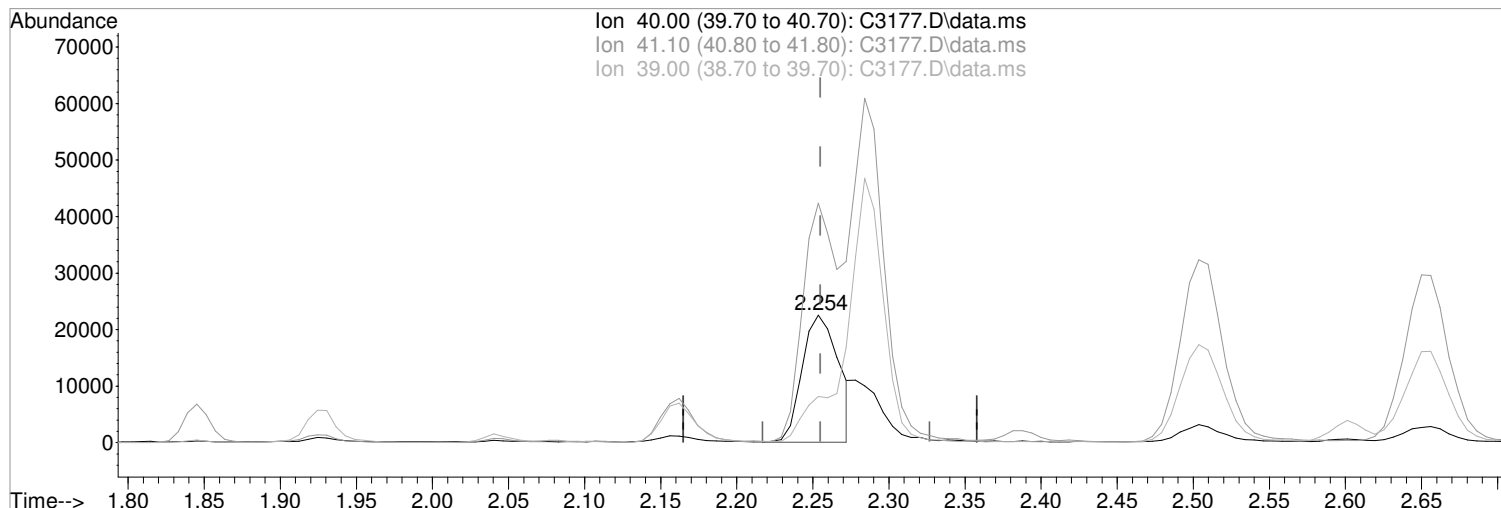
Quantitation Report (Qedit)

1st *FJ* 11/26/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3177.D
Acq On : 21 Nov 2017 10:27 am
Operator : F. NAEGLER
Sample : CCV
Misc :
ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 10:42:53 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3177.D\data.ms

(19) Acetonitrile

2.254min (-0.001) 223.96 ug/L m

response 37527

Ion	Exp%	Act%
40.00	100	100
41.10	187.10	187.60
39.00	38.40	36.29
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

11/21/17

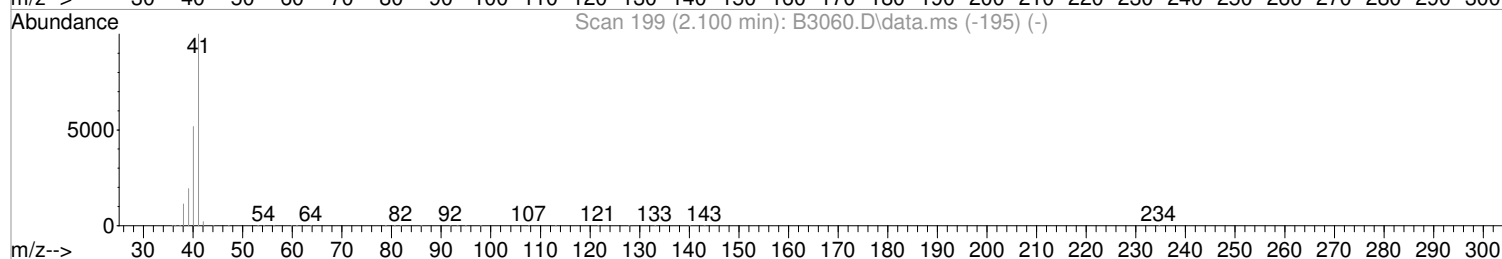
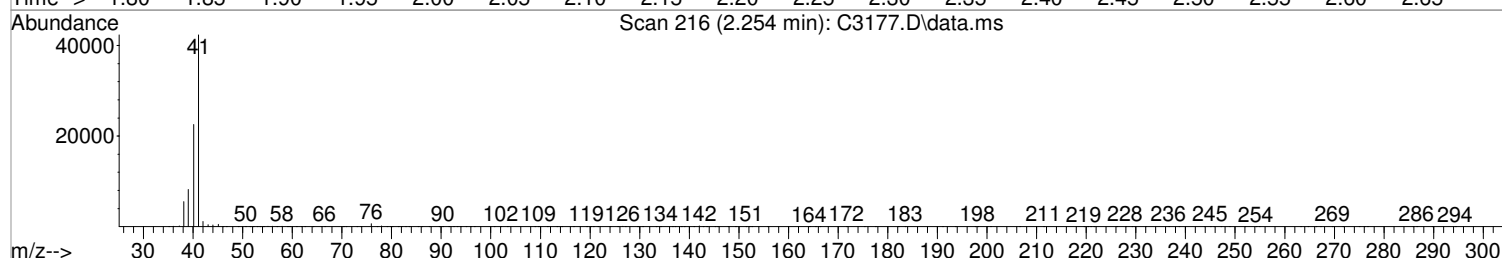
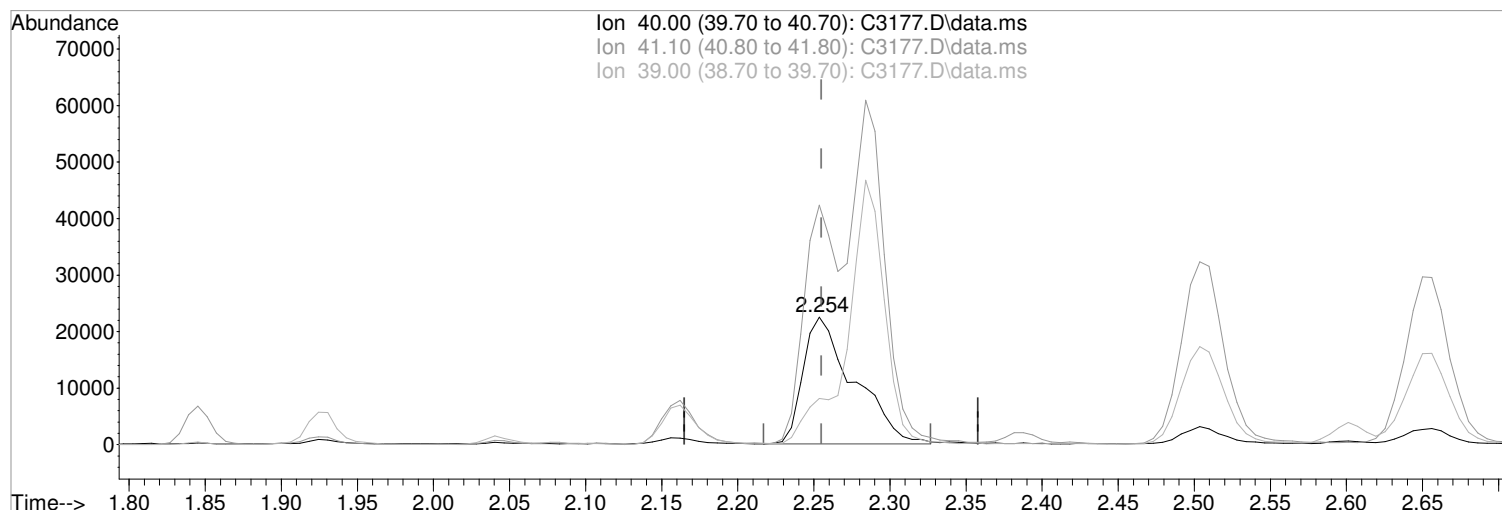
Quantitation Report (Qedit)

1st *FJ* 11/26/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3177.D
Acq On : 21 Nov 2017 10:27 am
Operator : F. NAEGLER
Sample : CCV
Misc :
ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 10:42:53 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C3177.D\data.ms

(19) Acetonitrile

Manual Integration:

2.254min (-0.001) 311.44 ug/L

Before

response 52186

Ion	Exp%	Act%
40.00	100	100
41.10	187.10	187.60
39.00	38.40	36.29
0.00	0.00	0.00

11/21/17

Evaluate Continuing Calibration Report

1st *FJ* 11/26/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3177.D
 Acq On : 21 Nov 2017 10:27 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 10:43:19 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 i	Pentafluorobenzene	50.000	50.000	0.0	104	0.00
2 P	Dichlorodifluoromethane	50.000	45.118	9.8	85	0.00
3 P	Chloromethane	50.000	44.852	10.3	83	0.00
4 P	Vinyl Chloride	50.000	41.670	16.7	75	0.00
5 P	Bromomethane	50.000	48.917	2.2	92	0.00
6 P	Chloroethane	50.000	41.938	16.1	87	0.00
7	Freon 21	50.000	44.594	10.8	87	0.00
8 P	Trichlorofluoromethane	50.000	38.714	22.6#	71	0.00
9	Diethyl Ether	50.000	46.526	6.9	92	0.00
10	Freon 123a	50.000	50.814	-1.6	101	0.00
11	Freon 123	50.000	51.813	-3.6	102	0.00
12	Acrolein	250.000	240.163	3.9	91	0.00
13	1,1-Dicethene	50.000	45.063	9.9	86	0.00
14 P	Freon 113	50.000	42.721	14.6	80	0.00
15 P	Acetone	50.000	41.624	16.8	91	0.00
16	2-Propanol	1000.000	890.288	11.0	90	0.00
17	Iodomethane	50.000	61.677	-23.4#	121	0.00
18 P	Carbon Disulfide	50.000	48.174	3.7	92	0.00
19	Acetonitrile	250.000	223.959	10.4	80	0.00
20	Allyl Chloride	50.000	40.346	19.3	84	0.00
21 P	Methyl Acetate	50.000	40.192	19.6	86	0.00
22 P	Methylene Chloride	50.000	48.150	3.7	98	0.00
23	TBA	1000.000	813.056	18.7	85	-0.01
24	Acrylonitrile	250.000	229.890	8.0	91	0.00
25 P	Methyl-t-Butyl Ether	50.000	45.229	9.5	88	0.00
26 P	trans-1,2-Dichloroethene	50.000	46.865	6.3	88	0.00
27 P	1,1-Dicethane	50.000	44.435	11.1	84	0.00
28	Vinyl Acetate	50.000	57.860	-15.7	109	0.00
29	DIPE	50.000	44.254	11.5	86	0.00
30	2-Chloro-1,3-Butadiene	50.000	50.904	-1.8	100	0.00
31	ETBE	50.000	42.460	15.1	86	0.00
32	2,2-Dichloropropane	50.000	46.082	7.8	84	0.00
33 P	cis-1,2-Dichloroethene	50.000	48.240	3.5	94	0.00
34 P	2-Butanone	50.000	41.932	16.1	87	-0.01
35	Propionitrile	250.000	231.963	7.2	92	0.00
36	Bromochloromethane	50.000	49.835	0.3	101	0.00
37	Methacrylonitrile	50.000	46.471	7.1	95	0.00
38	Tetrahydrofuran	50.000	38.351	23.3#	81	0.00
39 P	Chloroform	50.000	46.740	6.5	91	0.00
40 P	1,1,1-Trichloroethane	50.000	44.247	11.5	81	0.00
41	TAME	50.000	42.511	15.0	85	-0.01
42 i	1,4-Difluorobenzene	50.000	50.000	0.0	106	0.00
43 P	Cyclohexane	50.000	46.847	6.3	97	0.00
44 s	surr4,Dibrflmethane	50.000	50.099	-0.2	105	0.00
45 P	Carbontetrachloride	50.000	43.835	12.3	83	0.00
46	1,1-Dichloropropene	50.000	41.471	17.1	81	0.00
47 s	surr1,1,2-dichloroethane-d4	50.000	47.715	4.6	102	0.00
48 P	Benzene	50.000	45.187	9.6	88	0.00
49 P	1,2-Dichloroethane	50.000	46.881	6.2	96	0.00
50	Iso-Butyl Alcohol	1000.000	887.250	11.3	88	0.00
51	n-Heptane	50.000	38.181	23.6#	71	0.00 NT

Evaluate Continuing Calibration Report

1st *FJ* 11/26/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3177.D
 Acq On : 21 Nov 2017 10:27 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 10:43:19 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	1-Butanol	2500.000	2303.864	7.8	90	-0.01
53 P	Trichloroethene	50.000	40.553	18.9	85	0.00
54 P	Methylcyclohexane	50.000	51.763	-3.5	105	0.00
55 P	1,2-Dichloropropane	50.000	45.321	9.4	91	0.00
56	Dibromomethane	50.000	49.250	1.5	98	0.00
57	1,4-Dioxane	1000.000	995.188	0.5	101	-0.01
58	Methyl Methacrylate	50.000	44.115	11.8	92	0.00
59 P	Bromodichloromethane	50.000	49.333	1.3	93	0.00
60	2-Nitropropane	100.000	108.012	-8.0	105	0.00
61	2-Chloroethylvinyl Ether	50.000	30.344	39.3#	62	0.00
62 P	cis-1,3-Dichloropropene	50.000	49.458	1.1	95	0.00
63 P	4-Methyl-2-pentanone	50.000	44.337	11.3	87	0.00
64 s	SURR3, Toluene-d8	50.000	49.547	0.9	105	0.00
65 P	Toluene	50.000	45.080	9.8	86	0.00
66 P	trans-1,3-Dichloropropene	50.000	49.458	1.1	95	0.00
67	Ethyl Methacrylate	50.000	47.382	5.2	93	0.00
68 P	1,1,2-Trichloroethane	50.000	49.569	0.9	100	0.00
69 s	SURR2, BFB	50.000	53.890	-7.8	116	0.00
70 i	d5-Chlorobenzene	50.000	50.000	0.0	110	0.00
71 P	Tetrachloroethene	50.000	41.446	17.1	86	0.00
72 P	2-Hexanone	50.000	41.453	17.1	88	0.00
73	1,3-Dichloropropane	50.000	45.718	8.6	97	0.00
74 P	Dibromochloromethane	50.000	49.275	1.5	100	0.00
75	N-Butyl Acetate	50.000	41.431	17.1	86	0.00
76 P	1,2-Dibromoethane	50.000	51.543	-3.1	106	0.00
77	3-Chlorobenzotrifluoride	50.000	50.923	-1.8	106	0.00
78 P	Chlorobenzene	50.000	43.222	13.6	92	0.00
79	4-Chlorobenzotrifluoride	50.000	51.250	-2.5	106	0.00
80	1,1,1,2-Tetrachloroethane	50.000	47.597	4.8	96	0.00
81 P	Ethylbenzene	50.000	42.708	14.6	86	0.00
82 P	(m+p)Xylene	100.000	84.722	15.3	84	0.00
83 P	o-Xylene	50.000	43.352	13.3	88	0.00
84 P	Styrene	50.000	46.415	7.2	92	0.00
85 P	Bromoform	50.000	49.842	0.3	103	0.00
86	2-Chlorobenzotrifluoride	50.000	52.051	-4.1	110	0.00
87 P	Isopropylbenzene	50.000	41.304	17.4	81	0.00
88	Cyclohexanone	1000.000	816.560	18.3	86	0.00
89	trans-1,4-Dichloro-2-Butene	50.000	47.900	4.2	100	-0.01
90 i	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	116	0.00
91 P	1,1,2,2-Tetrachloroethane	50.000	48.270	3.5	102	0.00
92	Bromobenzene	50.000	44.468	11.1	99	0.00
93	1,2,3-Trichloropropane	50.000	42.850	14.3	100	0.00
94	n-Propylbenzene	50.000	38.986	22.0#	82	0.00
95	2-Chlorotoluene	50.000	40.413	19.2	87	0.00
96	3-Chlorotoluene	50.000	46.297	7.4	100	0.00
97	4-Chlorotoluene	50.000	40.647	18.7	91	0.00
98	1,3,5-Trimethylbenzene	50.000	39.885	20.2#	85	0.00
99	tert-Butylbenzene	50.000	37.500	25.0#	82	0.00
100	1,2,4-Trimethylbenzene	50.000	41.289	17.4	86	0.00
101	3,4-Dichlorobenzotrifluorid	50.000	51.061	-2.1	115	0.00

Evaluate Continuing Calibration Report

 1st *FJ* 11/26/17
 2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3177.D
 Acq On : 21 Nov 2017 10:27 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 10:43:19 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
102	sec-Butylbenzene	50.000	38.000	24.0#	78	0.00
103	p-Isopropyltoluene	50.000	39.267	21.5#	82	0.00
104 P	1,3-Dclbenz	50.000	42.996	14.0	96	0.00
105 P	1,4-Dclbenz	50.000	43.337	13.3	98	0.00
106	2,4-Dichlorobenzotrifluorid	50.000	52.019	-4.0	115	0.00
107	2,5-Dichlorobenzotrifluorid	50.000	50.924	-1.8	114	0.00
108	n-Butylbenzene	50.000	38.899	22.2#	79	0.00
109 P	1,2-Dclbenz	50.000	43.481	13.0	98	0.00
110 P	1,2-Dibromo-3-chloropropane	50.000	44.441	11.1	101	0.00
111	Trielution Dichlorotoluene	150.000	143.626	4.2	103	0.00
112	1,3,5-Trichlorobenzene	50.000	47.204	5.6	107	0.00
113	Coelution Dichlorotoluene	100.000	94.166	5.8	102	0.00
114 P	1,2,4-Tcbenzene	50.000	42.539	14.9	93	0.00
115	Hexachlorobt	50.000	39.251	21.5#	82	0.00
116	Naphthalen	50.000	46.264	7.5	95	0.00
117	1,2,3-Tclbenzene	50.000	42.126	15.7	92	0.00
118	2,4,5-Trichlorotoluene	50.000	45.371	9.3	95	0.00
119	2,3,6-Trichlorotoluene	50.000	44.785	10.4	94	0.00

(#)= Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3177.D
 Acq On : 21 Nov 2017 10:27 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 10:43:19 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.686	168	148998	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	226413	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	217414	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	126930	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	76173	50.10	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	100.20%	
47) surr1,1,2-dichloroetha...	5.119	65	98647	47.72	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	95.44%	
64) SURR3,Toluene-d8	7.948	98	296727	49.55	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	99.10%	
69) SURR2,BFB	10.728	95	123247	53.89	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	107.78%	
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	1.040	85	89049	45.12	ug/L	98
3) Chloromethane	1.150	50	93921	44.85	ug/L	99
4) Vinyl Chloride	1.211	62	79258	41.67	ug/L	99
5) Bromomethane	1.400	94	58105	48.92	ug/L	100
6) Chloroethane	1.473	64	50166	41.94	ug/L	94
7) Freon 21	1.601	67	148163	44.59	ug/L	99
8) Trichlorofluoromethane	1.644	101	91675	38.71	ug/L	99
9) Diethyl Ether	1.845	59	66660	46.53	ug/L	96
10) Freon 123a	1.845	67	93139	50.81	ug/L	97
11) Freon 123	1.888	83	104055	51.81	ug/L	99
12) Acrolein	1.924	56	101820	240.16	ug/L	100
13) 1,1-Dicethene	2.004	96	57692	45.06	ug/L	96
14) Freon 113	2.010	101	52860	42.72	ug/L	94
15) Acetone	2.040	43	42452	41.62	ug/L	97
16) 2-Propanol	2.162	45	133818	890.29	ug/L	87
17) Iodomethane	2.113	142	66650	61.68	ug/L	97
18) Carbon Disulfide	2.168	76	166777	48.17	ug/L	100
19) Acetonitrile	2.254	40	37527m	223.96	ug/L	
20) Allyl Chloride	2.290	76	26471	40.35	ug/L	# 91
21) Methyl Acetate	2.308	43	73252	40.19	ug/L	98
22) Methylene Chloride	2.388	84	73564	48.15	ug/L	99
23) TBA	2.504	59	199243	813.06	ug/L	83
24) Acrylonitrile	2.601	53	197982	229.89	ug/L	98
25) Methyl-t-Butyl Ether	2.656	73	213582	45.23	ug/L	99
26) trans-1,2-Dichloroethene	2.638	96	64554	46.87	ug/L	99
27) 1,1-Dicethane	3.064	63	121011	44.43	ug/L	98
28) Vinyl Acetate	3.144	86	17528	57.86	ug/L	100
29) DIPE	3.180	45	242397	44.25	ug/L	96
30) 2-Chloro-1,3-Butadiene	3.174	53	116629	50.90	ug/L	98
31) ETBE	3.637	59	200026	42.46	ug/L	98
32) 2,2-Dichloropropane	3.778	77	76802	46.08	ug/L	100
33) cis-1,2-Dichloroethene	3.784	96	78651	48.24	ug/L	100
34) 2-Butanone	3.820	43	56417	41.93	ug/L	97
35) Propionitrile	3.887	54	83204	231.96	ug/L	99
36) Bromochloromethane	4.119	130	51085	49.84	ug/L	97
37) Methacrylonitrile	4.119	67	40451	46.47	ug/L	93
38) Tetrahydrofuran	4.211	42	31757	38.35	ug/L	99
39) Chloroform	4.278	83	125498	46.74	ug/L	98
40) 1,1,1-Trichloroethane	4.546	97	91875	44.25	ug/L	96

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3177.D
 Acq On : 21 Nov 2017 10:27 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 10:43:19 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.509	73	186483	42.51	ug/L	96
43) Cyclohexane	4.637	41	82875	46.85	ug/L	87
45) Carbontetrachloride	4.838	117	71108	43.83	ug/L	97
46) 1,1-Dichloropropene	4.851	75	86062	41.47	ug/L	100
48) Benzene	5.216	78	265605	45.19	ug/L	96
49) 1,2-Dichloroethane	5.259	62	119514	46.88	ug/L	98
50) Iso-Butyl Alcohol	5.259	43	99927	887.25	ug/L	97
51) n-Heptane	5.802	43	73851	38.18	ug/L	95
52) 1-Butanol	6.375	56	149078	2303.86	ug/L	99
53) Trichloroethene	6.302	130	66211	40.55	ug/L	96
54) Methylcyclohexane	6.564	55	106032	51.76	ug/L	98
55) 1,2-Dicloropropane	6.606	63	76799	45.32	ug/L	97
56) Dibromomethane	6.765	93	53349	49.25	ug/L	93
57) 1,4-Dioxane	6.844	88	30512	995.19	ug/L	87
58) Methyl Methacrylate	6.887	69	63007	44.11	ug/L	93
59) Bromodichloromethane	7.027	83	94545	49.33	ug/L	99
60) 2-Nitropropane	7.338	41	43377	108.01	ug/L	97
61) 2-Chloroethylvinyl Ether	7.490	63	14560	30.34	ug/L	97
62) cis-1,3-Dichloropropene	8.332	75	101771	49.46	ug/L	97
63) 4-Methyl-2-pentanone	7.868	43	98325	44.34	ug/L	97
65) Toluene	8.027	91	284959	45.08	ug/L	98
66) trans-1,3-Dichloropropene	8.332	75	101771	49.46	ug/L	97
67) Ethyl Methacrylate	8.502	69	108896	47.38	ug/L	93
68) 1,1,2-Trichloroethane	8.527	97	75573	49.57	ug/L #	86
71) Tetrachloroethene	8.673	164	52665	41.45	ug/L	99
72) 2-Hexanone	8.868	43	76369	41.45	ug/L	94
73) 1,3-Dichloropropane	8.710	76	132586	45.72	ug/L	97
74) Dibromochloromethane	8.966	129	75775	49.27	ug/L	97
75) N-Butyl Acetate	9.057	43	147621	41.43	ug/L	98
76) 1,2-Dibromoethane	9.057	107	80101	51.54	ug/L	98
77) 3-Chlorobenzotrifluoride	9.655	180	116117	50.92	ug/L	93
78) Chlorobenzene	9.612	112	190139	43.22	ug/L	99
79) 4-Chlorobenzotrifluoride	9.716	180	105310	51.25	ug/L	97
80) 1,1,1,2-Tetrachloroethane	9.709	131	65940	47.60	ug/L	96
81) Ethylbenzene	9.752	106	96044	42.71	ug/L	96
82) (m+p)Xylene	9.874	106	235746	84.72	ug/L	100
83) o-Xylene	10.252	106	120372	43.35	ug/L	99
84) Styrene	10.264	104	214716	46.42	ug/L	95
85) Bromoform	10.411	173	51267	49.84	ug/L	98
86) 2-Chlorobenzotrifluoride	10.514	180	117724	52.05	ug/L	93
87) Isopropylbenzene	10.612	105	294136	41.30	ug/L	99
88) Cyclohexanone	10.661	55	350931	816.56	ug/L	94
89) trans-1,4-Dichloro-2-B...	10.935	53	27352	47.90	ug/L	80
91) 1,1,2,2-Tetrachloroethane	10.886	83	118978	48.27	ug/L	95
92) Bromobenzene	10.849	156	89904	44.47	ug/L	96
93) 1,2,3-Trichloropropane	10.904	110	37160	42.85	ug/L	97
94) n-Propylbenzene	10.984	91	349603	38.99	ug/L	98
95) 2-Chlorotoluene	11.038	91	218812	40.41	ug/L	98
96) 3-Chlorotoluene	11.093	91	262307	46.30	ug/L	98
97) 4-Chlorotoluene	11.136	91	267216	40.65	ug/L	95
98) 1,3,5-Trimethylbenzene	11.142	105	252835	39.88	ug/L	99
99) tert-Butylbenzene	11.423	119	207478	37.50	ug/L	100
100) 1,2,4-Trimethylbenzene	11.465	105	259205	41.29	ug/L	99
101) 3,4-Dichlorobenzotrifl...	11.532	214	100538	51.06	ug/L	94
102) sec-Butylbenzene	11.612	105	305422	38.00	ug/L	99
103) p-Isopropyltoluene	11.740	119	262974	39.27	ug/L	99

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
 Data File : C3177.D
 Acq On : 21 Nov 2017 10:27 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 21 10:43:19 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	163321	43.00	ug/L	98
105) 1,4-Dclbenz	11.758	146	170615	43.34	ug/L	99
106) 2,4-Dichlorobenzotrifl...	11.831	214	91094	52.02	ug/L	97
107) 2,5-Dichlorobenzotrifl...	11.874	214	102280	50.92	ug/L	92
108) n-Butylbenzene	12.081	91	241955	38.90	ug/L	99
109) 1,2-Dclbenz	12.069	146	165824	43.48	ug/L	97
110) 1,2-Dibromo-3-chloropr...	12.703	157	23215	44.44	ug/L	89
111) Trielution Dichlorotol...	12.831	125	456611	143.63	ug/L	97
112) 1,3,5-Trichlorobenzene	12.880	180	133755	47.20	ug/L	99
113) Coelution Dichlorotoluene	13.154	125	330393	94.17	ug/L	98
114) 1,2,4-Tcbenzene	13.367	180	113924	42.54	ug/L	96
115) Hexachlorobt	13.514	225	43916	39.25	ug/L	96
116) Naphthalen	13.550	128	345157	46.26	ug/L	98
117) 1,2,3-Tclbenzene	13.745	180	111123	42.13	ug/L	96
118) 2,4,5-Trichlorotoluene	14.337	159	80387	45.37	ug/L	95
119) 2,3,6-Trichlorotoluene	14.422	159	73711	44.79	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

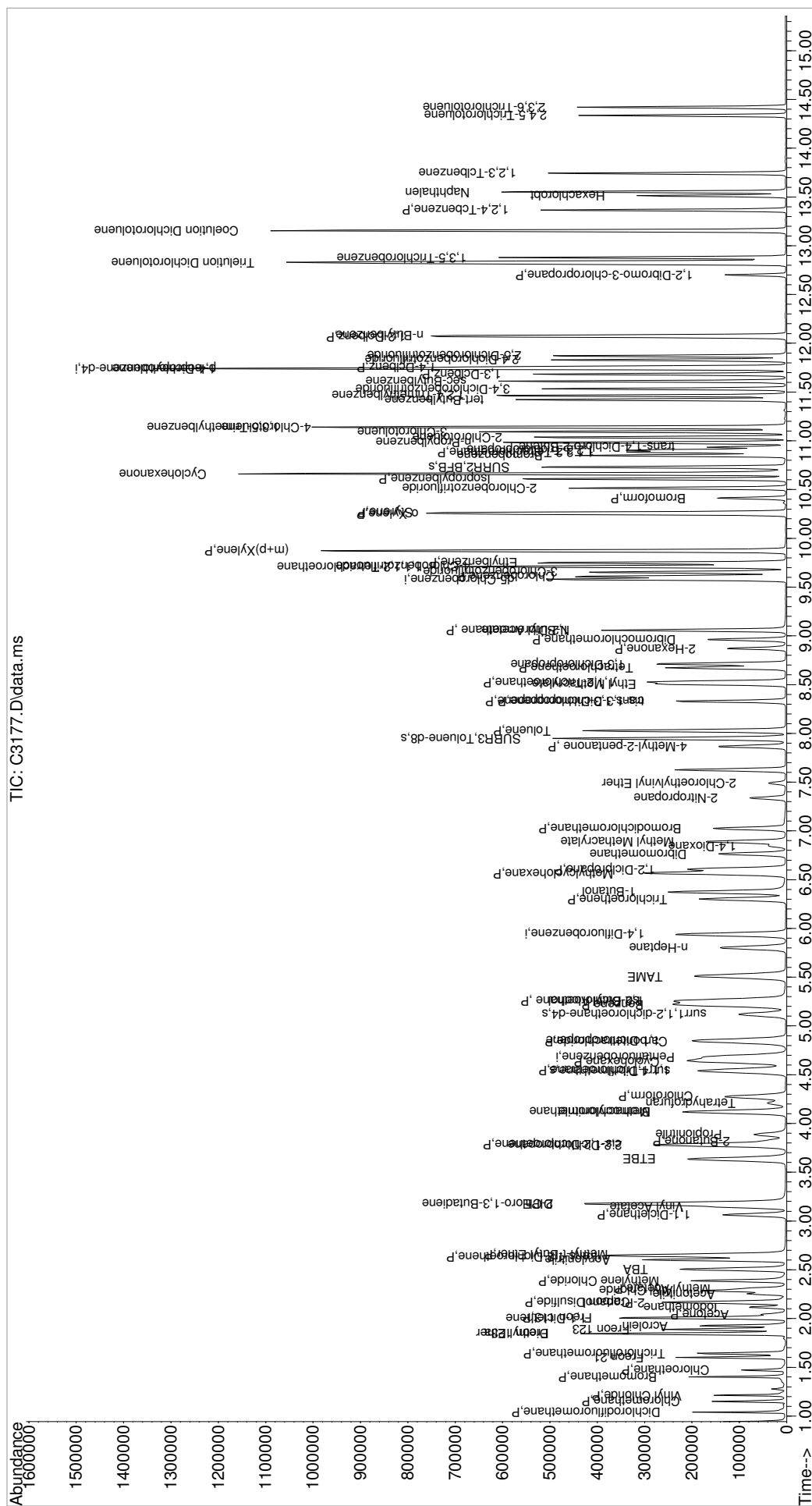
Quantitation Report (QT Reviewed)

Data Path	:	I:\ACQUDATA\MSVOA14\Data\112117\
Data File	:	C3177.D
Acq On	:	21 Nov 2017 10:27 am
Operator	:	F. NAEGLER
Sample	:	CCV
Misc	:	
ALS Vial	:	2 Sample Multiplier: 1

Inst : MSV0A14

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 21 10:43:19 2017
Quant Method : I:\ACQDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



Evaluate Continuing Calibration Report

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3239.D
 Acq On : 22 Nov 2017 11:24 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 12:37:07 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
1 i	Pentafluorobenzene	50.000	50.000	0.0	105	0.00	
2 P	Dichlorodifluoromethane	50.000	48.078	3.8	91	0.00	
3 P	Chloromethane	50.000	45.320	9.4	85	0.00	
4 P	Vinyl Chloride	50.000	44.275	11.5	80	0.00	
5 P	Bromomethane	50.000	53.379	-6.8	101	0.00	
6 P	Chloroethane	50.000	43.894	12.2	92	0.00	
7	Freon 21	50.000	40.904	18.2	81	0.00	
8 P	Trichlorofluoromethane	50.000	44.162	11.7	82	0.00	
9	Diethyl Ether	50.000	44.592	10.8	89	0.00	
10	Freon 123a	50.000	45.968	8.1	92	0.00	
11	Freon 123	50.000	46.961	6.1	93	0.00	
12	Acrolein	250.000	222.086	11.2	85	0.00	
13	1,1-Dicethene	50.000	48.771	2.5	94	0.00	
14 P	Freon 113	50.000	50.084	-0.2	94	0.00	
15 P	Acetone	50.000	38.783	22.4#	85	0.00	(1)
16	2-Propanol	1000.000	797.483	20.3#	80	0.00	NT
17	Iodomethane	50.000	61.050	-22.1#	121	0.00	NT
18 P	Carbon Disulfide	50.000	43.247	13.5	83	0.00	
19	Acetonitrile	250.000	224.207	10.3	81	0.00	
20	Allyl Chloride	50.000	42.583	14.8	89	0.00	
21 P	Methyl Acetate	50.000	36.534	26.9#	78	0.00	NT
22 P	Methylene Chloride	50.000	48.091	3.8	98	0.00	
23	TBA	1000.000	770.476	23.0#	81	-0.01	NT
24	Acrylonitrile	250.000	217.089	13.2	87	0.00	
25 P	Methyl-t-Butyl Ether	50.000	44.682	10.6	87	0.00	
26 P	trans-1,2-Dichloroethene	50.000	49.841	0.3	95	0.00	
27 P	1,1-Dicethane	50.000	46.104	7.8	88	0.00	
28	Vinyl Acetate	50.000	51.994	-4.0	97	0.00	
29	DIPE	50.000	37.432	25.1#	74	0.00	NT
30	2-Chloro-1,3-Butadiene	50.000	46.419	7.2	92	0.00	
31	ETBE	50.000	36.717	26.6#	75	-0.01	NT
32	2,2-Dichloropropane	50.000	50.825	-1.7	93	0.00	
33 P	cis-1,2-Dichloroethene	50.000	49.034	1.9	96	0.00	
34 P	2-Butanone	50.000	38.497	23.0#	81	-0.01	NT
35	Propionitrile	250.000	222.049	11.2	89	0.00	
36	Bromochloromethane	50.000	49.004	2.0	100	0.00	
37	Methacrylonitrile	50.000	42.780	14.4	89	0.00	
38	Tetrahydrofuran	50.000	36.166	27.7#	77	0.00	NT
39 P	Chloroform	50.000	48.538	2.9	95	0.00	
40 P	1,1,1-Trichloroethane	50.000	50.120	-0.2	92	0.00	
41	TAME	50.000	36.791	26.4#	74	-0.01	NT
42 i	1,4-Difluorobenzene	50.000	50.000	0.0	104	0.00	
43 P	Cyclohexane	50.000	44.063	11.9	90	0.00	
44 s	surr4,Dibrflmethane	50.000	50.472	-0.9	104	0.00	
45 P	Carbontetrachloride	50.000	51.861	-3.7	97	0.00	
46	1,1-Dichloropropene	50.000	48.571	2.9	94	0.00	
47 s	surr1,1,2-dichloroethane-d4	50.000	49.627	0.7	104	0.00	
48 P	Benzene	50.000	49.109	1.8	94	0.00	
49 P	1,2-Dichloroethane	50.000	47.494	5.0	96	0.00	
50	Iso-Butyl Alcohol	1000.000	848.911	15.1	82	0.00	
51	n-Heptane	50.000	50.259	-0.5	91	0.00	

Evaluate Continuing Calibration Report

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3239.D
 Acq On : 22 Nov 2017 11:24 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 12:37:07 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	1-Butanol	2500.000	2098.175	16.1	80	-0.01
53 P	Trichloroethene	50.000	46.204	7.6	95	0.00
54 P	Methylcyclohexane	50.000	48.442	3.1	96	0.00
55 P	1,2-Dichloropropane	50.000	46.821	6.4	93	0.00
56	Dibromomethane	50.000	49.035	1.9	96	0.00
57	1,4-Dioxane	1000.000	954.684	4.5	95	-0.01
58	Methyl Methacrylate	50.000	43.322	13.4	89	0.00
59 P	Bromodichloromethane	50.000	50.242	-0.5	93	0.00
60	2-Nitropropane	100.000	101.596	-1.6	96	0.00
61	2-Chloroethylvinyl Ether	50.000	27.777	44.4#	56	0.00 NT
62 P	cis-1,3-Dichloropropene	50.000	49.902	0.2	95	0.00
63 P	4-Methyl-2-pentanone	50.000	40.600	18.8	78	0.00
64 s	SURR3, Toluene-d8	50.000	49.655	0.7	104	0.00
65 P	Toluene	50.000	50.800	-1.6	96	0.00
66 P	trans-1,3-Dichloropropene	50.000	49.902	0.2	95	0.00
67	Ethyl Methacrylate	50.000	46.612	6.8	90	0.00
68 P	1,1,2-Trichloroethane	50.000	50.342	-0.7	100	0.00
69 s	SURR2, BFB	50.000	52.955	-5.9	112	0.00
70 i	d5-Chlorobenzene	50.000	50.000	0.0	103	0.00
71 P	Tetrachloroethene	50.000	52.297	-4.6	102	0.00
72 P	2-Hexanone	50.000	39.615	20.8#	79	0.00 NT
73	1,3-Dichloropropane	50.000	48.015	4.0	96	0.00
74 P	Dibromochloromethane	50.000	51.136	-2.3	98	0.00
75	N-Butyl Acetate	50.000	40.003	20.0	78	0.00
76 P	1,2-Dibromoethane	50.000	54.263	-8.5	105	0.00
77	3-Chlorobenzotrifluoride	50.000	44.680	10.6	87	0.00
78 P	Chlorobenzene	50.000	50.434	-0.9	101	0.00
79	4-Chlorobenzotrifluoride	50.000	44.907	10.2	87	0.00
80	1,1,1,2-Tetrachloroethane	50.000	53.470	-6.9	102	0.00
81 P	Ethylbenzene	50.000	51.705	-3.4	97	0.00
82 P	(m+p)Xylene	100.000	106.081	-6.1	99	0.00
83 P	o-Xylene	50.000	52.491	-5.0	100	0.00
84 P	Styrene	50.000	54.237	-8.5	101	0.00
85 P	Bromoform	50.000	52.002	-4.0	102	0.00
86	2-Chlorobenzotrifluoride	50.000	45.511	9.0	90	0.00
87 P	Isopropylbenzene	50.000	53.781	-7.6	99	0.00
88	Cyclohexanone	1000.000	898.032	10.2	89	0.00
89	trans-1,4-Dichloro-2-Butene	50.000	49.030	1.9	97	-0.01
90 i	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	110	0.00
91 P	1,1,2,2-Tetrachloroethane	50.000	51.181	-2.4	102	0.00
92	Bromobenzene	50.000	50.994	-2.0	107	0.00
93	1,2,3-Trichloropropane	50.000	45.805	8.4	101	0.00
94	n-Propylbenzene	50.000	51.253	-2.5	101	0.00
95	2-Chlorotoluene	50.000	49.803	0.4	101	0.00
96	3-Chlorotoluene	50.000	41.104	17.8	84	0.00
97	4-Chlorotoluene	50.000	49.952	0.1	105	0.00
98	1,3,5-Trimethylbenzene	50.000	51.820	-3.6	104	0.00
99	tert-Butylbenzene	50.000	51.155	-2.3	105	0.00
100	1,2,4-Trimethylbenzene	50.000	52.439	-4.9	103	0.00
101	3,4-Dichlorobenzotrifluorid	50.000	46.591	6.8	99	0.00

Evaluate Continuing Calibration Report

1st *FJ* 11/27/17
2nd *RL* 11/27/17

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3239.D
 Acq On : 22 Nov 2017 11:24 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 12:37:07 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
102	sec-Butylbenzene	50.000	52.259	-4.5	102	0.00
103	p-Isopropyltoluene	50.000	54.046	-8.1	106	0.00
104 P	1,3-Dclbenz	50.000	51.929	-3.9	110	0.00
105 P	1,4-Dclbenz	50.000	51.816	-3.6	110	0.00
106	2,4-Dichlorobenzotrifluorid	50.000	48.236	3.5	101	0.00
107	2,5-Dichlorobenzotrifluorid	50.000	46.963	6.1	99	0.00
108	n-Butylbenzene	50.000	54.481	-9.0	104	0.00
109 P	1,2-Dclbenz	50.000	51.354	-2.7	109	0.00
110 P	1,2-Dibromo-3-chloropropane	50.000	47.414	5.2	102	0.00
111	Trielution Dichlorotoluene	150.000	131.088	12.6	89	0.00
112	1,3,5-Trichlorobenzene	50.000	43.148	13.7	92	0.00
113	Coelution Dichlorotoluene	100.000	86.866	13.1	89	0.00
114 P	1,2,4-Tcbenzene	50.000	51.944	-3.9	107	0.00
115	Hexachlorobt	50.000	54.646	-9.3	107	0.00
116	Naphthalen	50.000	50.701	-1.4	98	0.00
117	1,2,3-Tclbenzene	50.000	50.473	-0.9	104	0.00
118	2,4,5-Trichlorotoluene	50.000	42.576	14.8	84	0.00
119	2,3,6-Trichlorotoluene	50.000	41.936	16.1	83	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3239.D
 Acq On : 22 Nov 2017 11:24 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 12:37:07 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	4.686	168	150197	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	222521	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	204093	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	119897	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.534	113	75421	50.47	ug/L	0.00
Spiked Amount 50.000	Range 89	- 119	Recovery	=	100.94%	
47) surr1,1,2-dichloroetha...	5.119	65	100835	49.63	ug/L	0.00
Spiked Amount 50.000	Range 73	- 125	Recovery	=	99.26%	
64) SURR3,Toluene-d8	7.948	98	292259	49.65	ug/L	0.00
Spiked Amount 50.000	Range 87	- 121	Recovery	=	99.30%	
69) SURR2,BFB	10.728	95	119026	52.95	ug/L	0.00
Spiked Amount 50.000	Range 85	- 122	Recovery	=	105.90%	
Target Compounds						Qvalue

2) Dichlorodifluoromethane	1.040	85	95720	48.08	ug/L	97
3) Chloromethane	1.150	50	95666	45.32	ug/L	98
4) Vinyl Chloride	1.211	62	84889	44.27	ug/L	99
5) Bromomethane	1.400	94	63916	53.38	ug/L	100
6) Chloroethane	1.473	64	52928	43.89	ug/L	93
7) Freon 21	1.601	67	136998	40.90	ug/L	100
8) Trichlorofluoromethane	1.644	101	105416	44.16	ug/L	100
9) Diethyl Ether	1.845	59	64404	44.59	ug/L	97
10) Freon 123a	1.845	67	84934	45.97	ug/L	96
11) Freon 123	1.888	83	95070	46.96	ug/L	98
12) Acrolein	1.924	56	94914	222.09	ug/L	99
13) 1,1-Dicethene	2.004	96	62941	48.77	ug/L	96
14) Freon 113	2.010	101	62469	50.08	ug/L	90
15) Acetone	2.040	43	39873	38.78	ug/L	99
16) 2-Propanol	2.162	45	119435	797.48	ug/L	88
17) Iodomethane	2.120	142	66391	61.05	ug/L	98
18) Carbon Disulfide	2.174	76	150922	43.25	ug/L	100
19) Acetonitrile	2.254	40	37871	224.21	ug/L	98
20) Allyl Chloride	2.290	76	28187	42.58	ug/L #	88
21) Methyl Acetate	2.309	43	67120	36.53	ug/L	99
22) Methylene Chloride	2.388	84	74065	48.09	ug/L	99
23) TBA	2.504	59	190328	770.48	ug/L	82
24) Acrylonitrile	2.601	53	188463	217.09	ug/L	97
25) Methyl-t-Butyl Ether	2.656	73	212696	44.68	ug/L	99
26) trans-1,2-Dichloroethene	2.638	96	69206	49.84	ug/L	98
27) 1,1-Dicethane	3.064	63	126568	46.10	ug/L	99
28) Vinyl Acetate	3.144	86	15685	51.99	ug/L #	91
29) DIPE	3.180	45	206683	37.43	ug/L	96
30) 2-Chloro-1,3-Butadiene	3.174	53	107209	46.42	ug/L	95
31) ETBE	3.631	59	174365	36.72	ug/L	97
32) 2,2-Dichloropropane	3.778	77	85388	50.83	ug/L	97
33) cis-1,2-Dichloroethene	3.784	96	80590	49.03	ug/L	98
34) 2-Butanone	3.820	43	52212	38.50	ug/L	97
35) Propionitrile	3.887	54	80289	222.05	ug/L	99
36) Bromochloromethane	4.119	130	50637	49.00	ug/L	99
37) Methacrylonitrile	4.119	67	37538	42.78	ug/L	95
38) Tetrahydrofuran	4.211	42	30189	36.17	ug/L	93
39) Chloroform	4.278	83	131376	48.54	ug/L	99
40) 1,1,1-Trichloroethane	4.552	97	104909	50.12	ug/L	99

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3239.D
 Acq On : 22 Nov 2017 11:24 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 12:37:07 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.509	73	162689	36.79	ug/L	96
43) Cyclohexane	4.637	41	76610	44.06	ug/L	86
45) Carbontetrachloride	4.838	117	83431	51.86	ug/L	99
46) 1,1-Dichloropropene	4.851	75	99063	48.57	ug/L	99
48) Benzene	5.216	78	283695	49.11	ug/L	98
49) 1,2-Dichloroethane	5.259	62	118995	47.49	ug/L	97
50) Iso-Butyl Alcohol	5.259	43	93559	848.91	ug/L	96
51) n-Heptane	5.808	43	95540	50.26	ug/L	95
52) 1-Butanol	6.375	56	131652	2098.18	ug/L	98
53) Trichloroethene	6.302	130	74140	46.20	ug/L	96
54) Methylcyclohexane	6.570	55	97523	48.44	ug/L	97
55) 1,2-Dicloropropane	6.613	63	77977	46.82	ug/L	99
56) Dibromomethane	6.765	93	52203	49.03	ug/L	100
57) 1,4-Dioxane	6.844	88	28767	954.68	ug/L	84
58) Methyl Methacrylate	6.893	69	60776	43.32	ug/L	96
59) Bromodichloromethane	7.027	83	94631	50.24	ug/L	98
60) 2-Nitropropane	7.338	41	39559	101.60	ug/L	94
61) 2-Chloroethylvinyl Ether	7.490	63	13099	27.78	ug/L	98
62) cis-1,3-Dichloropropene	8.332	75	101026	49.90	ug/L	97
63) 4-Methyl-2-pentanone	7.868	43	88489	40.60	ug/L	99
65) Toluene	8.027	91	315595	50.80	ug/L	98
66) trans-1,3-Dichloropropene	8.332	75	101026	49.90	ug/L	98
67) Ethyl Methacrylate	8.502	69	105149	46.61	ug/L	97
68) 1,1,2-Trichloroethane	8.527	97	75431	50.34	ug/L #	87
71) Tetrachloroethene	8.673	164	62381	52.30	ug/L	99
72) 2-Hexanone	8.868	43	68511	39.62	ug/L	95
73) 1,3-Dichloropropane	8.716	76	130716	48.01	ug/L	98
74) Dibromochloromethane	8.966	129	74019	51.14	ug/L	99
75) N-Butyl Acetate	9.057	43	133800	40.00	ug/L	99
76) 1,2-Dibromoethane	9.057	107	79161	54.26	ug/L	98
77) 3-Chlorobenzotrifluoride	9.655	180	95638	44.68	ug/L	97
78) Chlorobenzene	9.612	112	208272	50.43	ug/L	99
79) 4-Chlorobenzotrifluoride	9.716	180	86623	44.91	ug/L	97
80) 1,1,1,2-Tetrachloroethane	9.710	131	69537	53.47	ug/L	96
81) Ethylbenzene	9.752	106	109153	51.71	ug/L	98
82) (m+p)Xylene	9.874	106	277091	106.08	ug/L	98
83) o-Xylene	10.252	106	136816	52.49	ug/L	99
84) Styrene	10.264	104	235524	54.24	ug/L	97
85) Bromoform	10.411	173	50441	52.00	ug/L	96
86) 2-Chlorobenzotrifluoride	10.514	180	96626	45.51	ug/L	93
87) Isopropylbenzene	10.606	105	359522	53.78	ug/L	99
88) Cyclohexanone	10.661	55	364665	898.03	ug/L	95
89) trans-1,4-Dichloro-2-B...	10.935	53	26282	49.03	ug/L	82
91) 1,1,2,2-Tetrachloroethane	10.880	83	119162	51.18	ug/L	97
92) Bromobenzene	10.850	156	97385	50.99	ug/L	93
93) 1,2,3-Trichloropropane	10.904	110	37521	45.80	ug/L	94
94) n-Propylbenzene	10.984	91	434134	51.25	ug/L	98
95) 2-Chlorotoluene	11.039	91	254717	49.80	ug/L	99
96) 3-Chlorotoluene	11.093	91	219981	41.10	ug/L	97
97) 4-Chlorotoluene	11.136	91	310194	49.95	ug/L	95
98) 1,3,5-Trimethylbenzene	11.142	105	310293	51.82	ug/L	98
99) tert-Butylbenzene	11.423	119	267348	51.16	ug/L	99
100) 1,2,4-Trimethylbenzene	11.465	105	310967	52.44	ug/L	99
101) 3,4-Dichlorobenzotrifl...	11.532	214	86654	46.59	ug/L	93
102) sec-Butylbenzene	11.612	105	396761	52.26	ug/L	98
103) p-Isopropyltoluene	11.740	119	341897	54.05	ug/L	99

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
 Data File : C3239.D
 Acq On : 22 Nov 2017 11:24 am
 Operator : F. NAEGLER
 Sample : CCV
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Nov 22 12:37:07 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	186323	51.93	ug/L	97
105) 1,4-Dclbenz	11.758	146	192692	51.82	ug/L	98
106) 2,4-Dichlorobenzotrifl...	11.831	214	79789	48.24	ug/L	97
107) 2,5-Dichlorobenzotrifl...	11.874	214	89098	46.96	ug/L	93
108) n-Butylbenzene	12.081	91	320100	54.48	ug/L	99
109) 1,2-Dclbenz	12.063	146	184999	51.35	ug/L	99
110) 1,2-Dibromo-3-chloropr...	12.703	157	23475	47.41	ug/L	90
111) Trielution Dichlorotol...	12.831	125	393659	131.09	ug/L	98
112) 1,3,5-Trichlorobenzene	12.880	180	115489	43.15	ug/L	99
113) Coelution Dichlorotoluene	13.154	125	287893	86.87	ug/L	97
114) 1,2,4-Tcbenzene	13.367	180	131404	51.94	ug/L	96
115) Hexachlorobt	13.514	225	57753	54.65	ug/L	95
116) Naphthalen	13.550	128	357299	50.70	ug/L	99
117) 1,2,3-Tclbenzene	13.745	180	125765	50.47	ug/L	99
118) 2,4,5-Trichlorotoluene	14.337	159	71256	42.58	ug/L	92
119) 2,3,6-Trichlorotoluene	14.422	159	65198	41.94	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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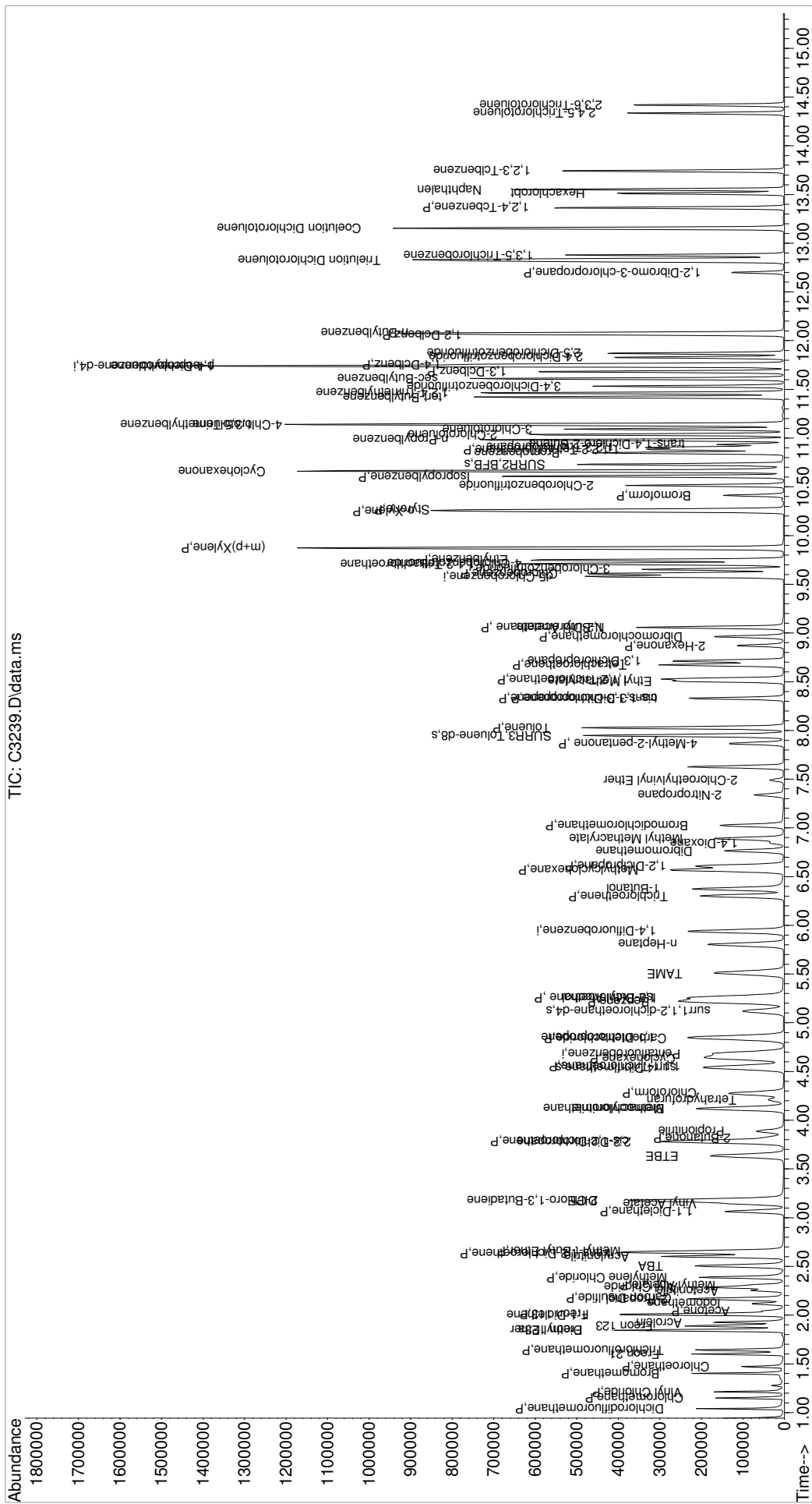
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Data File     : C3239.D
Acq On       : 22 Nov 2017 11:24 am
Operator      : F. NAEGLER
Sample        : CCV
Misc          :
ALS Vial      : 1 Sample Multiplier: 1

```

Inst : MSV0A14

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 22 12:37:07 2017
Quant Method : I:\ACQDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Oct 06 11:46:22 2017
Response via : Initial Calibration



Tune File : I:\ACQUDATA\msvoa12\Data\111717\P14056.D

Tune Time : 17 Nov 2017 10:09 am

Daily Calibration File : I:\ACQUDATA\msvoa12\Data\111717\P14057.D

271908 444260 418206

211298

File	Sample	Surrogate Recovery %				Internal Standard Responses		
P14057.D	CCV	104	103	99	97	271908	444260	418206

P14058.D	LCS	109	103	102	102	268230	435335	399943

P14059.D	VBLK	99	99	95	91	255745	438853	389253

P14060.D	VBLK	108	105	102	103	241982	395150	377434

P14061.D	R1710830-0	109	102	100	99	259376	428949	386742

P14062.D	R1710830-0	104	103	97	100	235043	388221	343457

P14063.D	R1710830-0	104	105	101	100	254289	414020	373790

P14064.D	R1710830-0	102	103	99	98	236246	395160	351047

P14065.D	R1710830-0	104	104	100	98	240238	392529	364409

P14066.D	R1710830-0	100	103	96	95	248482	408074	371521

P14067.D	R1710830-0	108	105	99	100	238685	384598	346156

P14068.D	R1710830-0	111	106	102	103	236250	379231	355794

P14069.D	R1710830-0	110	111	102	101	233738	386553	356581

P14070.D								

R1710830-0 104 102 99 97 228405 394889 362841
 183588

P14071.D

R1710830-0 103 105 99 99 243891 394868 354803
 185247

P14072.D

R1710830-0 100 100 97 98 232813 397413 359889
 185138

P14073.D

CBT-001|1. 102 102 99 104 231152 382246 345072
 174568

P14074.D

R1710788-0 104 101 98 95 230703 385421 351768
 174901

P14075.D

R1710788-0 110 105 100 102 236796 381502 359210
 182826

P14076.D

R1710788-0 105 104 99 94 228867 385294 343920
 178079

P14077.D

R1710788-0 106 105 100 99 237714 387726 348188
 182317

P14078.D

R1710788-0 110 108 99 99 228199 378464 349925
 182784

P14079.D

R1710788-0 105 105 100 98 230960 389891 363432
 181589

P14080.D

R1710788-0 105 104 99 103 233439 390252 347785
 182651

P14081.D

R1710830-0 103 105 100 98 237533 389750 353105
 180261

P14082.D

R1710830-0 109 101 98 94 233665 398846 356054
 188491

P14083.D

BLK 105 105 98 98 235344 394419 360542
 180336

(fails) - fails 12hr time check * - fails criteria

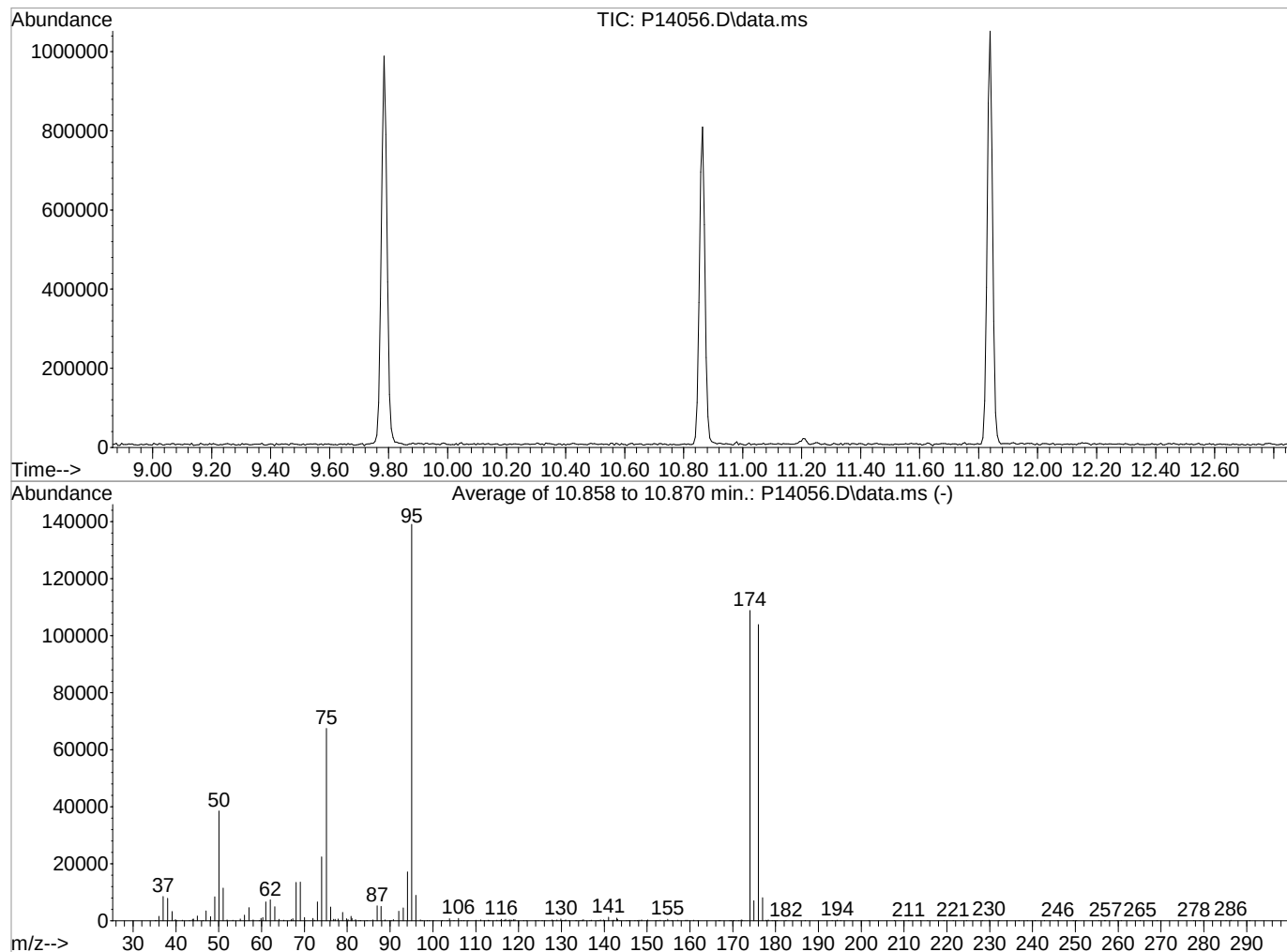
Created: Sun Nov 19 10:44:08 2017 MSVOA-12

Data Path : I:\ACQUDATA\msvoa12\Data\111717\
 Data File : P14056.D
 Acq On : 17 Nov 2017 10:09 am
 Operator : K.Ruest
 Sample : TUNE
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Inst : MSVOA-12

Integration File: INTP90.P

Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Title : MS#12 - 8260B WATERS 10mL Purge
 Last Update : Fri Sep 01 13:46:44 2017



AutoFind: Scans 1601, 1602, 1603; Background Corrected with Scan 1593

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.7	38491	PASS
75	95	30	60	48.5	67456	PASS
95	95	100	100	100.0	139085	PASS
96	95	5	9	6.4	8933	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	78.2	108784	PASS
175	174	5	9	6.5	7051	PASS
176	174	95	101	95.5	103883	PASS
177	176	5	9	7.7	8011	PASS

Tune File : I:\ACQUDATA\MSVOA14\Data\112017\C3121.D

Tune Time : 20 Nov 2017 9:41 am

Daily Calibration File : I:\ACQUDATA\MSVOA14\DATA\112017\C3123.D

24 hrs
|
|
V

151736 229627 215232

125838

File	Sample	Surrogate Recovery %				Internal Standard Responses		
C3125.D	LCS	106	102	105	114	150826	228877	210037
				118751				
C3127.D	MBLK	95	97	97	100	143411	216592	203641
				111472				
C3128.D	R1710983-0	93	95	95	94	143606	219023	204038
				112968				
C3129.D	R1710983-0	94	98	97	96	136236	208959	194689
				106005				
C3130.D	R1710983-0	93	97	96	96	140204	215578	203898
				111738				
C3131.D	R1710983-0	97	98	98	96	136943	210473	192596
				105608				
C3132.D	R1710983-0	106	106	107	108	135787	204597	191936
				105335				
C3133.D	R1710983-0	95	97	97	97	139435	210136	196377
				108435				
C3134.D	R1710983-0	96	100	99	98	136986	205707	192390
				106864				
C3135.D	R1710983-0	100	102	100	100	141026	215082	199075
				109030				
C3136.D	R1710983-0	94	96	94	95	139091	209717	193776
				107479				
C3137.D	R1710983-0	93	96	94	91	140623	211348	199924
				109919				
C3138.D	R1710776-0	94	95	94	94	139444	211750	198382
				108013				
C3139.D								

R1710776-0	92	96	93	94	139860	207934	195889
			107685				

1st	<i>FJ</i>	11/22/17
2nd	<i>RL</i>	11/26/17

C3140.D	R1710776-0	91	96	94	94	138500	209189	194848
				105907				

C3141.D	R1710776-0	94	94	94	93	138785	208764	193960
				105399				

C3142.D	R1710776-0	94	96	94	94	136557	206610	193954
				106988				

C3143.D	R1710776-0	99	101	101	101	138124	205090	195268
				106752				

C3144.D	R1710776-0	96	100	99	100	137918	209360	195537
				106159				

C3145.D	R1710776-0	104	106	105	102	131931	199345	184964
				99943				

C3146.D	R1710776-0	94	97	97	97	140658	212437	199370
				105031				

C3147.D	R1710776-0	94	98	96	97	138865	212151	197930
				108830				

C3148.D	R1710983-0	98	97	97	105	151086	224625	214893
				121476				

C3149.D	R1710983-0	99	95	96	102	149171	222121	214631
				122993				

(fails) - fails 12hr time check * - fails criteria

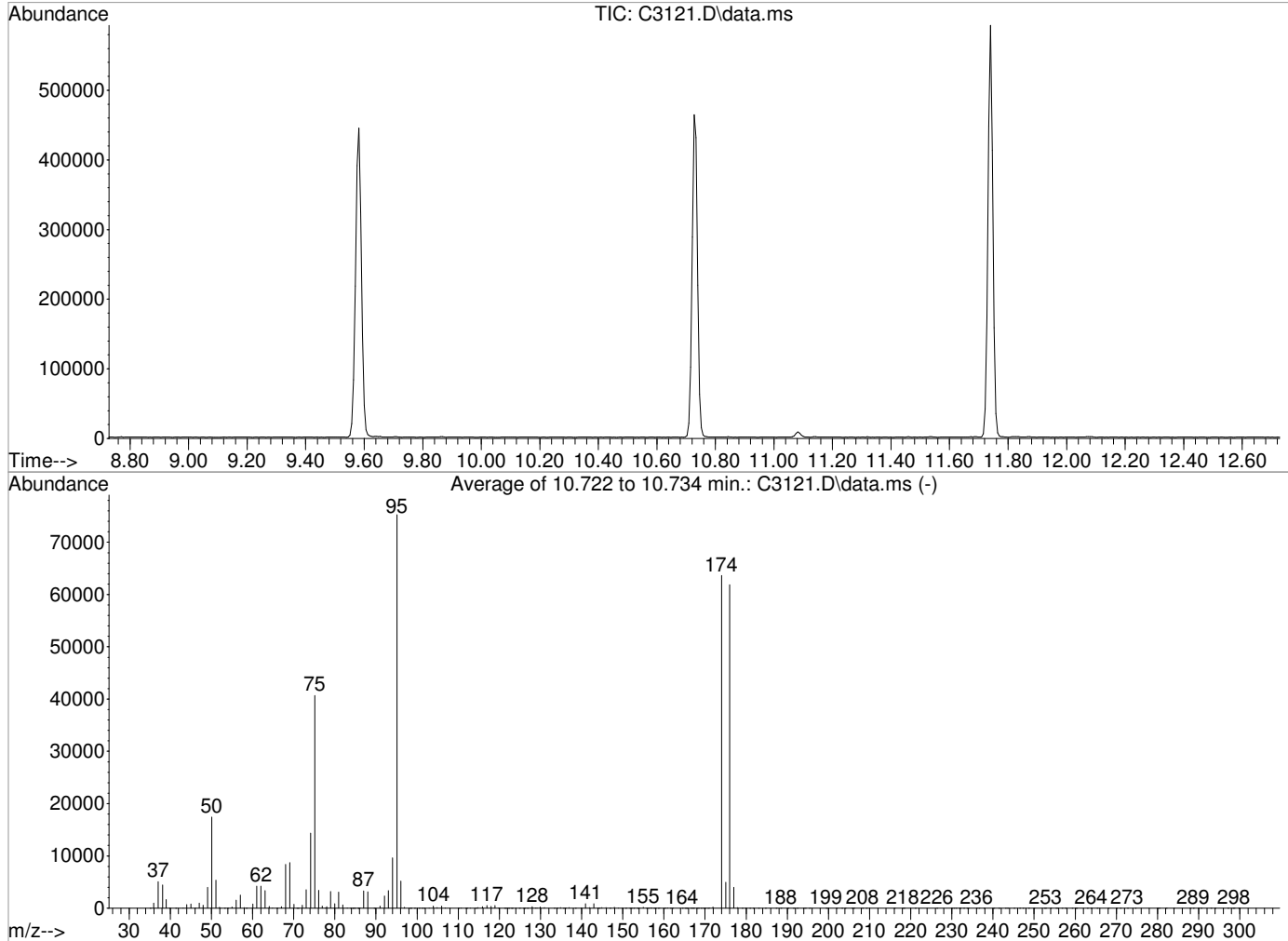
Created: Sun Nov 26 18:07:38 2017 MSVOA14

Data Path : I:\ACQUDATA\MSVOA14\Data\112017\
Data File : C3121.D
Acq On : 20 Nov 2017 9:41 am
Operator : F. NAEGLER
Sample : TUNE
Misc :
ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Integration File: CPD4.P

Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Title : MS#14 - 8260 WATERS 5mL Purge
Last Update : Fri Oct 06 11:46:22 2017



AutoFind: Scans 1605, 1606, 1607; Background Corrected with Scan 1600

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.2	17449	PASS
75	95	30	60	54.0	40659	PASS
95	95	100	100	100.0	75261	PASS
96	95	5	9	6.9	5213	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	84.5	63629	PASS
175	174	5	9	7.8	4949	PASS
176	174	95	101	97.2	61848	PASS
177	176	5	9	6.4	3978	PASS

Tune File : I:\ACQUDATA\MSVOA14\Data\112117\C3176.D

Tune Time : 21 Nov 2017 9:47 am

Daily Calibration File : I:\ACQUDATA\MSVOA14\Data\112117\C3177.D

148998 226413 217414

126930

File	Sample	Surrogate Recovery %				Internal Standard Responses		
=====								
C3179.D	LCS	98	95	97	104	149173	226888	213336
			122984					

C3181.D	MBLK	93	95	94	97	145565	218488	202060
			111059					

C3182.D	R1711039-0	93	95	94	93	144801	217905	204086
			108738					

C3183.D	R1711035-0	94	97	96	99	136351	208341	193080
			104042					

C3184.D	R1711035-0	94	96	94	95	141410	213069	200209
			104956					

C3185.D	R1711035-0	94	95	94	93	140943	211670	196604
			105578					

C3186.D	R1711035-0	94	97	95	91	143266	211659	196915
			105715					

C3188.D	R1710784-0	96	97	96	96	139365	207121	193113
			104721					

C3189.D	R1710784-0	94	96	95	94	141155	210927	196833
			105031					

C3190.D	R1710784-0	94	96	94	95	139229	210394	198599
			109018					

C3191.D	R1710784-0	94	95	94	94	141151	211039	195901
			104766					

C3193.D	R1711044-0	97	96	95	94	142332	213000	198513
			104935					

C3194.D	R1710953-0	96	97	96	96	136101	205266	192269
			104680					

C3195.D								

R1710954-0	96	98	98	98	135394	203578	189848
				102969			

1st	<i>FJ</i>	11/27/17
2nd	<i>RL</i>	11/27/17

C3196.D	R1711014-0	97	97	97	96	131861	198610	187638
					101895			

C3197.D	R1711045-0	95	99	98	99	135384	202585	189518
					100035			

C3198.D	R1711040-0	94	96	95	93	135260	205576	190774
					104453			

C3200.D	R1710784-0	99	101	98	100	133352	199089	185356
					101340			

C3201.D	R1710784-0	98	99	99	100	135871	204857	191908
					101829			

C3202.D	R1710784-0	94	95	94	92	135926	203672	189562
					103742			

C3203.D	R1710784-0	96	97	98	98	131337	197194	185711
					101112			

C3204.D	R1710784-0	102	105	103	104	133614	200966	190548
					101049			

C3205.D	R1710784-0	97	93	96	102	139199	210694	201224
					114549			

C3206.D	R1710784-0	98	94	94	100	141413	213462	204219
					113978			

(fails) - fails 12hr time check * - fails criteria

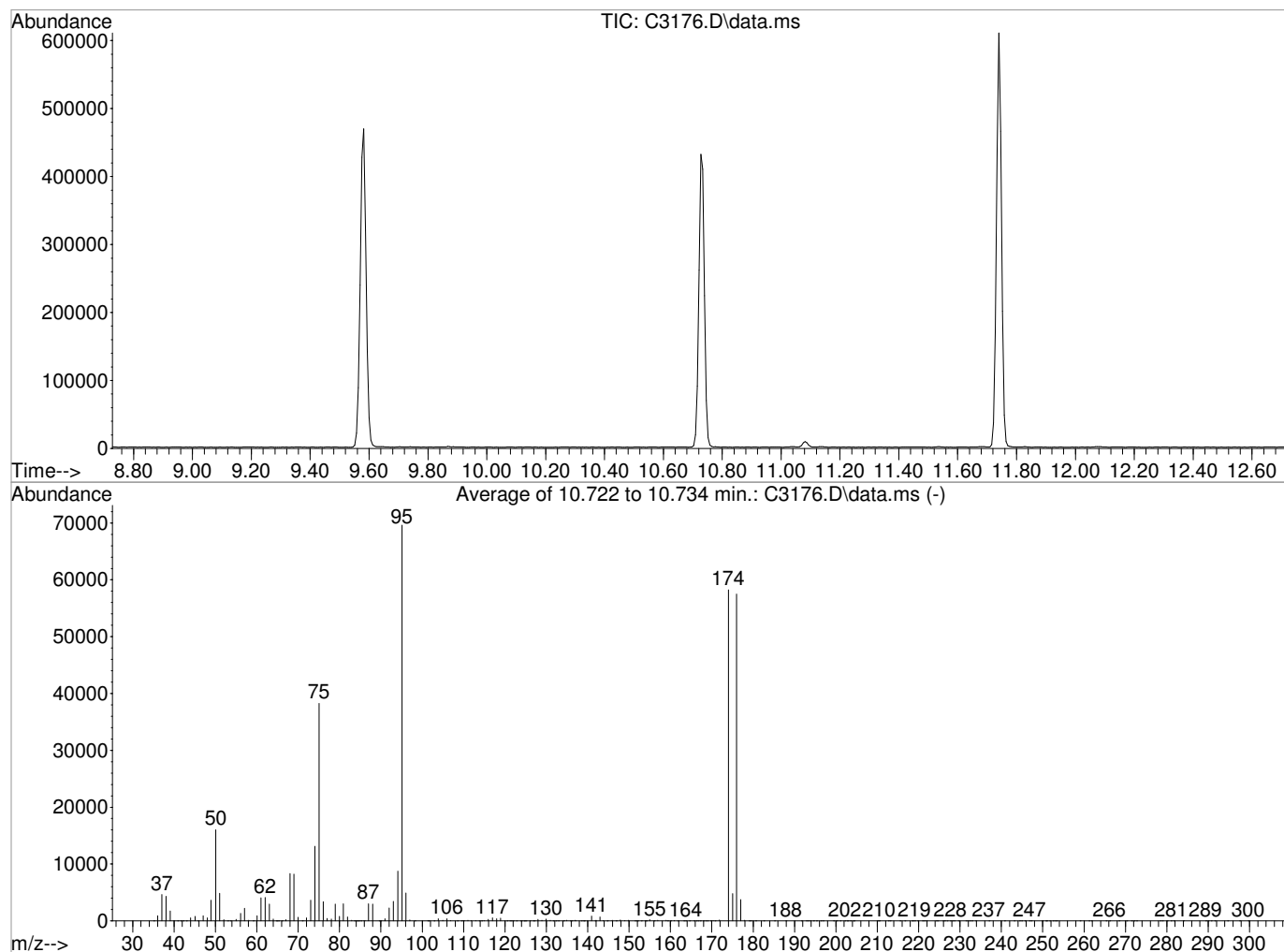
Created: Mon Nov 27 12:59:36 2017 MSVOA14

Data Path : I:\ACQUDATA\MSVOA14\Data\112117\
Data File : C3176.D
Acq On : 21 Nov 2017 9:47 am
Operator : F. NAEGLER
Sample : TUNE
Misc :
ALS Vial : 1 Sample Multiplier: 1

Inst : MSVOA14

Integration File: CPD4.P

Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Title : MS#14 - 8260 WATERS 5mL Purge
Last Update : Fri Oct 06 11:46:22 2017



AutoFind: Scans 1605, 1606, 1607; Background Corrected with Scan 1600

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.0	16035	PASS
75	95	30	60	55.0	38277	PASS
95	95	100	100	100.0	69613	PASS
96	95	5	9	7.1	4921	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	83.6	58227	PASS
175	174	5	9	8.2	4802	PASS
176	174	95	101	98.7	57472	PASS
177	176	5	9	6.5	3742	PASS

Tune File : I:\ACQUDATA\MSVOA14\Data\112217\C3238.D

Tune Time : 22 Nov 2017 10:57 am

Daily Calibration File : I:\ACQUDATA\MSVOA14\DATA\112217\C3239.D

150197 222521 204093

119897

File	Sample	Surrogate Recovery %				Internal Standard Responses		
C3240.D	LCS	99	99	98	100	151990	226434	202583
				116934				
C3242.D	MBLK	95	100	96	96	140964	207777	186764
				103453				
C3243.D	R1711062-0	94	99	95	95	145875	218748	193477
				107756				
C3244.D	R1711111-0	94	100	96	95	140977	212049	188721
				106287				
C3245.D	R1711061-0	94	99	95	96	133450	200110	178948
				98852				
C3246.D	R1711061-0	96	100	96	96	139355	209206	184085
				103349				
C3247.D	R1711111-0	96	100	96	96	139300	207885	185375
				101426				
C3248.D	R1711062-0	95	100	96	95	140573	209060	187321
				102539				
C3249.D	R1710784-0	94	99	96	93	137258	205845	184650
				100612				
C3250.D	R1710784-0	96	102	97	96	136798	201780	180857
				101652				
C3251.D	R1710784-0	98	102	97	97	135075	201775	182358
				98589				
C3253.D	R1711040-0	97	102	97	97	134323	199595	176382
				99533				
C3254.D	R1711045-0	94	101	96	93	133997	199036	177166
				98078				
C3255.D								

R1710953-0	96	100	97	95	130431	197753	176161
			97667				

1st	FJ	11/27/17
2nd	RL	11/27/17

C3257.D

R1711022-0	94	99	95	92	133978	198214	176091
			98719				

C3258.D

R1711022-0	95	100	95	94	133072	202747	178566
			100442				

C3259.D

R1711022-0	98	102	99	98	128266	194335	172559
			95755				

C3260.D

R1711022-0	100	99	98	104	139692	207419	188611
			111855				

C3261.D

R1711022-0	99	99	97	102	138147	206523	184510
			108956				

C3262.D

R1711062-0	101	99	98	103	143513	212018	193493
			112230				

C3263.D

R1711062-0	100	99	97	105	146784	221946	201163
			116814				

(fails) - fails 12hr time check * - fails criteria

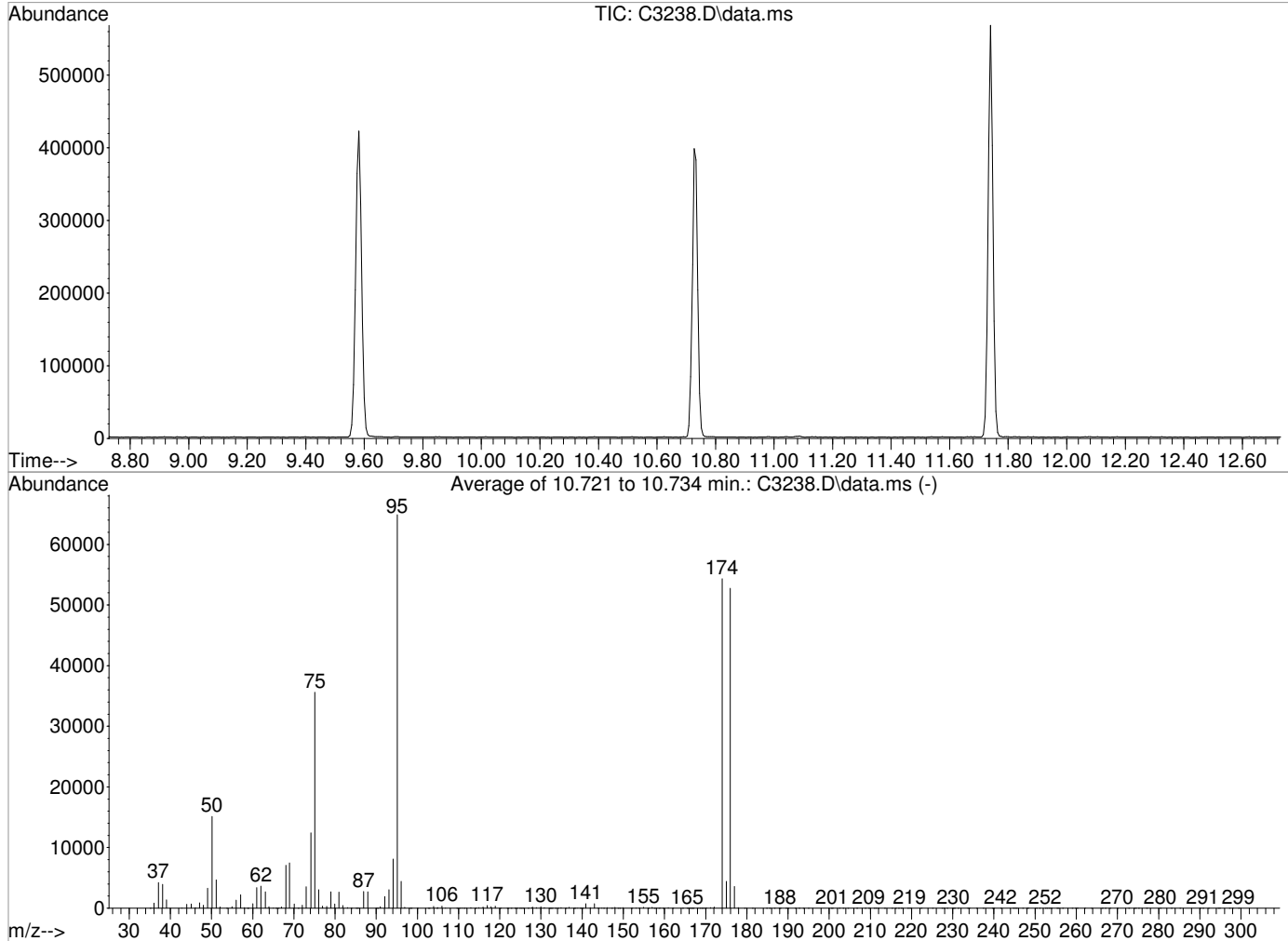
Created: Mon Nov 27 15:14:09 2017 MSV0A14

Data Path : I:\ACQUDATA\MSVOA14\Data\112217\
Data File : C3238.D
Acq On : 22 Nov 2017 10:57 am
Operator : F. NAEGLER
Sample : TUNE
Misc :
ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA14

Integration File: CPD4.P

Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Title : MS#14 - 8260 WATERS 5mL Purge
Last Update : Fri Oct 06 11:46:22 2017



AutoFind: Scans 1605, 1606, 1607; Background Corrected with Scan 1600

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.3	15133	PASS
75	95	30	60	54.9	35607	PASS
95	95	100	100	100.0	64885	PASS
96	95	5	9	6.8	4402	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	83.7	54339	PASS
175	174	5	9	8.1	4414	PASS
176	174	95	101	97.1	52757	PASS
177	176	5	9	6.8	3583	PASS

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11701.D
 Acq On : 31 Aug 2017 8:59 pm
 Operator : B.ALLGEIER
 Sample : icv
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 13:50:18 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.389	168	237523	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	398549	50.00	ppb	0.00
71) d5-Chlorobenzene	9.791	117	357226	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	175321	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.237	113	112713	50.71	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	101.42%	
48) surr1,1,2-dichloroetha...	5.773	65	175323	49.49	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	98.98%	
65) SURR3,Toluene-d8	8.297	98	514733	50.12	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	100.24%	
70) SURR2,BFB	10.864	95	201072	49.80	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	99.60%	
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	1.183	85	148785	45.55	ppb	95
3) Chloromethane	1.311	50	280580	45.04	ppb	94
4) Vinyl Chloride	1.384	62	216167	53.21	ppb	94
5) Bromomethane	1.610	94	77739	47.06	ppb	90
6) Chloroethane	1.683	64	101975	47.51	ppb	100
7) Freon 21	1.835	67	287414	51.78	ppb	98
8) Trichlorofluoromethane	1.884	101	187611	45.01	ppb	97
9) Diethyl Ether	2.122	59	182257	49.44	ppb	81
10) Freon 123a	2.122	67	184978	55.87	ppb	94
11) Freon 123	2.176	83	196777	53.47	ppb	99
12) Acrolein	2.219	56	110984	104.24	ppb	99
13) 1,1-Dicethene	2.311	96	111955	43.21	ppb	# 72
14) Freon 113	2.311	101	100389	43.62	ppb	93
15) Acetone	2.353	43	144356	49.88	ppb	92
16) 2-Propanol	2.481	45	603922	1005.25	ppb	95
17) Iodomethane	2.439	142	116576	43.60	ppb	87
18) Carbon Disulfide	2.500	76	351448	51.48	ppb	97
19) Acetonitrile	2.597	40	131526	238.46	ppb	95
20) Allyl Chloride	2.640	76	67297m	52.90	ppb	
21) Methyl Acetate	2.658	43	273531	35.58	ppb	97
22) Methylene Chloride	2.756	84	139374	49.64	ppb	92
23) TBA	2.884	59	832486	996.54	ppb	88
24) Acrylonitrile	3.006	53	680358	257.93	ppb	100
25) Methyl-t-Butyl Ether	3.054	73	495022	49.11	ppb	90
26) trans-1,2-Dichloroethene	3.048	96	122923	46.05	ppb	# 82
28) 1,1-Dicethane	3.542	63	291560	48.72	ppb	96
29) Vinyl Acetate	3.634	86	28664	46.55	ppb	# 86
30) DIPE	3.670	45	797055	51.18	ppb	93
31) 2-Chloro-1,3-Butadiene	3.670	53	345591	54.91	ppb	87
32) ETBE	4.194	59	656069	52.00	ppb	90
33) 2,2-Dichloropropane	4.377	77	178740	43.09	ppb	92
34) cis-1,2-Dichloroethene	4.383	96	141772	45.32	ppb	# 74
35) 2-Butanone	4.420	43	192343	51.80	ppb	91
36) Propionitrile	4.499	54	279638	251.06	ppb	90
37) Bromochloromethane	4.767	130	86581	46.06	ppb	90
38) Methacrylonitrile	4.774	67	91893	50.42	ppb	# 83
39) Tetrahydrofuran	4.859	42	121021	52.63	ppb	90
40) Chloroform	4.956	83	232368	48.45	ppb	92
41) 1,1,1-Trichloroethane	5.249	97	203806	50.34	ppb	88

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11701.D
 Acq On : 31 Aug 2017 8:59 pm
 Operator : B.ALLGEIER
 Sample : icv
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 13:50:18 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.090	73	488955	52.03	ppb	94
44) Cyclohexane	5.341	41	204864	48.67	ppb	90
46) Carbontetrachloride	5.529	117	157260	47.23	ppb	98
47) 1,1-Dichloropropene	5.536	75	175270	44.74	ppb	89
49) Benzene	5.859	78	541389	45.62	ppb	87
50) 1,2-Dichloroethane	5.889	62	248211	48.41	ppb	97
51) Iso-Butyl Alcohol	5.865	43	455424	958.01	ppb	99
52) n-Heptane	6.346	43	259023	41.91	ppb	87
53) 1-Butanol	6.840	56	2336	9.17	ppb	88
54) Trichloroethene	6.804	130	145769	48.06	ppb	97
55) Methylcyclohexane	7.048	55	284515	51.15	ppb	79
56) 1,2-Dicloropropane	7.084	63	174302	46.31	ppb	98
57) Dibromomethane	7.224	93	90066	48.74	ppb	88
58) 1,4-Dioxane	7.285	88	70740	1001.91	ppb	# 76
59) Methyl Methacrylate	7.310	69	142425	49.25	ppb	95
60) Bromodichloromethane	7.456	83	175390	52.86	ppb	96
61) 2-Nitropropane	7.736	41	145192	100.04	ppb	97
62) 2-Chloroethylvinyl Ether	7.858	63	123605	56.72	ppb	90
63) cis-1,3-Dichloropropene	7.999	75	227818	48.82	ppb	97
64) 4-Methyl-2-pentanone	8.200	43	342676	50.90	ppb	90
66) Toluene	8.370	91	596767	46.84	ppb	98
67) trans-1,3-Dichloropropene	8.639	75	210207	49.40	ppb	97
68) Ethyl Methacrylate	8.779	69	260800	52.50	ppb	83
69) 1,1,2-Trichloroethane	8.828	97	141228	49.82	ppb	97
72) Tetrachloroethene	8.962	164	97045	44.16	ppb	93
73) 2-Hexanone	9.114	43	263292	51.23	ppb	87
74) 1,3-Dichloropropane	8.992	76	252136	46.36	ppb	93
75) Dibromochloromethane	9.224	129	132222	51.36	ppb	97
76) N-Butyl Acetate	9.273	43	513745	52.79	ppb	90
77) 1,2-Dibromoethane	9.321	107	144115	51.51	ppb	96
78) Chlorobenzene	9.815	112	372342	46.94	ppb	98
79) 3-CBTF	9.834	180	185104	48.97	ppb	95
80) 4-CBTF	9.888	180	160878	47.84	ppb	98
81) 1,1,1,2-Tetrachloroethane	9.901	131	137382	52.24	ppb	97
82) Ethylbenzene	9.937	106	213393	49.41	ppb	# 89
83) (m+p)Xylene	10.047	106	501498	94.48	ppb	97
84) o-Xylene	10.407	106	249470	47.39	ppb	96
85) Styrene	10.419	104	430075	50.72	ppb	97
87) Bromoform	10.571	173	89069	60.64	ppb	94
88) 2-CBTF	10.650	180	181884	51.47	ppb	96
89) Isopropylbenzene	10.742	105	639264	49.94	ppb	97
90) Cyclohexanone	10.803	55	1191862	1017.05	ppb	81
91) trans-1,4-Dichloro-2-B...	11.047	53	84336	54.68	ppb	97
92) 1,1,2,2-Tetrachloroethane	10.998	83	195424	50.72	ppb	92
93) Bromobenzene	10.986	156	152855	48.44	ppb	93
94) 1,2,3-Trichloropropane	11.028	110	70092	49.07	ppb	94
95) n-Propylbenzene	11.095	91	751876	49.91	ppb	96
96) 2-Chlorotoluene	11.163	91	456470	47.89	ppb	96
97) 3-Chlorotoluene	11.211	91	509264	52.70	ppb	96
98) 4-Chlorotoluene	11.254	91	524166	48.32	ppb	97
99) 1,3,5-Trimethylbenzene	11.248	105	538419	50.83	ppb	95
100) tert-Butylbenzene	11.522	119	466565	48.44	ppb	100
101) 1,2,4-Trimethylbenzene	11.565	105	558609	50.26	ppb	95
102) 3,4-DCBTF	11.626	214	131334	47.91	ppb	# 91
103) sec-Butylbenzene	11.705	105	686142	48.81	ppb	96
104) p-Isopropyltoluene	11.827	119	571074	50.31	ppb	97

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11701.D
 Acq On : 31 Aug 2017 8:59 pm
 Operator : B.ALLGEIER
 Sample : icv
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 13:50:18 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.784	146	286980	47.02	ppb	98
106) 1,4-Dclbenz	11.864	146	291900	47.46	ppb	95
107) 2,4-DCBTF	11.912	214	124607	51.84	ppb	98
108) 2,5-DCBTF	11.955	214	137037	50.42	ppb	95
109) n-Butylbenzene	12.162	91	542049	51.23	ppb	95
110) 1,2-Dclbenz	12.162	146	290290	48.99	ppb	98
111) 1,2-Dibromo-3-chloropr...	12.784	157	50058	50.71	ppb	91
112) Trielution Dichlorotol...	12.906	125	916108	157.82	ppb #	92
113) 1,3,5 Trichlorobenzene	12.961	180	227284	50.87	ppb	99
114) Coelution Dichlorotoluene	13.235	125	687367	106.78	ppb	97
115) 1,2,4-Tcbenzene	13.443	180	228036	48.41	ppb	97
116) Hexachlorobt	13.583	225	95749	48.86	ppb	97
117) Naphthalen	13.632	128	797776	53.17	ppb	98
118) 1,2,3-Tclbenzene	13.821	180	232257	48.55	ppb	95
119) 2,4,5-Trichlorotoluene	14.406	159	207687	54.41	ppb	94
120) 2,3,6-Trichlorotoluene	14.491	159	231939	65.14	ppb	93

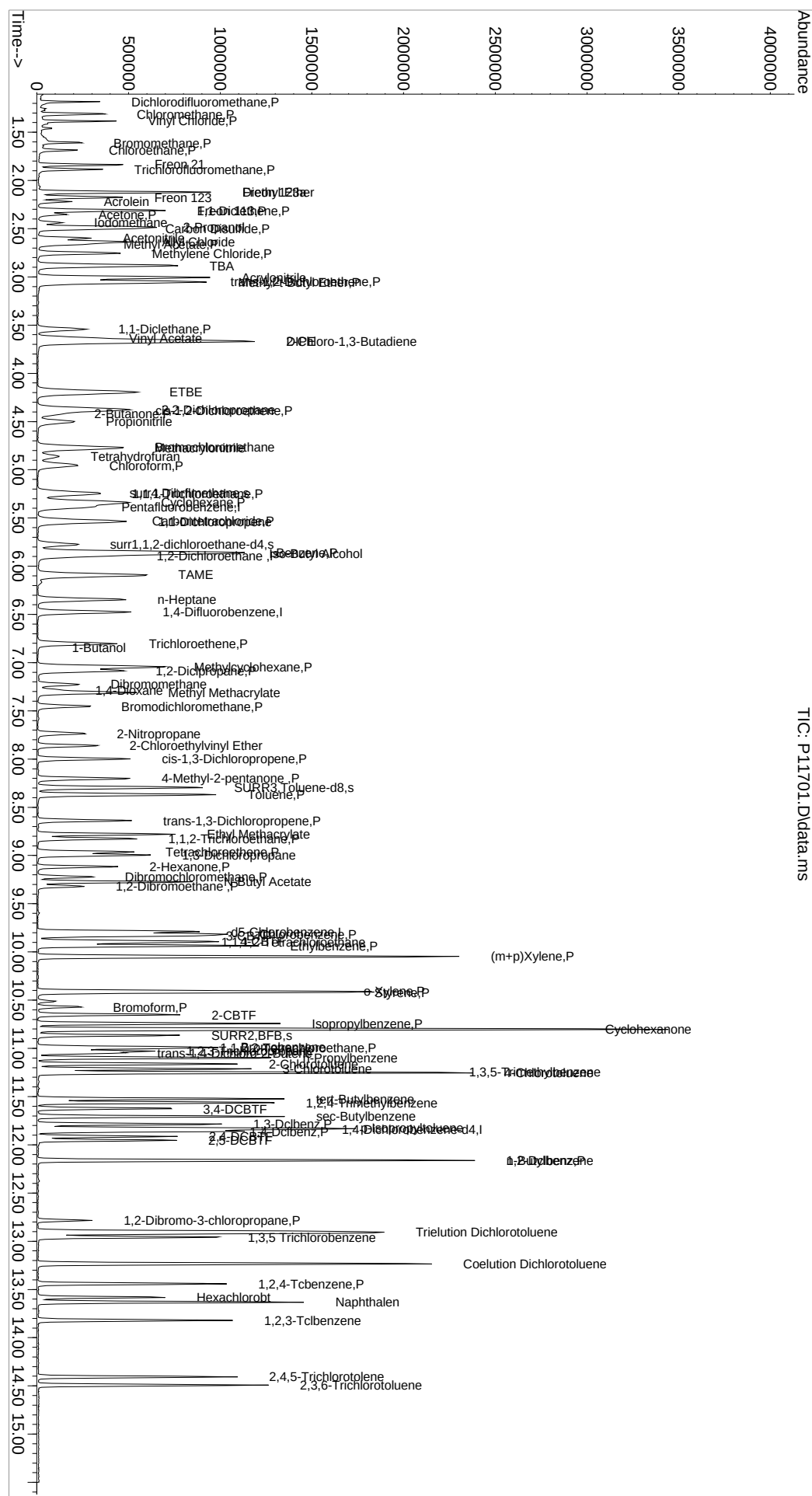
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2nd *WR* 09/05/17
A O A D D

Quantitation Report (QT Reviewed)

Quant Time: Sep 01 13:50:18 2017
Quant Method : I:\ACQDATA\msv0a12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
Quant Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration

Inst : MSV0A-12

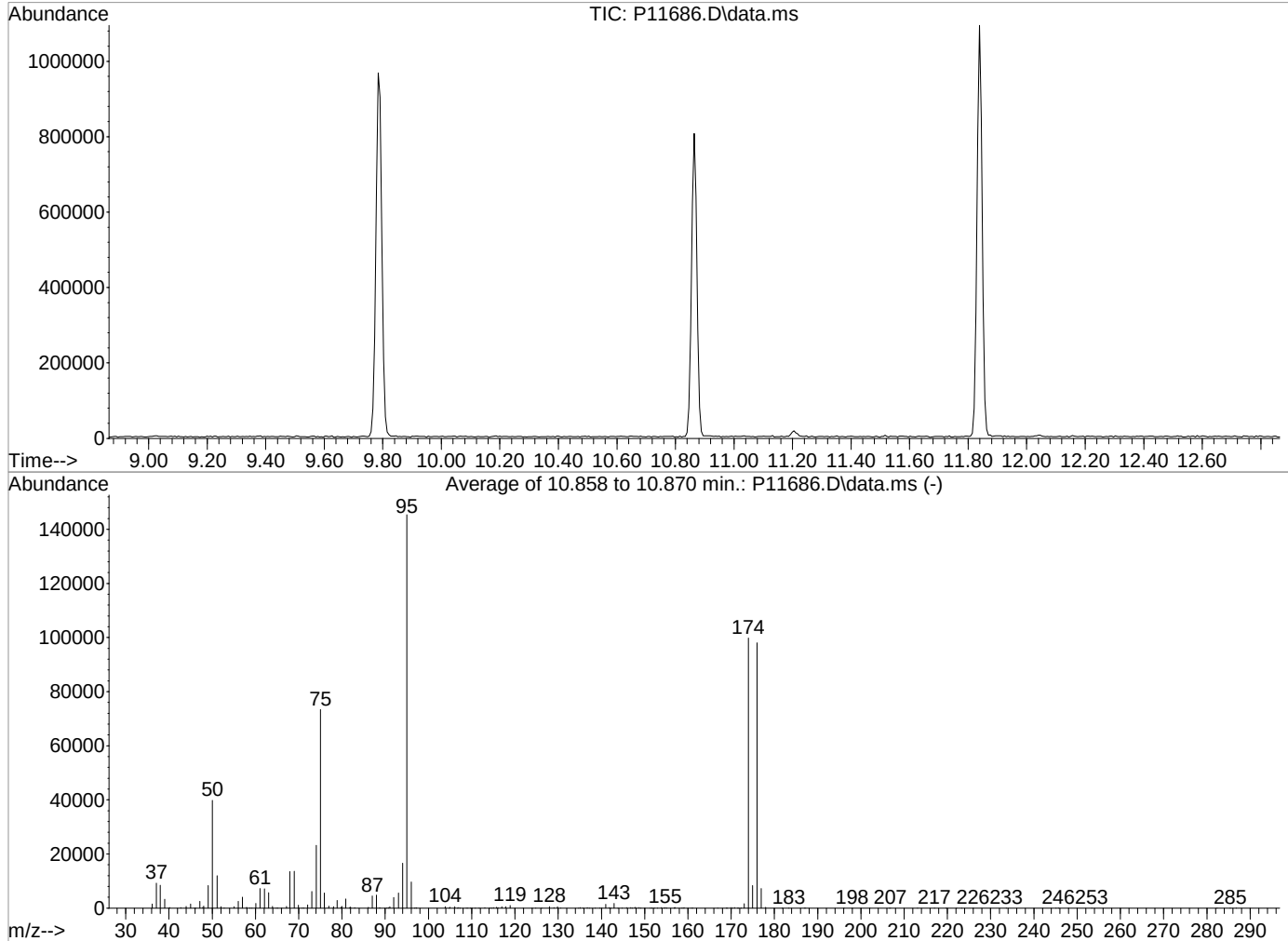


Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11686.D
Acq On : 31 Aug 2017 2:07 pm
Operator : B.ALLGEIER
Sample : tune
Misc :
ALS Vial : 1 Sample Multiplier: 1

Inst : MSVOA-12

Integration File: INTP90.P

Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Title : MS#12 - 8260B WATERS 10mL Purge
Last Update : Fri Sep 01 13:46:44 2017



AutoFind: Scans 1601, 1602, 1603; Background Corrected with Scan 1594

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.4	39845	PASS
75	95	30	60	50.4	73379	PASS
95	95	100	100	100.0	145451	PASS
96	95	5	9	6.6	9664	PASS
173	174	0.00	2	1.6	1570	PASS
174	95	50	120	68.6	99776	PASS
175	174	5	9	8.3	8286	PASS
176	174	95	101	98.2	98019	PASS
177	176	5	9	7.3	7181	PASS

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11689.D
 Acq On : 31 Aug 2017 4:36 pm
 Operator : B.ALLGEIER
 Sample : inst blk
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 10:27:41 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 10:26:08 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

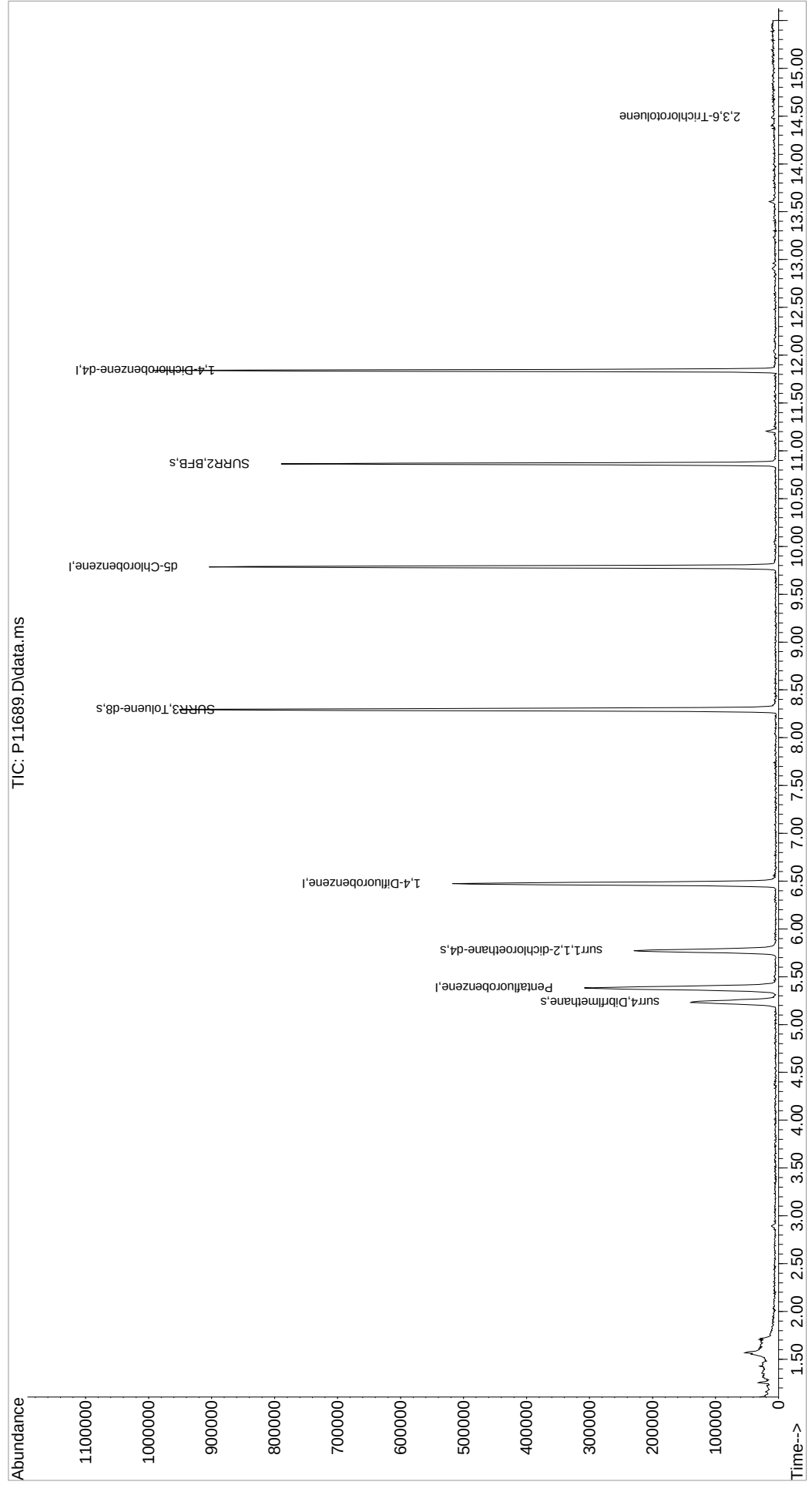
Internal Standards						
1) Pentafluorobenzene	5.383	168	248513	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	405841	50.00	ppb	0.00
71) d5-Chlorobenzene	9.785	117	367212	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	176247	50.00	ppb	0.00
System Monitoring Compounds						
45) surr4,Dibrflmethane	5.231	113	113596	50.19	ppb	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery =	100.38%		
48) surr1,1,2-dichloroetha...	5.773	65	182205	50.51	ppb	0.00
Spiked Amount 50.000	Range 73 - 125		Recovery =	101.02%		
65) SURR3,Toluene-d8	8.291	98	536690	51.32	ppb	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery =	102.64%		
70) SURR2,BFB	10.864	95	204939	49.84	ppb	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery =	99.68%		
Target Compounds						
5) Bromomethane	1.597	94	628	Below Cal	#	5
6) Chloroethane	1.677	64	527	Below Cal	#	94
120) 2,3,6-Trichlorotoluene	14.491	159	869	0.24	ppb	84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11689.D
 Acq On : 31 Aug 2017 4:36 pm
 Operator : B.ALLGEIER
 Sample : inst blk
 Misc :
 ALS Vial : 2 Sample Multiplier: 1
 Inst : MSV0A-12

Quant Time: Sep 01 10:27:41 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 Qlast Update : Fri Sep 01 10:26:08 2017
 Response via : Initial Calibration



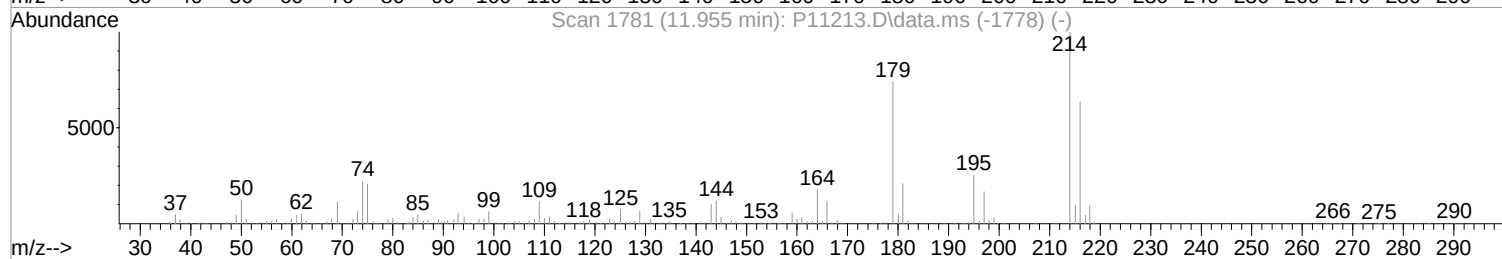
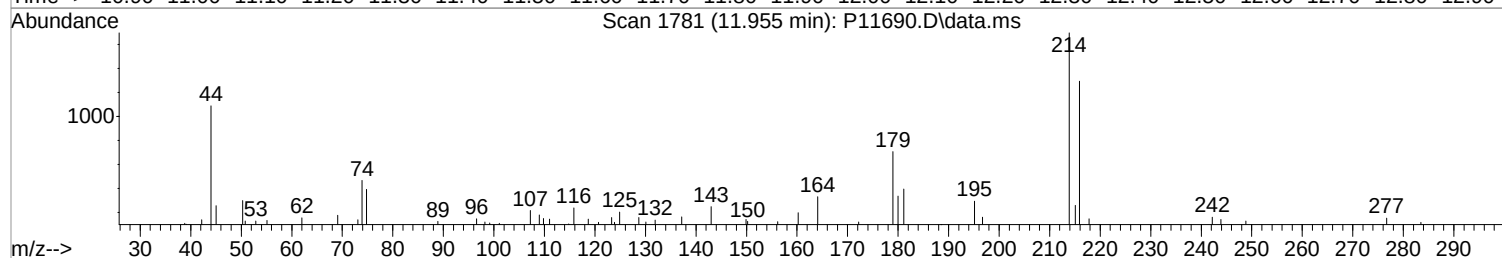
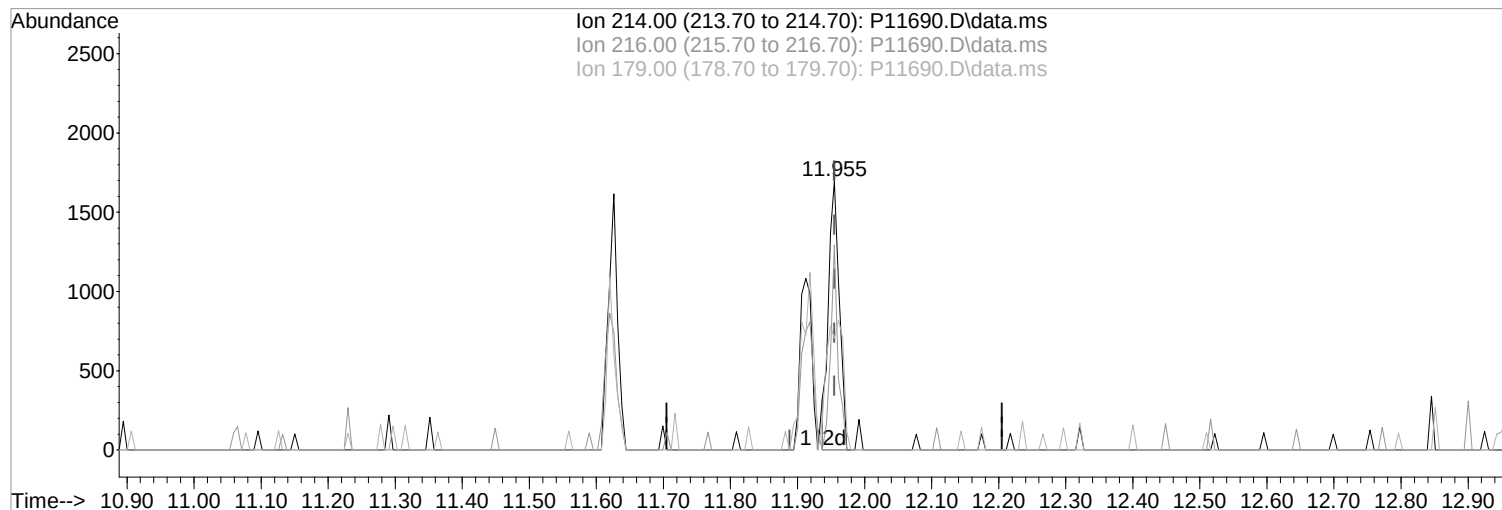
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(108) 2,5-DCBTF

11.955min (+0.000) 0.75 ppb m

response 1884

Ion	Exp%	Act%
214.00	100	100
216.00	62.50	76.13#
179.00	74.00	41.60#
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

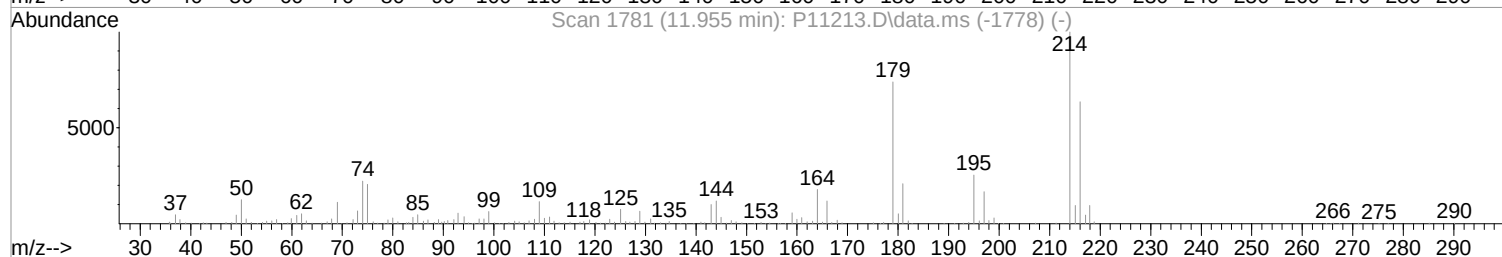
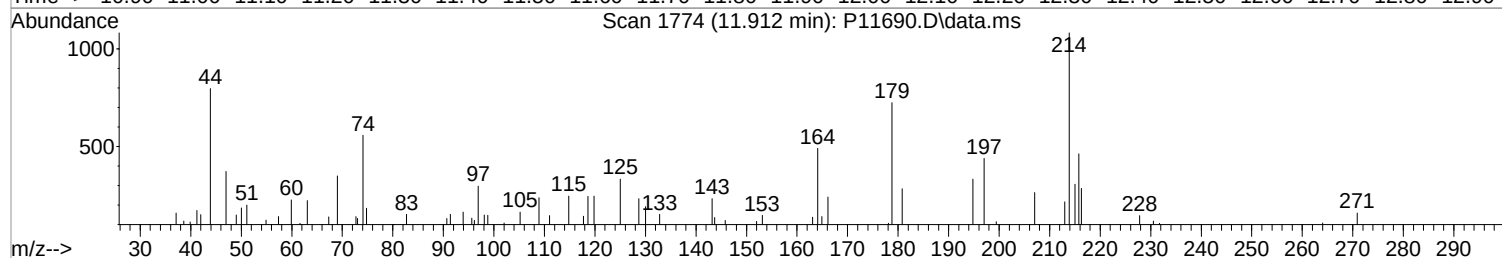
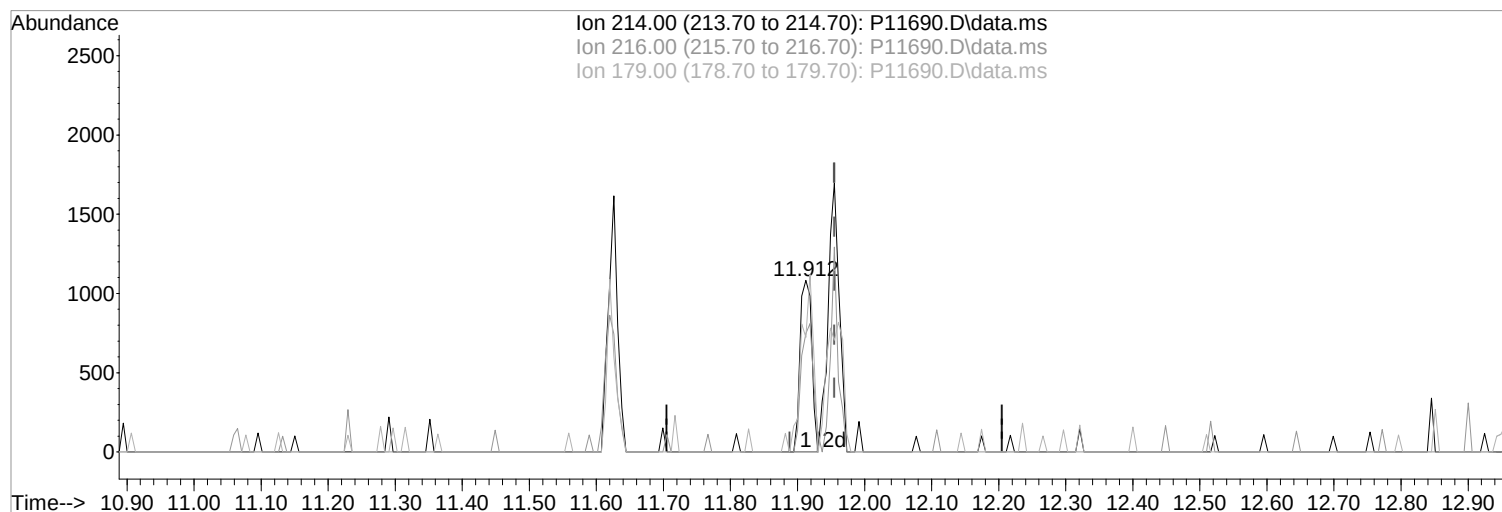
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(108) 2,5-DCBTF

Manual Integration:

11.912min (-0.042) 0.51 ppb

Before

response 1297

Ion	Exp%	Act%
214.00	100	100
216.00	62.50	68.98
179.00	74.00	66.85
0.00	0.00	0.00

09/01/17

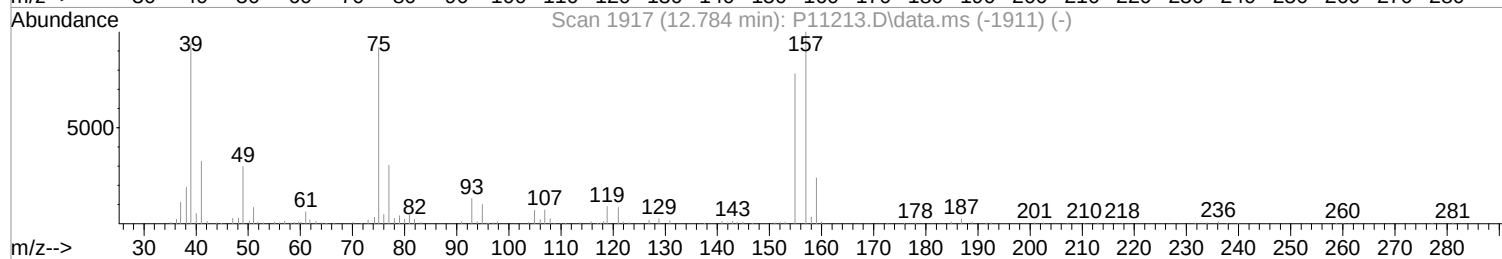
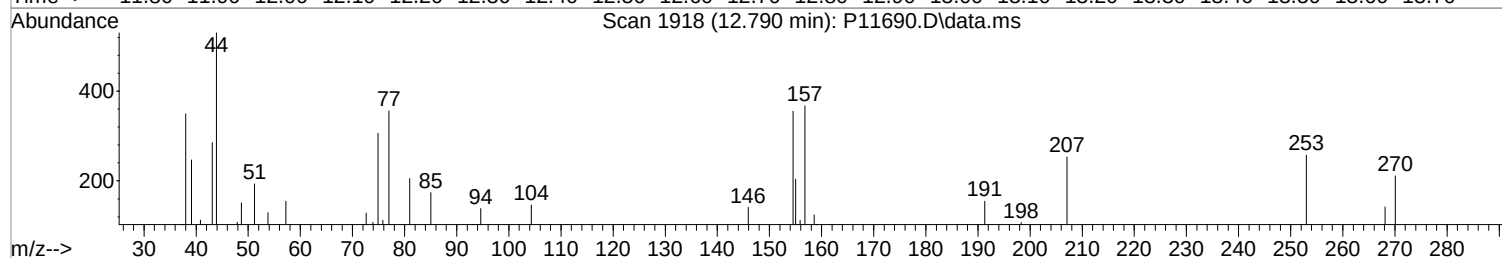
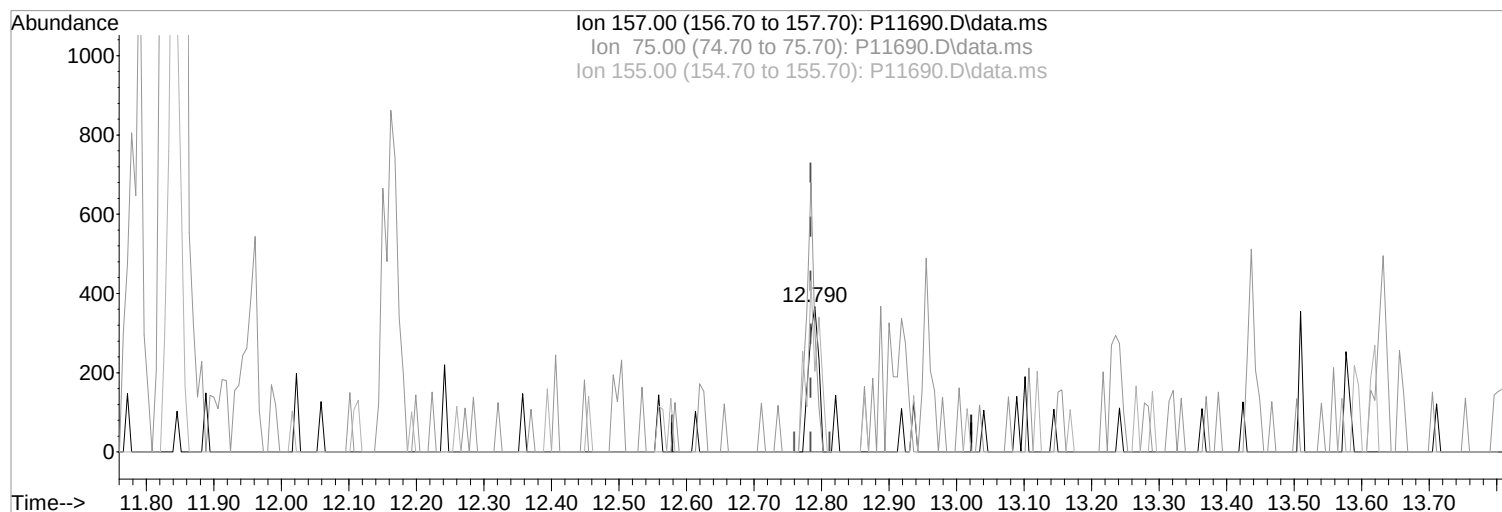
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:20:58 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(111) 1,2-Dibromo-3-chloropropane (P)

12.790min (+0.006) 0.37 ppb m

response 388

Ion	Exp%	Act%
157.00	100	100
75.00	91.70	83.38
155.00	78.30	55.59#
0.00	0.00	0.00

Manual Integration:

After

Peak not found.

09/01/17

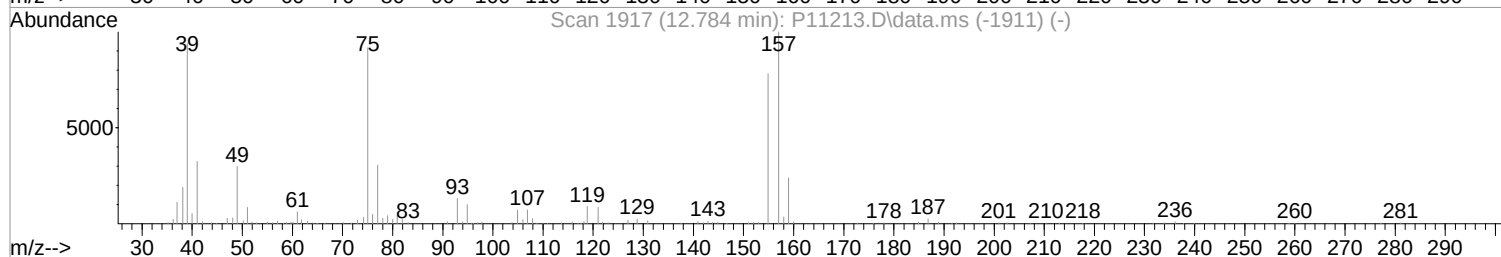
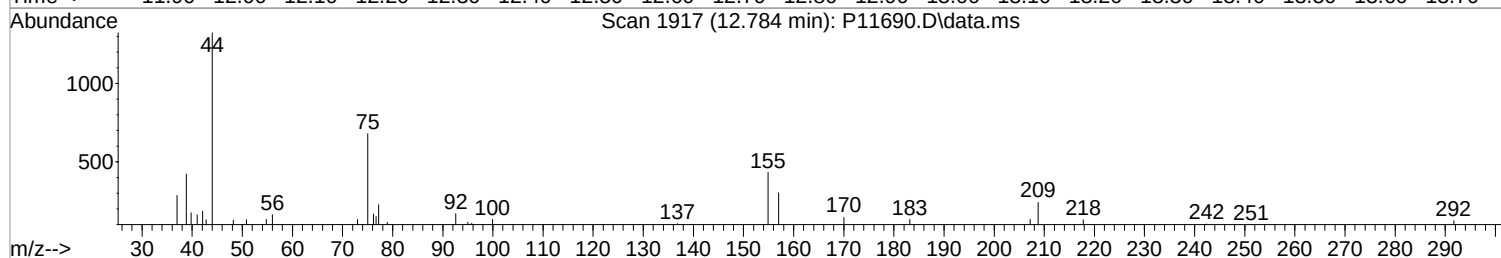
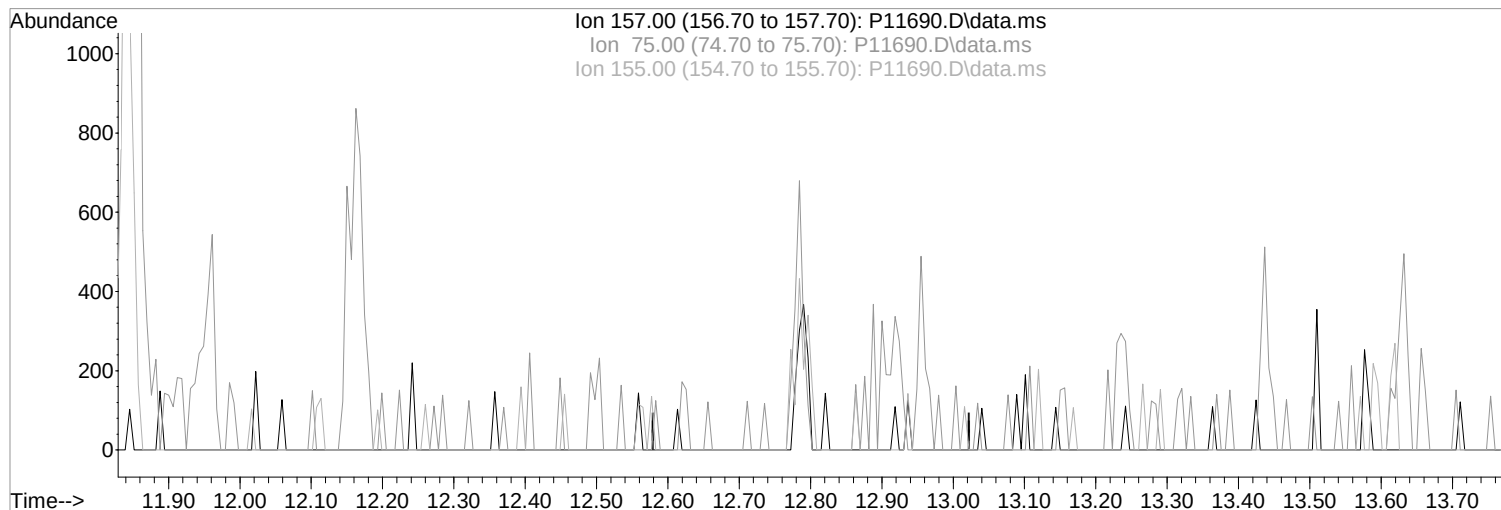
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(111) 1,2-Dibromo-3-chloropropane (P)

Manual Integration:

12.784min (-12.784) 0.00 ppb

Before

response 0

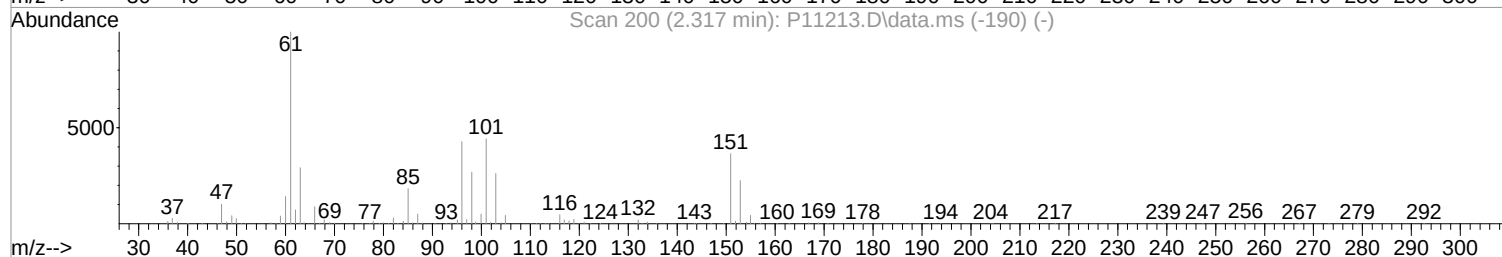
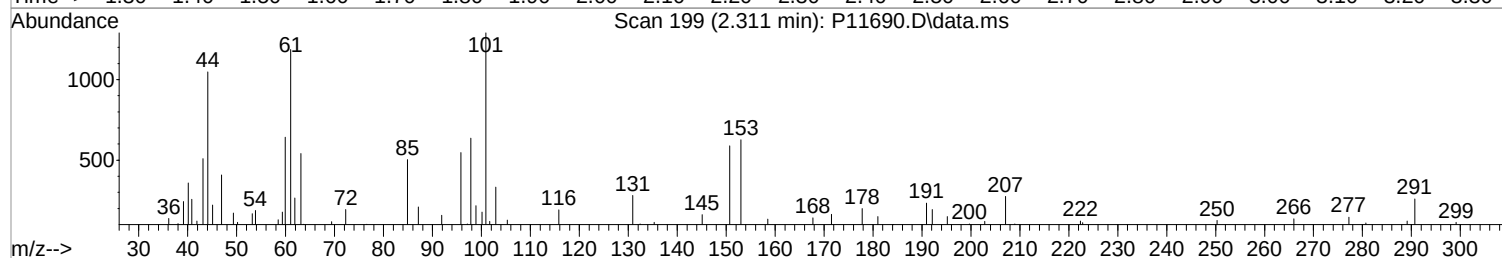
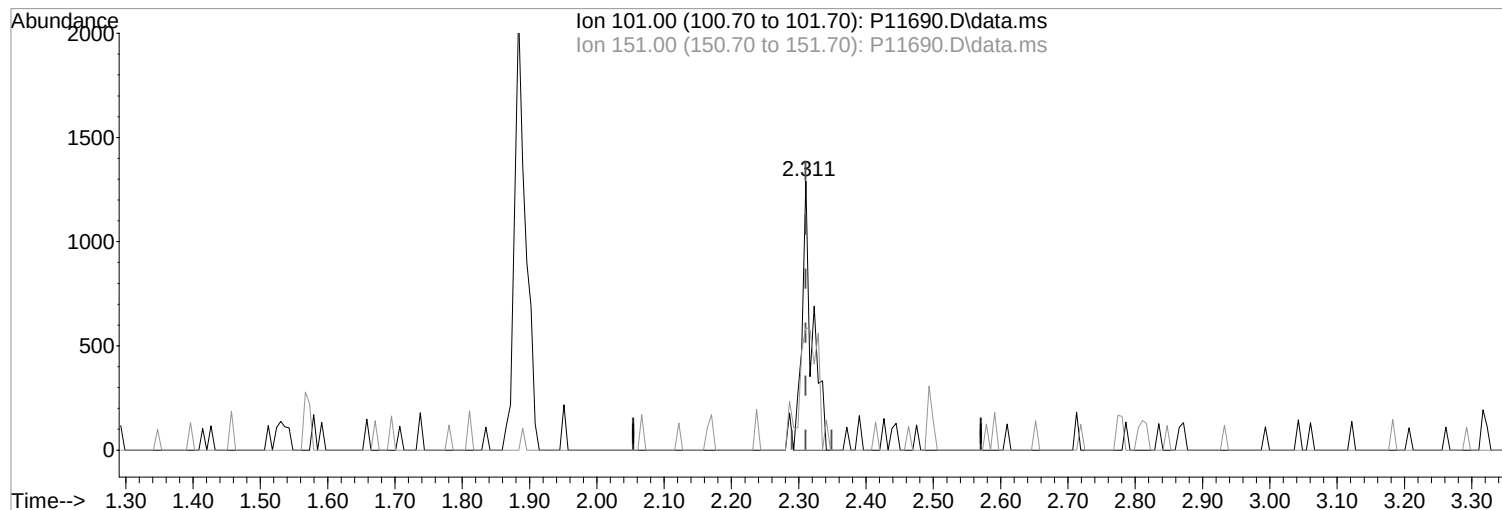
Ion	Exp%	Act%
157.00	100	0.00
75.00	91.70	0.00#
155.00	78.30	0.00#
0.00	0.00	0.00

09/01/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:20:58 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(14) Freon 113 (P)

2.311min (+0.000) 0.59 ppb m

response 1369

Ion	Exp%	Act%
101.00	100	100
151.00	82.70	45.62#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

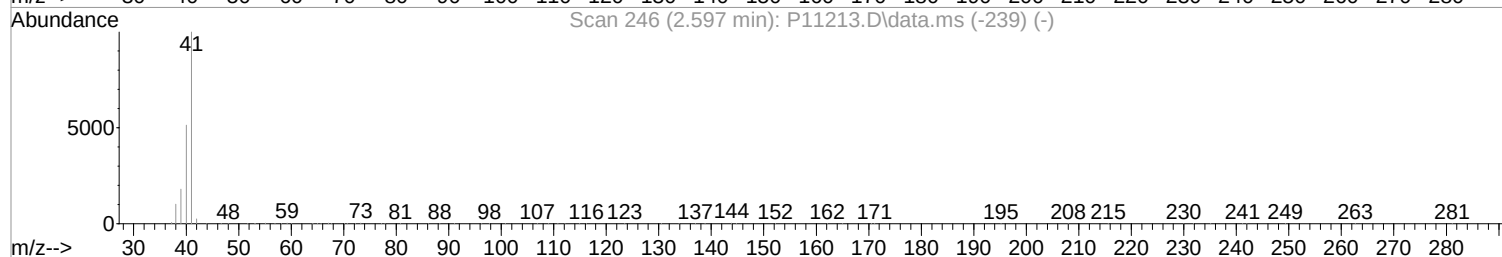
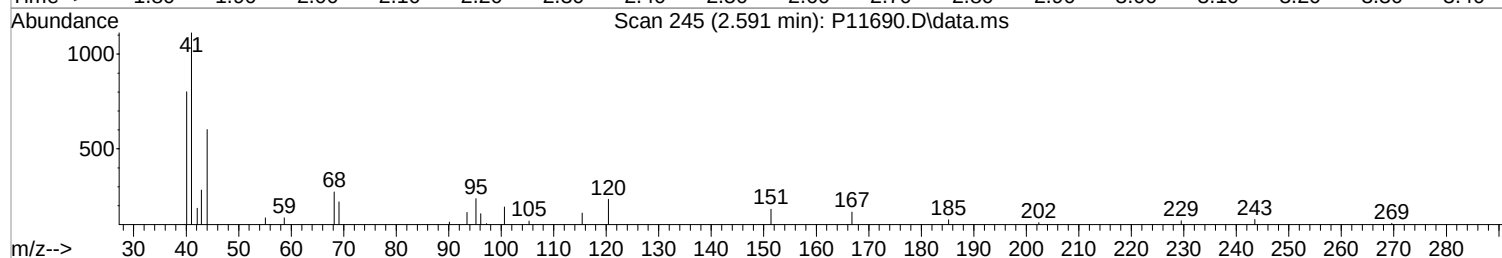
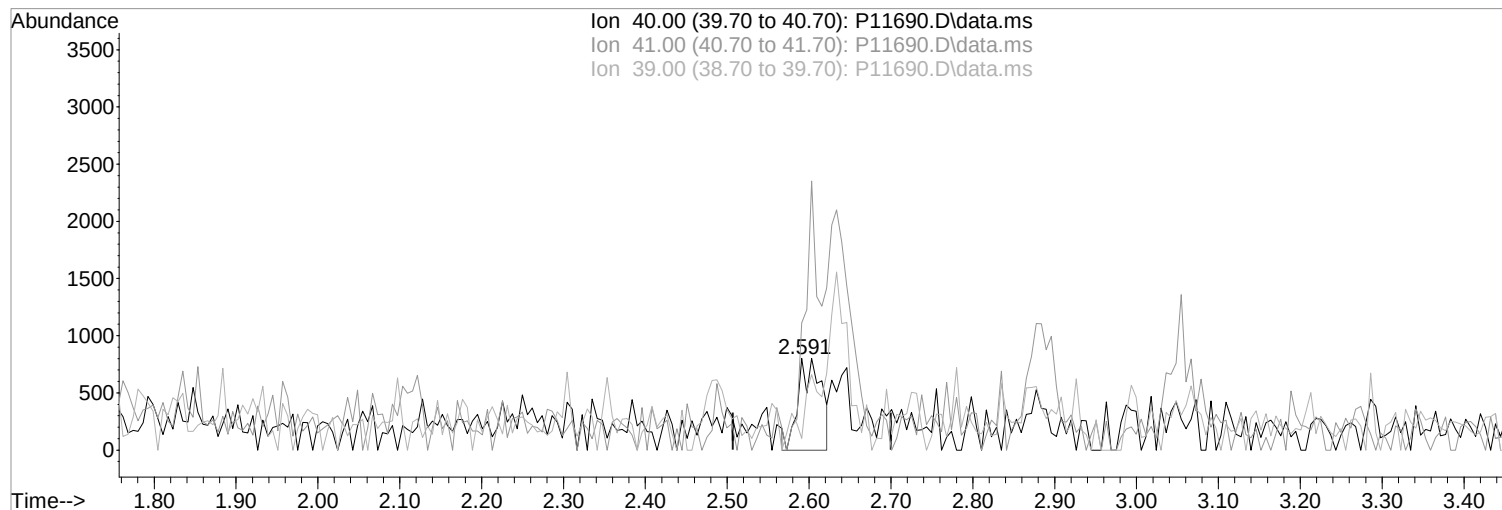
Poor integration.

09/01/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(19) Acetonitrile

Manual Integration:

2.591min (-0.006) 2.77 ppb m

After

response 1534

Poor integration.

Ion	Exp%	Act%
40.00	100	100
41.00	195.10	138.95#
39.00	35.40	12.73#
0.00	0.00	0.00

09/01/17

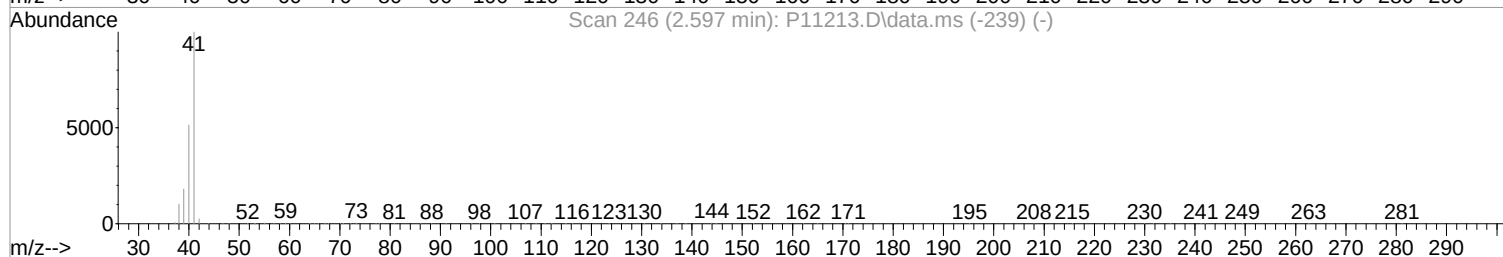
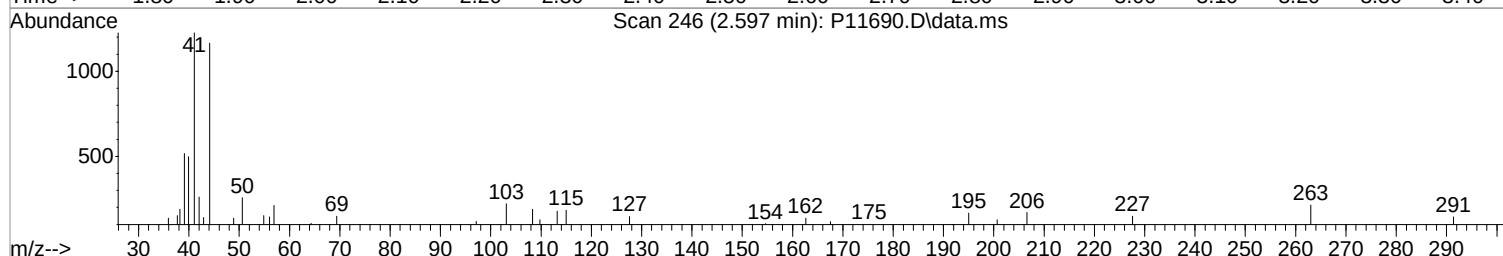
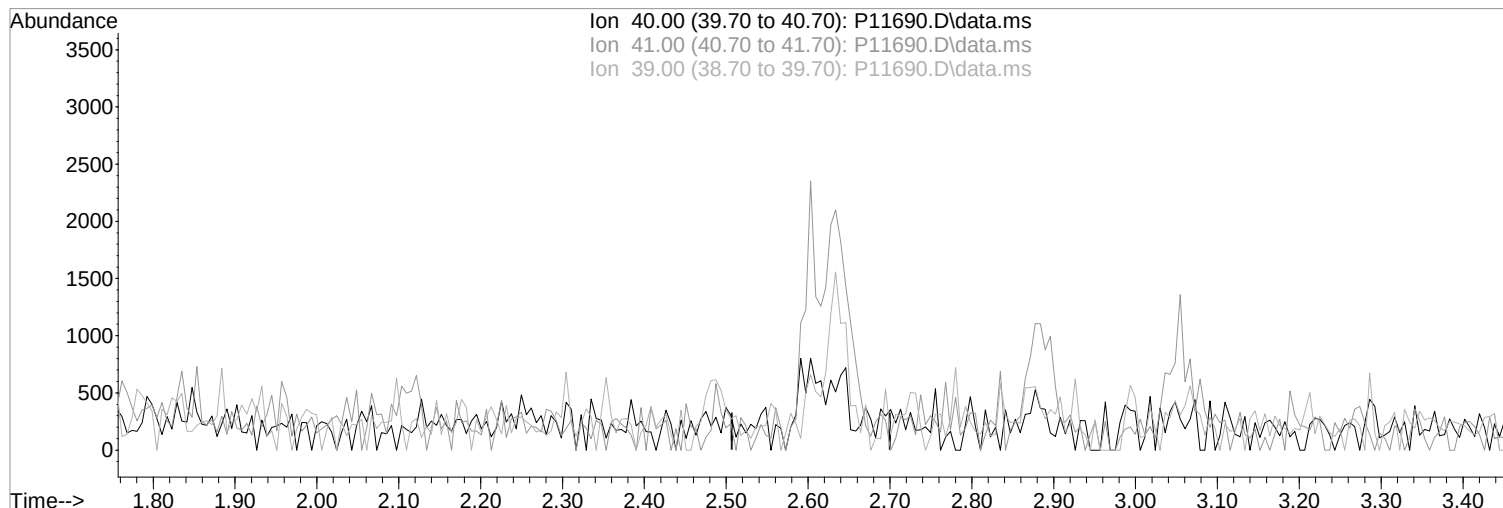
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(19) Acetonitrile

Manual Integration:

2.597min (-2.597) 0.00 ppb

Before

response 0

Ion	Exp%	Act%
40.00	100	0.00
41.00	195.10	0.00#
39.00	35.40	0.00#
0.00	0.00	0.00

09/01/17

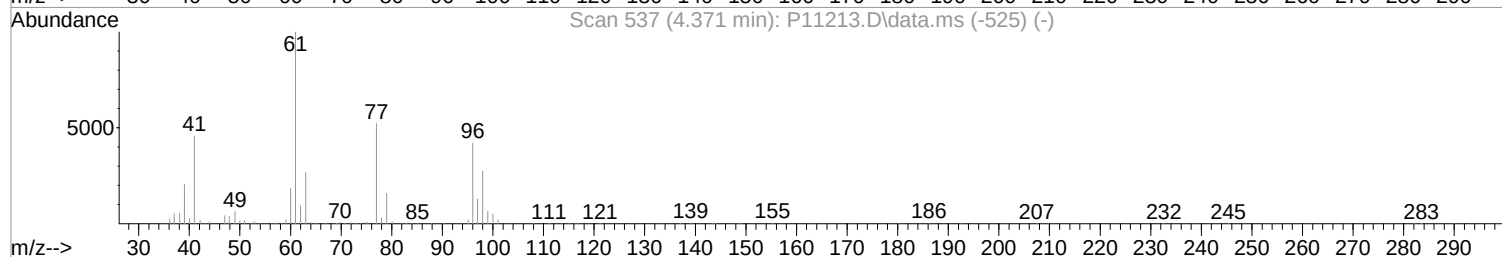
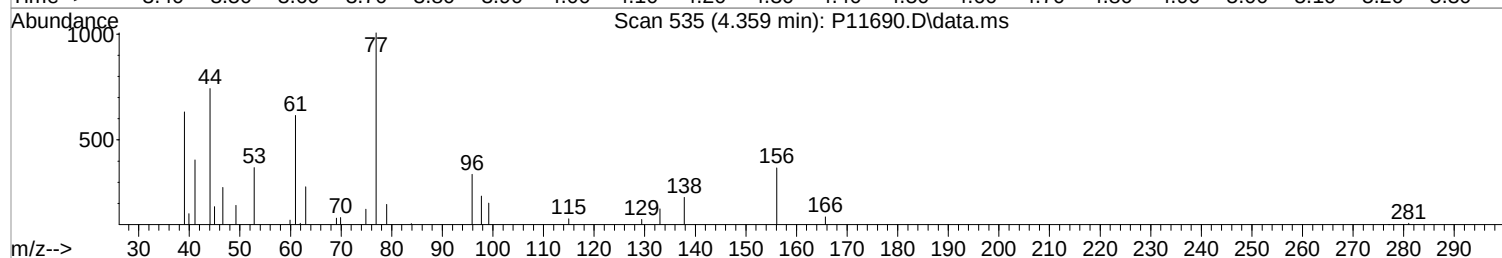
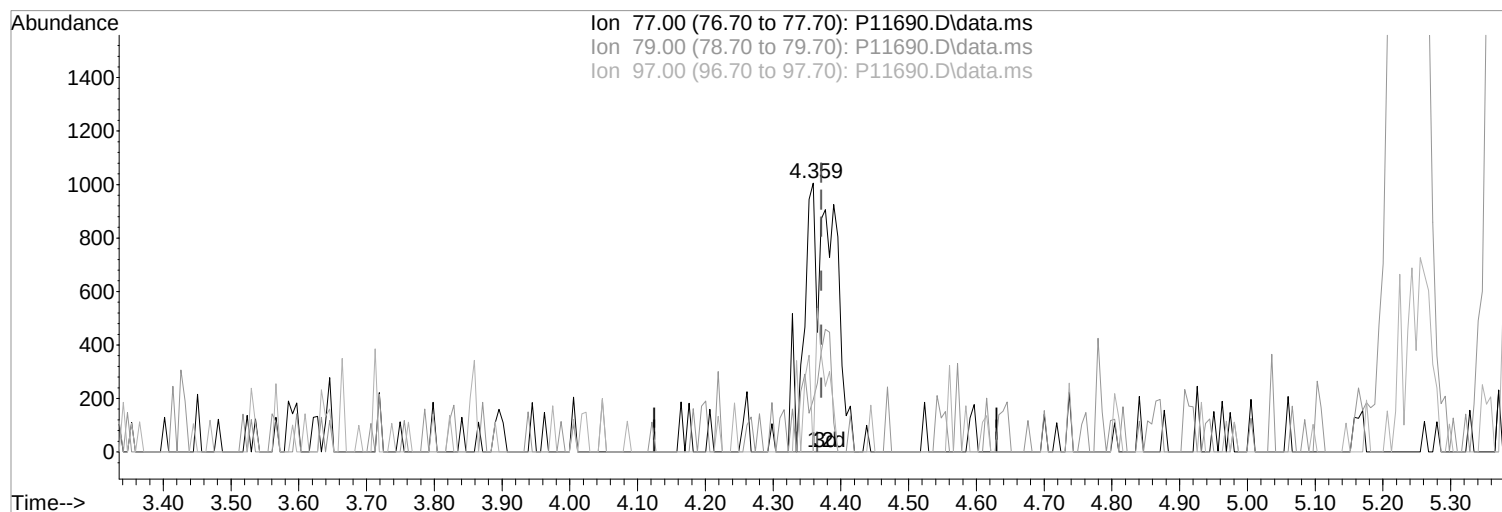
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(33) 2,2-Dichloropropane

4.359min (-0.012) 0.79 ppb m

response 3135

Ion	Exp%	Act%
77.00	100	100
79.00	30.10	19.38
97.00	24.60	23.36
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

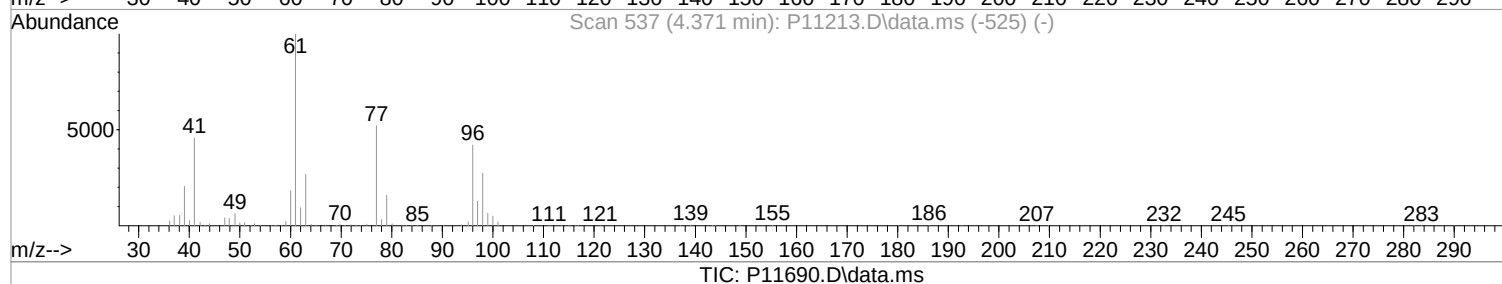
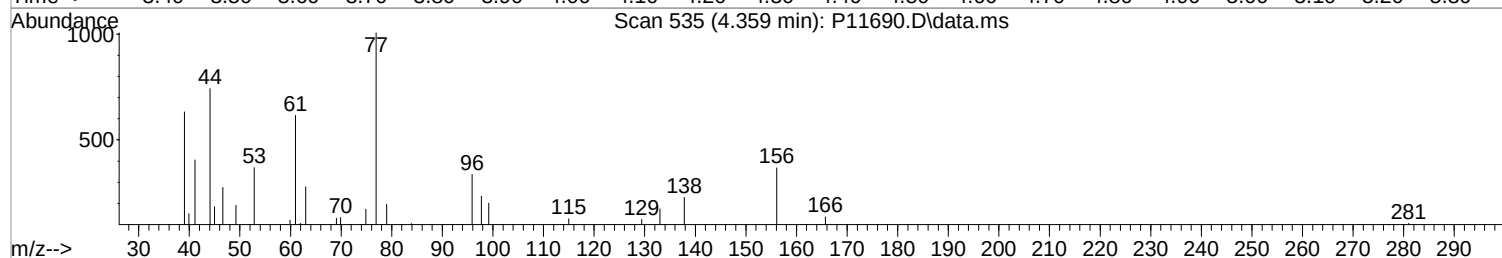
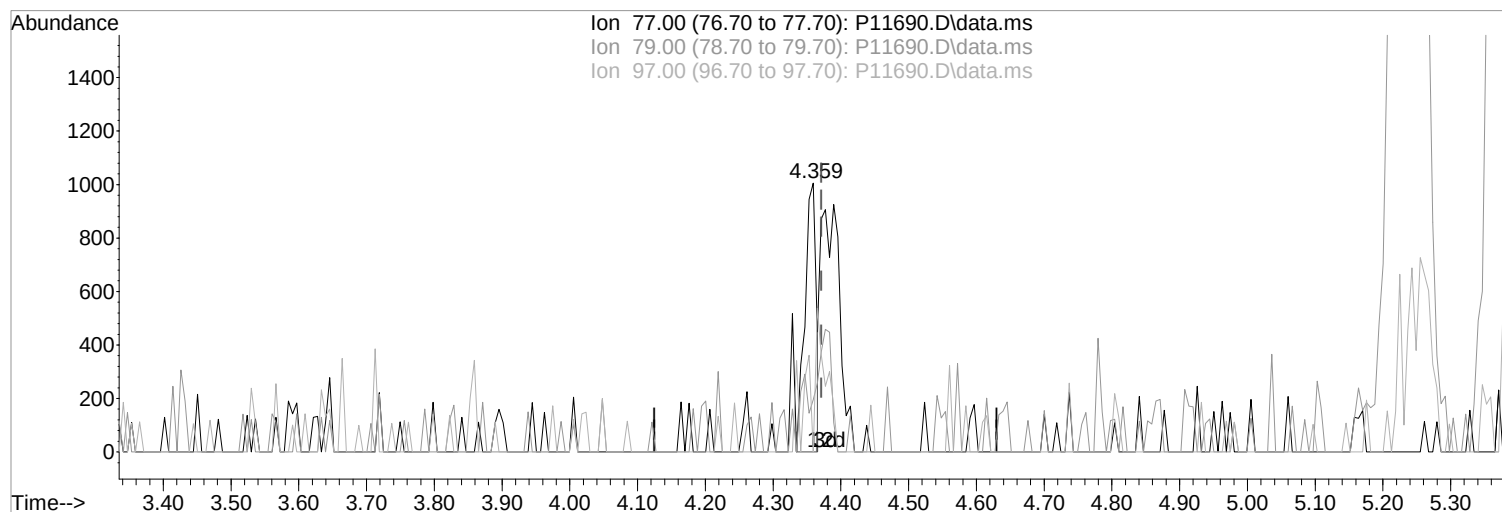
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



(33) 2,2-Dichloropropane

Manual Integration:

4.359min (-0.012) 0.30 ppb

Before

response 1168

Ion	Exp%	Act%
77.00	100	100
79.00	30.10	19.38
97.00	24.60	23.36
0.00	0.00	0.00

09/01/17

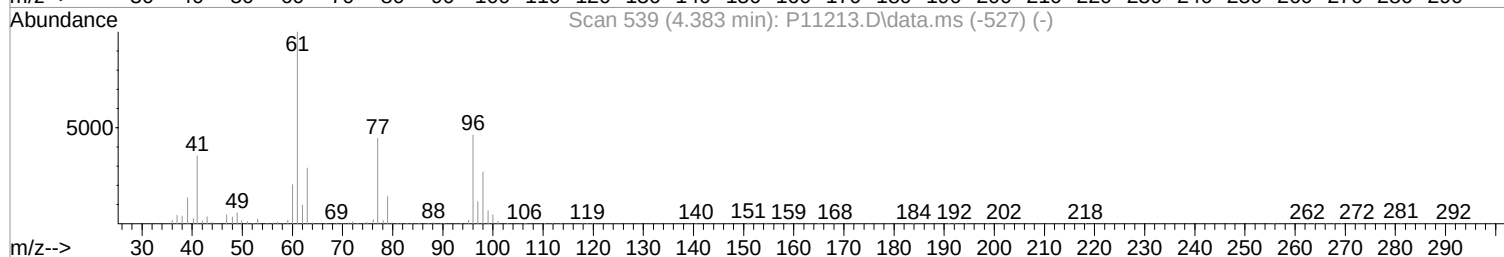
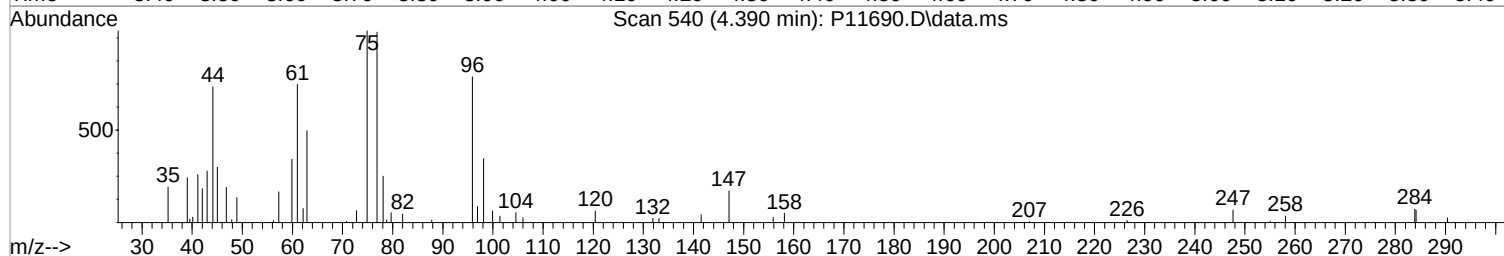
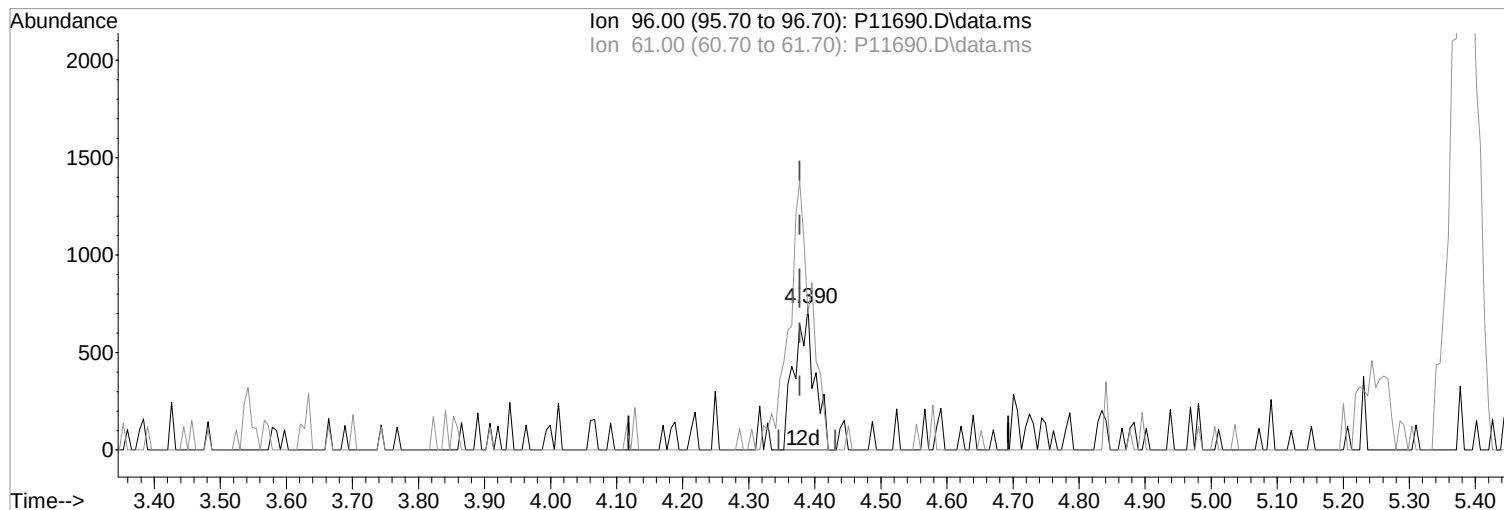
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:20:58 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(34) cis-1,2-Dichloroethene (P)

4.390min (+0.012) 0.50 ppb m

response 1545

Ion	Exp%	Act%
96.00	100	100
61.00	217.50	95.49#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

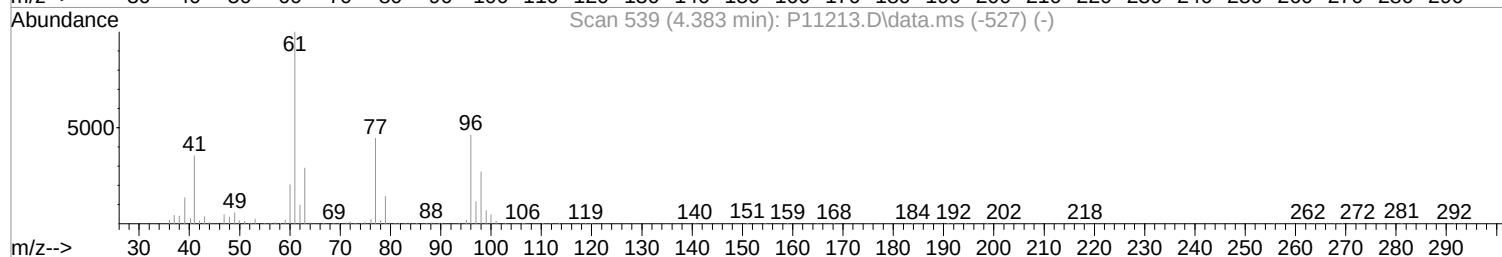
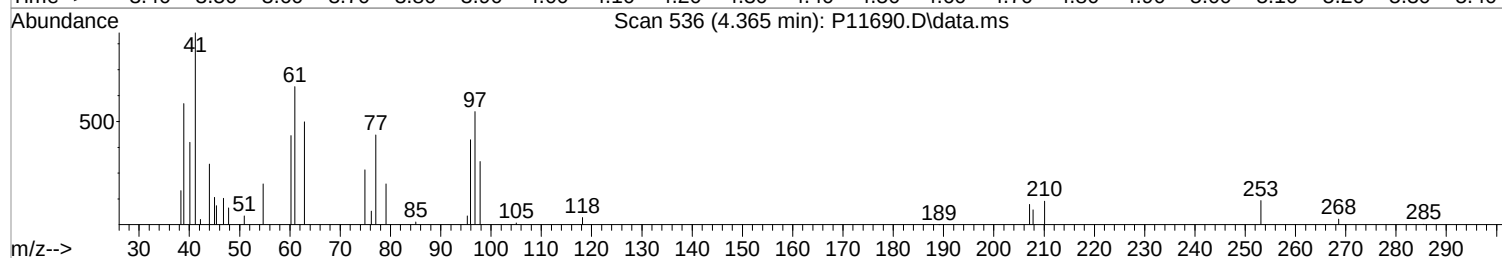
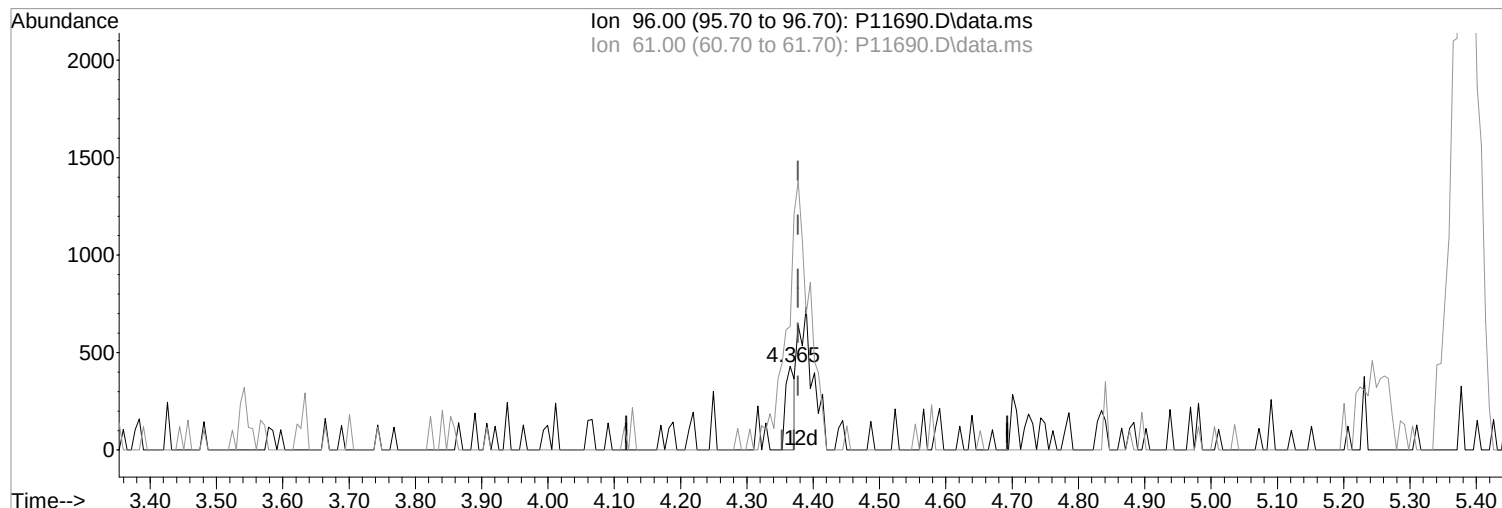
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(34) cis-1,2-Dichloroethene (P)

Manual Integration:

4.365min (-0.012) 0.13 ppb

Before

response 414

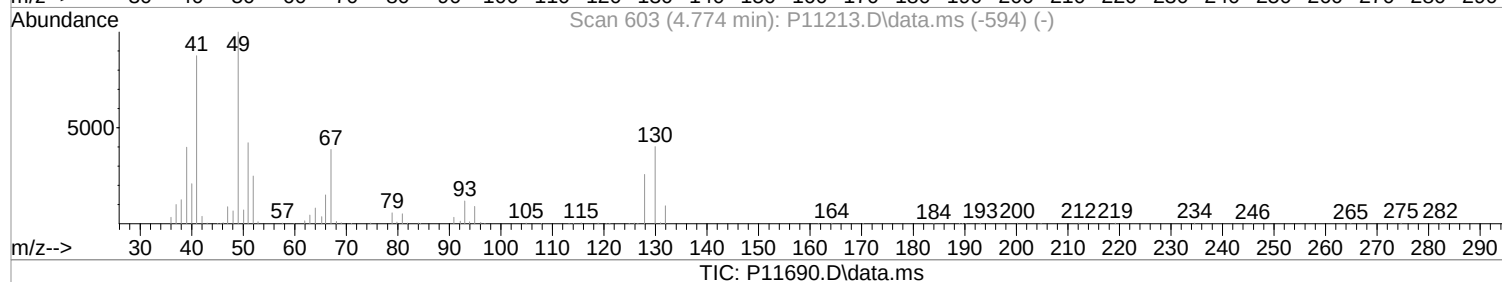
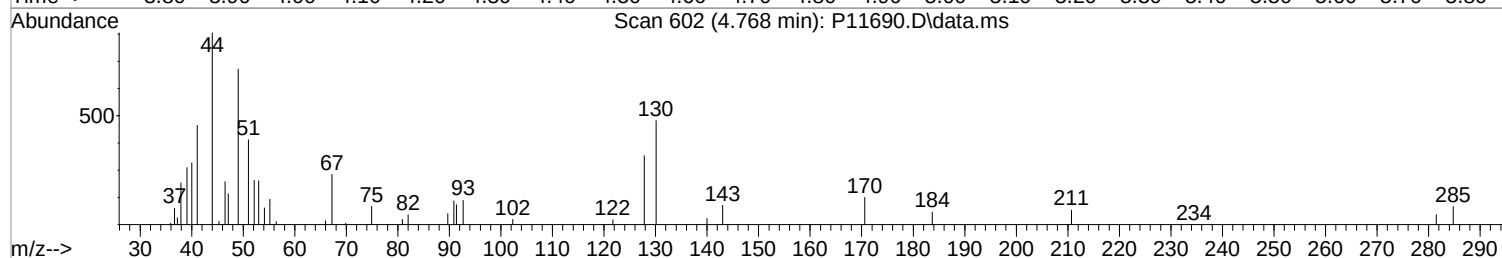
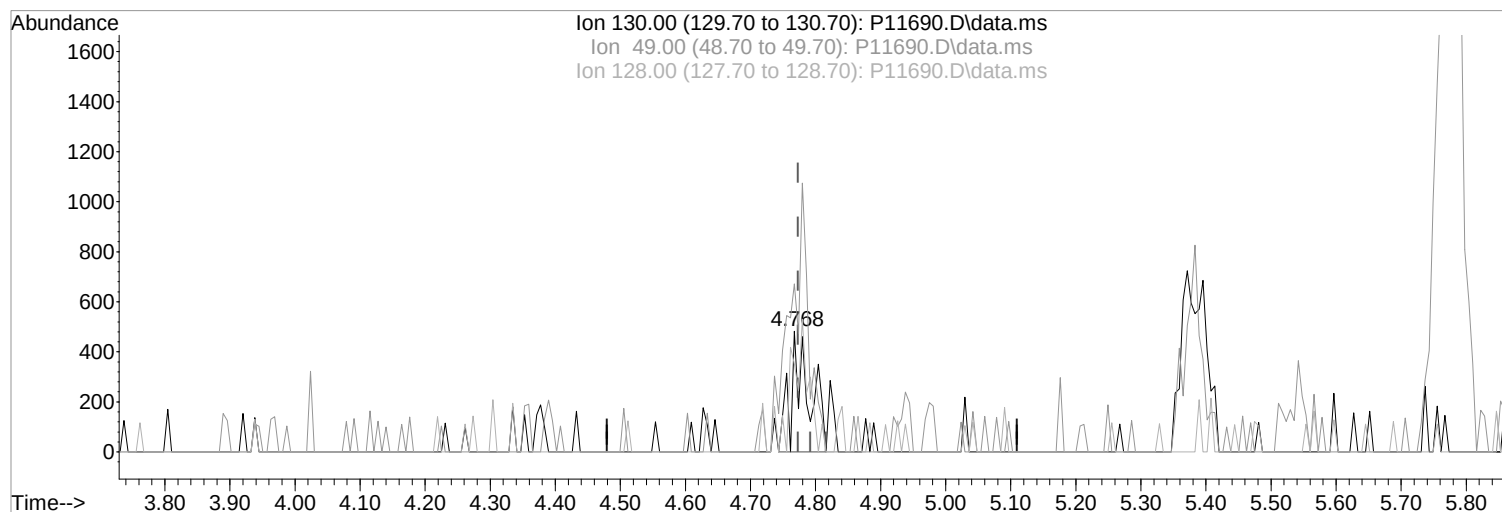
Ion	Exp%	Act%
96.00	100	100
61.00	217.50	147.79#
0.00	0.00	0.00
0.00	0.00	0.00

09/01/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



(37) Bromochloromethane

Manual Integration:

4.768min (-0.006) 0.52 ppb m

After

response 962

Poor integration.

Ion	Exp%	Act%
130.00	100	100
49.00	255.50	139.21#
128.00	66.10	73.03
0.00	0.00	0.00

09/01/17

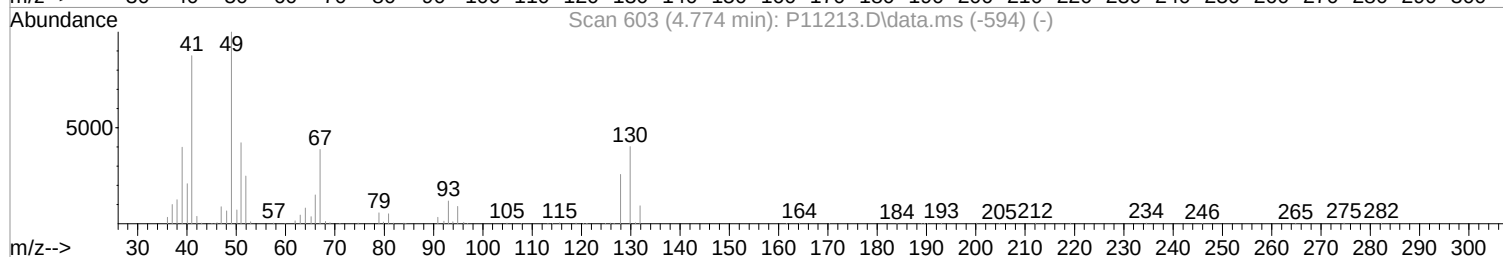
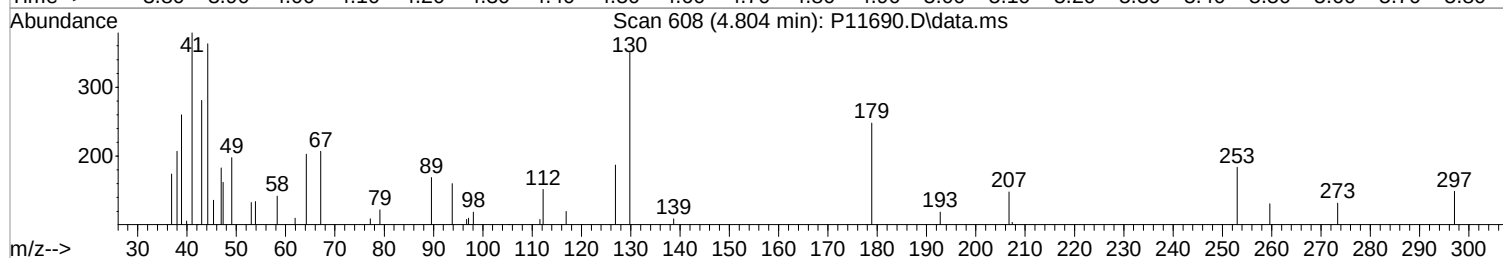
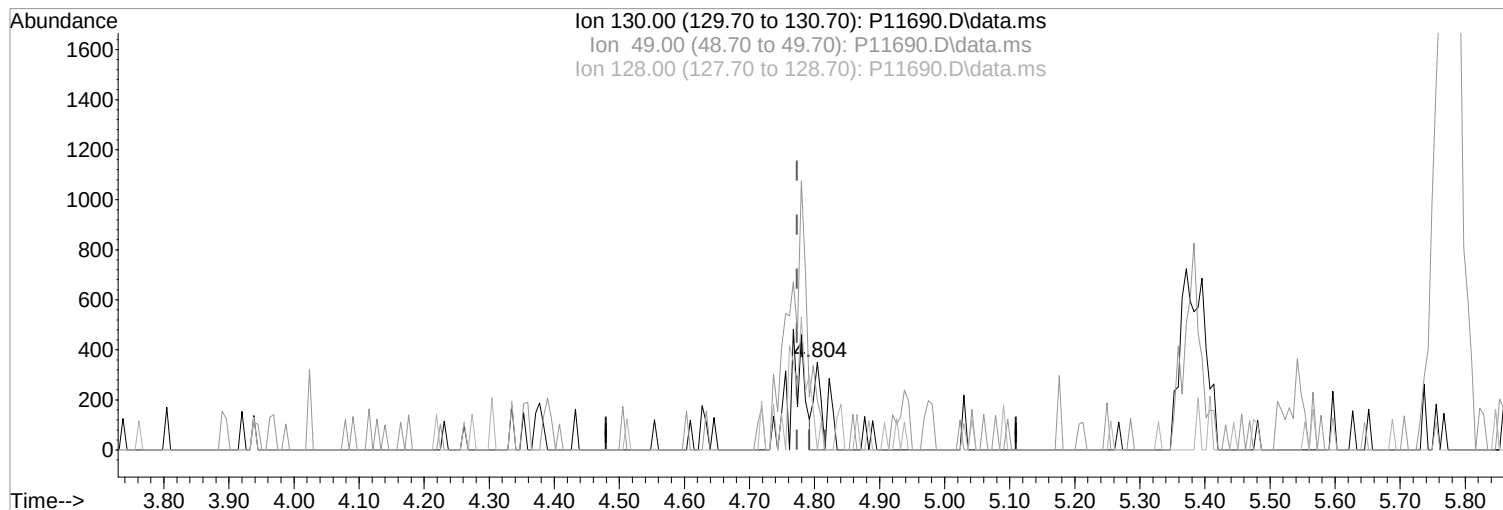
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(37) Bromochloromethane

Manual Integration:

4.804min (+0.031) 0.15 ppb

Before

response 271

Ion Exp% Act%

09/01/17

130.00 100 100

49.00 255.50 56.57#

128.00 66.10 0.00#

0.00 0.00 0.00

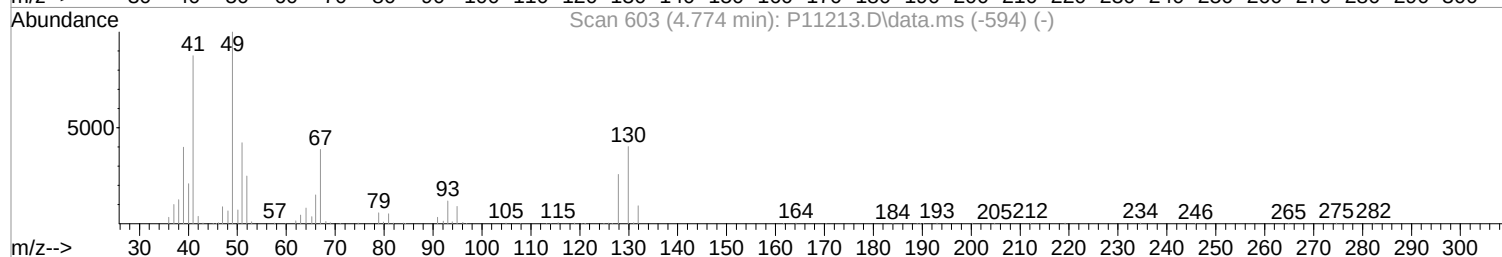
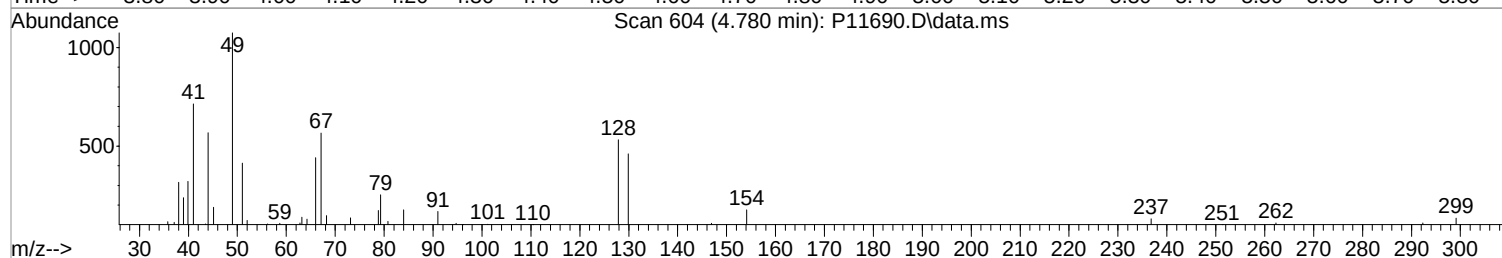
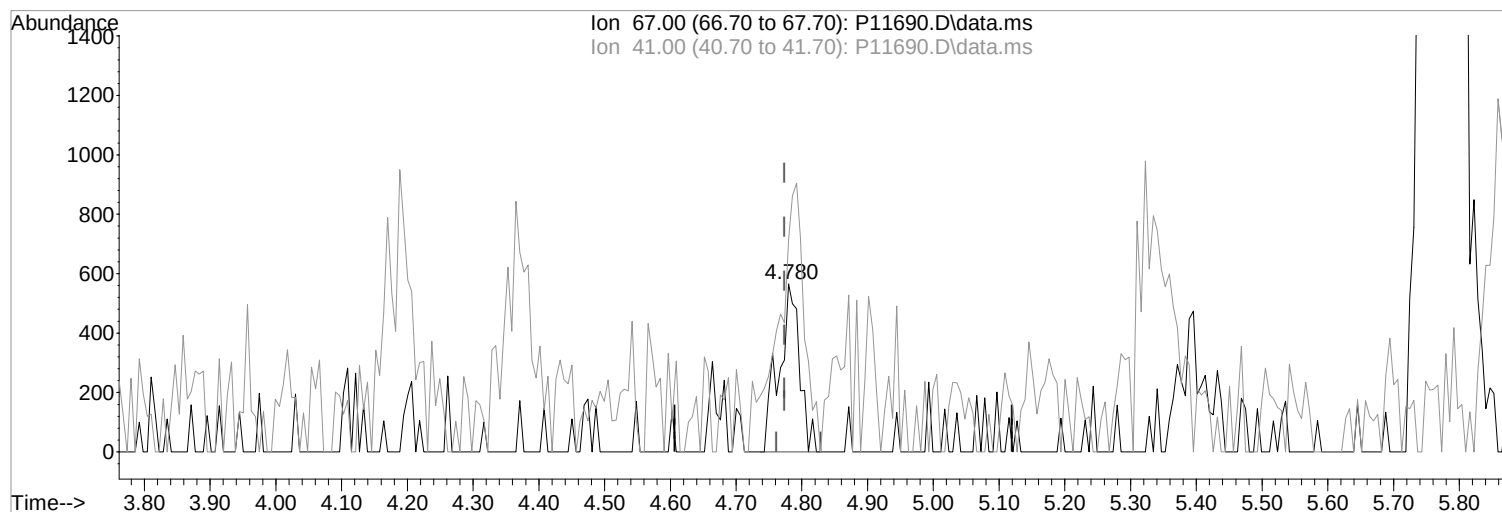
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(38) Methacrylonitrile

4.780min (+0.006) 0.60 ppb m

response 1233

Ion	Exp%	Act%
67.00	100	100
41.00	232.00	126.15#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

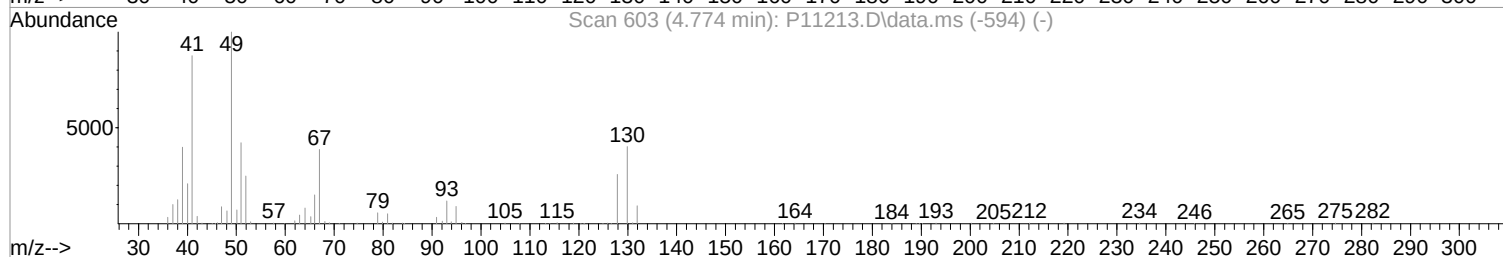
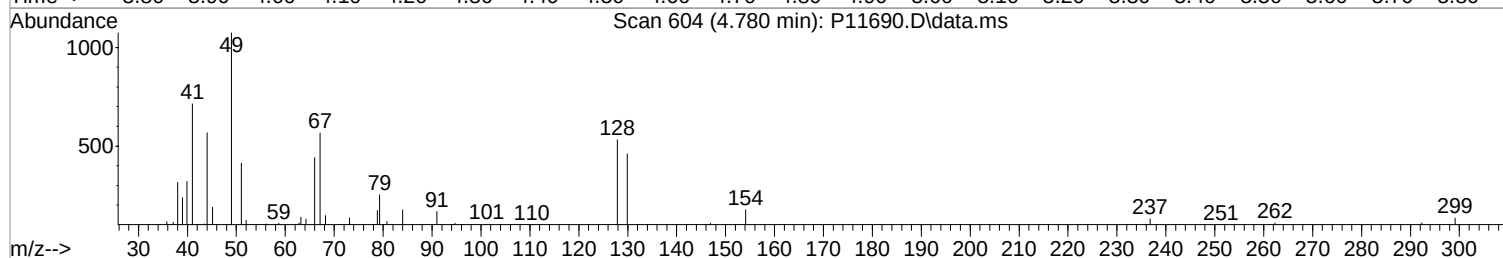
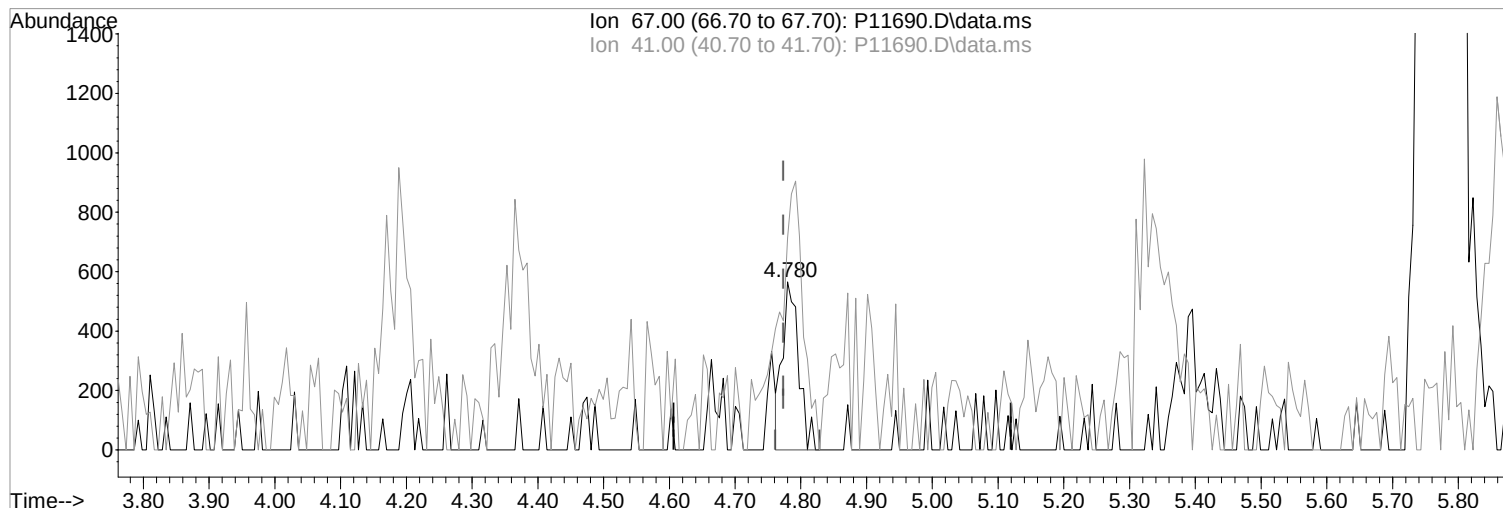
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(38) Methacrylonitrile

Manual Integration:

4.780min (+0.006) 0.47 ppb

Before

response 975

Ion	Exp%	Act%
67.00	100	100
41.00	232.00	126.15#
0.00	0.00	0.00
0.00	0.00	0.00

09/01/17

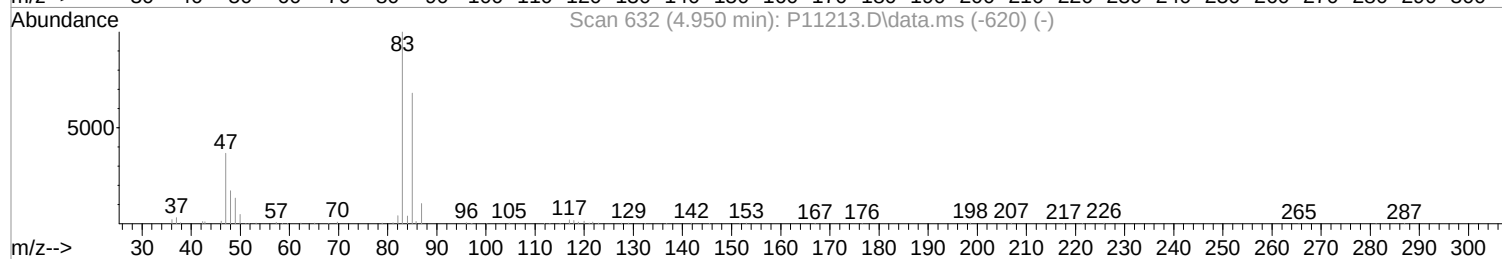
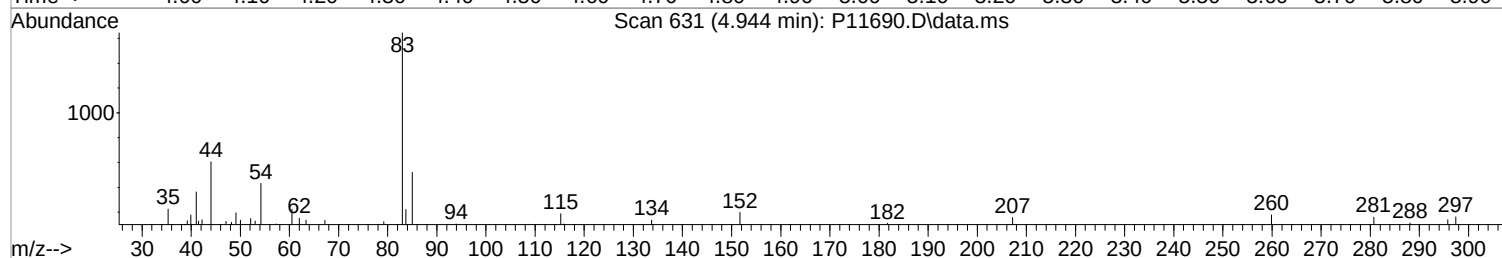
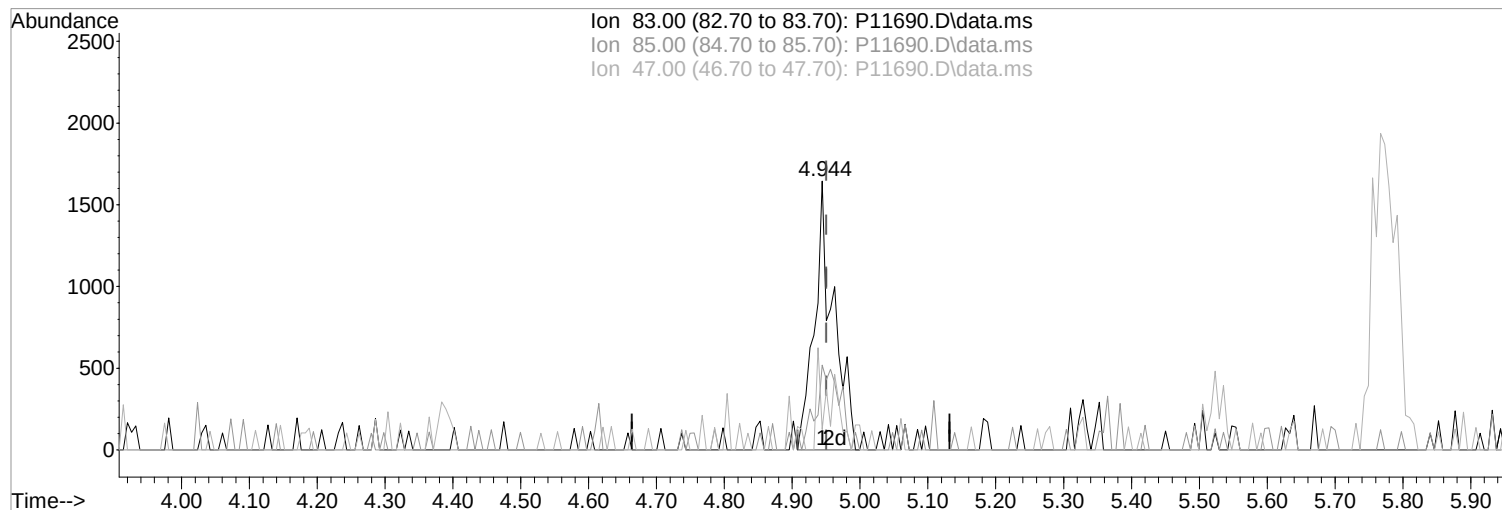
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(40) Chloroform (P)

4.944min (-0.006) 0.72 ppb m

response 3219

Ion	Exp%	Act%
83.00	100	100
85.00	68.00	31.55#
47.00	36.70	7.60#
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

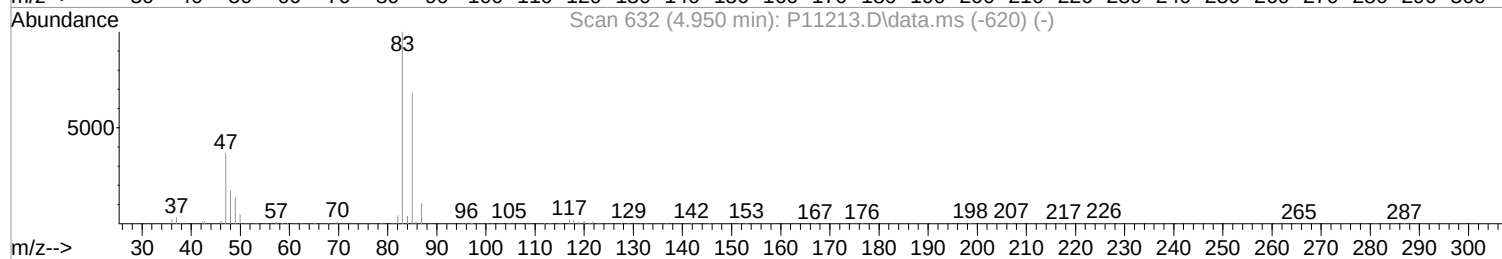
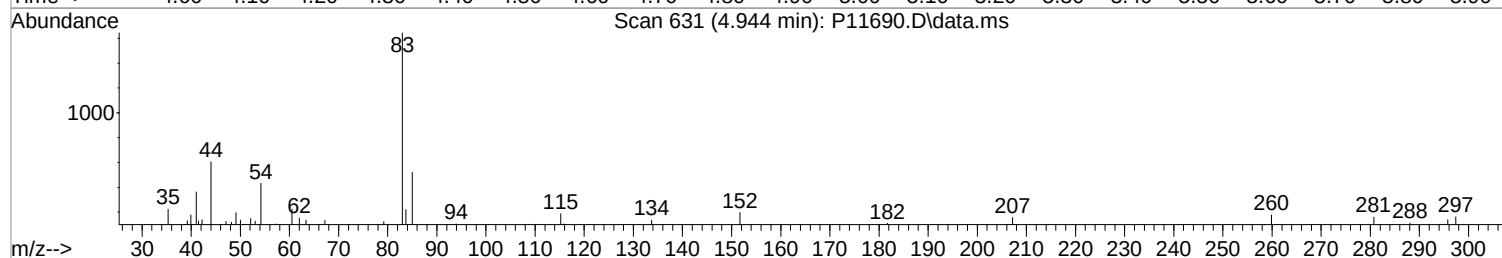
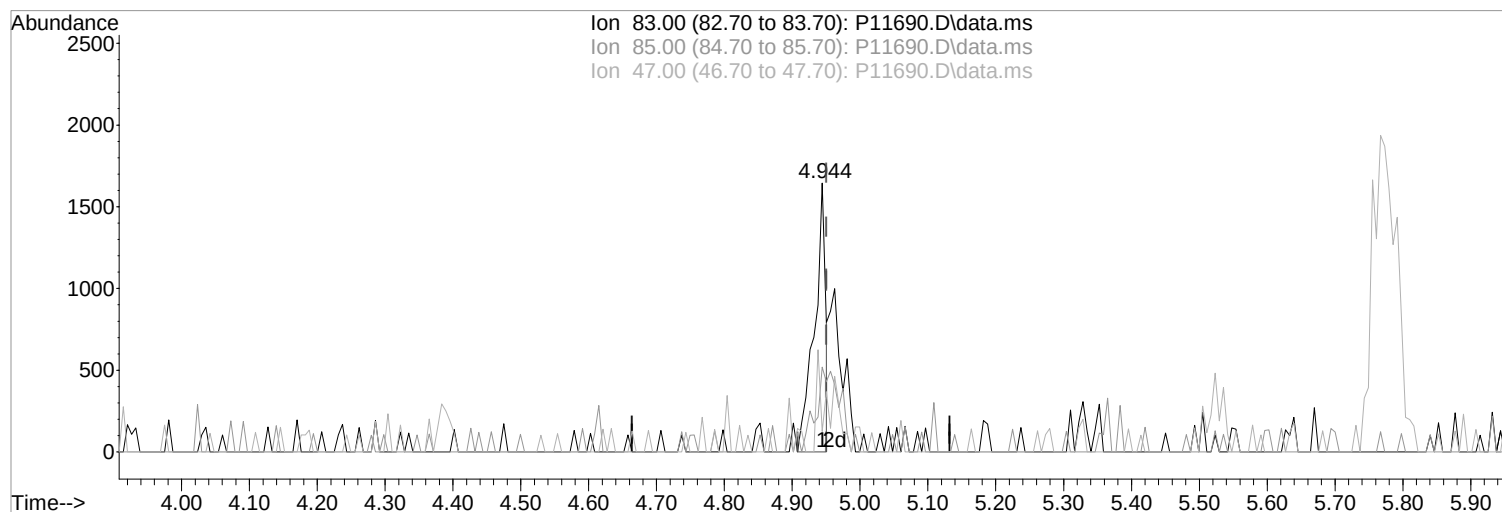
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(40) Chloroform (P)

Manual Integration:

4.944min (-0.006) 0.43 ppb

Before

response 1894

Ion	Exp%	Act%
83.00	100	100
85.00	68.00	27.81#
47.00	36.70	6.70#
0.00	0.00	0.00

09/01/17

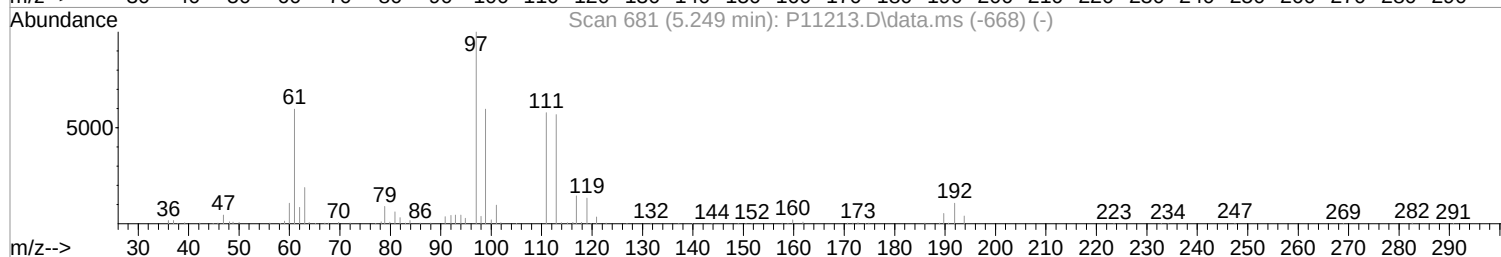
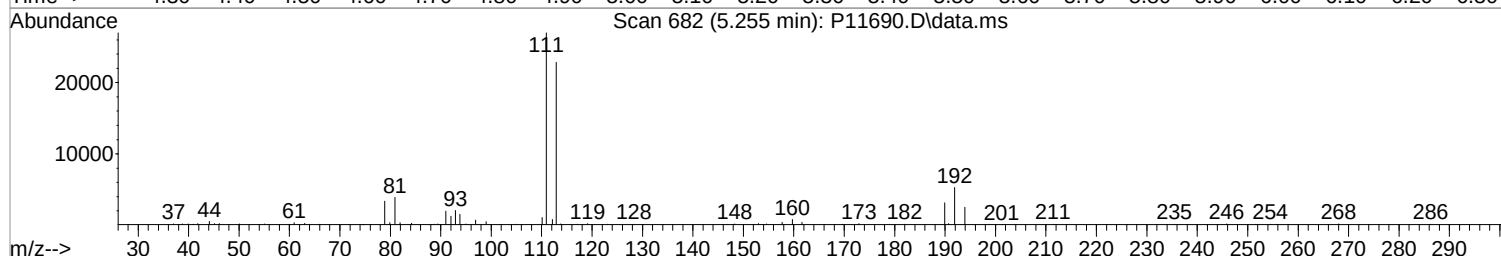
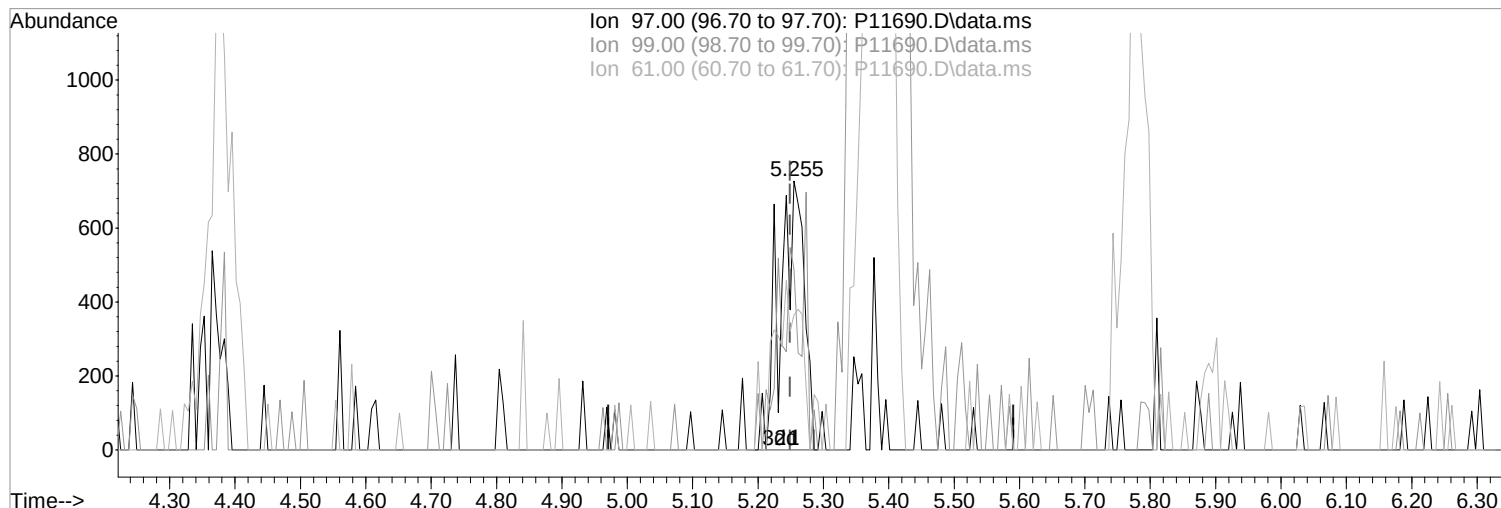
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(41) 1,1,1-Trichloroethane (P)

5.255min (+0.006) 0.46 ppb m

response 1885

Ion	Exp%	Act%
97.00	100	100
99.00	59.70	67.13
61.00	59.70	50.21
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

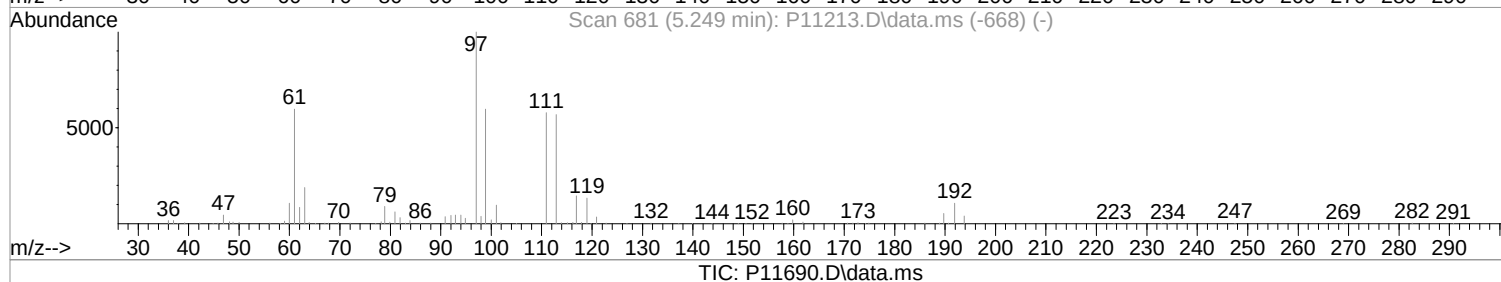
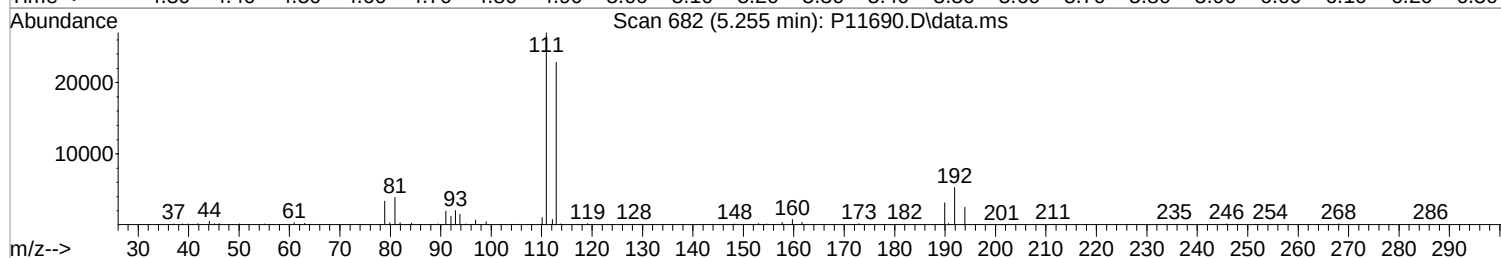
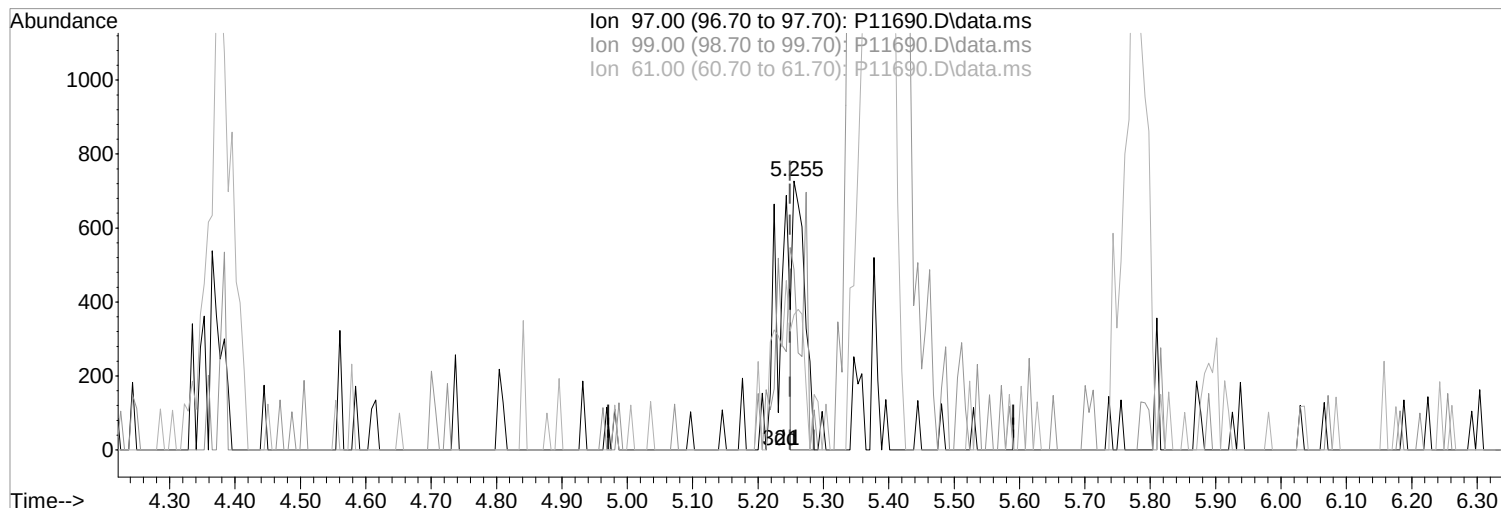
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



(41) 1,1,1-Trichloroethane (P)

Manual Integration:

5.255min (+0.006) 0.23 ppb

Before

response 937

Ion	Exp%	Act%
97.00	100	100
99.00	59.70	67.13
61.00	59.70	50.21
0.00	0.00	0.00

09/01/17

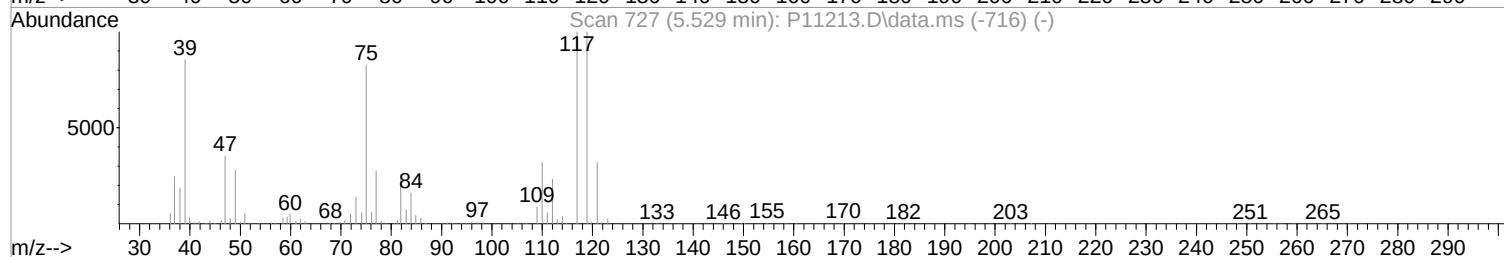
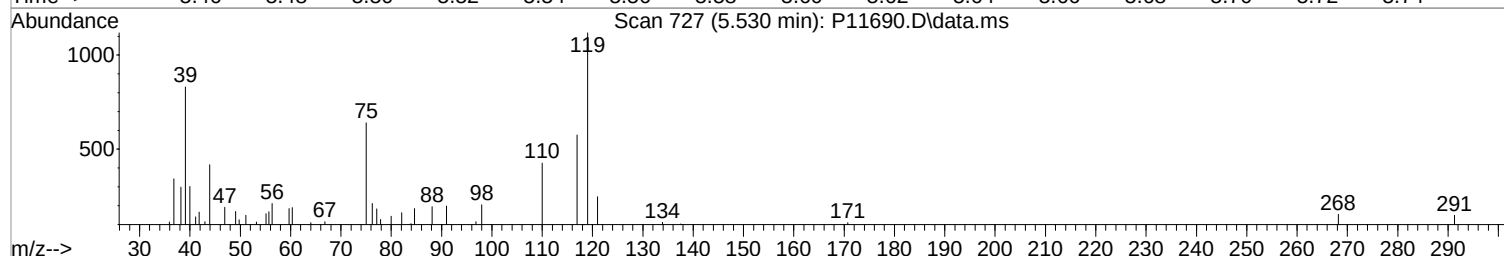
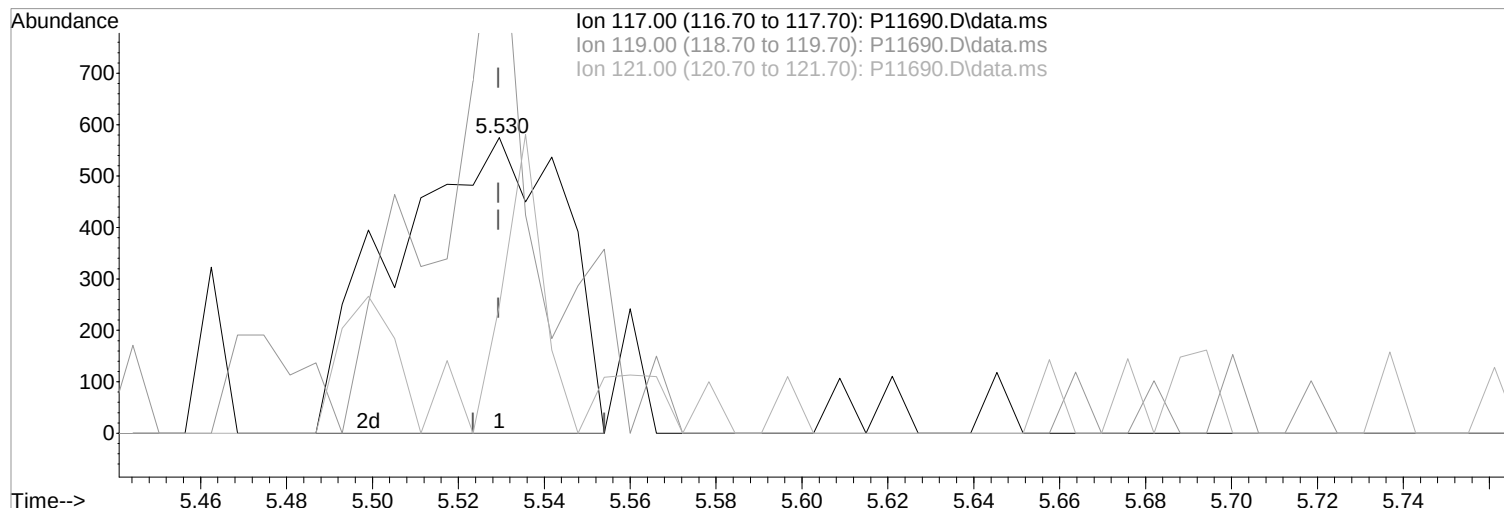
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(46) Carbontetrachloride (P)

5.530min (+0.000) 0.48 ppb m

response 1576

Ion	Exp%	Act%
117.00	100	100
119.00	100.10	194.61#
121.00	31.80	43.13
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

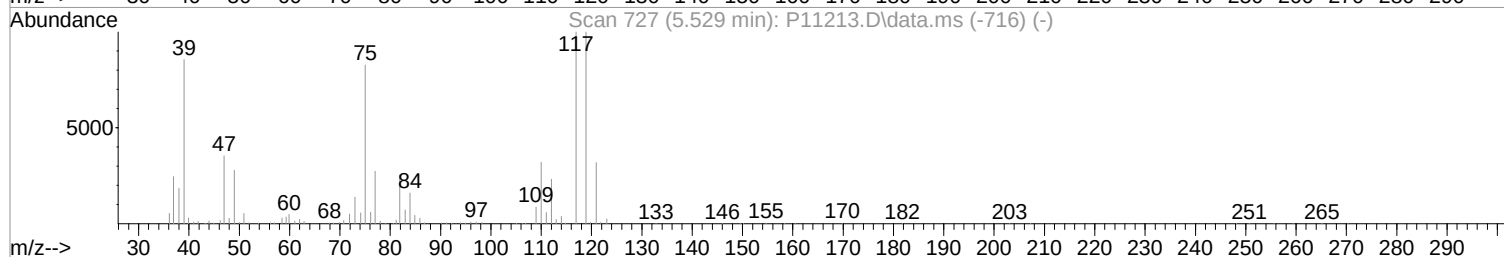
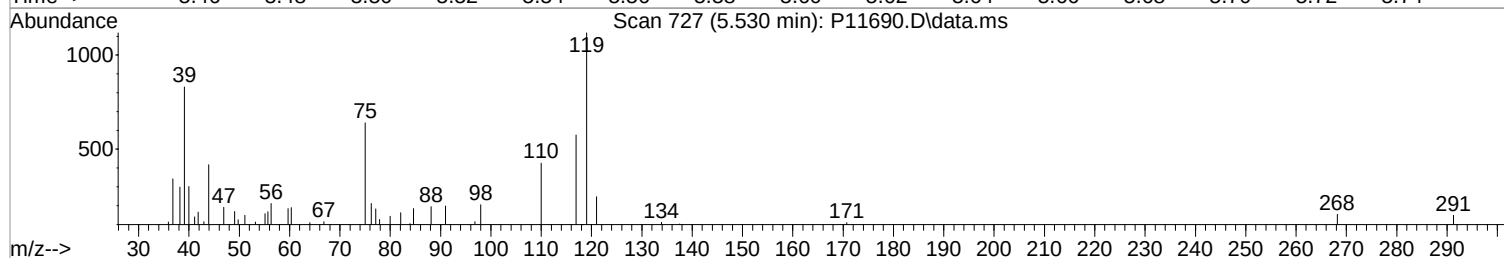
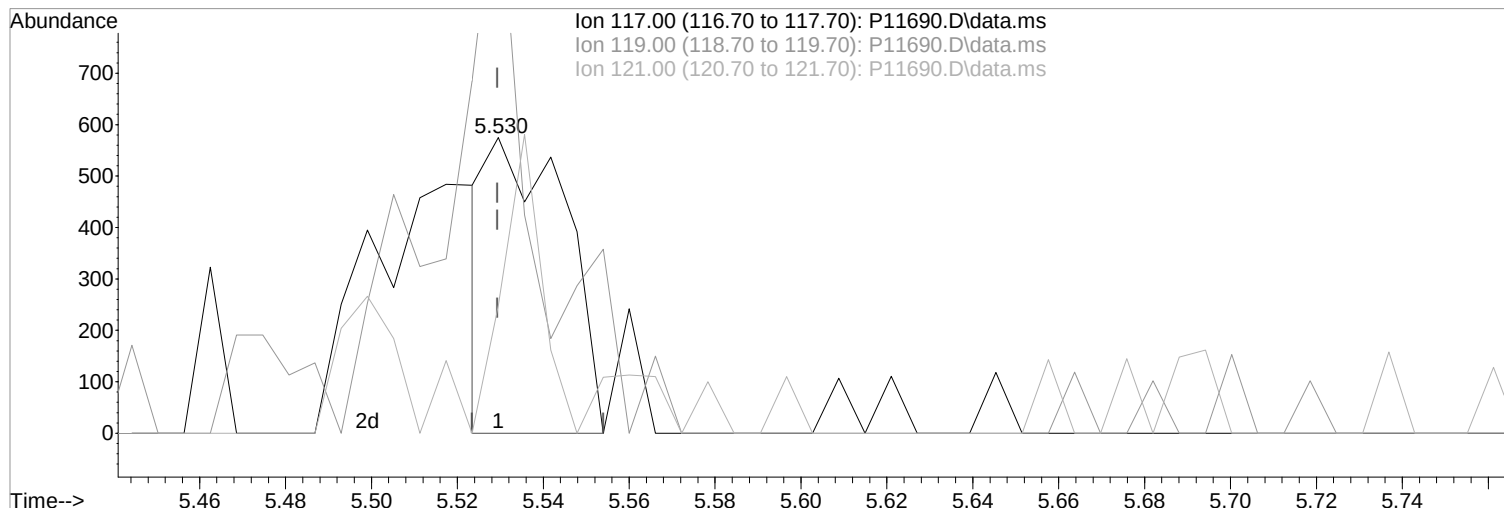
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(46) Carbontetrachloride (P)

Manual Integration:

5.530min (+0.000) 0.22 ppb

Before

response 715

Ion	Exp%	Act%
117.00	100	100
119.00	100.10	194.61#
121.00	31.80	43.13
0.00	0.00	0.00

09/01/17

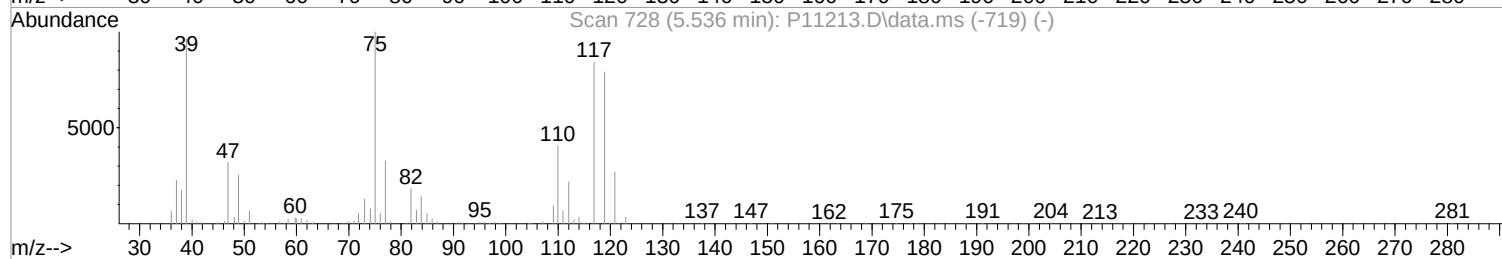
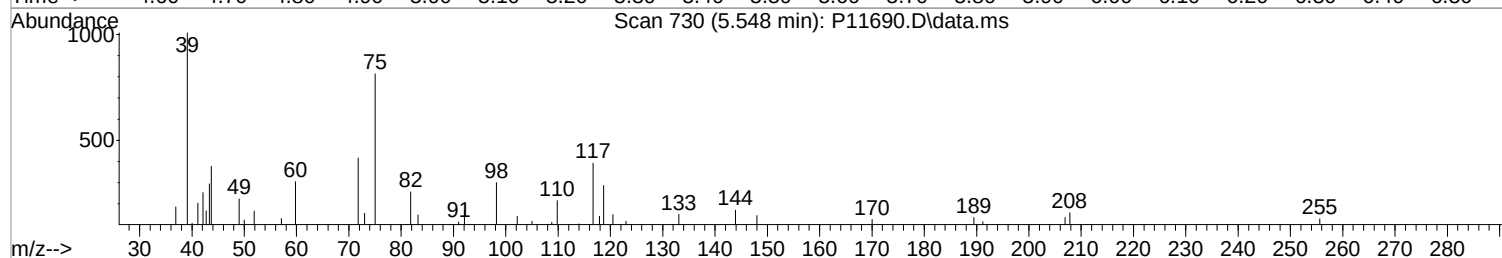
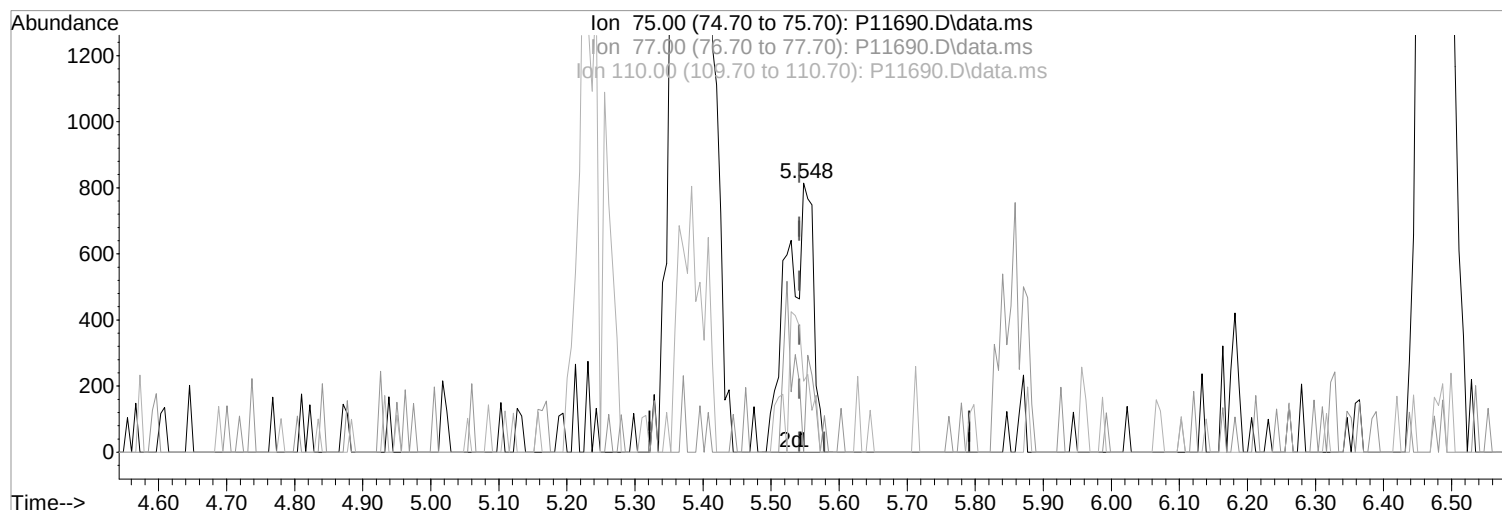
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(47) 1,1-Dichloropropene

5.548min (+0.006) 0.65 ppb m

response 2174

Ion	Exp%	Act%
75.00	100	100
77.00	32.60	0.00#
110.00	40.90	26.41
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

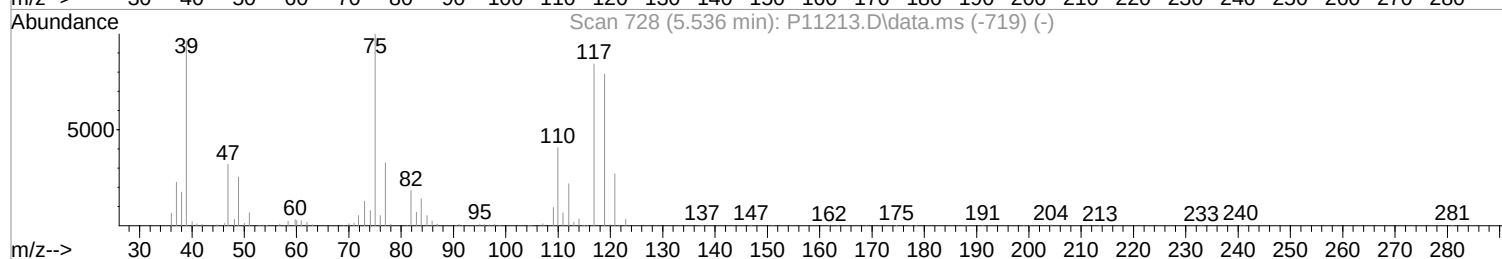
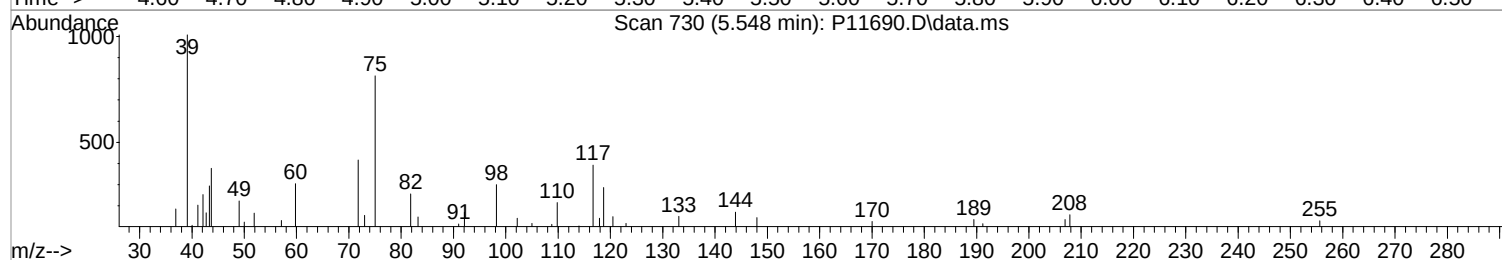
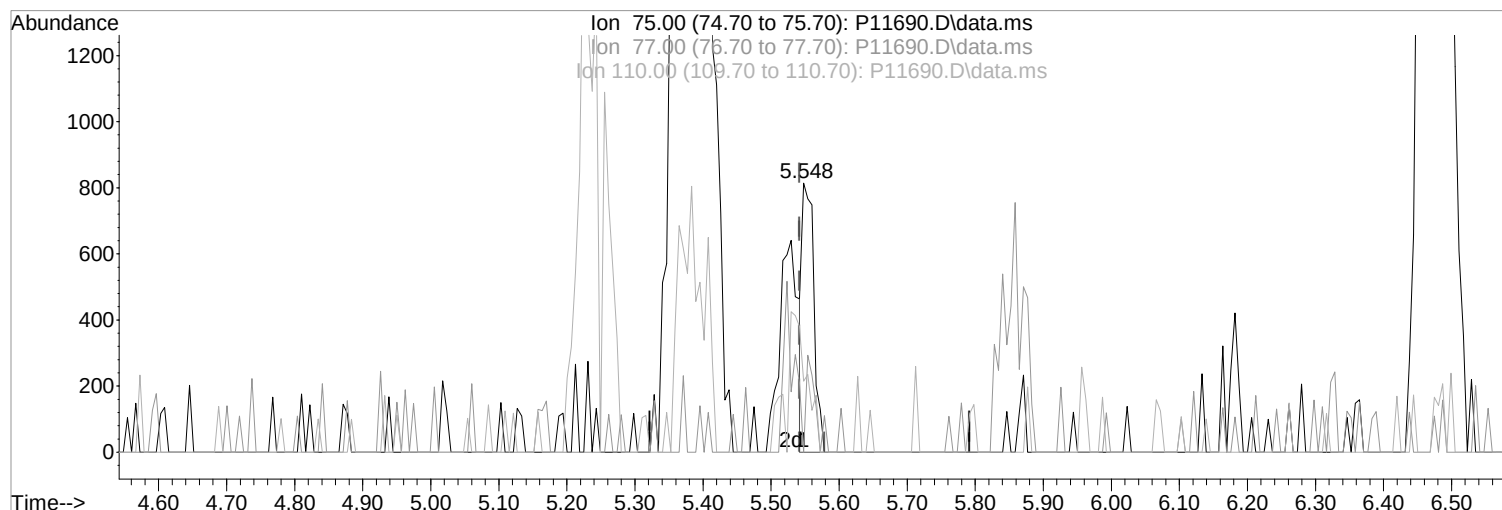
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(47) 1,1-Dichloropropene

Manual Integration:

5.548min (+0.006) 0.29 ppb

Before

response 973

Ion Exp% Act%

09/01/17

75.00 100 100

77.00 32.60 0.00#

110.00 40.90 26.41

0.00 0.00 0.00

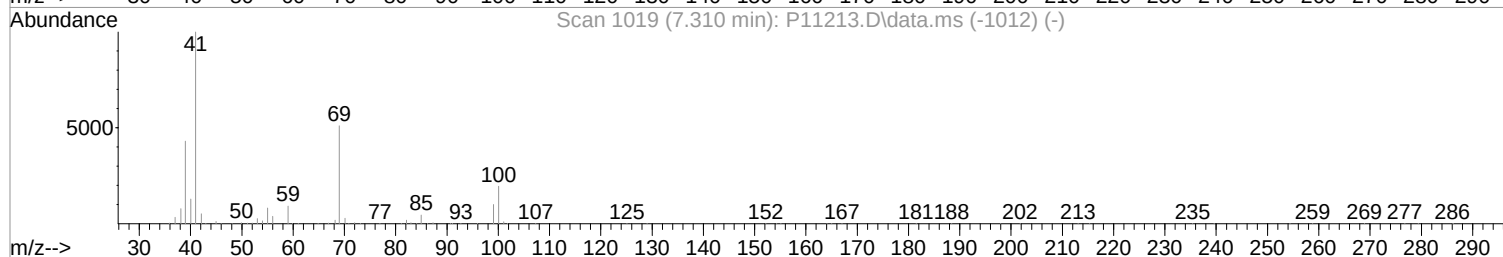
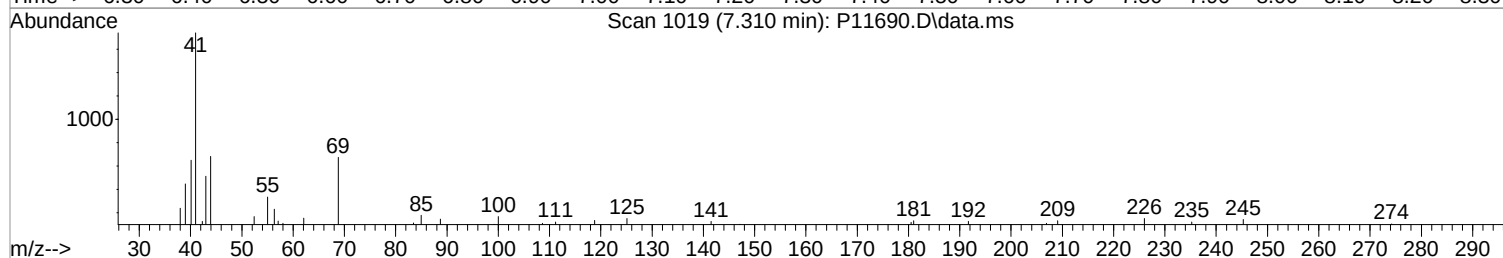
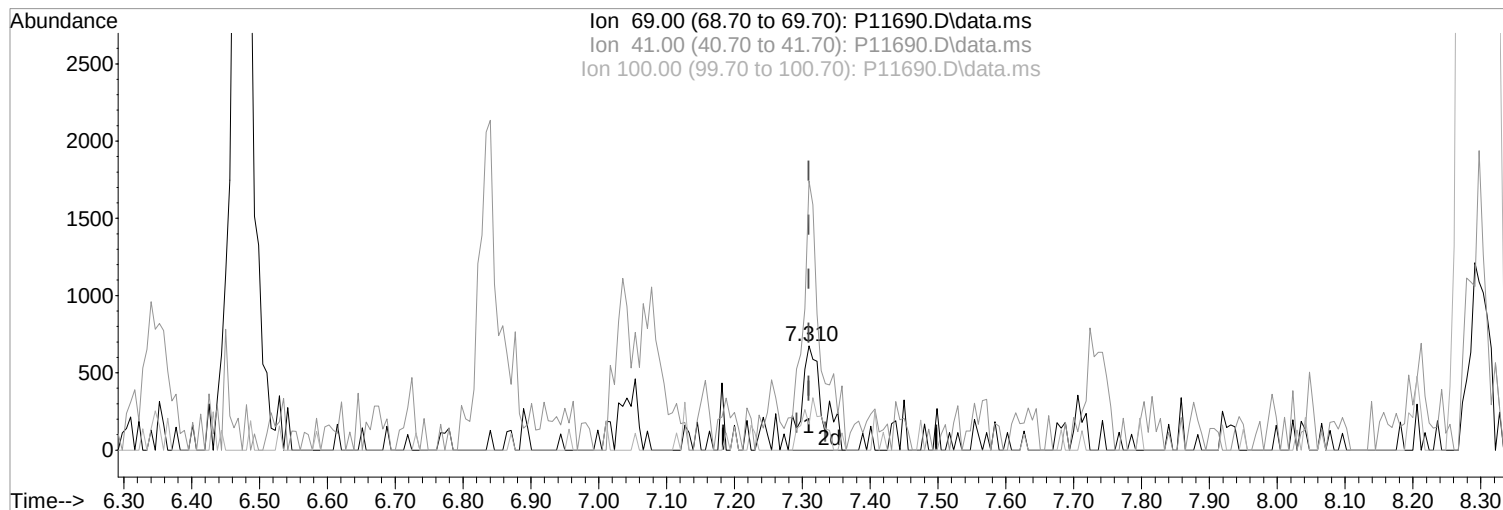
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(59) Methyl Methacrylate

7.310min (+0.000) 0.52 ppb m

response 1460

Ion	Exp%	Act%
69.00	100	100
41.00	198.00	257.93#
100.00	38.40	24.59
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

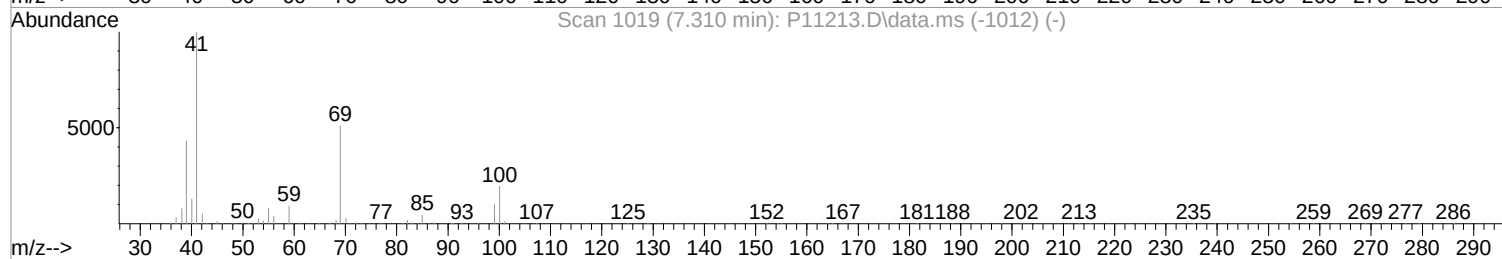
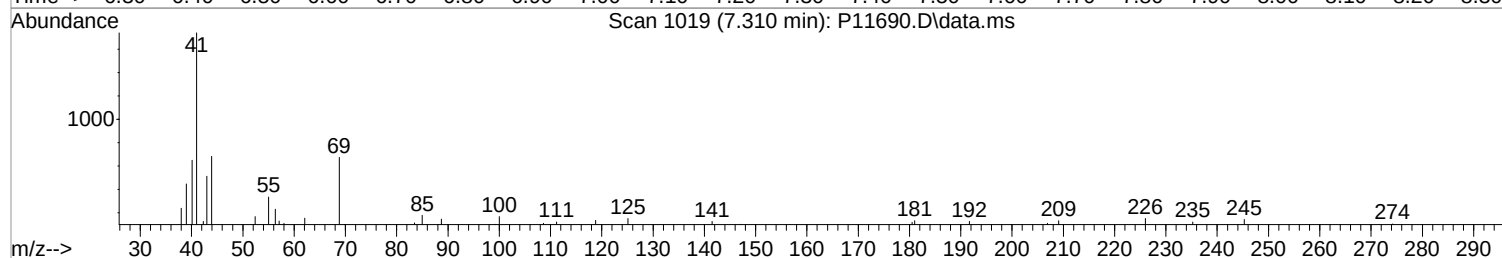
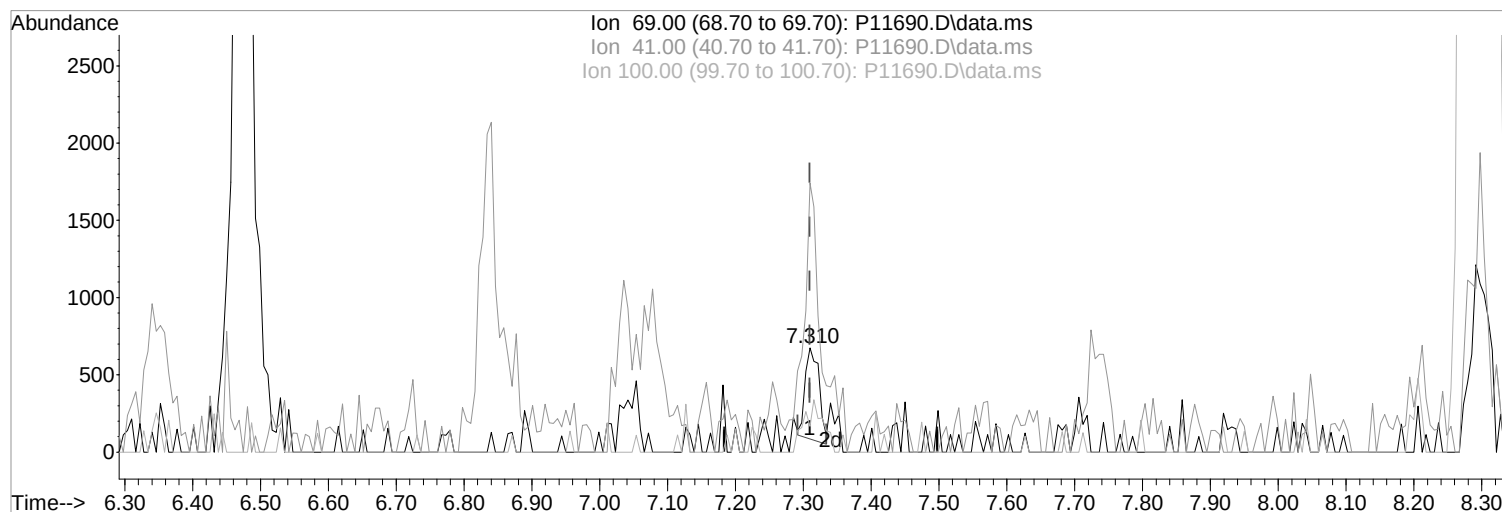
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(59) Methyl Methacrylate

Manual Integration:

7.310min (+0.000) 0.30 ppb

Before

response 849

Ion	Exp%	Act%
69.00	100	100
41.00	198.00	257.93#
100.00	38.40	24.59
0.00	0.00	0.00

09/01/17

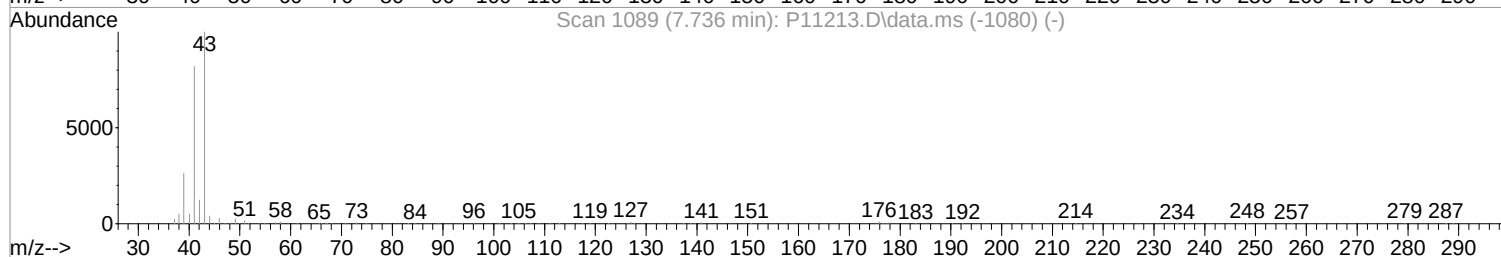
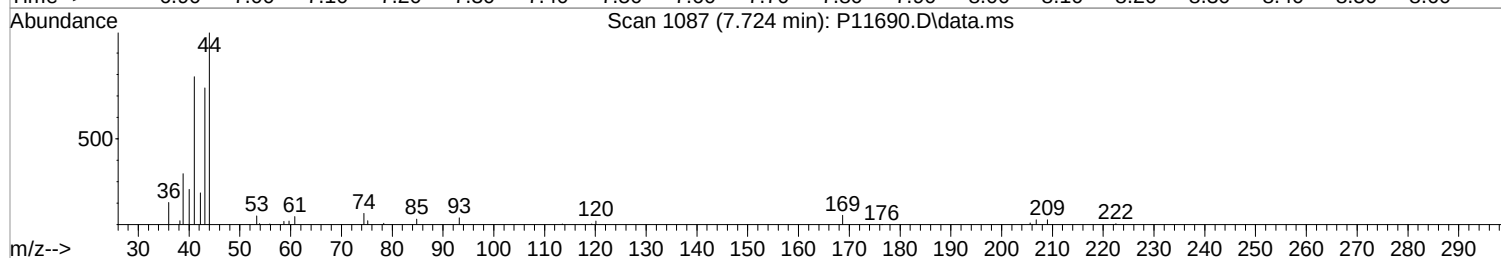
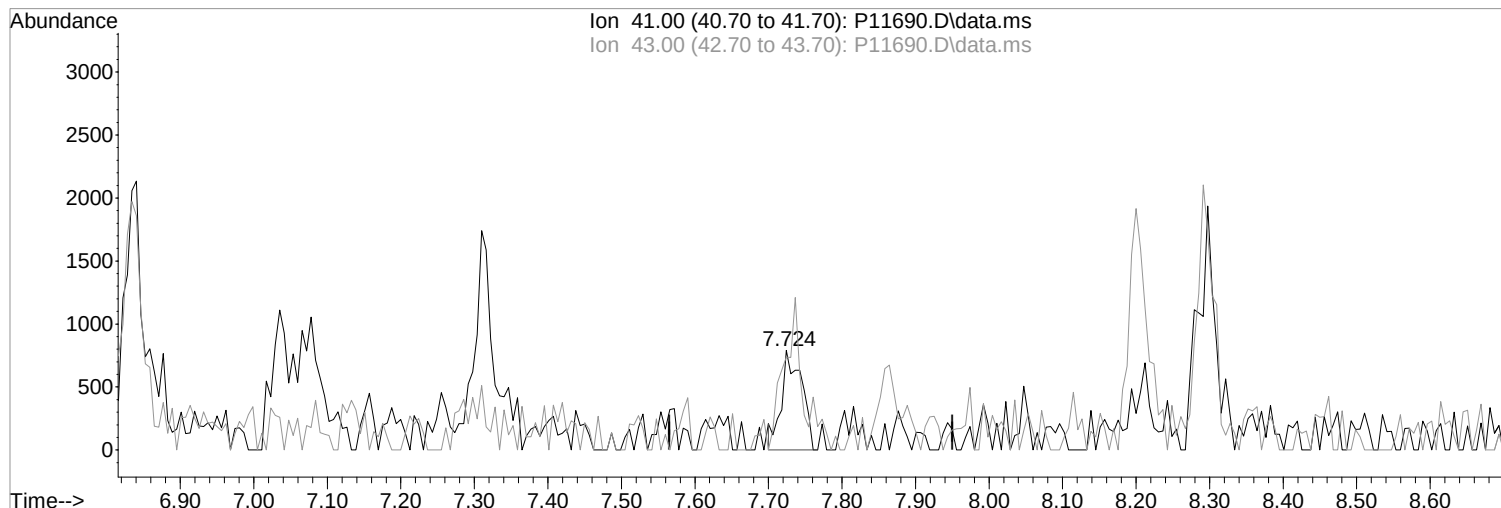
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(61) 2-Nitropropane

Manual Integration:

7.724min (-0.012) 1.01 ppb m

After

response 1499

Poor integration.

09/01/17

Ion	Exp%	Act%
41.00	100	100
43.00	122.10	93.29#
0.00	0.00	0.00
0.00	0.00	0.00

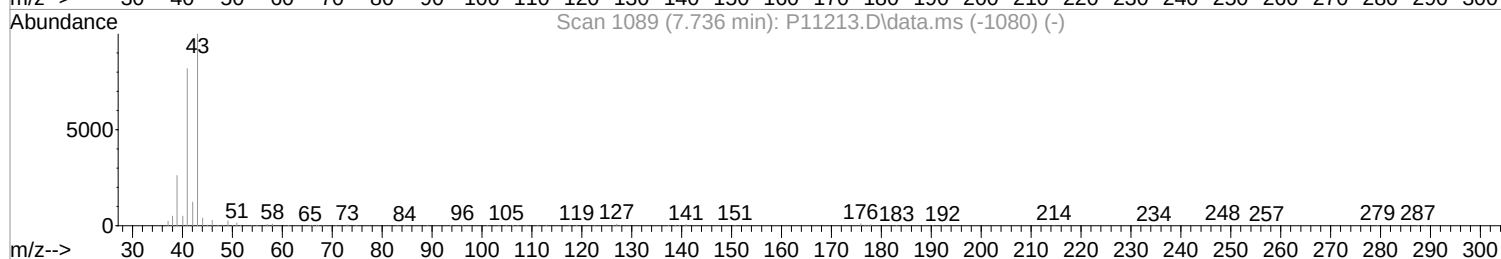
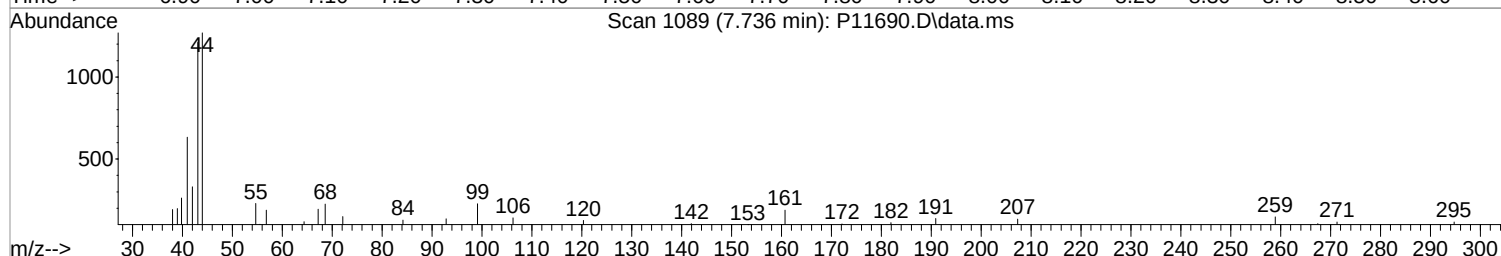
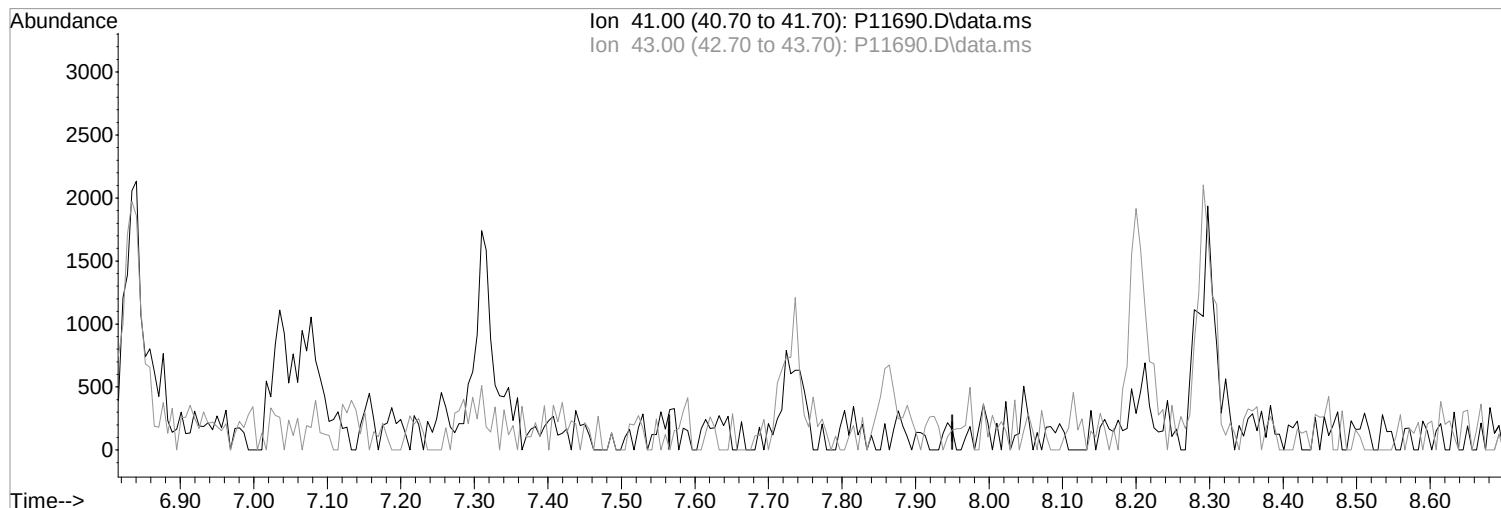
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(61) 2-Nitropropane

Manual Integration:

7.736min (-7.736) 0.00 ppb

Before

response 0

Ion	Exp%	Act%
41.00	100	0.00
43.00	122.10	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

09/01/17

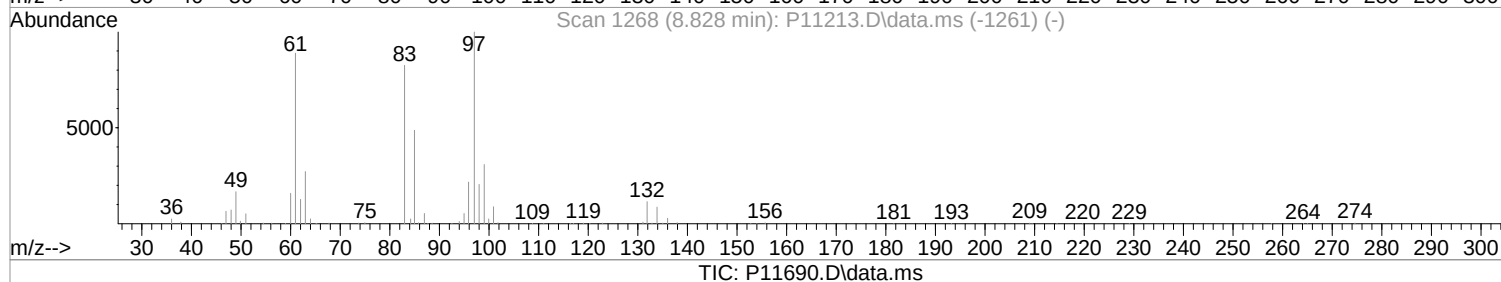
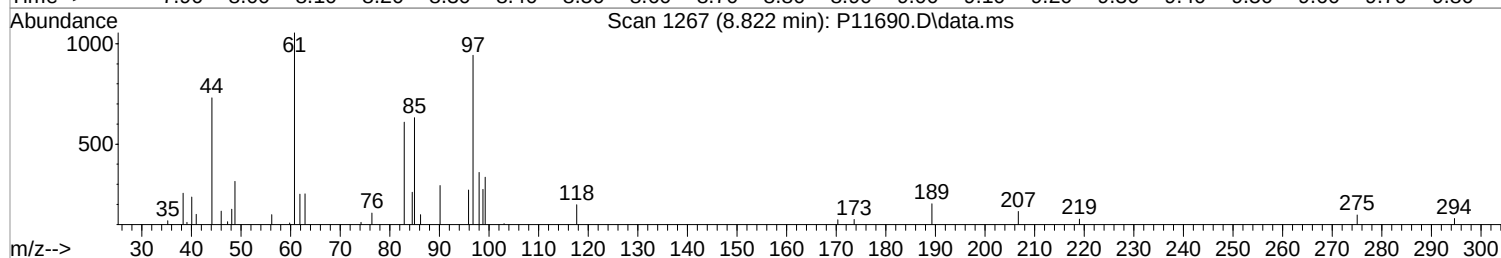
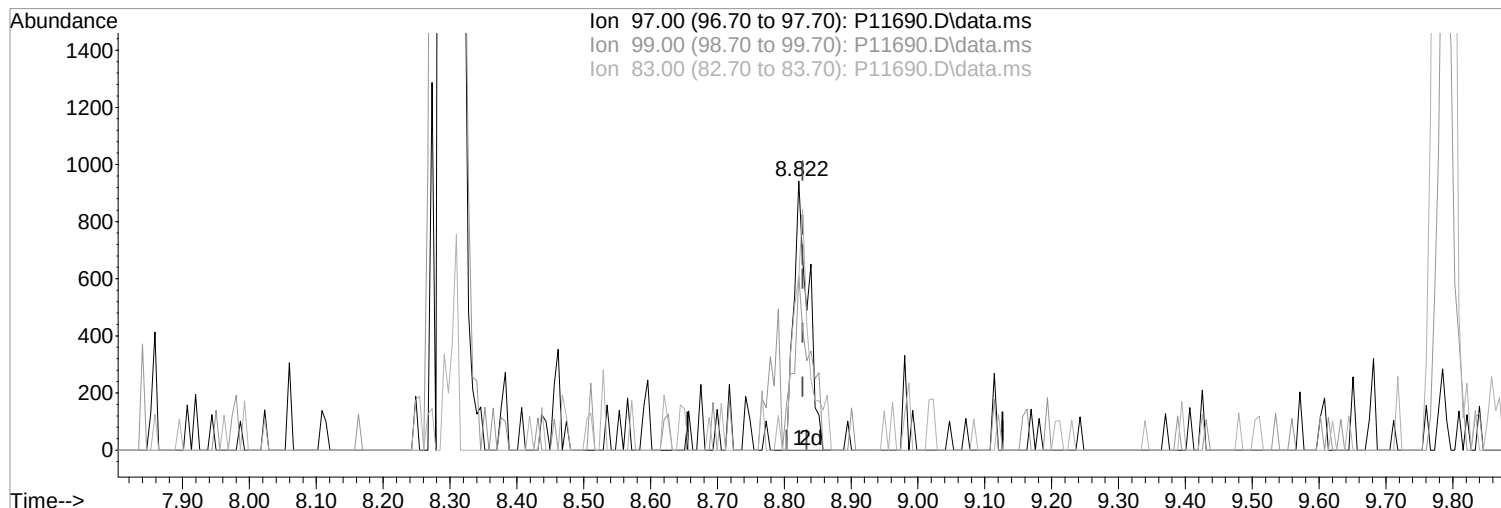
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



(69) 1,1,2-Trichloroethane (P)

8.822min (-0.006) 0.52 ppb m

response 1427

Ion	Exp%	Act%
97.00	100	100
99.00	64.00	35.56#
83.00	81.90	64.65
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

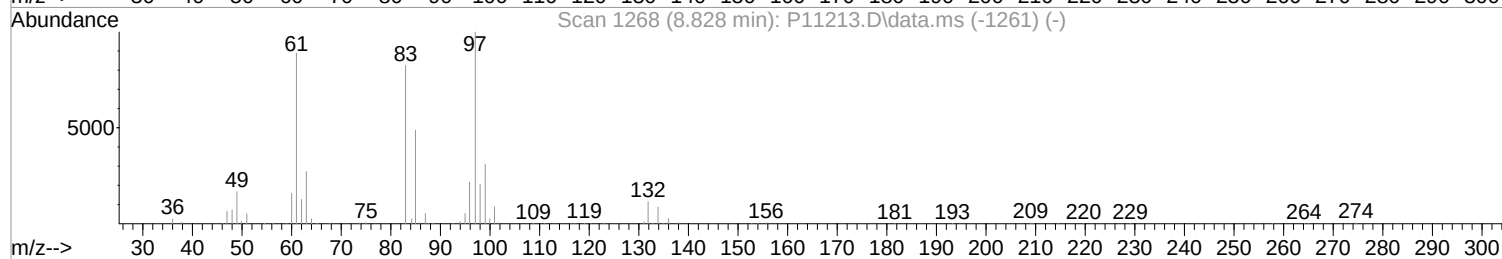
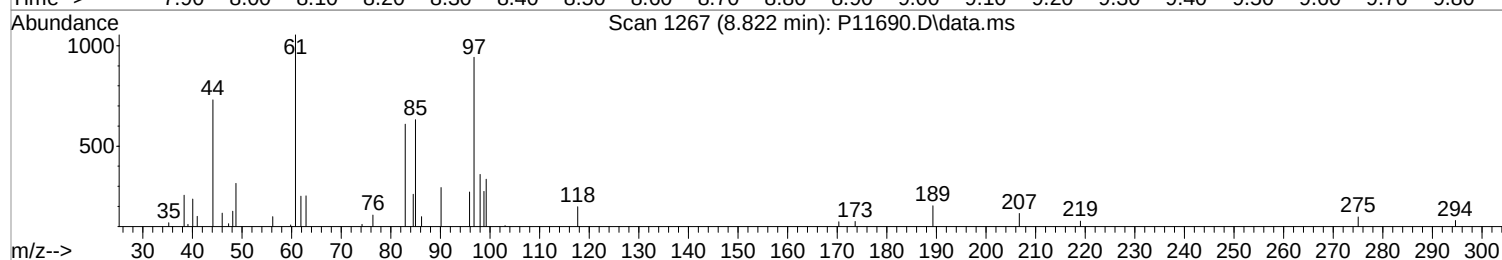
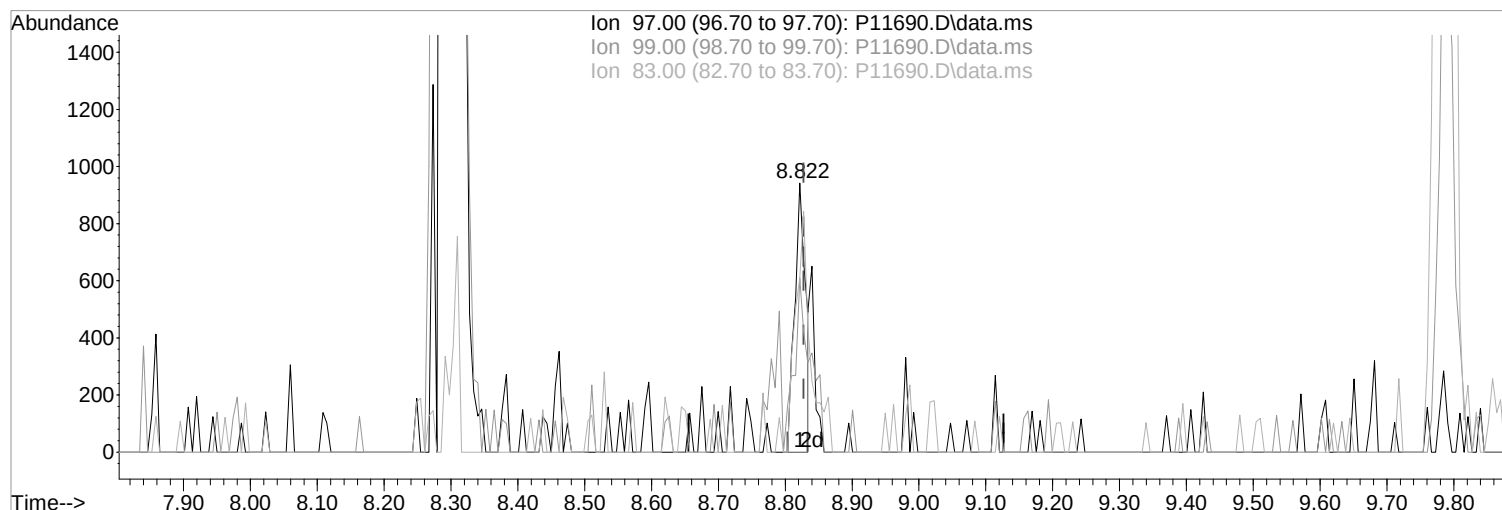
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(69) 1,1,2-Trichloroethane (P)

Manual Integration:

8.822min (-0.006) 0.40 ppb

Before

response 1089

Ion	Exp%	Act%
97.00	100	100
99.00	64.00	64.76
83.00	81.90	64.65
0.00	0.00	0.00

09/01/17

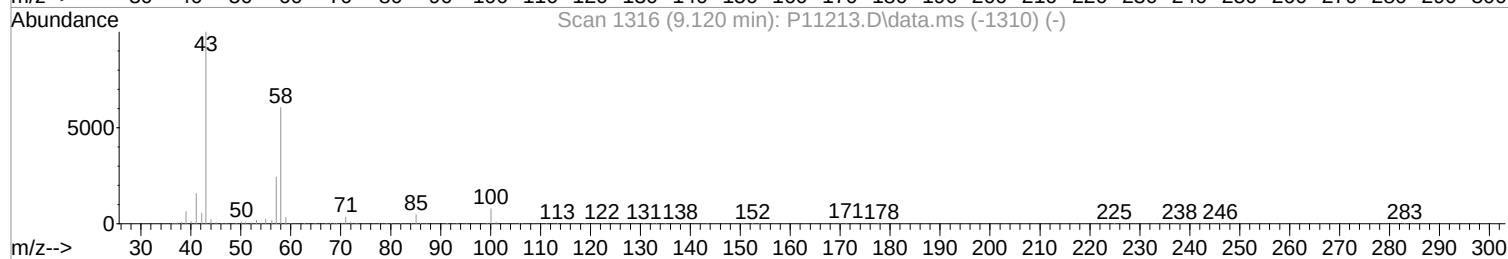
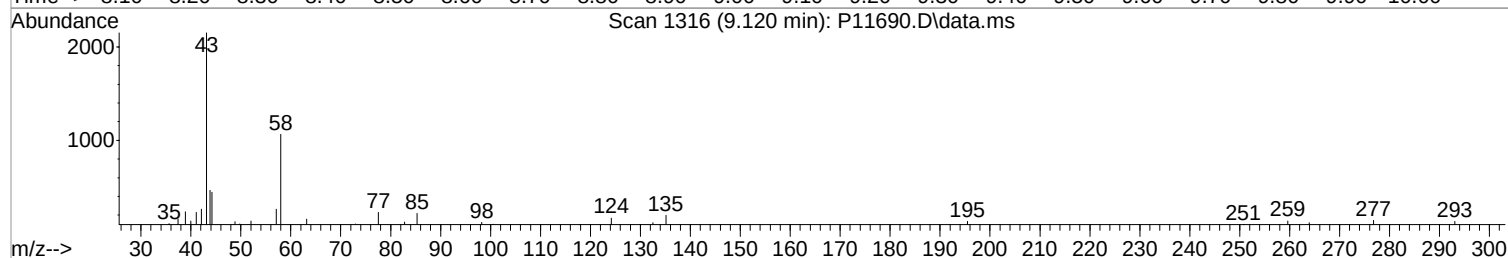
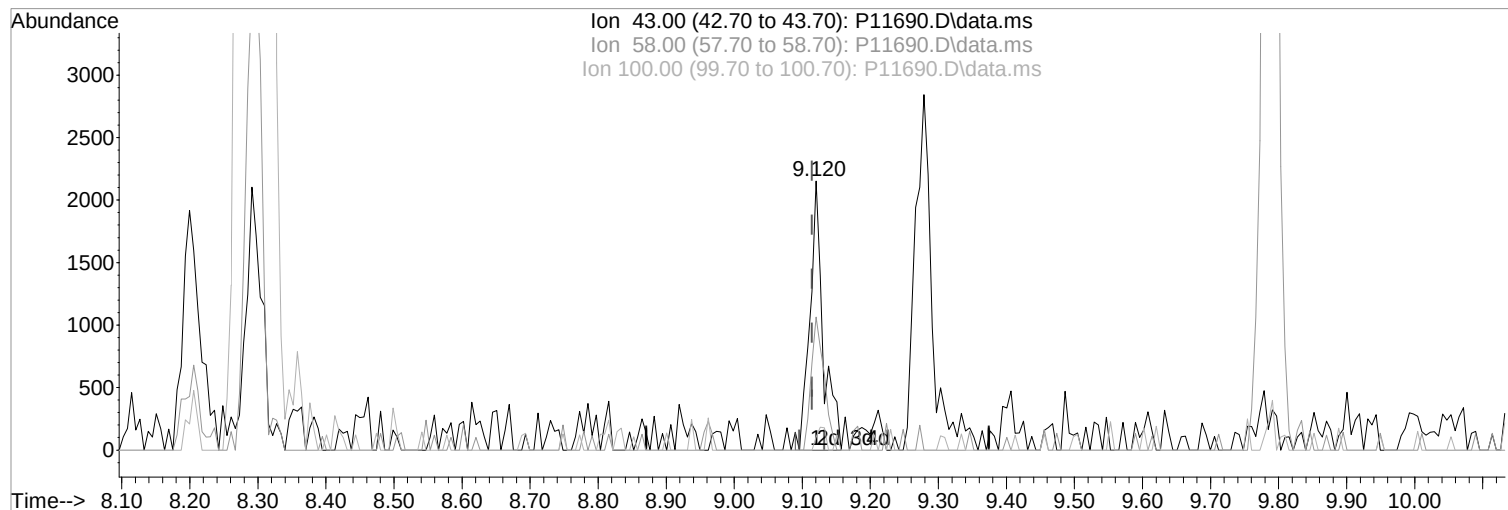
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(73) 2-Hexanone (P)

9.120min (+0.006) 0.58 ppb m

response 2910

Ion	Exp%	Act%
43.00	100	100
58.00	60.50	49.49
100.00	7.80	4.79
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

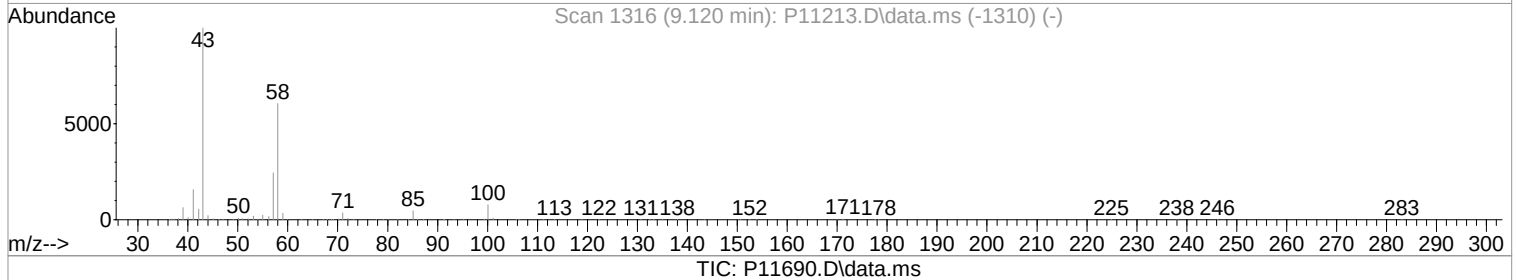
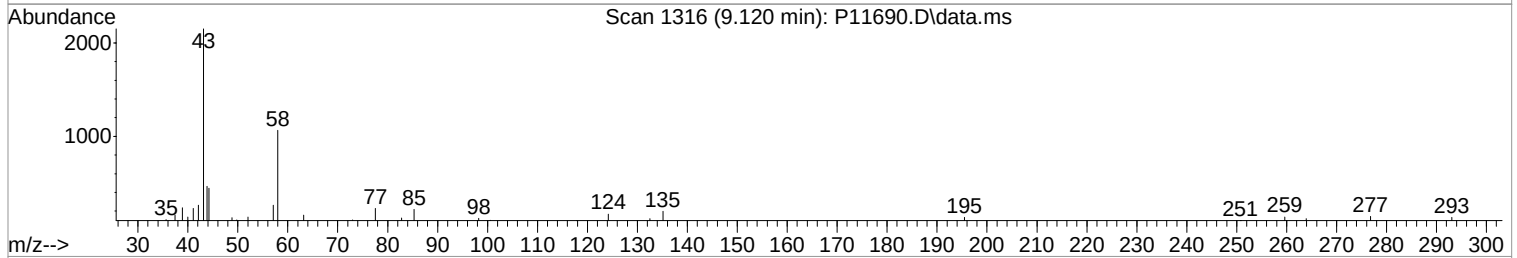
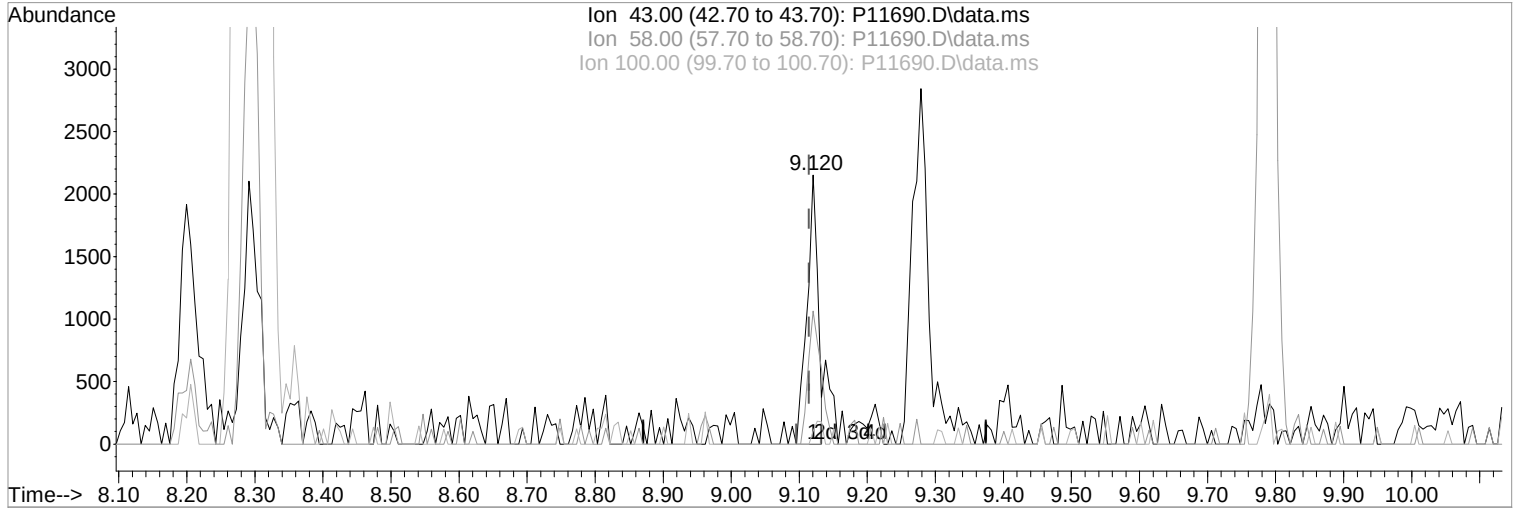
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



(73) 2-Hexanone (P)

Manual Integration:

9.120min (+0.006) 0.47 ppb

Before

response 2362

Ion Exp% Act%

09/01/17

43.00 100 100

58.00 60.50 49.49

100.00 7.80 4.79

0.00 0.00 0.00

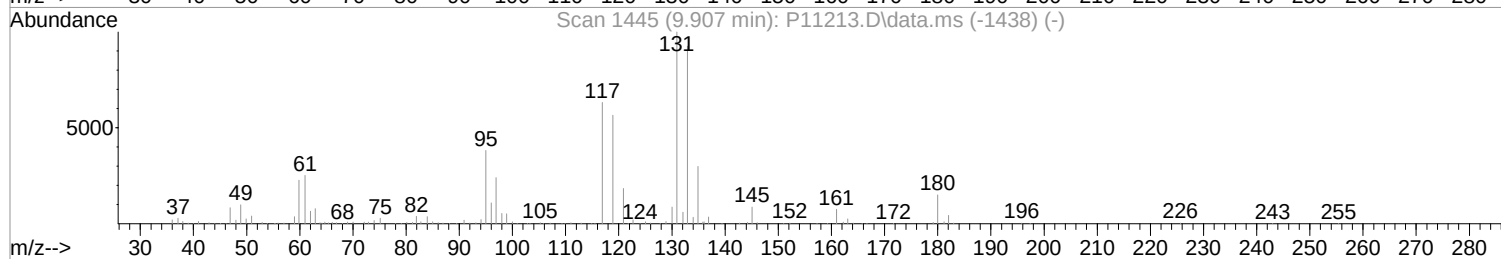
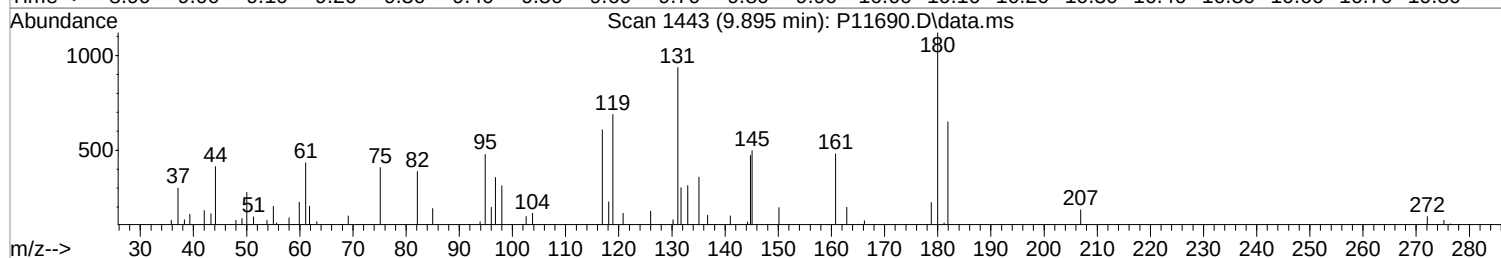
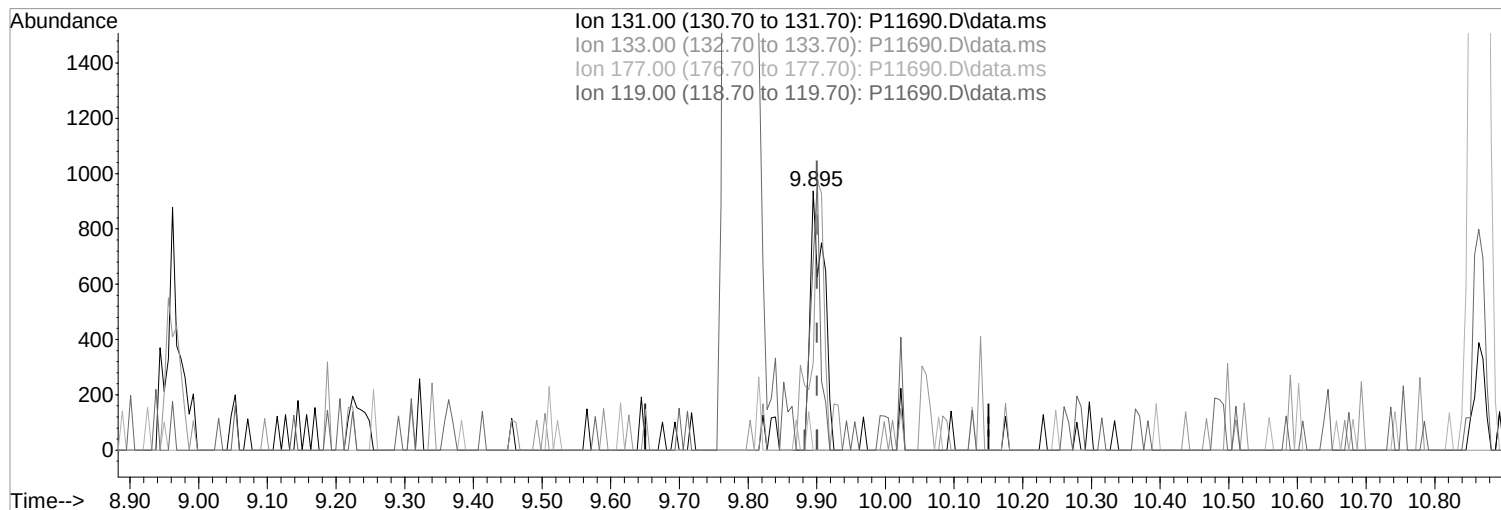
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(81) 1,1,1,2-Tetrachloroethane

9.895min (-0.006) 0.48 ppb m

response 1276

Ion	Exp%	Act%
131.00	100	100
133.00	92.70	33.51#
177.00	0.00	0.00
119.00	56.60	73.43

Manual Integration:

After

Poor integration.

09/01/17

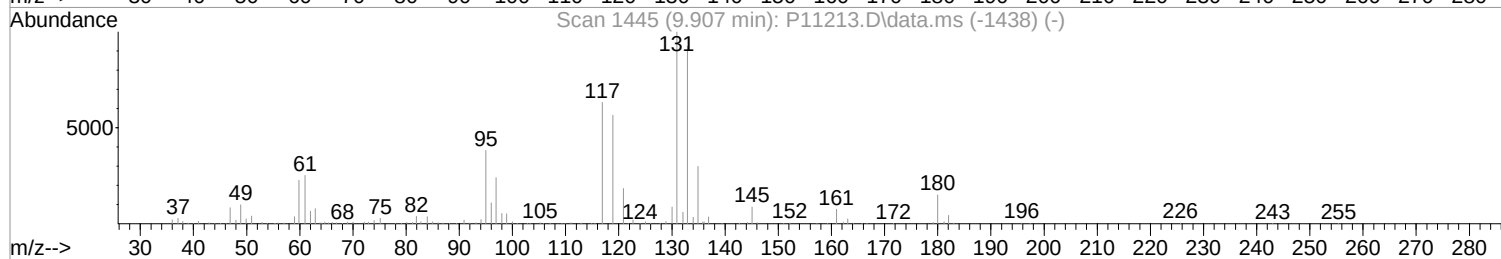
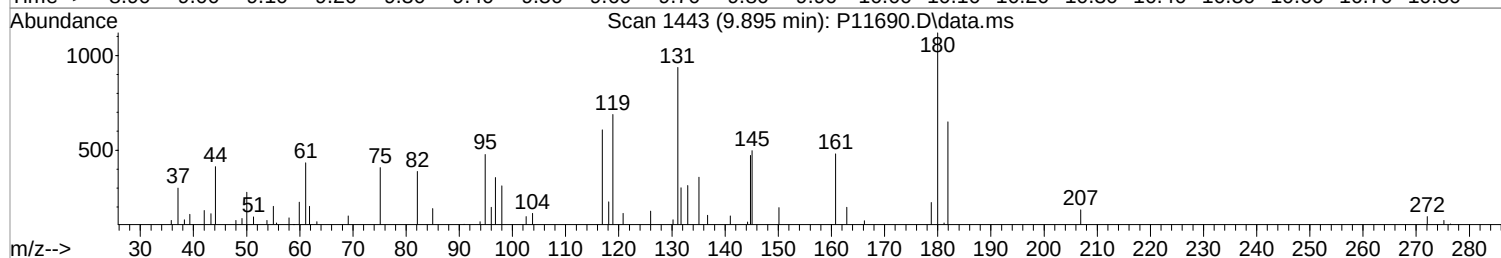
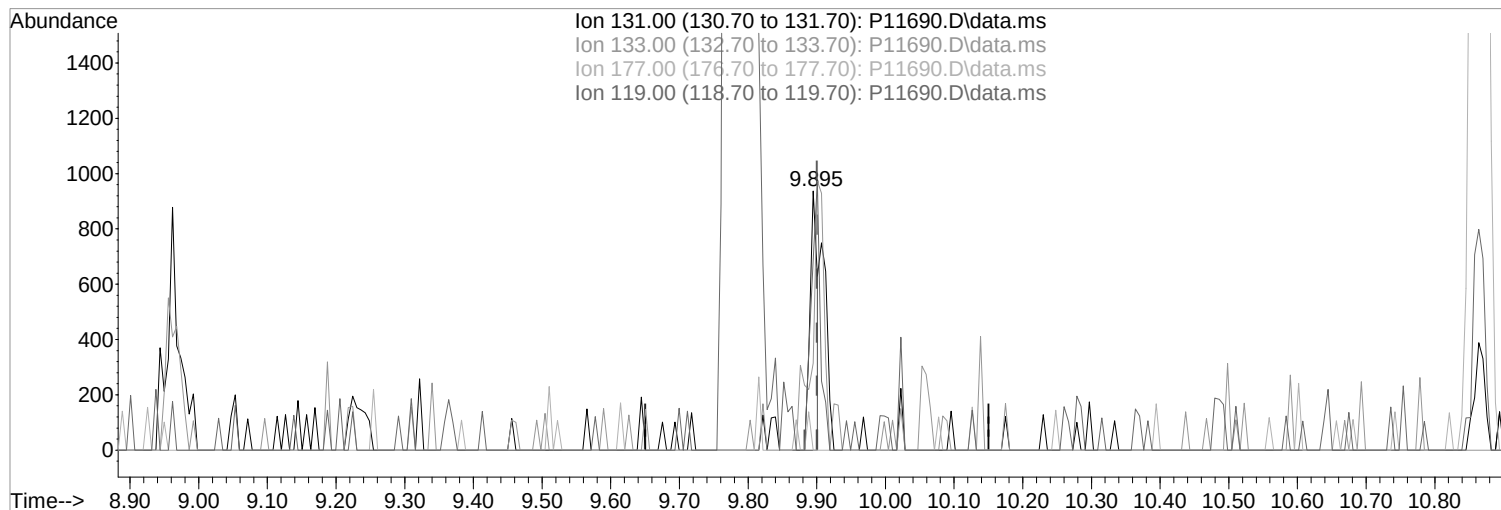
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(81) 1,1,1,2-Tetrachloroethane

Manual Integration:

9.895min (-0.006) 0.26 ppb

Before

response 699

Ion	Exp%	Act%
131.00	100	100
133.00	92.70	25.34#
177.00	0.00	0.00
119.00	56.60	55.53

09/01/17

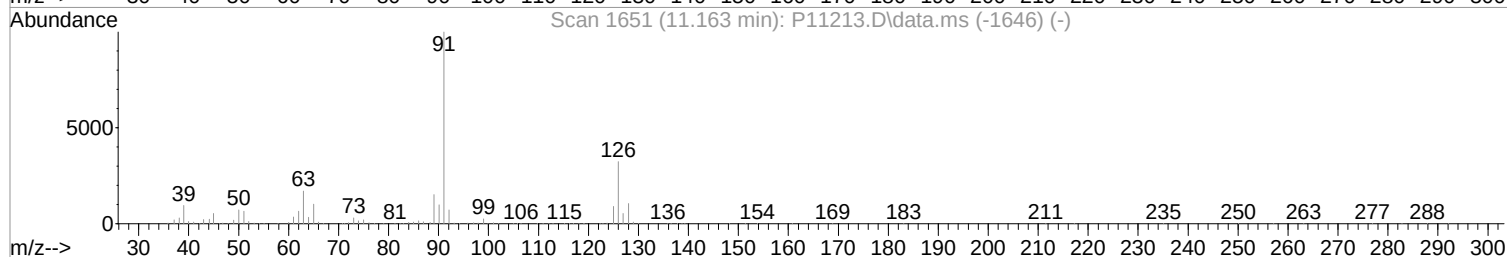
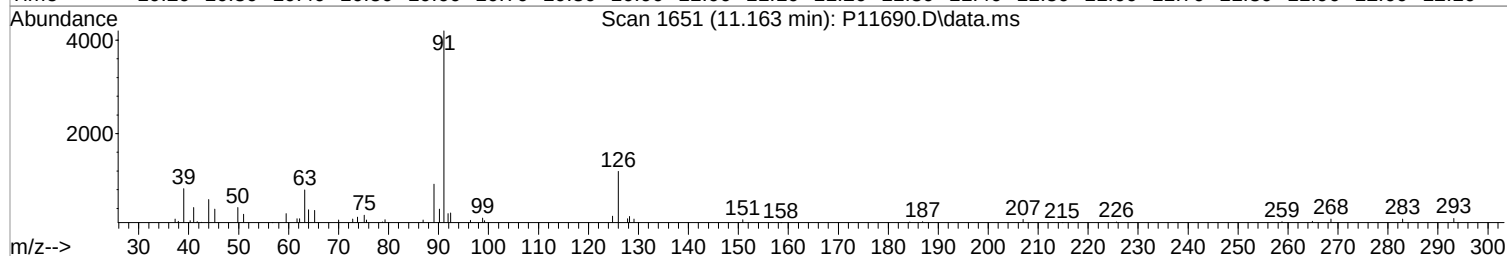
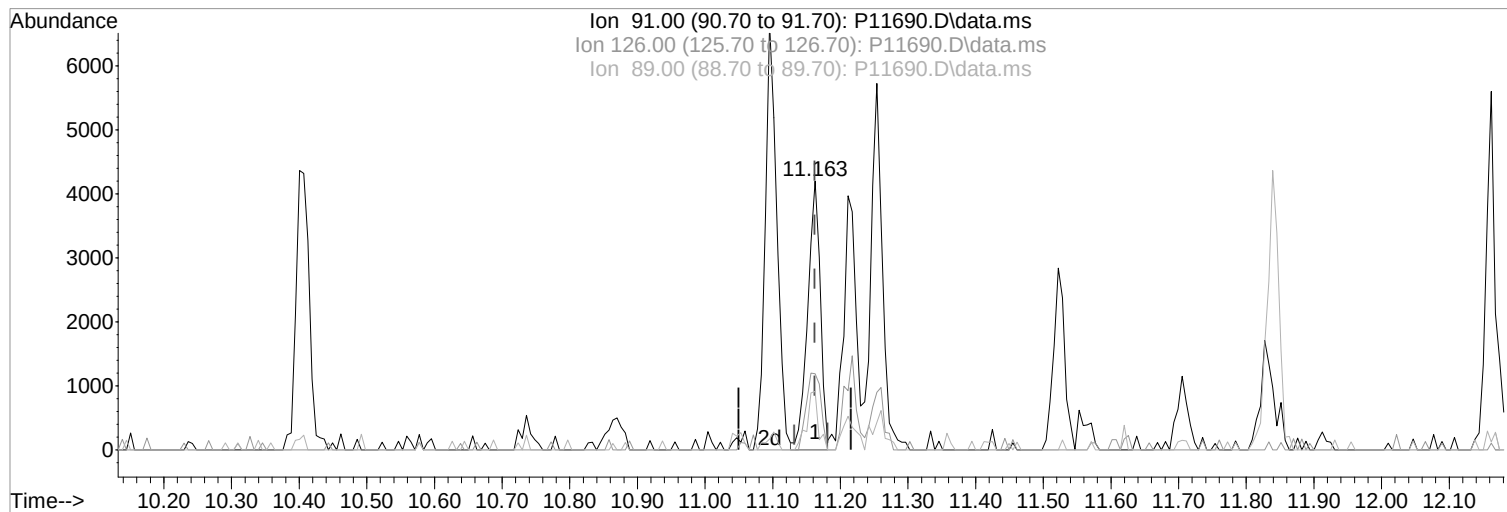
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(96) 2-Chlorotoluene

11.163min (+0.000) 0.64 ppb m

response 5411

Ion	Exp%	Act%
91.00	100	100
126.00	32.30	28.38
89.00	15.00	21.88
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

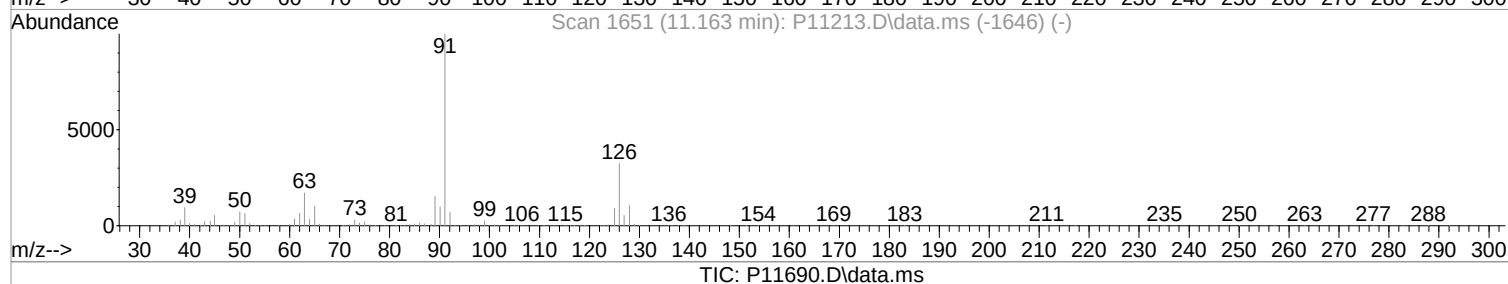
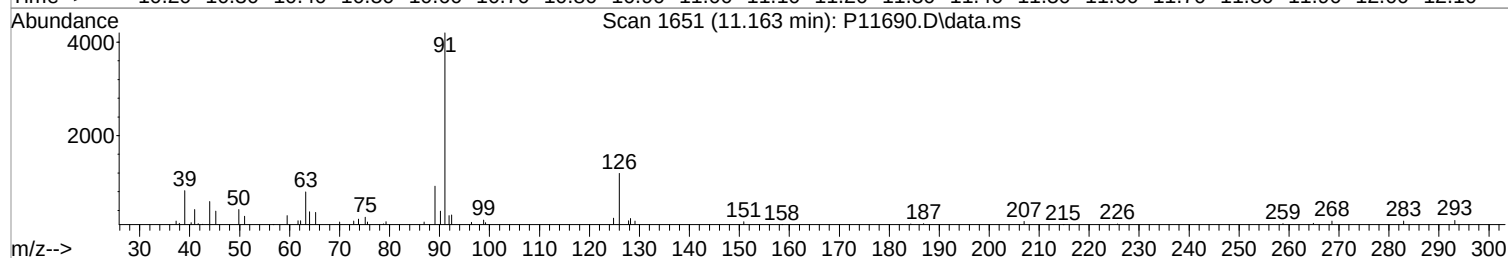
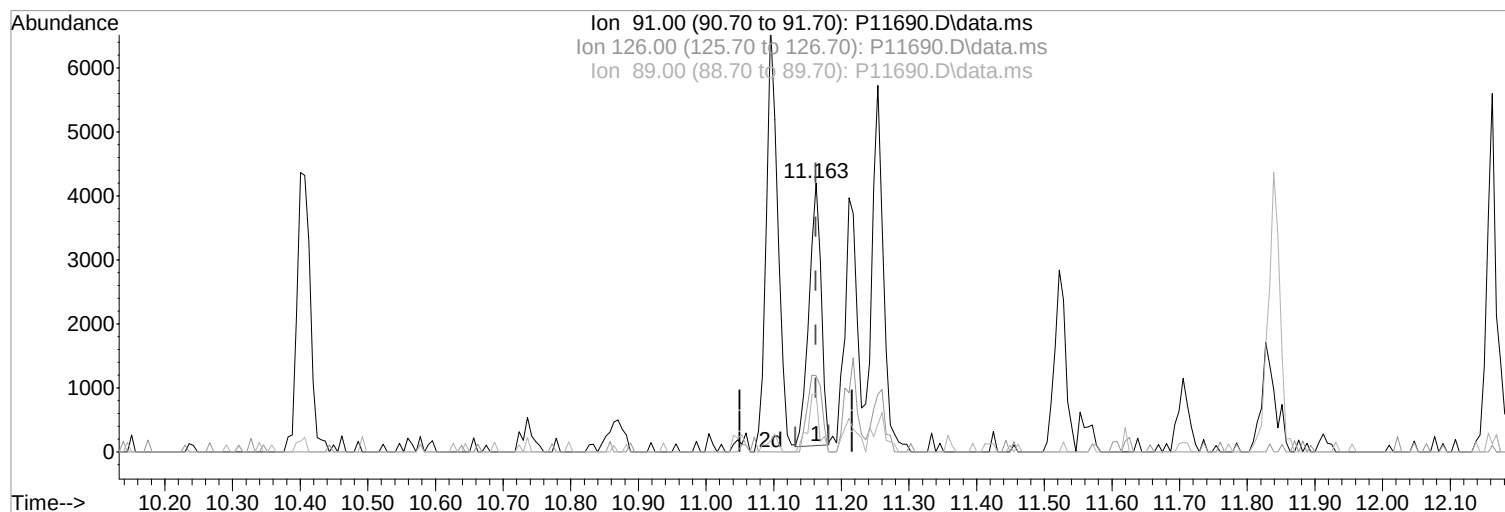
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



(96) 2-Chlorotoluene

Manual Integration:

11.163min (+0.000) 0.60 ppb

Before

response 5087

Ion	Exp%	Act%
91.00	100	100
126.00	32.30	28.38
89.00	15.00	21.88
0.00	0.00	0.00

09/01/17

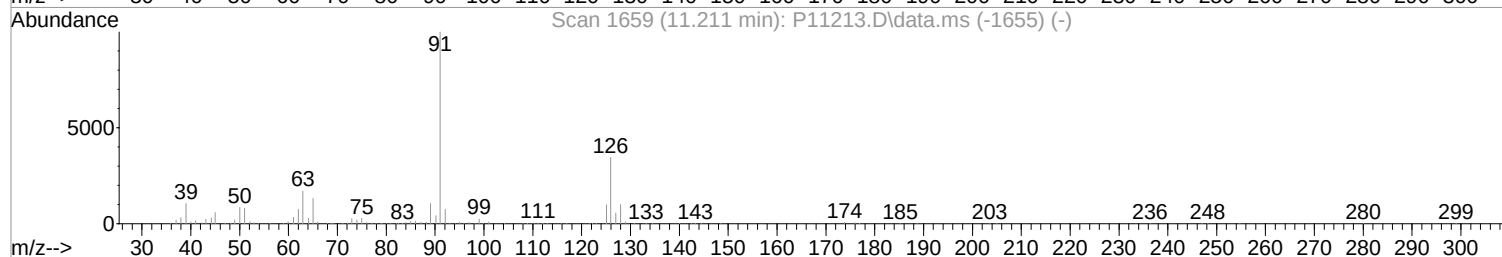
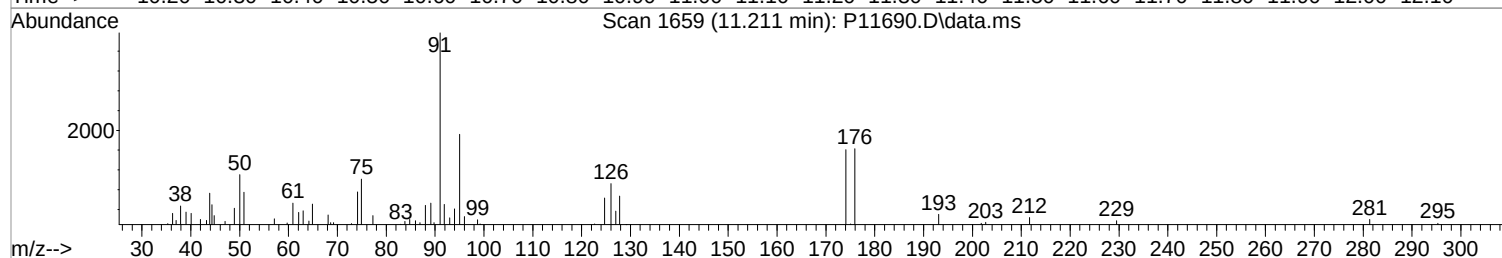
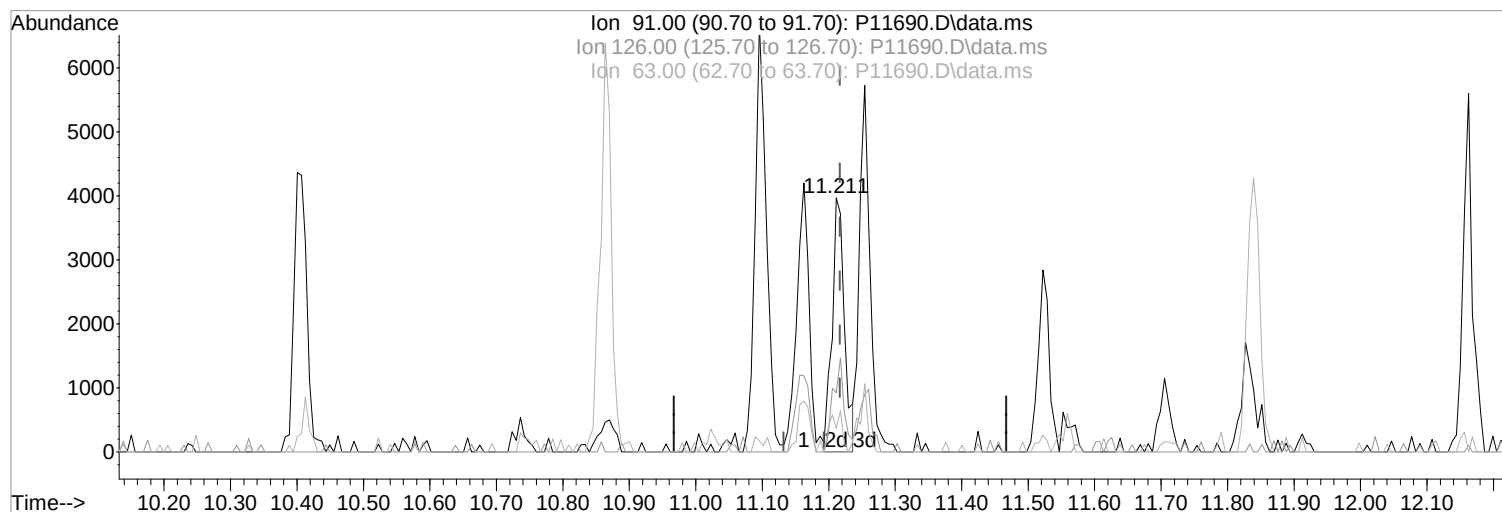
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(97) 3-Chlorotoluene

Manual Integration:

11.211min (-0.006) 0.59 ppb m

After

response 5166

Poor integration.

Ion	Exp%	Act%
91.00	100	100
126.00	34.50	23.29#
63.00	16.90	9.37#
0.00	0.00	0.00

09/01/17

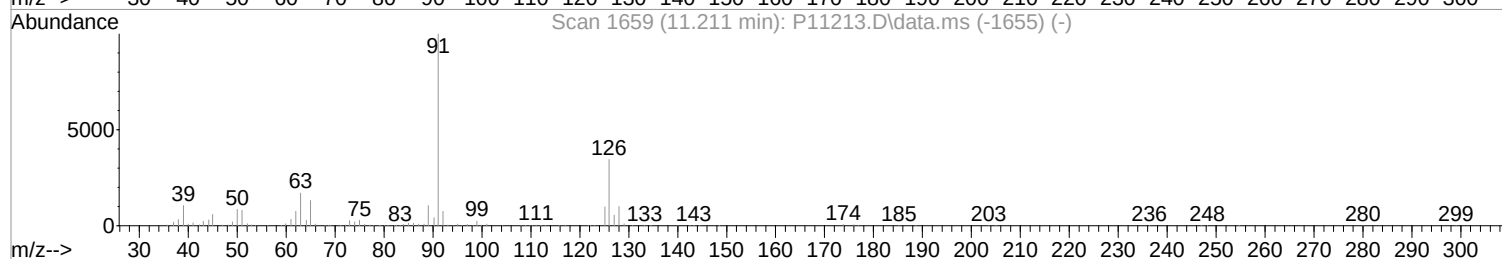
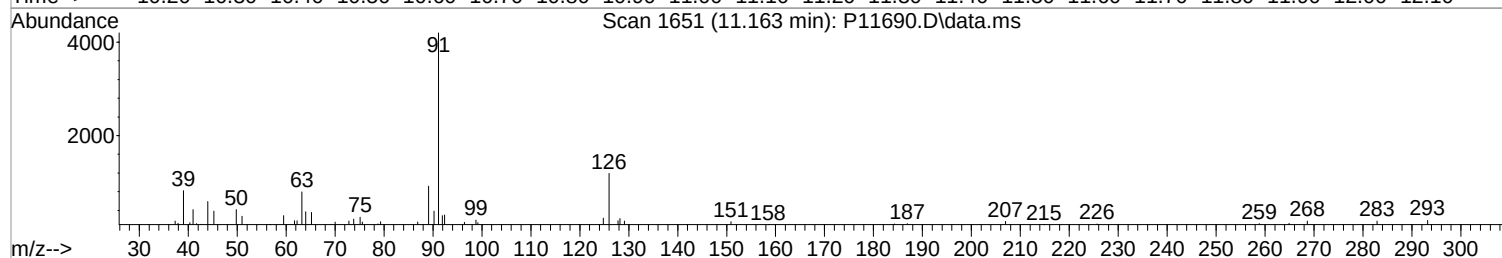
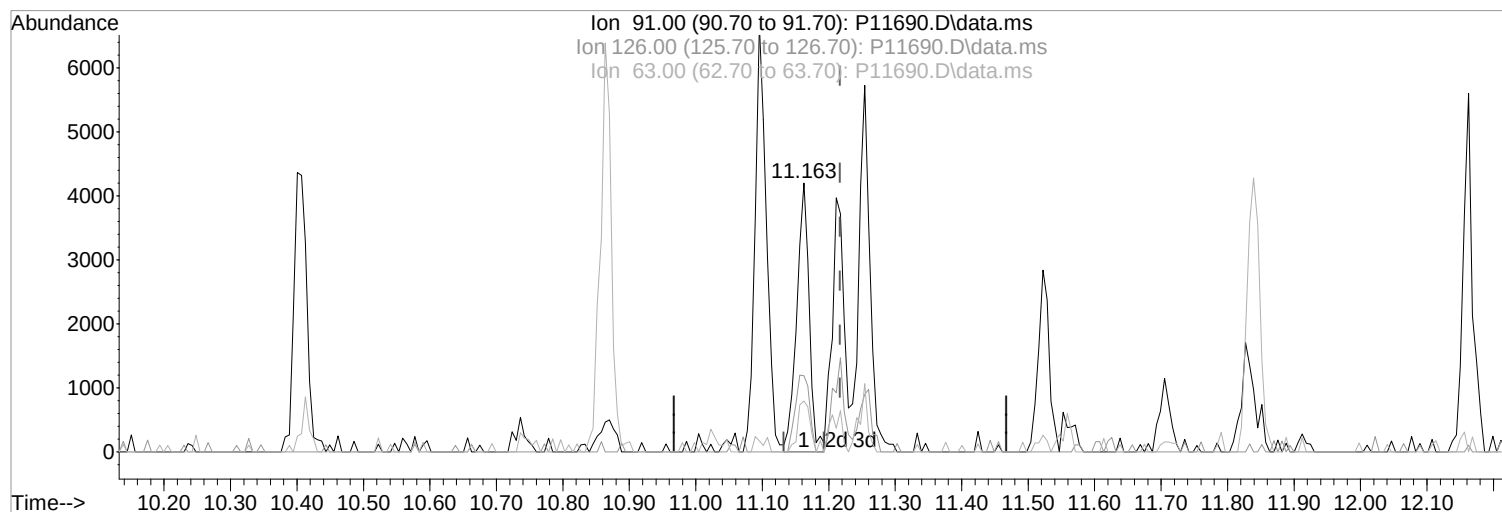
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(97) 3-Chlorotoluene

Manual Integration:

11.163min (-0.055) 0.62 ppb

Before

response 5512

Ion	Exp%	Act%

09/01/17

91.00	100	100
126.00	34.50	28.38
63.00	16.90	18.93
0.00	0.00	0.00

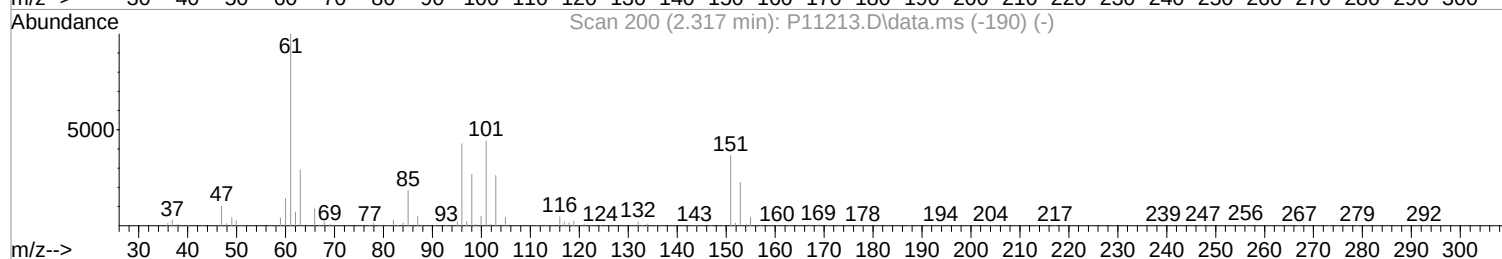
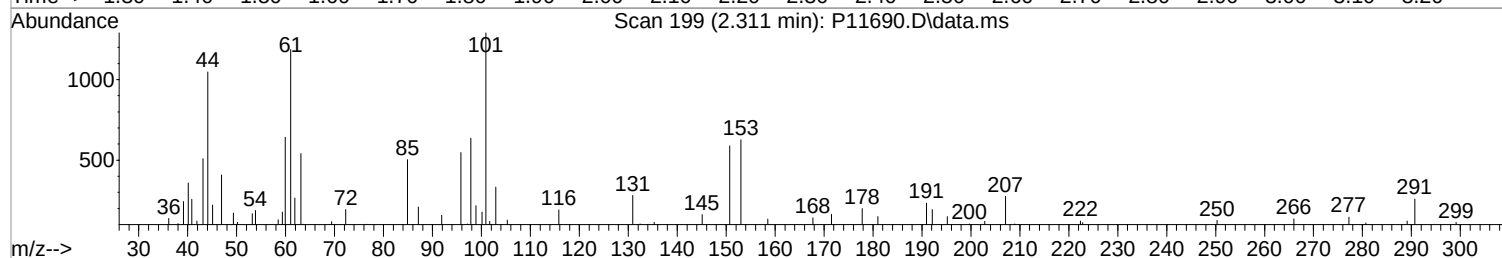
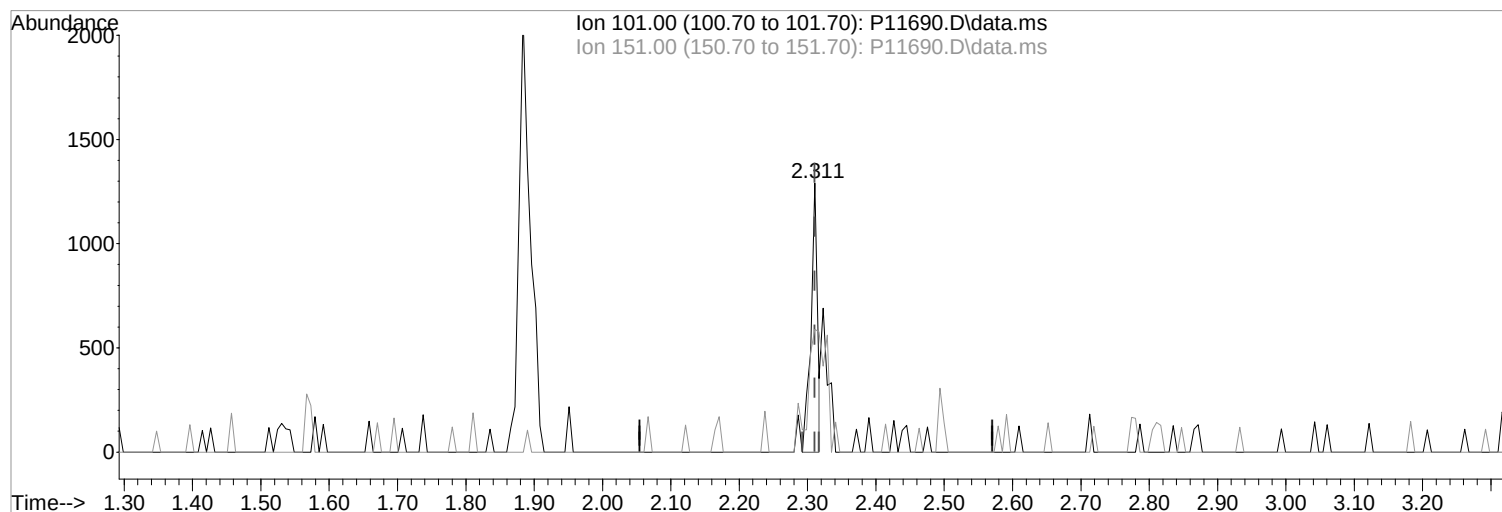
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:01 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11690.D\data.ms

(14) Freon 113 (P)

Manual Integration:

2.311min (+0.000) 0.38 ppb

Before

response 877

Ion Exp% Act%

09/01/17

101.00 100 100

151.00 82.70 41.77#

0.00 0.00 0.00

0.00 0.00 0.00

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11690.D
 Acq On : 31 Aug 2017 4:58 pm
 Operator : B.ALLGEIER
 Sample : 0.5ppb
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:20:58 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.383	168	239504	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	392503	50.00	ppb	0.00
71) d5-Chlorobenzene	9.791	117	347905	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	171683	50.00	ppb	0.00

System Monitoring Compounds						
45) surr4,Dibrflmethane	5.243	113	105467	44.49	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	88.98%#	
48) surr1,1,2-dichloroetha...	5.773	65	176311	48.56	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	97.12%	
65) SURR3,Toluene-d8	8.291	98	521971	53.26	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	106.52%	
70) SURR2,BFB	10.864	95	198737	52.41	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	104.82%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.183	85	2074	0.58	ppb	90
3) Chloromethane	1.311	50	3931	0.52	ppb	86
4) Vinyl Chloride	1.384	62	2098	0.40	ppb	# 58
6) Chloroethane	1.689	64	2058	0.74	ppb	65
7) Freon 21	1.835	67	3781	0.70	ppb	86
8) Trichlorofluoromethane	1.884	101	2450	0.64	ppb	87
9) Diethyl Ether	2.116	59	2067	0.41	ppb	# 61
10) Freon 123a	2.122	67	2236	0.64	ppb	93
11) Freon 123	2.177	83	2268	0.63	ppb	# 71
12) Acrolein	2.219	56	3417	2.29	ppb	98
13) 1,1-Dicethene	2.305	96	1620	0.61	ppb	# 50
14) Freon 113	2.311	101	1369m	0.59	ppb	
15) Acetone	2.359	43	2163	0.78	ppb	78
16) 2-Propanol	2.487	45	5318	7.96	ppb	89
18) Carbon Disulfide	2.500	76	3945	0.49	ppb	90
19) Acetonitrile	2.591	40	1534m	2.77	ppb	
20) Allyl Chloride	2.640	76	757	0.58	ppb	# 37
21) Methyl Acetate	2.658	43	3963	0.50	ppb	91
22) Methylene Chloride	2.762	84	1470	0.52	ppb	# 41
23) TBA	2.884	59	9010	8.81	ppb	98
24) Acrylonitrile	3.012	53	6588	1.92	ppb	94
25) Methyl-t-Butyl Ether	3.054	73	5680	0.60	ppb	87
26) trans-1,2-Dichloroethene	3.036	96	1503	0.53	ppb	# 50
28) 1,1-Dicethane	3.548	63	3329	0.46	ppb	91
30) DIPE	3.670	45	8447	0.48	ppb	# 75
31) 2-Chloro-1,3-Butadiene	3.664	53	3855	0.46	ppb	82
32) ETBE	4.194	59	6488	0.39	ppb	71
33) 2,2-Dichloropropane	4.359	77	3135m	0.79	ppb	
34) cis-1,2-Dichloroethene	4.390	96	1545m	0.50	ppb	
36) Propionitrile	4.505	54	3120	2.22	ppb	# 43
37) Bromochloromethane	4.768	130	962m	0.52	ppb	
38) Methacrylonitrile	4.780	67	1233m	0.60	ppb	
40) Chloroform	4.944	83	3219m	0.72	ppb	
41) 1,1,1-Trichloroethane	5.255	97	1885m	0.46	ppb	
42) TAME	6.090	73	5548	0.59	ppb	93
46) Carbontetrachloride	5.530	117	1576m	0.48	ppb	
47) 1,1-Dichloropropene	5.548	75	2174m	0.65	ppb	
49) Benzene	5.853	78	6682	0.64	ppb	92
50) 1,2-Dichloroethane	5.883	62	2790	0.54	ppb	83

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11690.D
 Acq On : 31 Aug 2017 4:58 pm
 Operator : B.ALLGEIER
 Sample : 0.5ppb
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:20:58 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) Iso-Butyl Alcohol	5.859	43	4622	10.06	ppb	89
52) n-Heptane	6.340	43	3253	0.48	ppb	95
53) 1-Butanol	6.840	56	5408	17.86	ppb #	61
54) Trichloroethene	6.804	130	1522	0.54	ppb #	87
55) Methylcyclohexane	7.035	55	4351	0.59	ppb	89
56) 1,2-Dichloropropane	7.084	63	2142	0.49	ppb	81
57) Dibromomethane	7.224	93	946	0.52	ppb #	68
58) 1,4-Dioxane	7.285	88	732	11.89	ppb #	49
59) Methyl Methacrylate	7.310	69	1460m	0.52	ppb	
60) Bromodichloromethane	7.444	83	1638	0.50	ppb	84
61) 2-Nitropropane	7.724	41	1499m	1.01	ppb	
62) 2-Chloroethylvinyl Ether	7.864	63	683	0.22	ppb	61
63) cis-1,3-Dichloropropene	7.999	75	2207	0.49	ppb #	34
64) 4-Methyl-2-pentanone	8.200	43	3413	0.51	ppb #	71
66) Toluene	8.370	91	6308	0.53	ppb	98
67) trans-1,3-Dichloropropene	8.633	75	1921	0.46	ppb	84
68) Ethyl Methacrylate	8.785	69	2605	0.57	ppb #	68
69) 1,1,2-Trichloroethane	8.822	97	1427m	0.52	ppb	
72) Tetrachloroethene	8.962	164	1098	0.54	ppb #	74
73) 2-Hexanone	9.120	43	2910m	0.58	ppb	
74) 1,3-Dichloropropane	8.992	76	2782	0.62	ppb #	84
75) Dibromochloromethane	9.218	129	1336	0.51	ppb	92
76) N-Butyl Acetate	9.279	43	4240	0.41	ppb	96
77) 1,2-Dibromoethane	9.322	107	1310	0.54	ppb	84
78) Chlorobenzene	9.815	112	4038	0.56	ppb	76
79) 3-CBTF	9.834	180	2365	0.64	ppb	95
80) 4-CBTF	9.888	180	1919	0.59	ppb	92
81) 1,1,1,2-Tetrachloroethane	9.895	131	1276m	0.48	ppb	
82) Ethylbenzene	9.937	106	2002	0.52	ppb	90
83) (m+p)Xylene	10.047	106	5877	1.25	ppb #	69
84) o-Xylene	10.413	106	3079	0.63	ppb #	37
85) Styrene	10.425	104	3496	0.44	ppb	94
88) 2-CBTF	10.657	180	2019	0.59	ppb #	74
89) Isopropylbenzene	10.742	105	6572	0.57	ppb	88
90) Cyclohexanone	10.803	55	11659	10.43	ppb	85
91) trans-1,4-Dichloro-2-B...	11.047	53	693	0.38	ppb	85
92) 1,1,2,2-Tetrachloroethane	11.004	83	2313	0.63	ppb	92
93) Bromobenzene	10.986	156	1713	0.58	ppb #	57
94) 1,2,3-Trichloropropane	11.022	110	813	0.66	ppb #	21
95) n-Propylbenzene	11.096	91	8010	0.58	ppb	98
96) 2-Chlorotoluene	11.163	91	5411m	0.64	ppb	
97) 3-Chlorotoluene	11.211	91	5166m	0.59	ppb	
98) 4-Chlorotoluene	11.254	91	6689	0.70	ppb	84
99) 1,3,5-Trimethylbenzene	11.248	105	5295	0.54	ppb	84
100) tert-Butylbenzene	11.522	119	5535	0.62	ppb	96
101) 1,2,4-Trimethylbenzene	11.565	105	5799	0.58	ppb	98
102) 3,4-DCBTF	11.626	214	1582	0.61	ppb #	80
103) sec-Butylbenzene	11.705	105	7142	0.58	ppb	90
104) p-Isopropyltoluene	11.833	119	5276	0.48	ppb	87
105) 1,3-Dichlorobenz	11.784	146	3355	0.57	ppb	87
106) 1,4-Dichlorobenz	11.858	146	3461	0.58	ppb	89
108) 2,5-DCBTF	11.955	214	1884m	0.75	ppb	
109) n-Butylbenzene	12.162	91	5568	0.55	ppb	89
110) 1,2-Dichlorobenz	12.162	146	2778	0.50	ppb #	67
111) 1,2-Dibromo-3-chloropr...	12.790	157	388m	0.37	ppb	
112) Trielution Dichlorotol...	12.900	125	9777	1.75	ppb #	87

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11690.D
Acq On : 31 Aug 2017 4:58 pm
Operator : B.ALLGEIER
Sample : 0.5ppb
Misc :
ALS Vial : 3 Sample Multiplier: 1

Inst : MSVOA-12

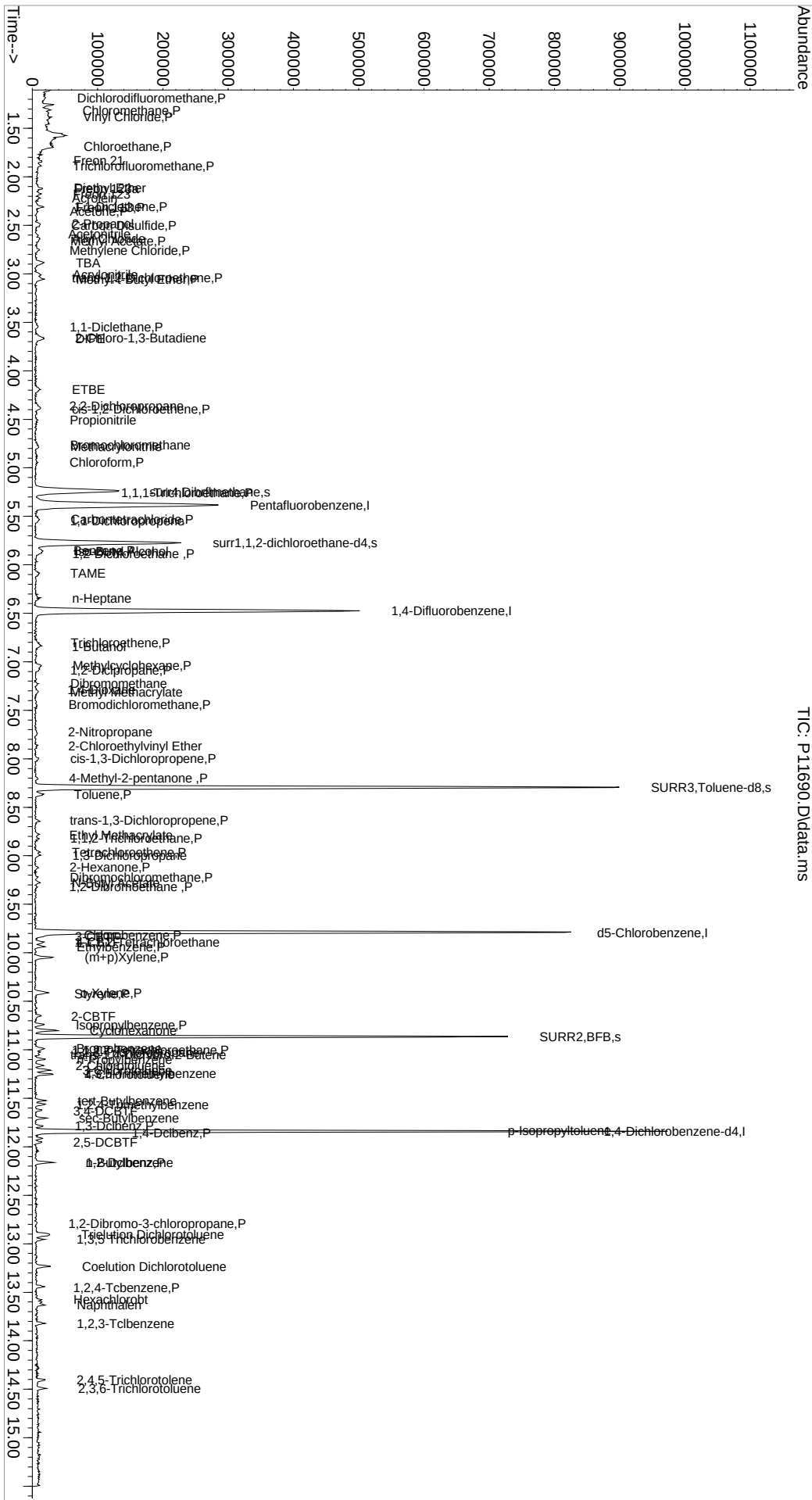
Quant Time: Sep 01 09:20:58 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
113) 1,3,5 Trichlorobenzene	12.955	180	2580	0.60	ppb	# 93
114) Coelution Dichlorotoluene	13.235	125	7197	1.14	ppb	# 86
115) 1,2,4-Tcbenzene	13.449	180	2629	0.62	ppb	# 86
116) Hexachlorobt	13.577	225	1151	0.67	ppb	# 38
117) Naphthalen	13.632	128	7765	0.53	ppb	# 97
118) 1,2,3-Tclbenzene	13.821	180	2511	0.54	ppb	# 99
119) 2,4,5-Trichlorotoluene	14.400	159	2258	0.56	ppb	# 78
120) 2,3,6-Trichlorotoluene	14.491	159	2324	0.61	ppb	# 85

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQDATA\msvoa12\Data\083117\
 Data File : P1690.D
 Acq On : 31 Aug 2017 4:58 pm
 Operator : B.ALGEIER
 Sample : 0.5ppb
 Inst : MSVOA-12
 PALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 01 09:20:58 2017
 Quant Method : I:\ACQDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 Quant Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration



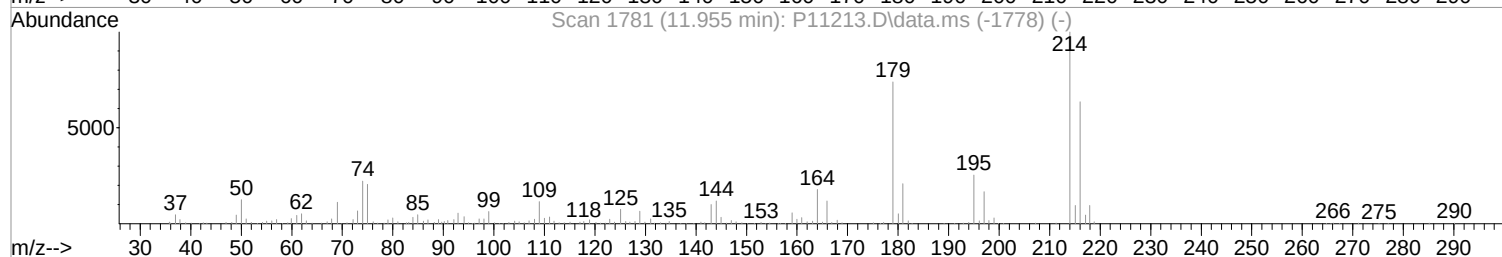
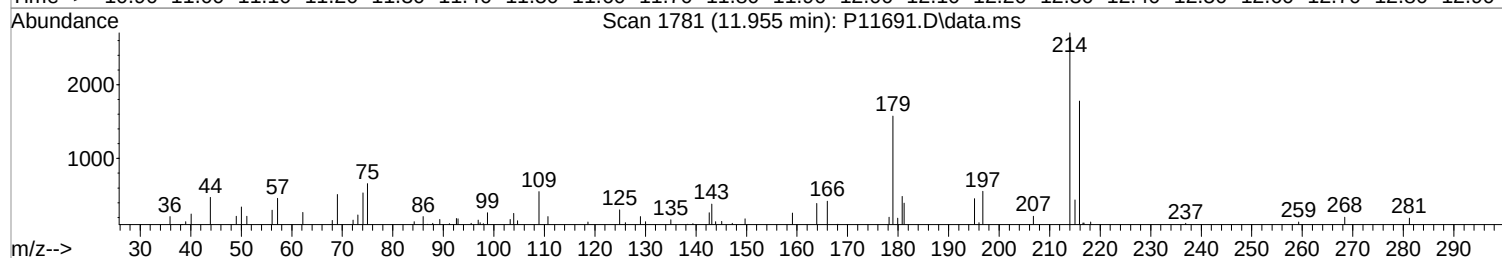
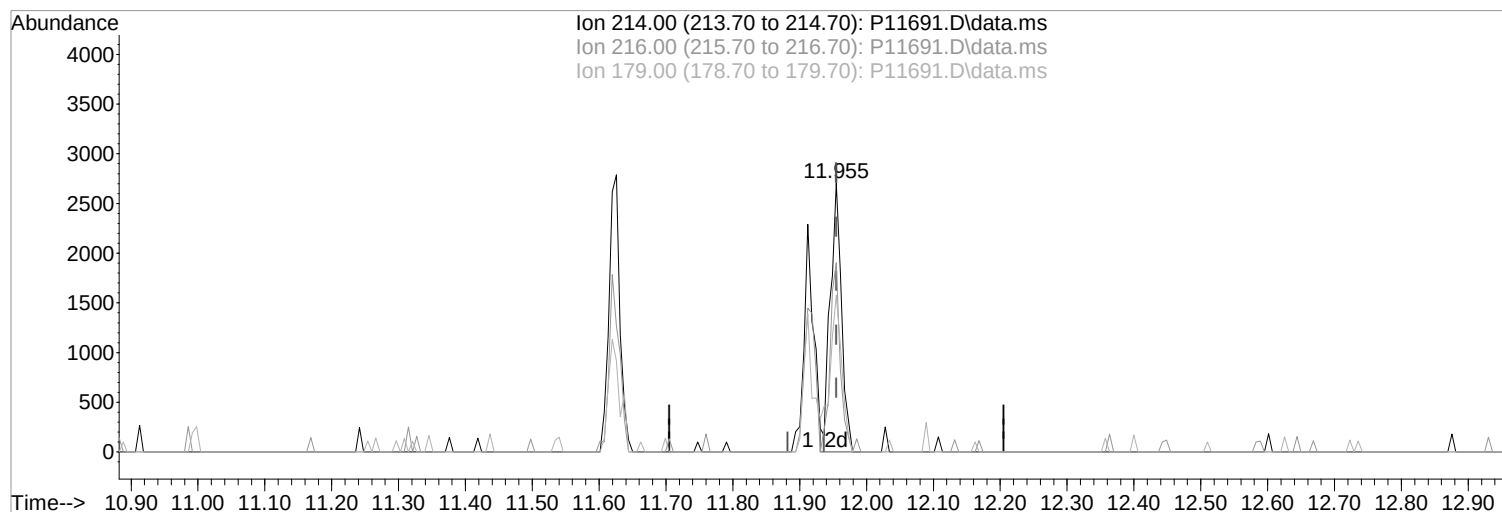
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(108) 2,5-DCBTF

11.955min (+0.000) 1.23 ppb m

response 3193

Ion	Exp%	Act%
214.00	100	100
216.00	62.50	65.78
179.00	74.00	58.20#
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

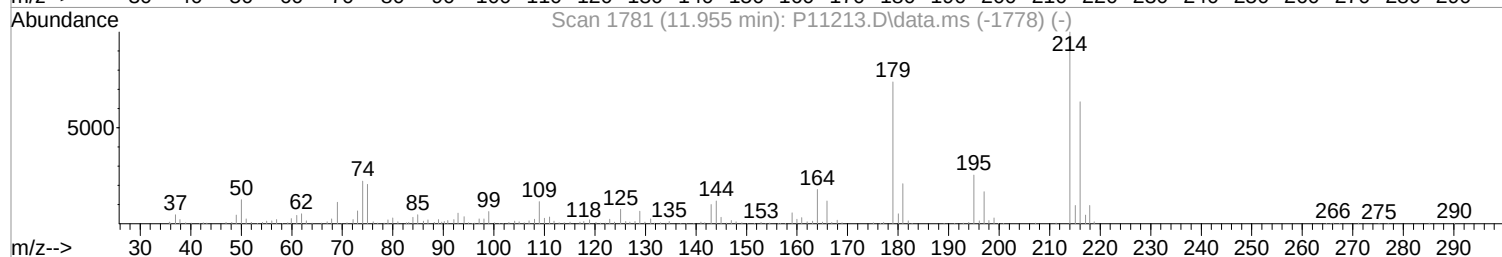
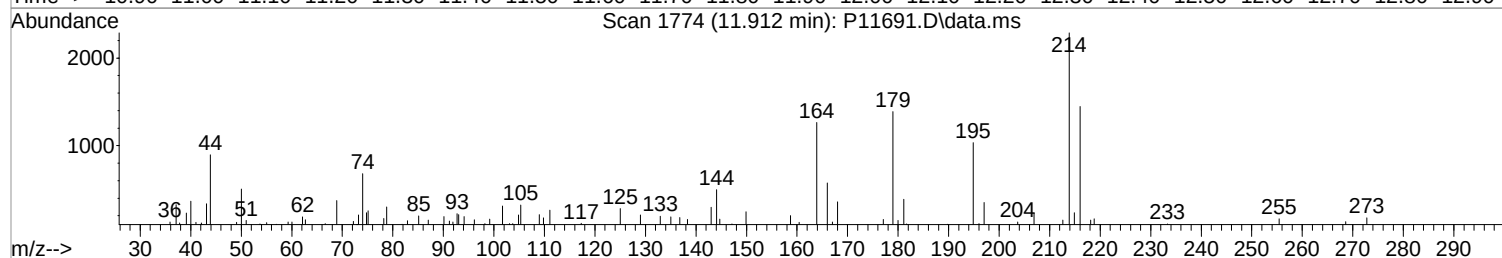
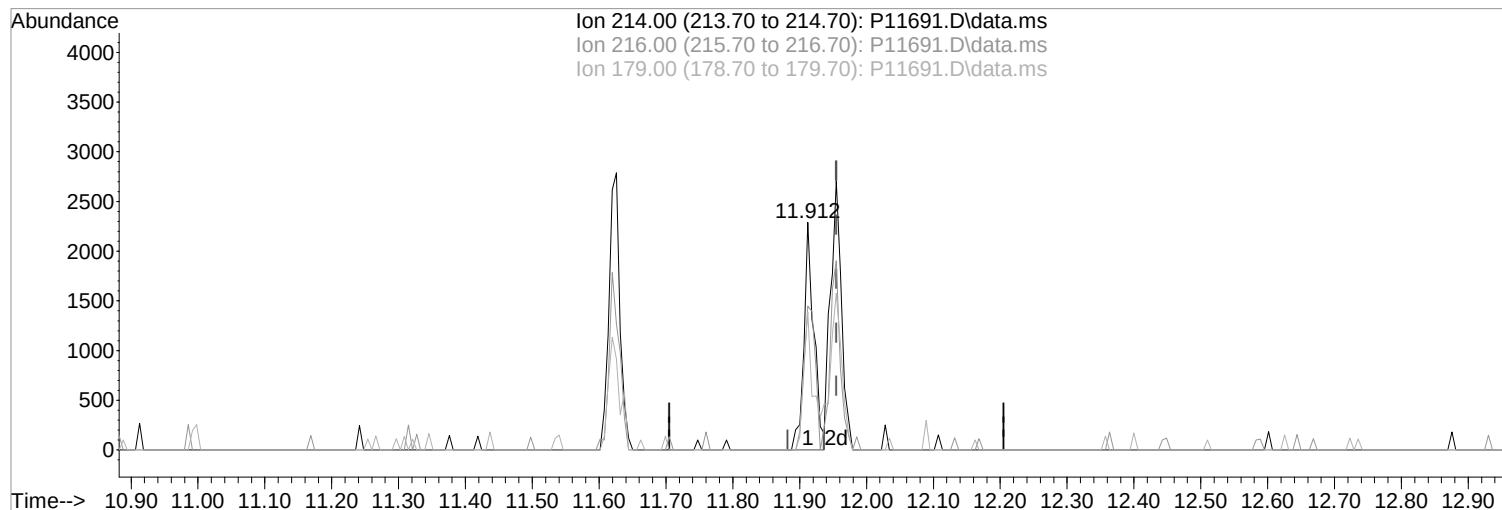
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(108) 2,5-DCBTF

Manual Integration:

11.912min (-0.043) 0.92 ppb

Before

response 2389

Ion Exp% Act%

09/01/17

214.00 100 100

216.00 62.50 63.17

179.00 74.00 60.68

0.00 0.00 0.00

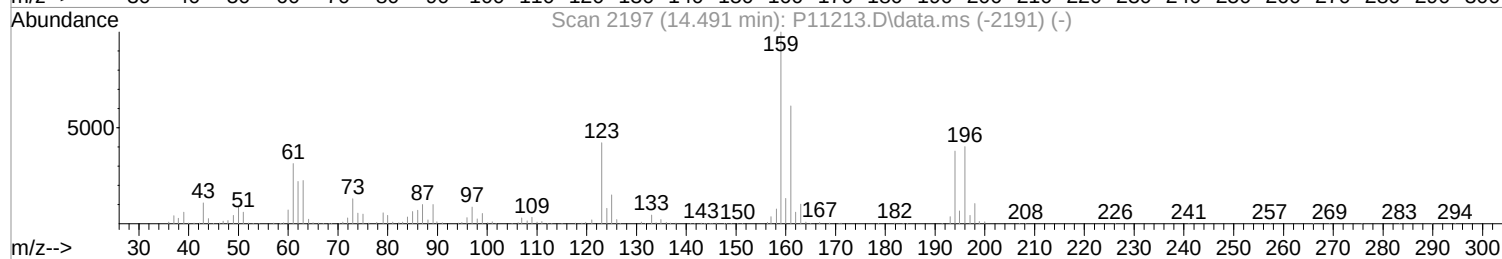
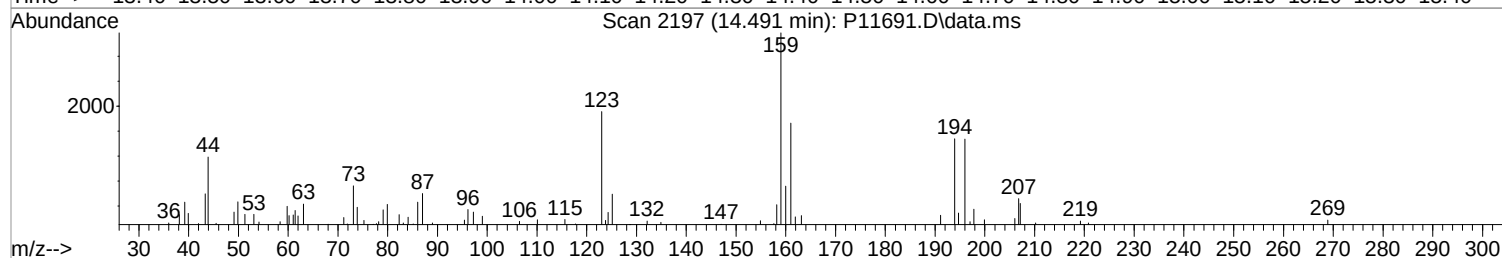
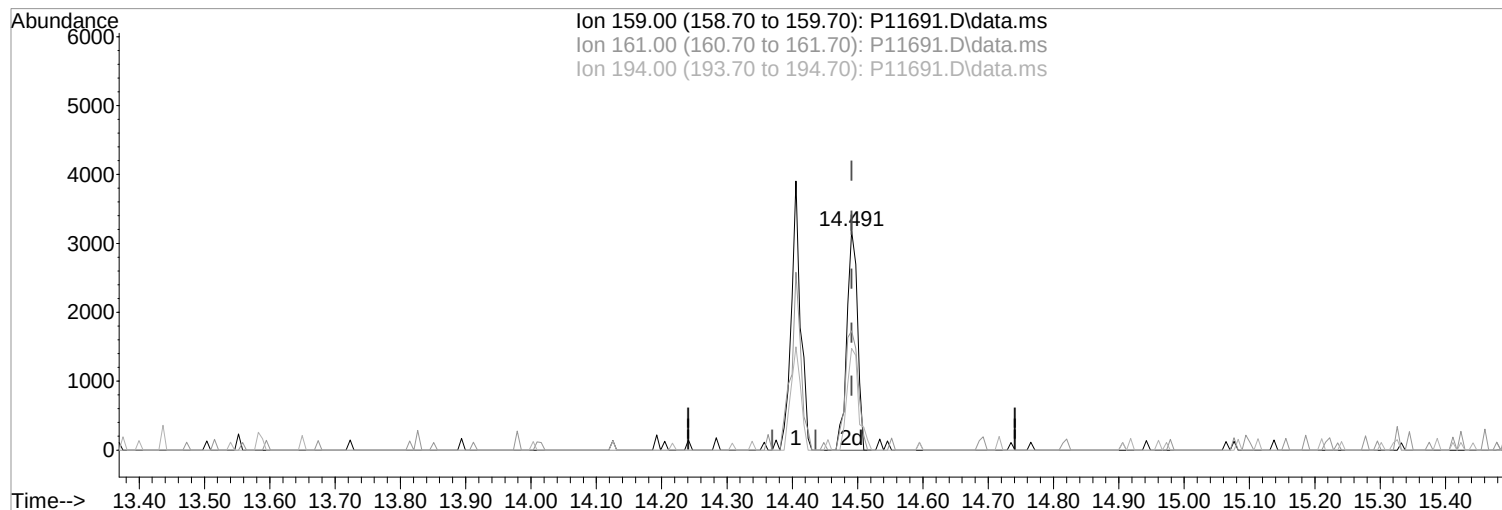
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(120) 2,3,6-Trichlorotoluene

14.491min (+0.000) 0.92 ppb m

response 3619

Ion	Exp%	Act%
159.00	100	100
161.00	61.30	54.41
194.00	37.80	46.41#
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

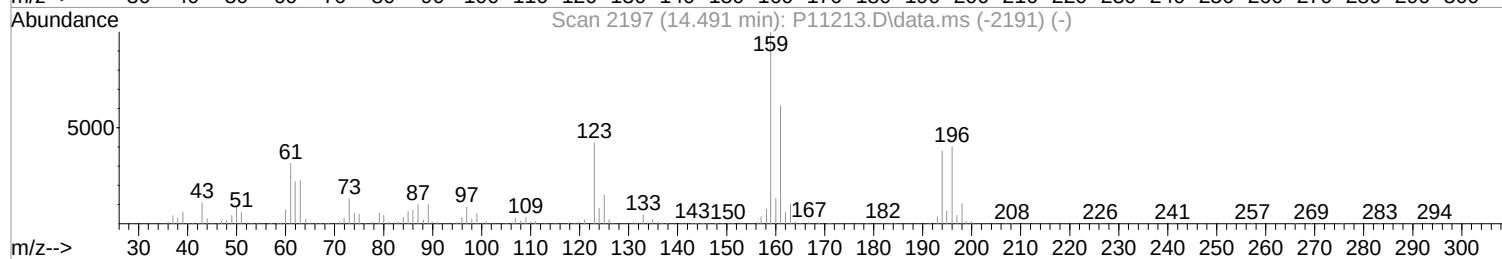
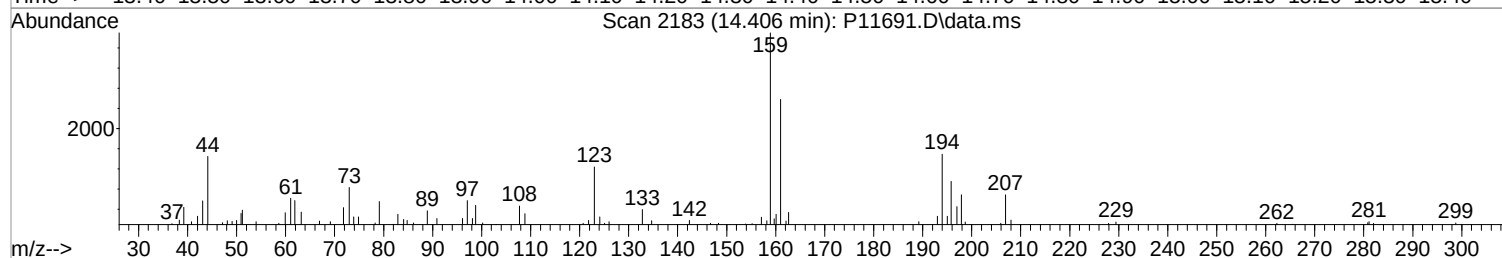
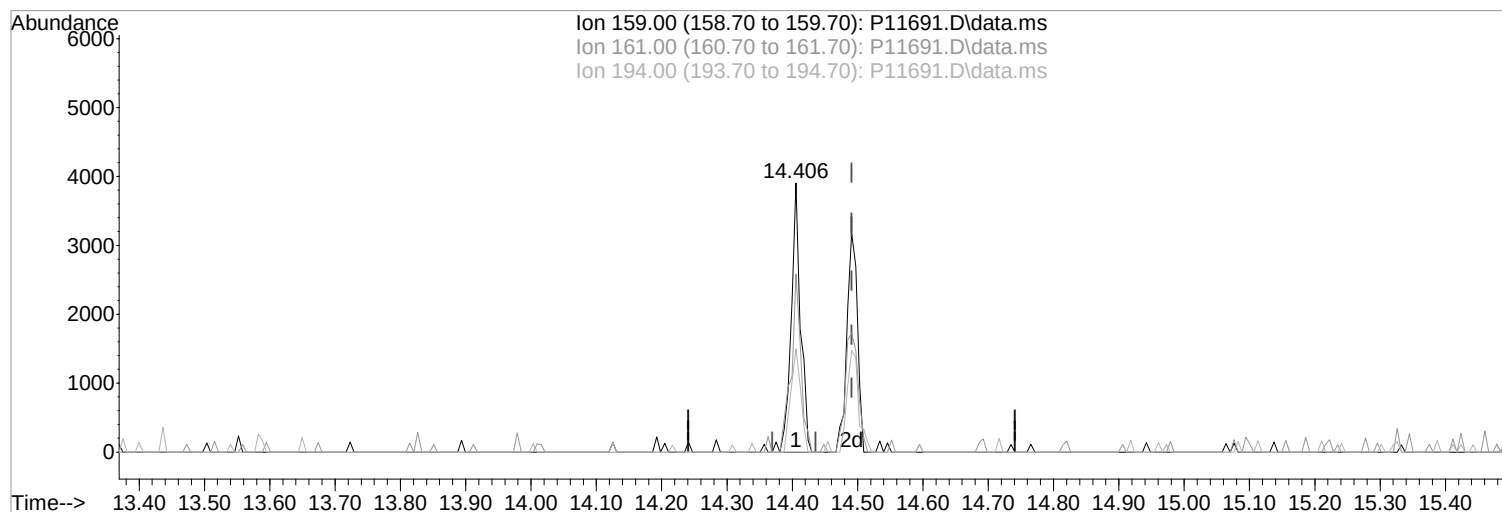
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(120) 2,3,6-Trichlorotoluene

Manual Integration:

14.406min (-0.085) 1.00 ppb

Before

response 3923

Ion	Exp%	Act%

09/01/17

159.00	100	100

161.00	61.30	62.66

194.00	37.80	36.39

0.00	0.00	0.00

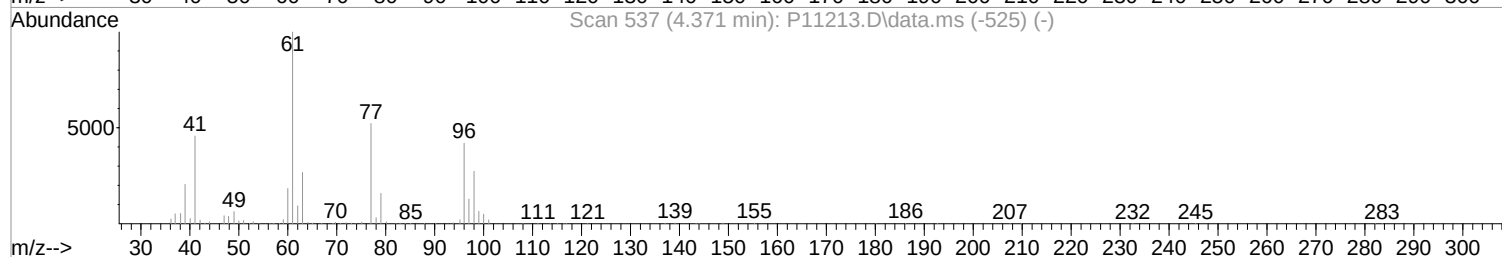
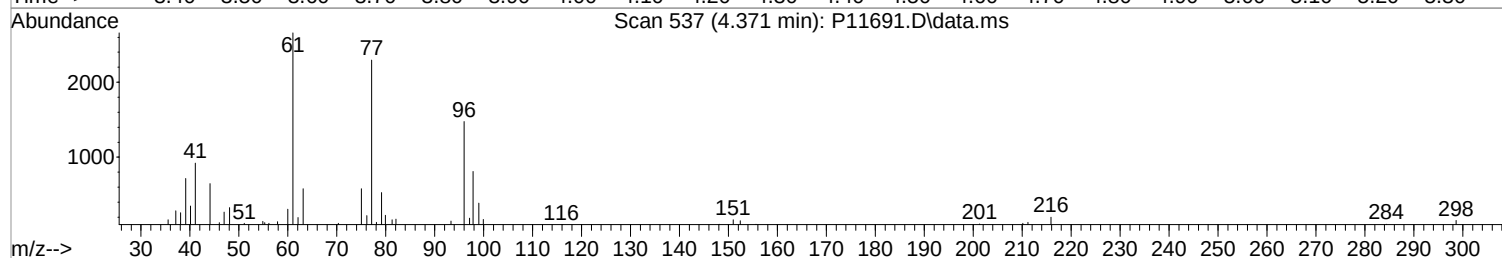
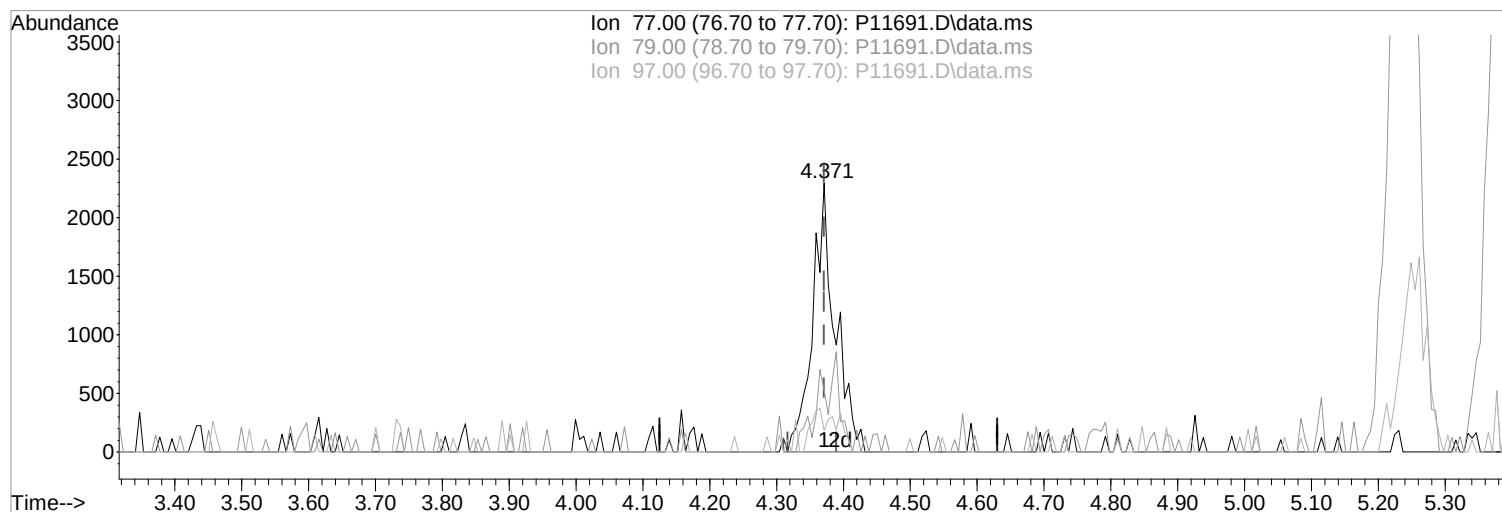
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(33) 2,2-Dichloropropane

4.371min (+0.000) 1.32 ppb m

response 5352

Ion	Exp%	Act%
77.00	100	100
79.00	30.10	23.00
97.00	24.60	8.06
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

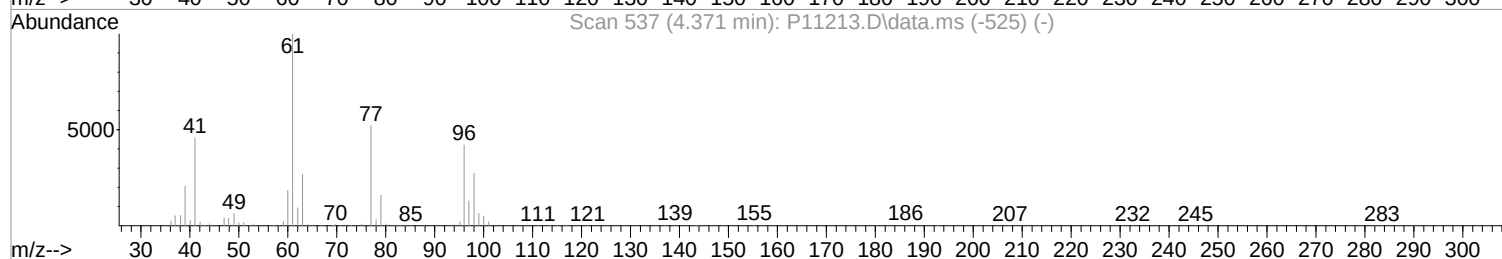
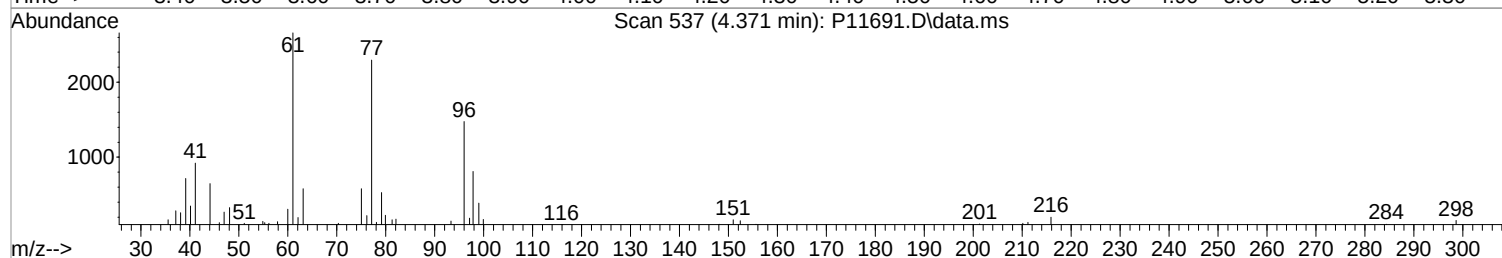
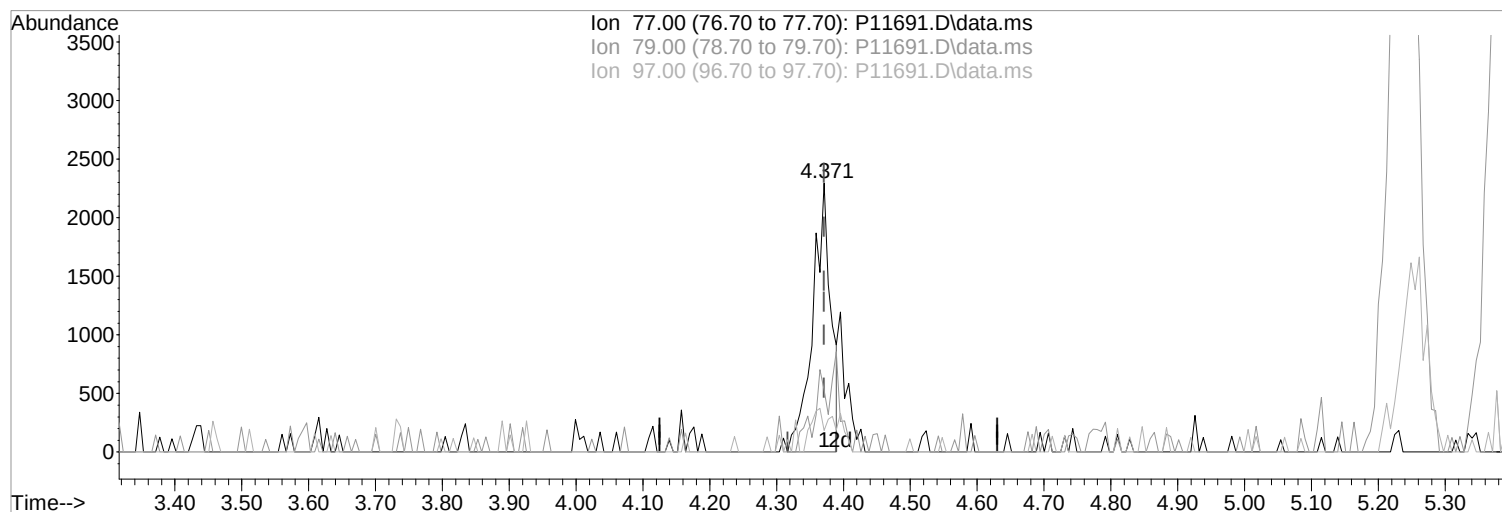
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(33) 2,2-Dichloropropane

Manual Integration:

4.371min (+0.000) 1.06 ppb

Before

response 4320

Ion	Exp%	Act%
77.00	100	100
79.00	30.10	23.00
97.00	24.60	8.06
0.00	0.00	0.00

09/01/17

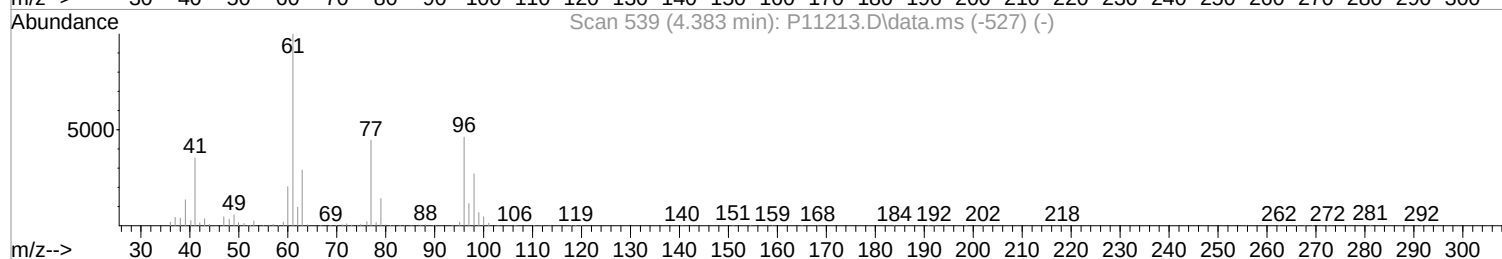
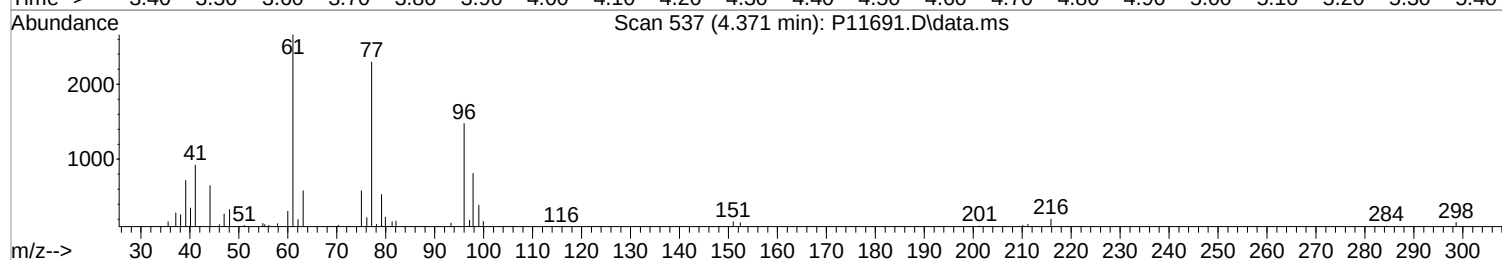
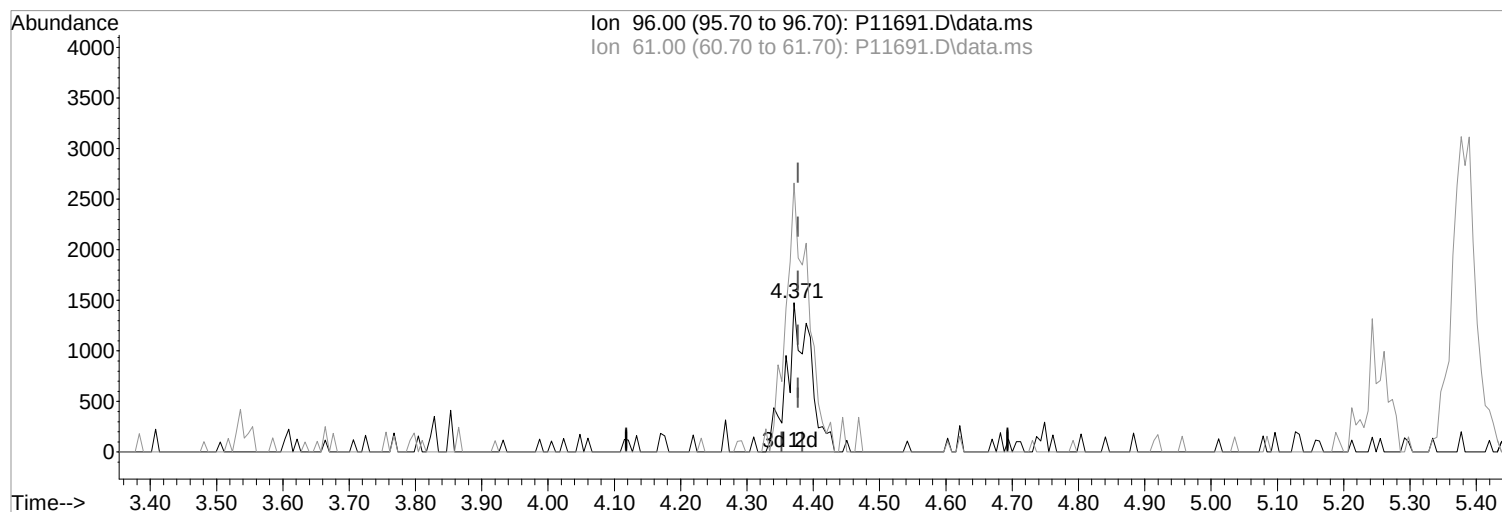
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(34) cis-1,2-Dichloroethene (P)

4.371min (-0.006) 1.15 ppb m

response 3655

Ion	Exp%	Act%
96.00	100	100
61.00	217.50	180.09#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

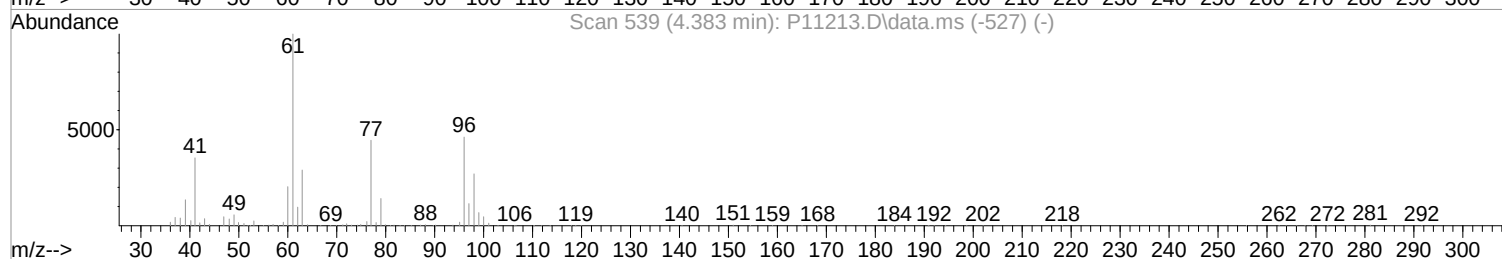
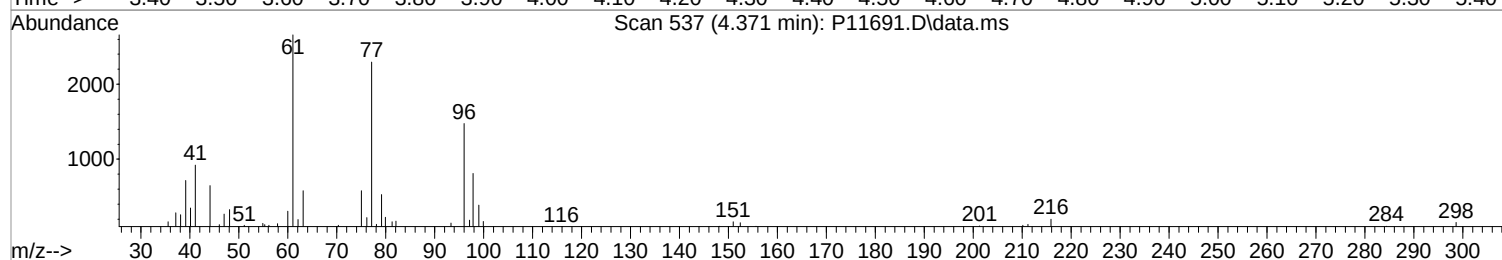
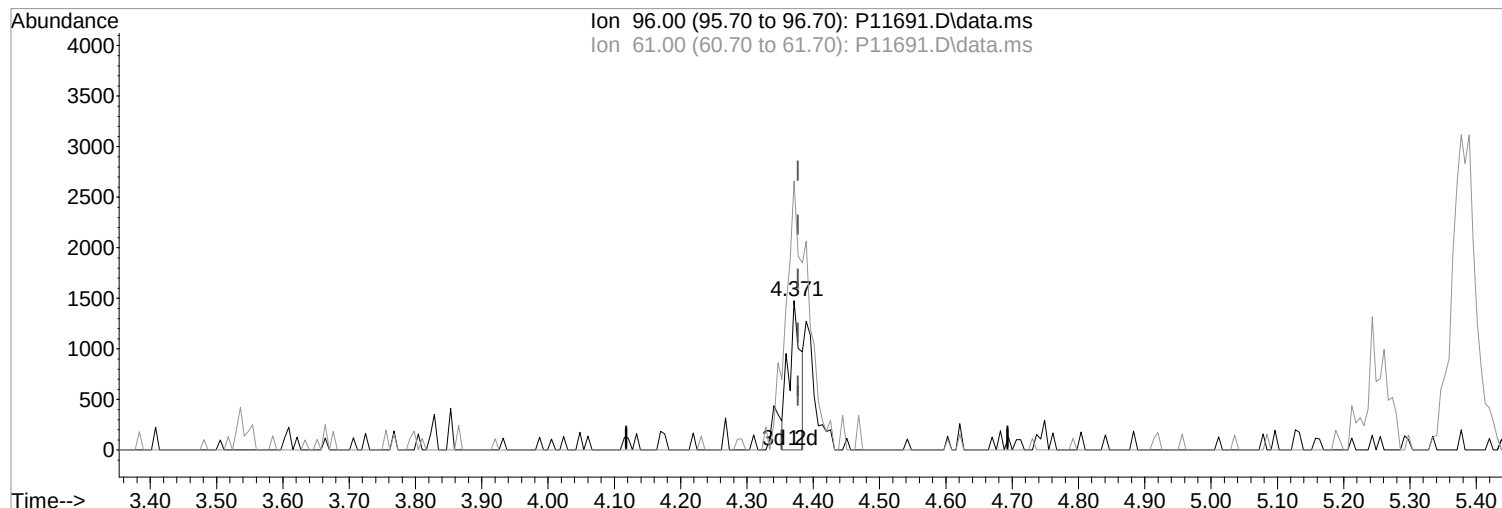
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(34) cis-1,2-Dichloroethene (P)

Manual Integration:

4.371min (-0.006) 0.57 ppb

Before

response 1826

Ion	Exp%	Act%
96.00	100	100
61.00	217.50	180.09#
0.00	0.00	0.00
0.00	0.00	0.00

09/01/17

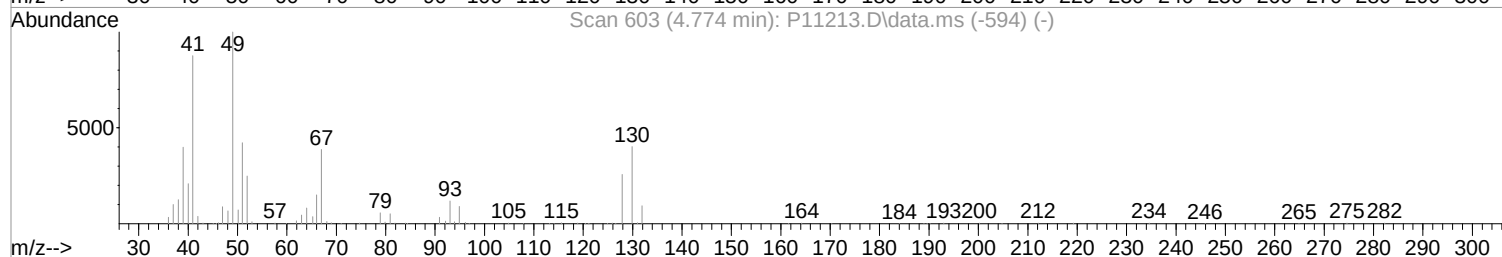
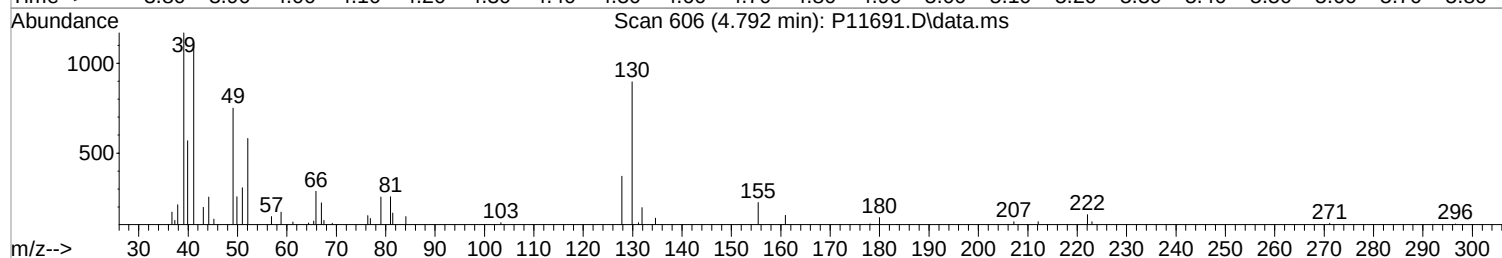
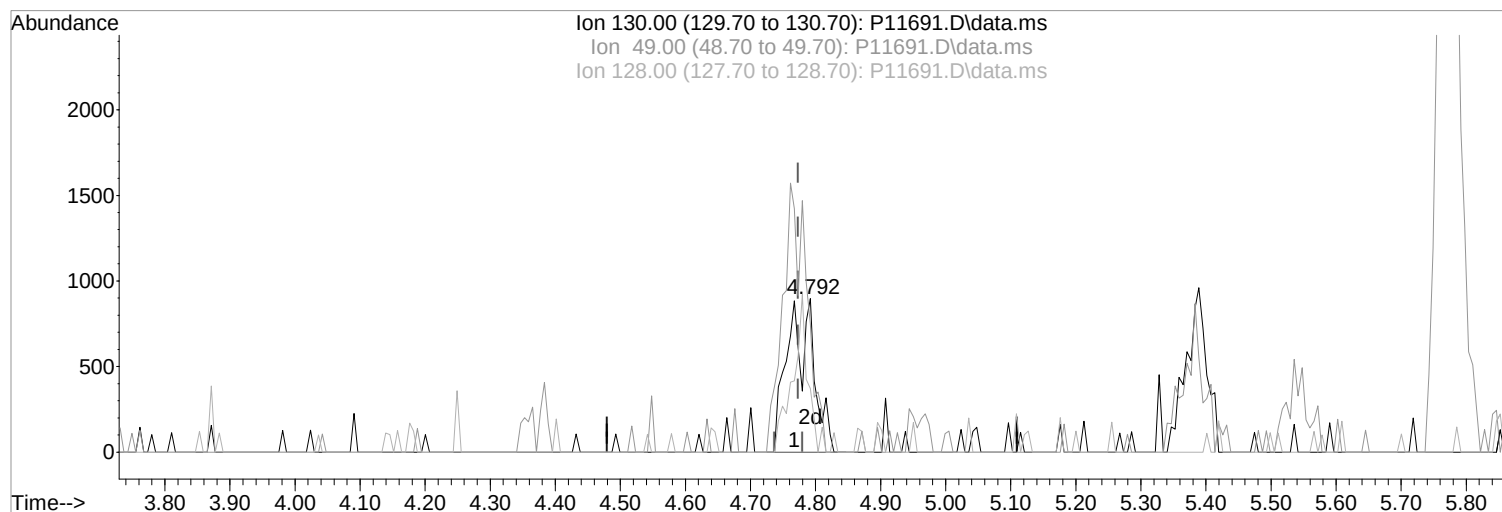
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(37) Bromochloromethane

4.792min (+0.018) 1.33 ppb m

response 2504

Ion	Exp%	Act%
130.00	100	100
49.00	255.50	83.61#
128.00	66.10	41.36#
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

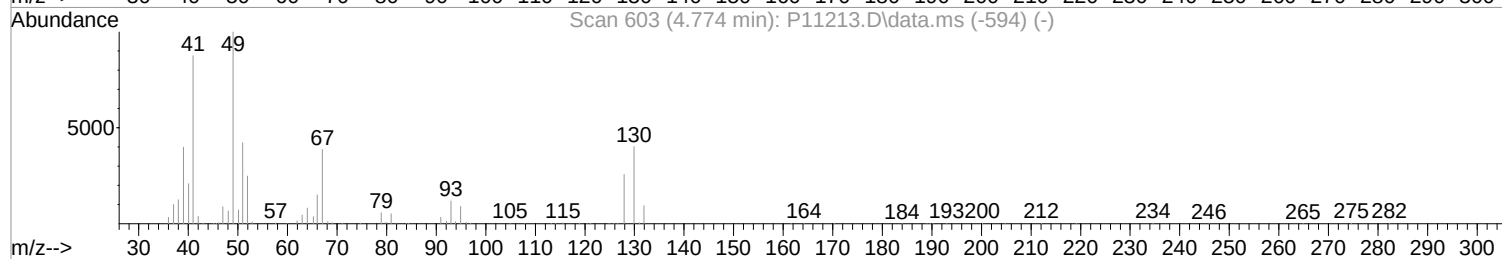
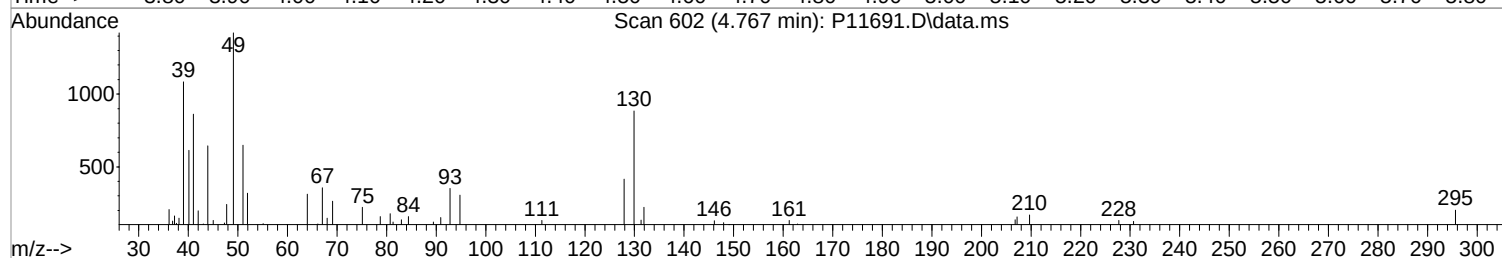
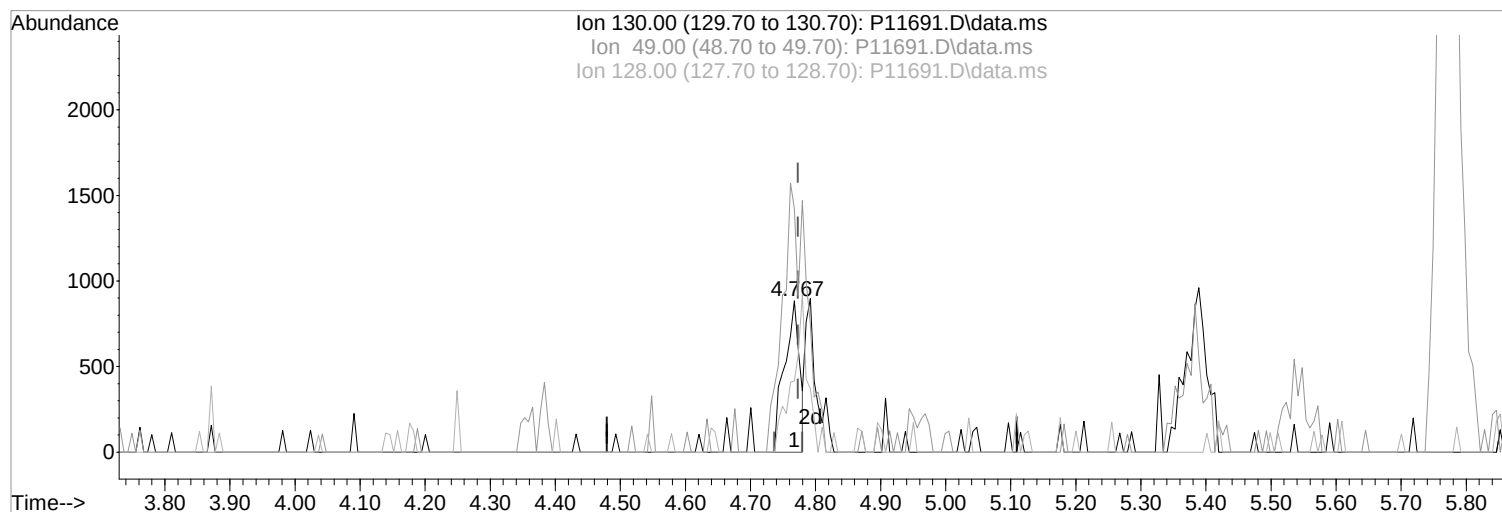
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(37) Bromochloromethane

Manual Integration:

4.767min (-0.006) 0.76 ppb

Before

response 1426

Ion Exp% Act%

09/01/17

130.00 100 100

49.00 255.50 160.86#

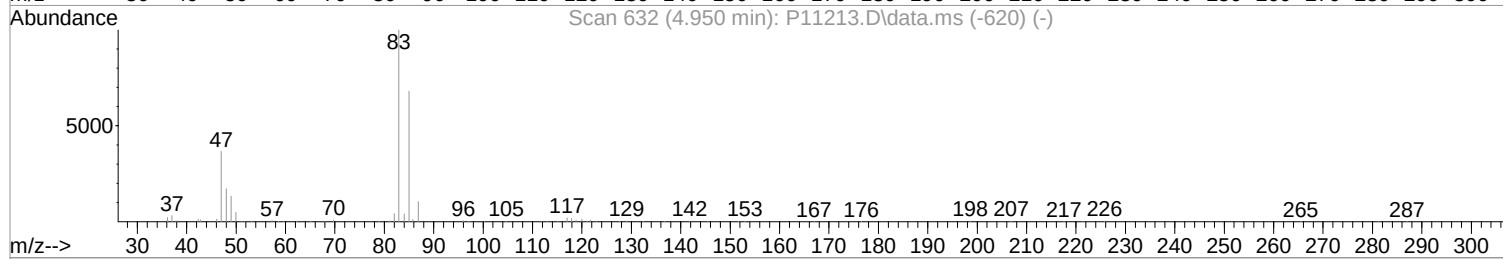
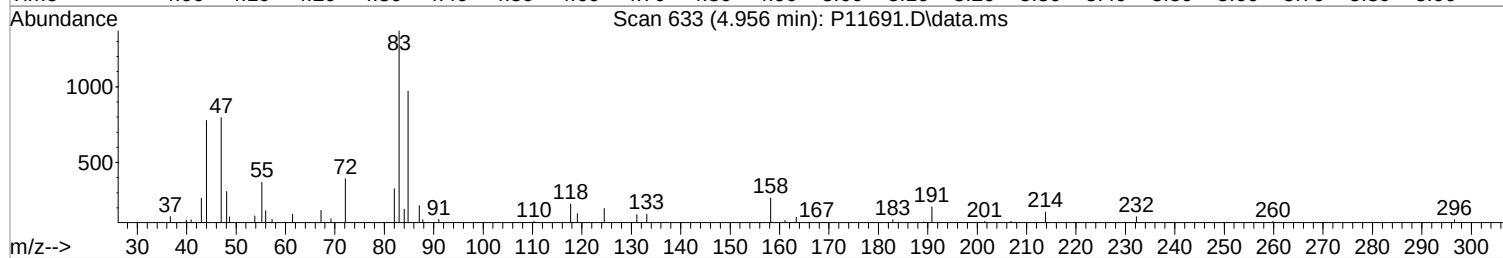
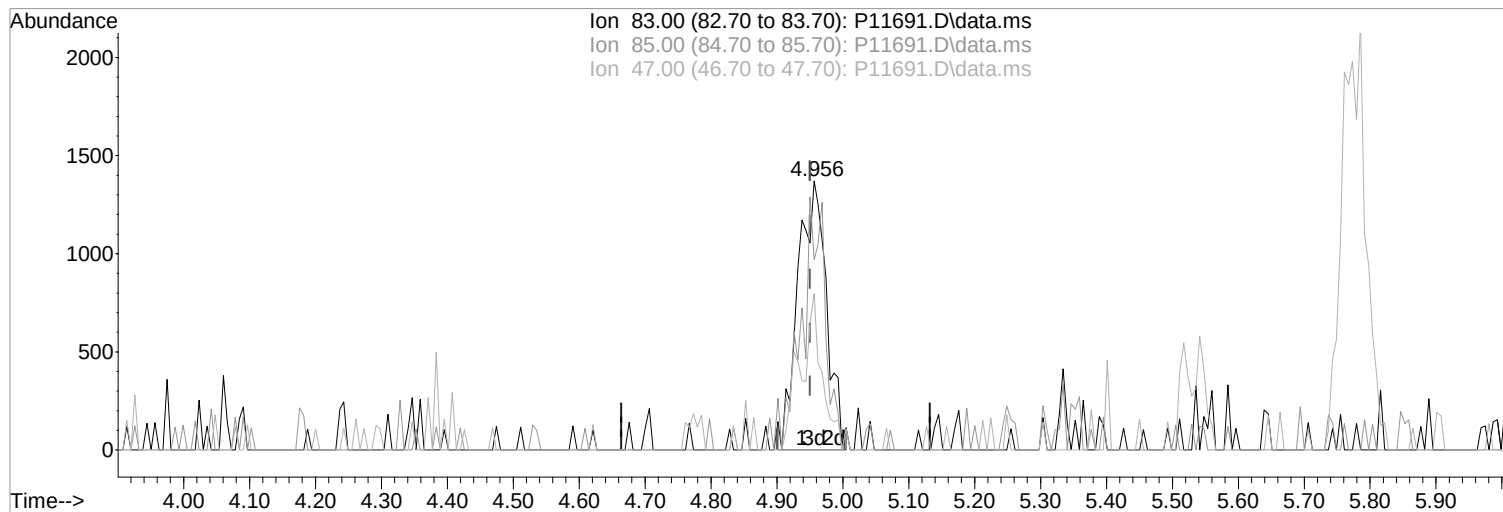
128.00 66.10 47.06

0.00 0.00 0.00

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:34:48 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(40) Chloroform (P)

4.956min (+0.006) 0.90 ppb m

response 4097

Ion	Exp%	Act%
83.00	100	100
85.00	68.00	70.88
47.00	36.70	58.18#
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

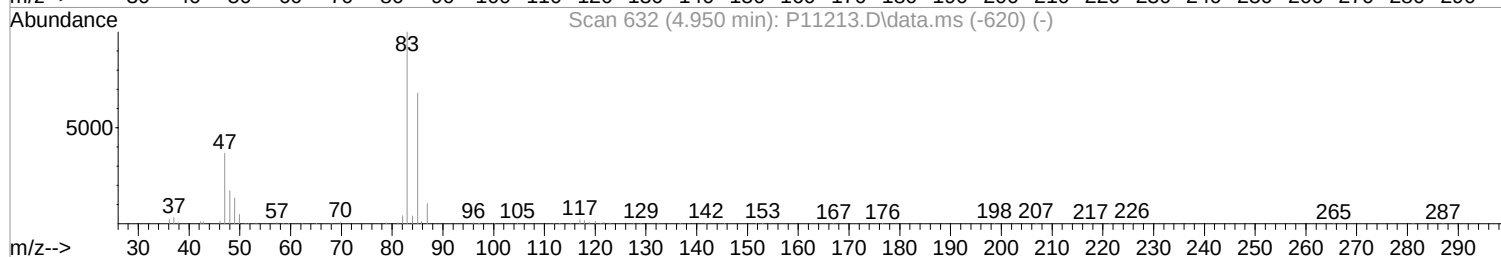
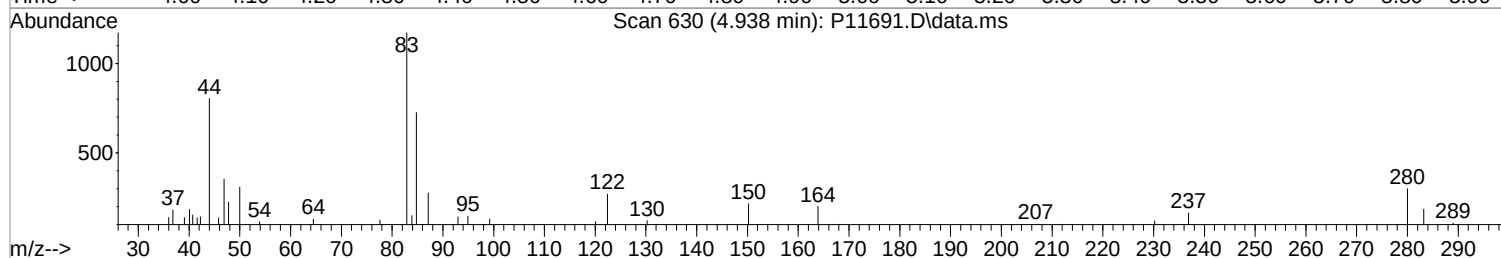
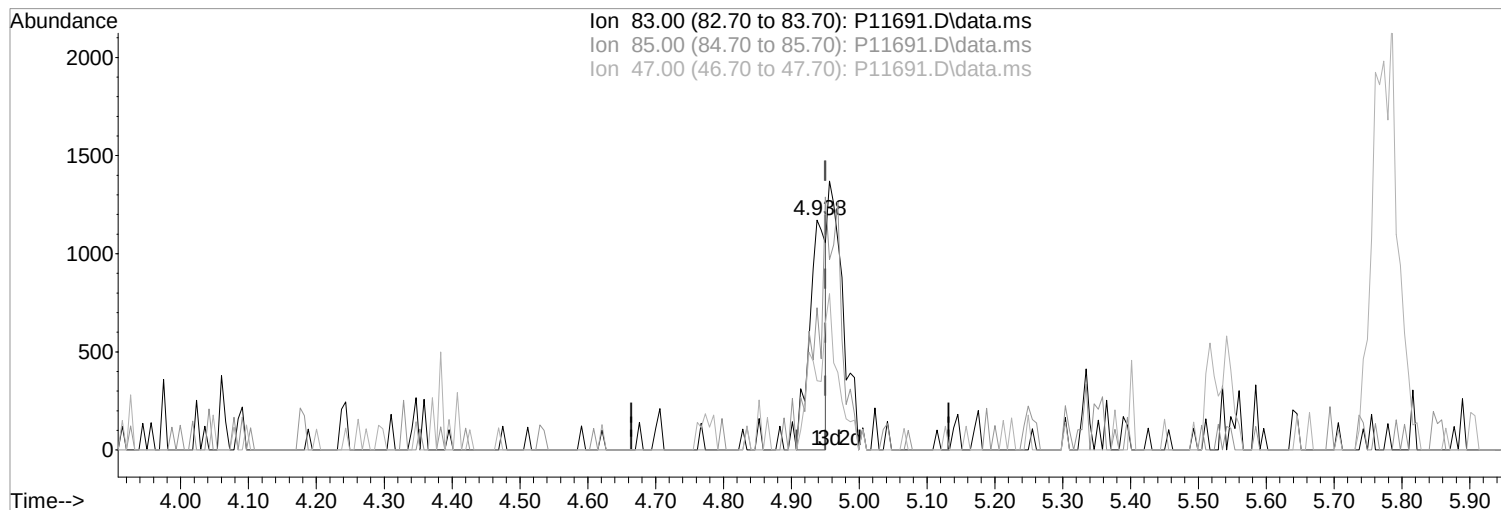
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(40) Chloroform (P)

Manual Integration:

4.938min (-0.012) 0.43 ppb

Before

response 1975

Ion	Exp%	Act%
83.00	100	100
85.00	68.00	61.86
47.00	36.70	30.12
0.00	0.00	0.00

09/01/17

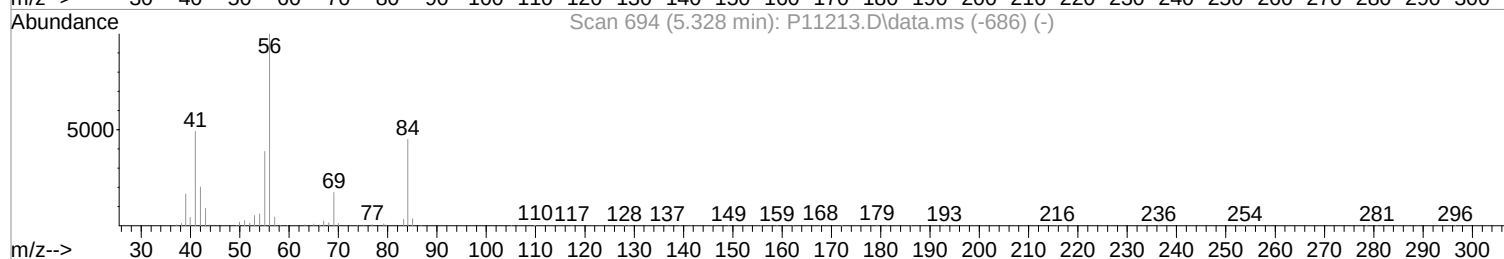
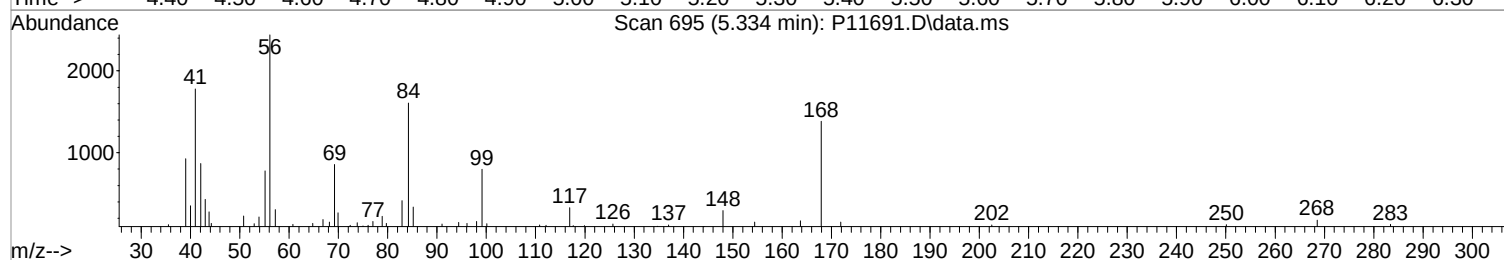
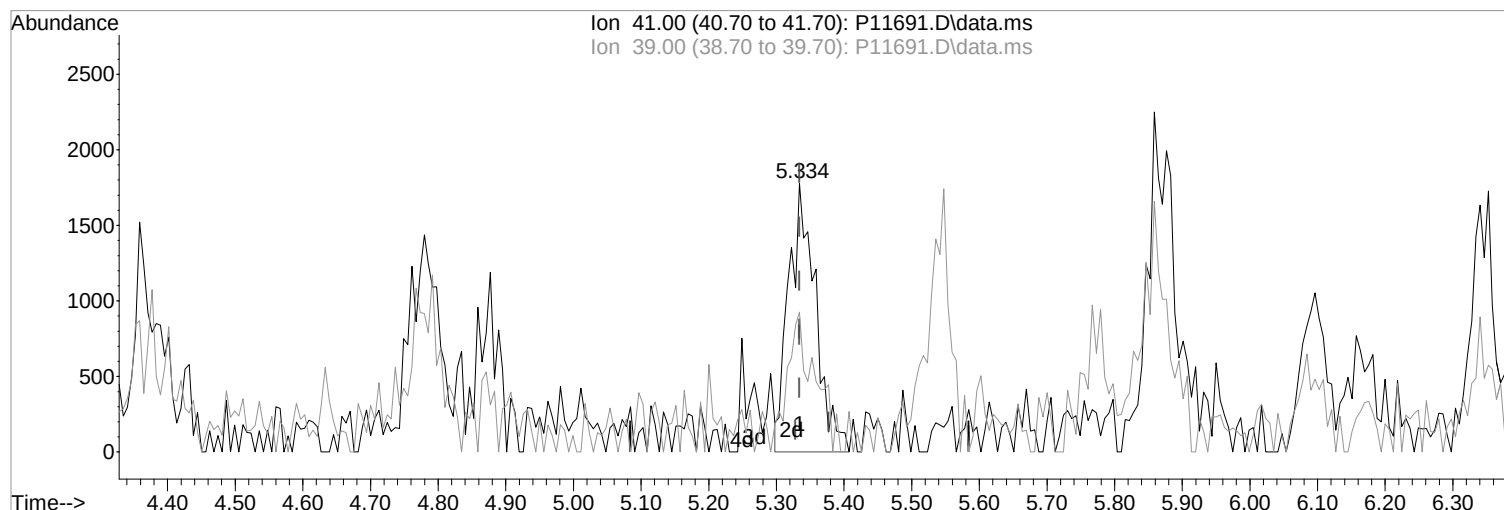
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(44) Cyclohexane (P)

5.334min (+0.000) 1.09 ppb m

response 4863

Ion	Exp%	Act%
41.00	100	100
39.00	33.90	52.08
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

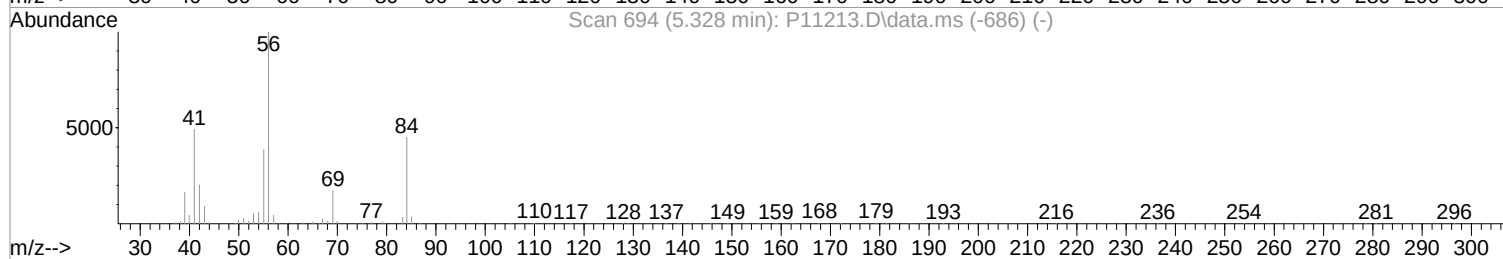
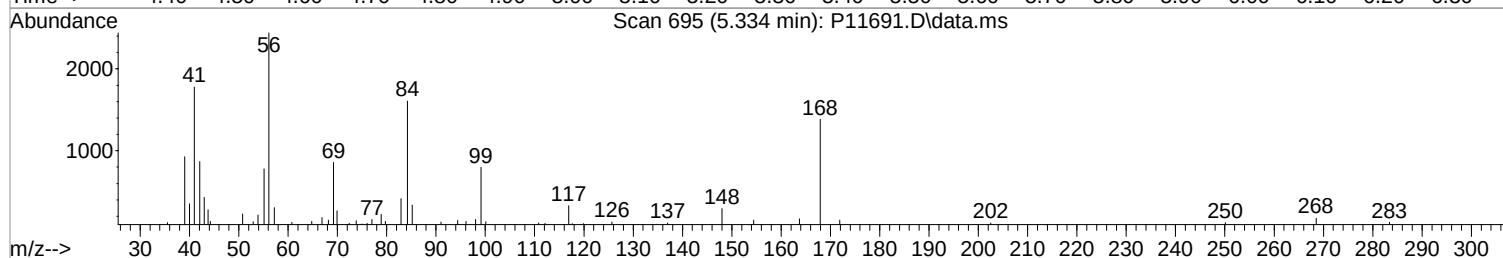
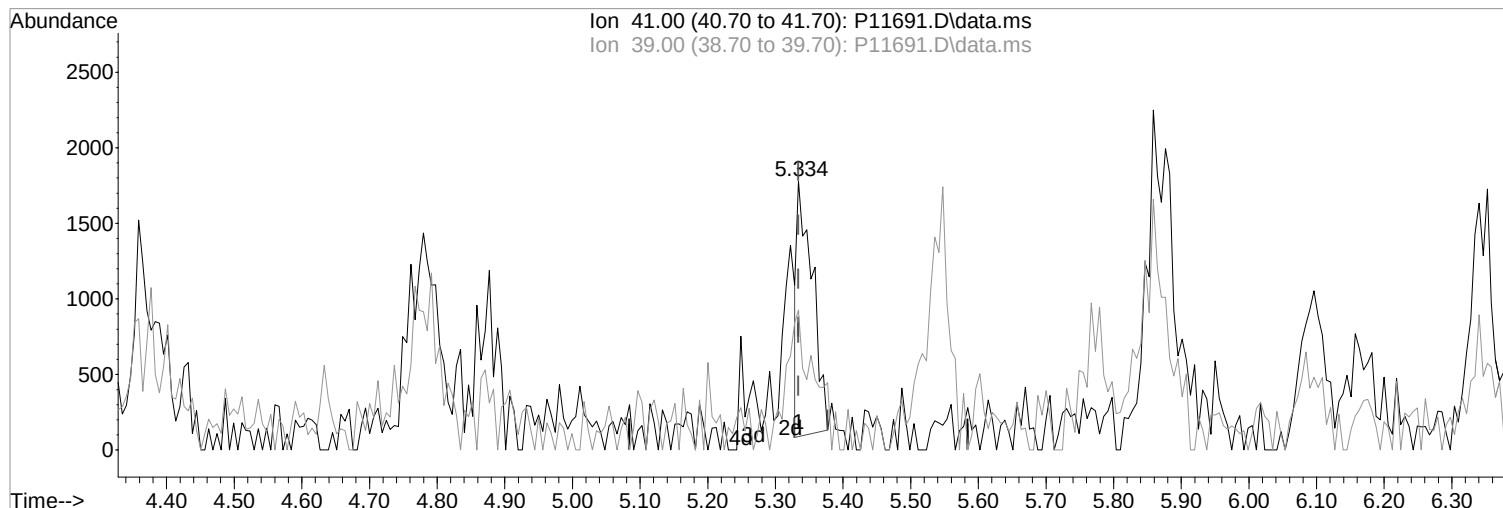
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(44) Cyclohexane (P)

Manual Integration:

5.334min (+0.000) 0.59 ppb

Before

response 2640

Ion	Exp%	Act%
41.00	100	100
39.00	33.90	52.08
0.00	0.00	0.00
0.00	0.00	0.00

09/01/17

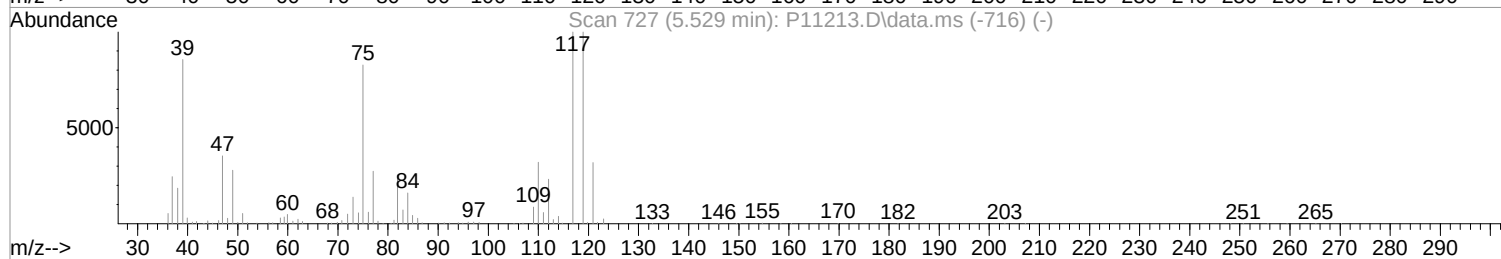
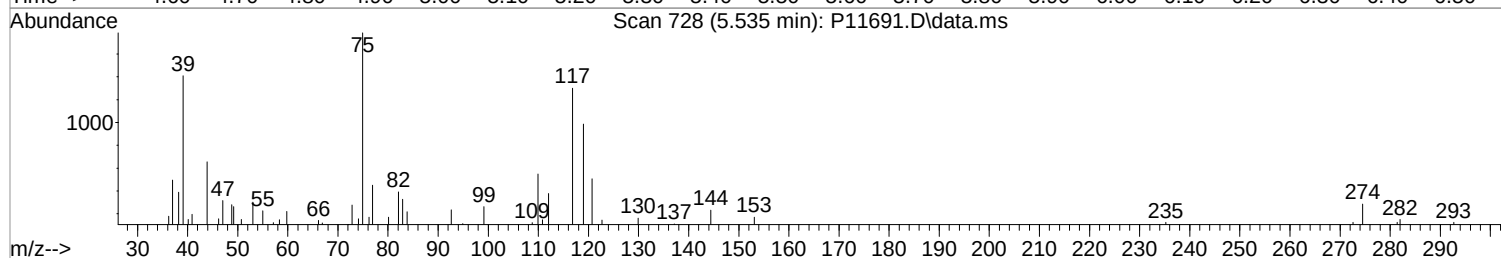
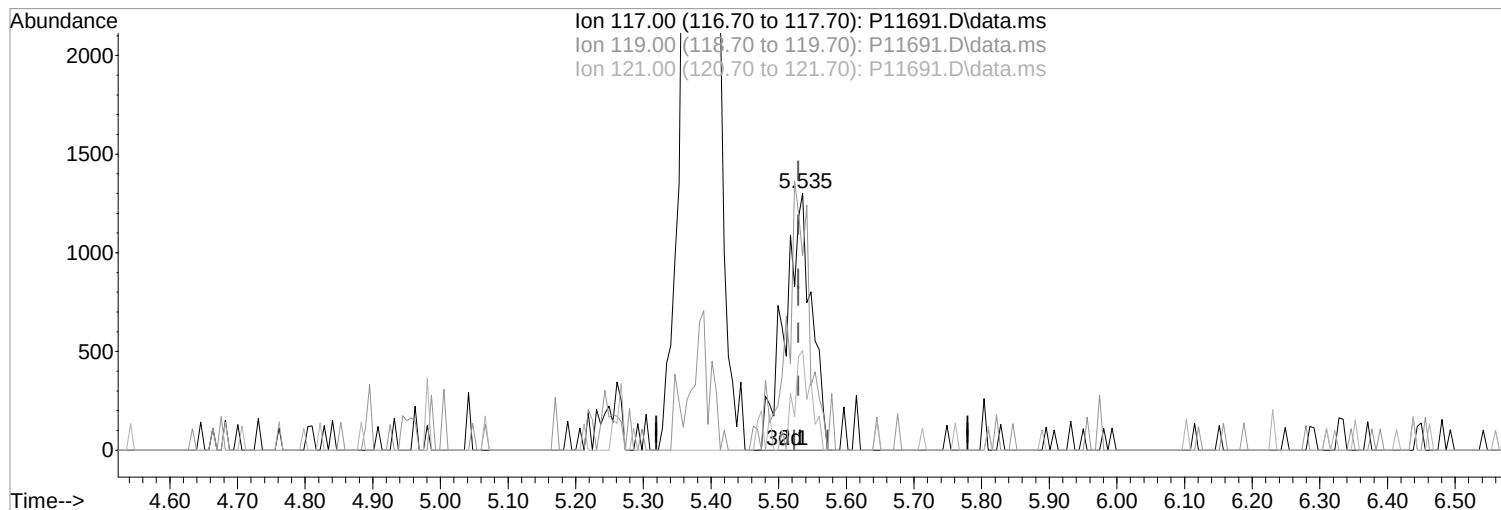
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(46) Carbontetrachloride (P)

5.535min (+0.006) 1.07 ppb m

response 3555

Ion	Exp%	Act%
117.00	100	100
119.00	100.10	75.86#
121.00	31.80	38.82
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

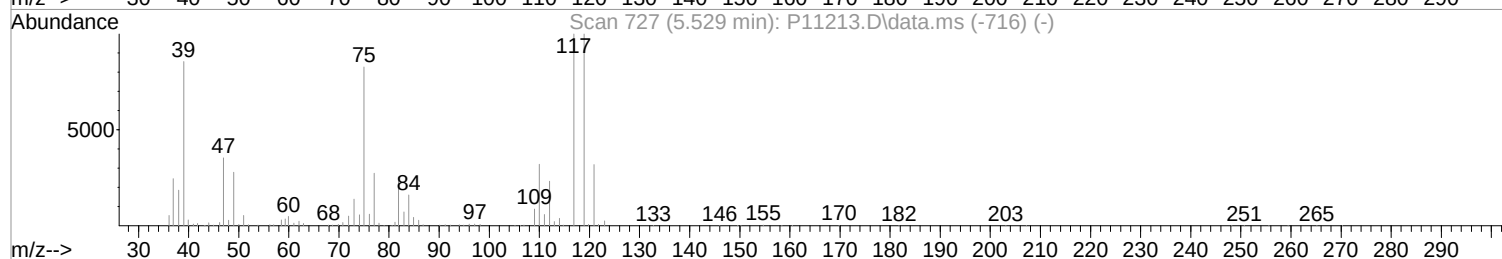
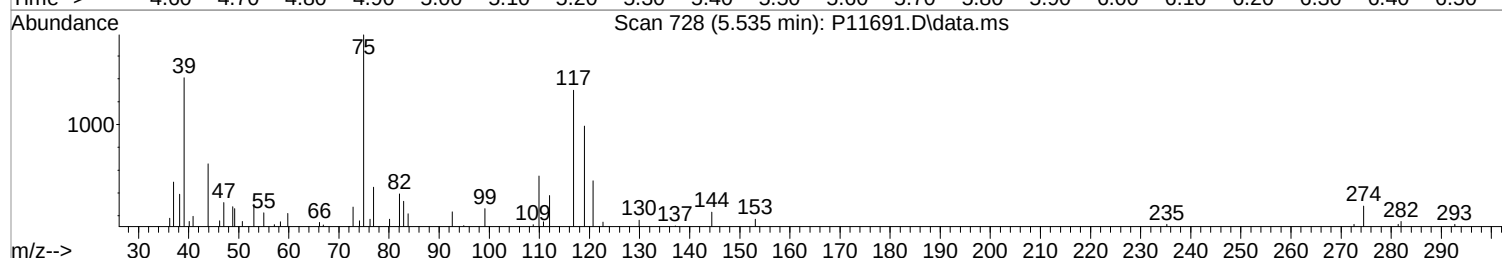
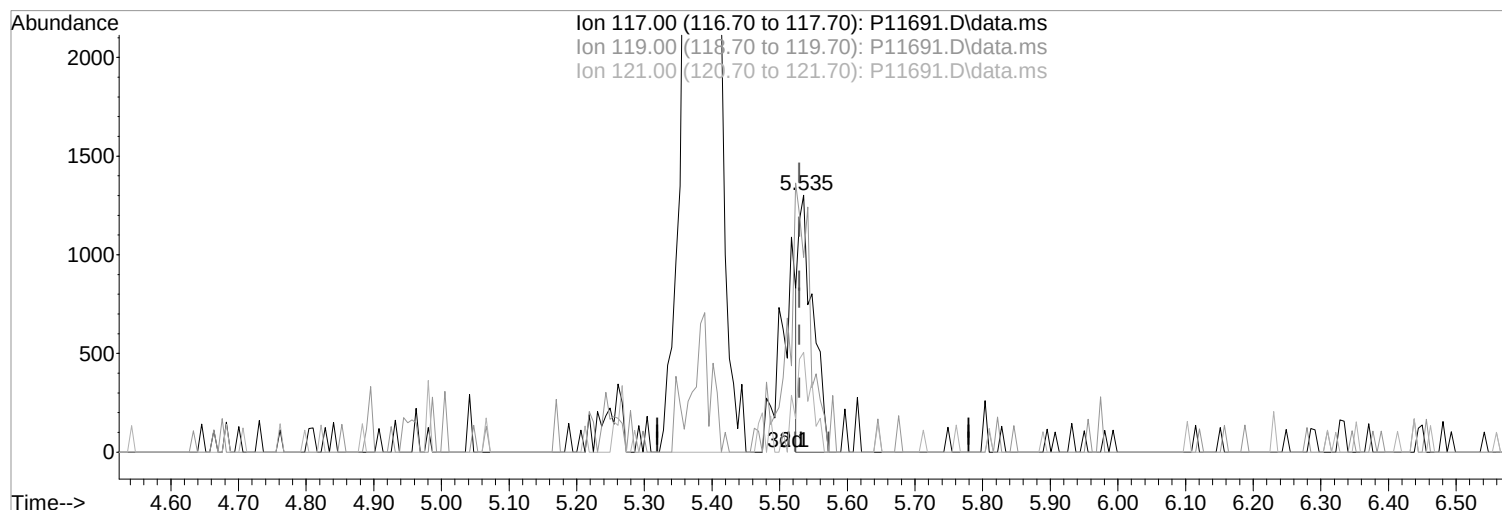
Quantitation Report (Qedit)

1st BA 09/01/17
2nd RL 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(46) Carbontetrachloride (P)

Manual Integration:

5.535min (+0.006) 0.58 ppb

Before

response 1935

Ion Exp% Act%

09/01/17

117.00 100 100

119.00 100.10 75.86#

121.00 31.80 38.82

0.00 0.00 0.00

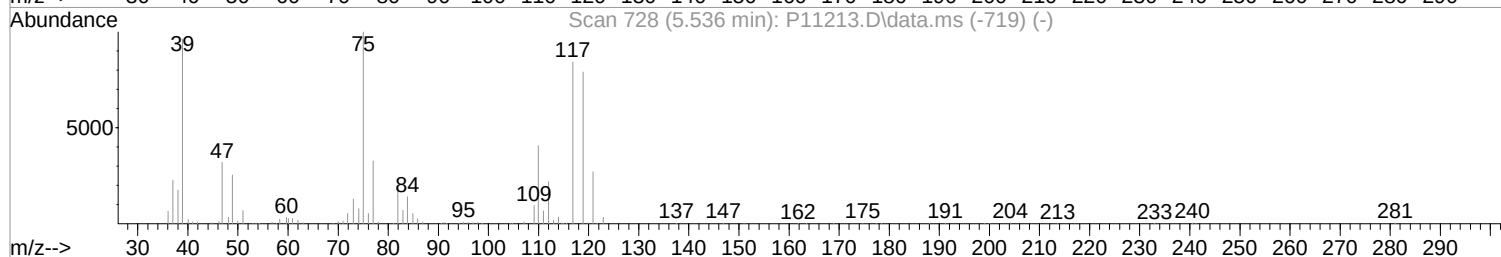
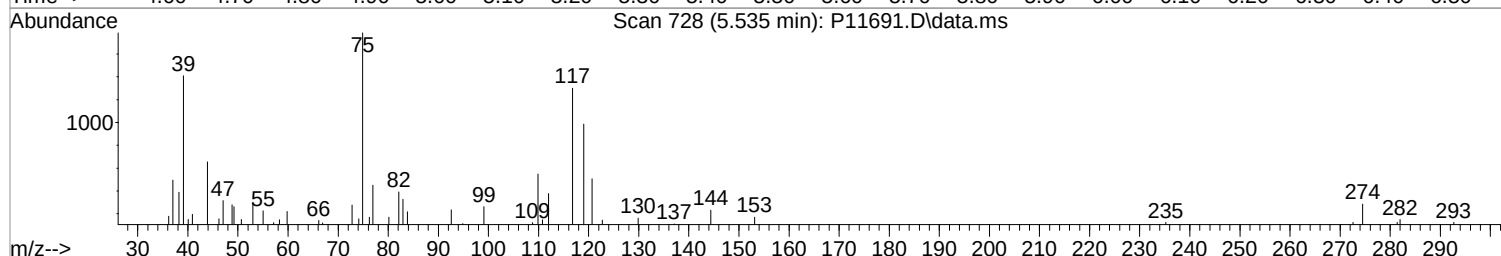
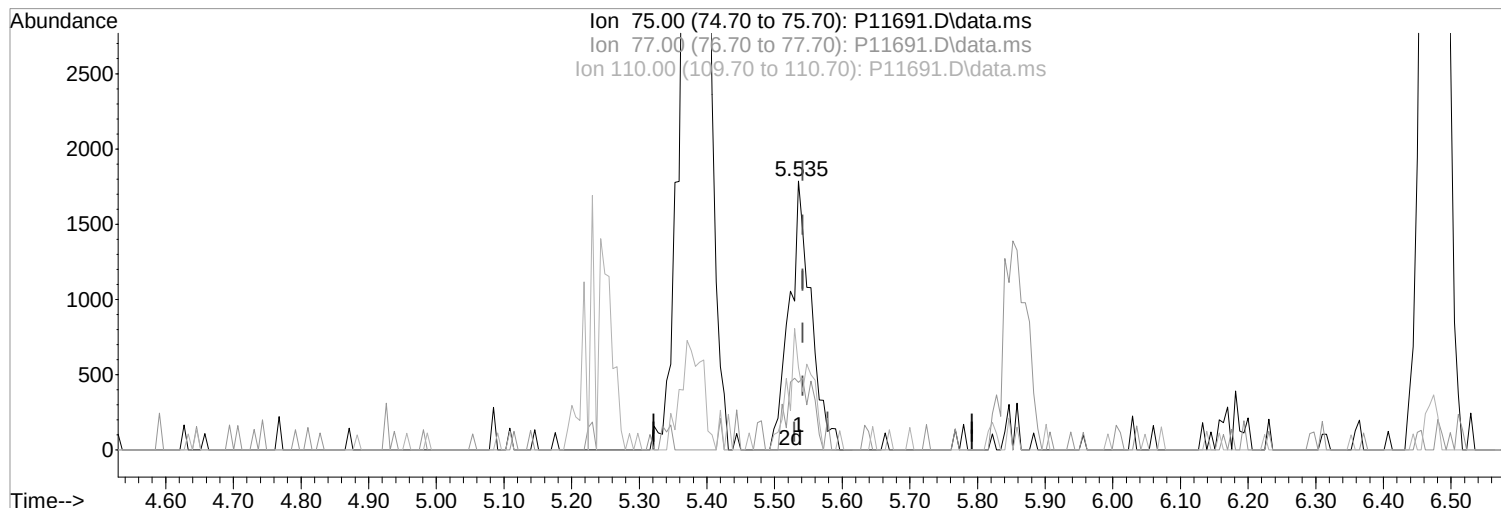
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(47) 1,1-Dichloropropene

5.535min (-0.006) 1.16 ppb m

response 3980

Ion	Exp%	Act%
75.00	100	100
77.00	32.60	25.18
110.00	40.90	30.72
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

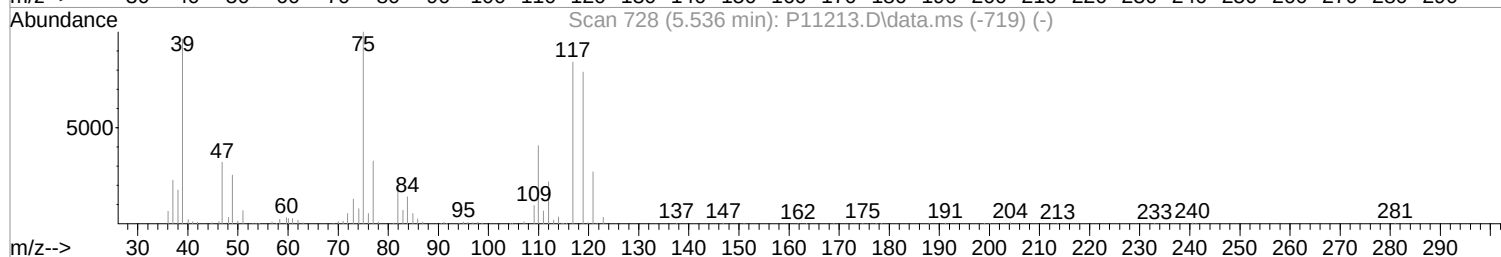
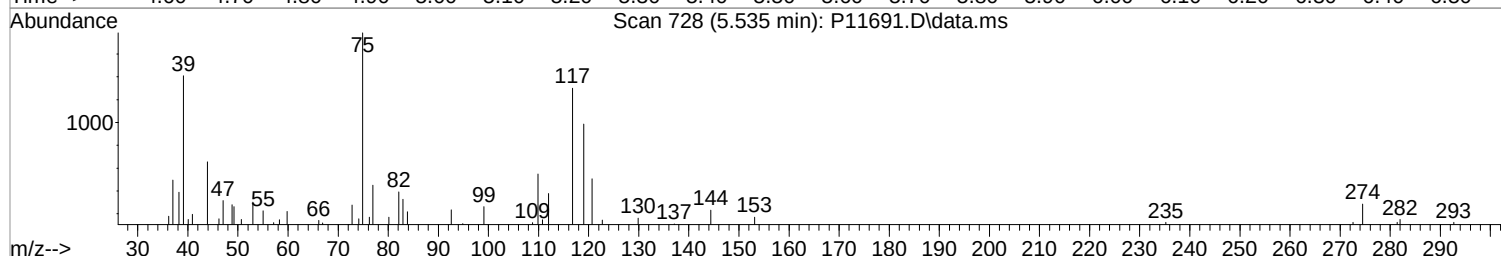
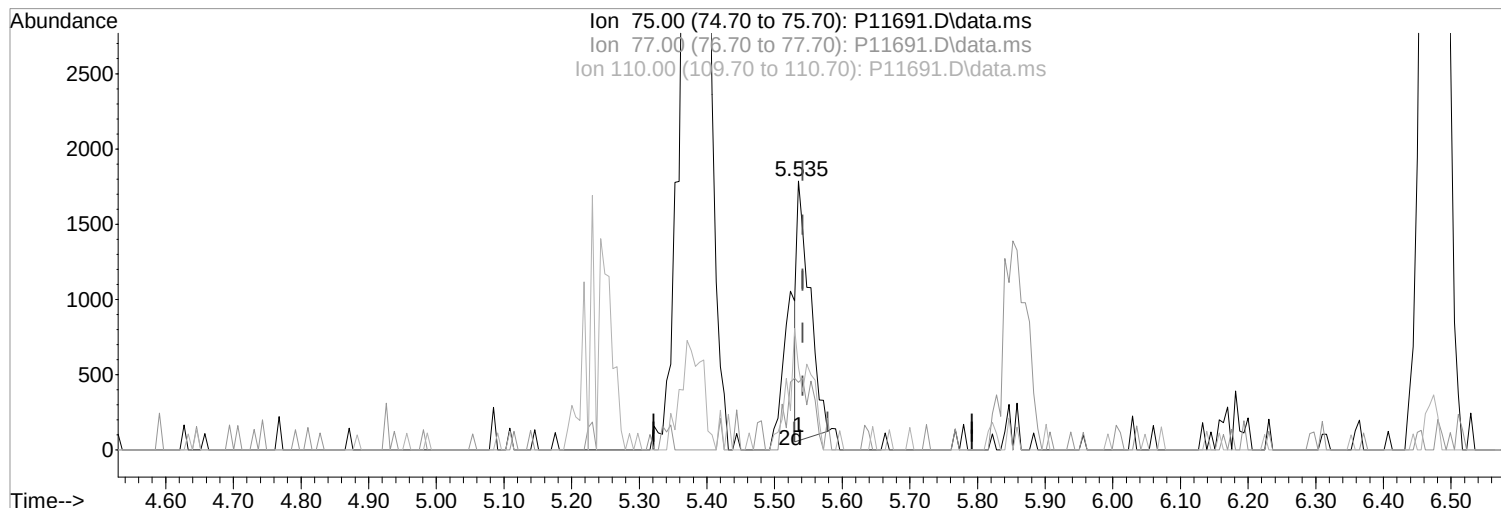
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:04 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11691.D\data.ms

(47) 1,1-Dichloropropene
5.535min (-0.006) 0.65 ppb
response 2245

Manual Integration:

Before

09/01/17

Ion	Exp%	Act%
75.00	100	100
77.00	32.60	25.18
110.00	40.90	30.72
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11691.D
 Acq On : 31 Aug 2017 5:20 pm
 Operator : B.ALLGEIER
 Sample : 1.0ppb
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:34:48 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.389	168	245857	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	399980	50.00	ppb	0.00
71) d5-Chlorobenzene	9.791	117	360758	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	176234	50.00	ppb	0.00

System Monitoring Compounds						
45) surr4,Dibrflmethane	5.237	113	111860	46.31	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	92.62%	
48) surr1,1,2-dichloroetha...	5.773	65	184695	49.92	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	99.84%	
65) SURR3,Toluene-d8	8.297	98	535401	53.61	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	107.22%	
70) SURR2,BFB	10.864	95	211260	54.67	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	109.34%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.183	85	3092	0.84	ppb	91
3) Chloromethane	1.311	50	6993	0.90	ppb	91
4) Vinyl Chloride	1.384	62	4419	0.83	ppb	100
5) Bromomethane	1.603	94	2712	0.48	ppb	94
6) Chloroethane	1.689	64	3403	1.19	ppb	97
7) Freon 21	1.835	67	6879	1.25	ppb	94
8) Trichlorofluoromethane	1.884	101	5106	1.29	ppb	81
9) Diethyl Ether	2.122	59	4113	0.79	ppb	91
10) Freon 123a	2.122	67	4114	1.15	ppb	# 63
11) Freon 123	2.170	83	3877	1.04	ppb	88
12) Acrolein	2.219	56	6108	3.98	ppb	79
13) 1,1-Dicethene	2.311	96	3015	1.10	ppb	# 48
14) Freon 113	2.311	101	2701	1.13	ppb	83
15) Acetone	2.359	43	4668	1.65	ppb	93
16) 2-Propanol	2.487	45	11590	16.90	ppb	59
17) Iodomethane	2.432	142	915	4.99	ppb	89
18) Carbon Disulfide	2.499	76	6810	0.83	ppb	84
19) Acetonitrile	2.609	40	2410	4.24	ppb	# 76
20) Allyl Chloride	2.640	76	1368	1.03	ppb	# 77
21) Methyl Acetate	2.664	43	8466	1.03	ppb	94
22) Methylene Chloride	2.749	84	2991	1.03	ppb	# 63
23) TBA	2.884	59	15923	15.16	ppb	96
24) Acrylonitrile	3.005	53	12410	3.52	ppb	96
25) Methyl-t-Butyl Ether	3.060	73	10701	1.10	ppb	82
26) trans-1,2-Dichloroethene	3.048	96	2734	0.94	ppb	# 82
28) 1,1-Dicethane	3.542	63	6186	0.82	ppb	82
29) Vinyl Acetate	3.627	86	712	1.03	ppb	# 1
30) DIPE	3.676	45	16571	0.91	ppb	89
31) 2-Chloro-1,3-Butadiene	3.670	53	5710	0.67	ppb	63
32) ETBE	4.200	59	13539	0.79	ppb	78
33) 2,2-Dichloropropane	4.371	77	5352m	1.32	ppb	
34) cis-1,2-Dichloroethene	4.371	96	3655m	1.15	ppb	
35) 2-Butanone	4.432	43	4674	1.16	ppb	94
36) Propionitrile	4.505	54	5063	3.51	ppb	73
37) Bromochloromethane	4.792	130	2504m	1.33	ppb	
38) Methacrylonitrile	4.773	67	1605	0.76	ppb	# 52
39) Tetrahydrofuran	4.871	42	3443	1.29	ppb	89
40) Chloroform	4.956	83	4097m	0.90	ppb	
41) 1,1,1-Trichloroethane	5.261	97	3985	0.95	ppb	87

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11691.D
 Acq On : 31 Aug 2017 5:20 pm
 Operator : B.ALLGEIER
 Sample : 1.0ppb
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:34:48 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.102	73	8993	0.93	ppb	82
44) Cyclohexane	5.334	41	4863m	1.09	ppb	
46) Carbontetrachloride	5.535	117	3555m	1.07	ppb	
47) 1,1-Dichloropropene	5.535	75	3980m	1.16	ppb	
49) Benzene	5.859	78	11028	1.04	ppb	84
50) 1,2-Dichloroethane	5.895	62	5446	1.03	ppb	93
51) Iso-Butyl Alcohol	5.865	43	8534	18.24	ppb	86
52) n-Heptane	6.346	43	6540	0.94	ppb	89
53) 1-Butanol	6.828	56	9846	31.90	ppb	# 60
54) Trichloroethene	6.804	130	2873	1.00	ppb	91
55) Methylcyclohexane	7.041	55	5535	0.74	ppb	76
56) 1,2-Dichloropropane	7.084	63	3795	0.86	ppb	79
57) Dibromomethane	7.218	93	1861	1.00	ppb	# 71
58) 1,4-Dioxane	7.291	88	1691	26.96	ppb	# 28
59) Methyl Methacrylate	7.316	69	2640	0.92	ppb	# 86
60) Bromodichloromethane	7.456	83	3241	0.97	ppb	83
61) 2-Nitropropane	7.736	41	3225	2.14	ppb	# 63
62) 2-Chloroethylvinyl Ether	7.858	63	1780	0.57	ppb	81
63) cis-1,3-Dichloropropene	7.998	75	4466	0.97	ppb	77
64) 4-Methyl-2-pentanone	8.200	43	6774	0.99	ppb	87
66) Toluene	8.364	91	12867	1.06	ppb	86
67) trans-1,3-Dichloropropene	8.639	75	4361	1.03	ppb	90
68) Ethyl Methacrylate	8.773	69	4546	0.97	ppb	# 62
69) 1,1,2-Trichloroethane	8.821	97	3111	1.11	ppb	91
72) Tetrachloroethene	8.968	164	2957	1.41	ppb	# 64
73) 2-Hexanone	9.120	43	4343	0.83	ppb	99
74) 1,3-Dichloropropane	8.992	76	5702	1.23	ppb	# 62
75) Dibromochloromethane	9.224	129	2519	0.94	ppb	91
76) N-Butyl Acetate	9.273	43	9798	0.91	ppb	97
77) 1,2-Dibromoethane	9.321	107	3002	1.20	ppb	98
78) Chlorobenzene	9.815	112	8191	1.10	ppb	89
79) 3-CBTF	9.833	180	3988	1.04	ppb	93
80) 4-CBTF	9.888	180	4074	1.22	ppb	81
81) 1,1,1,2-Tetrachloroethane	9.894	131	2520	0.90	ppb	# 71
82) Ethylbenzene	9.937	106	4664	1.18	ppb	97
83) (m+p)Xylene	10.047	106	11572	2.37	ppb	# 68
84) o-Xylene	10.406	106	4800	0.95	ppb	96
85) Styrene	10.419	104	8414	1.03	ppb	90
87) Bromoform	10.571	173	1102	0.66	ppb	# 66
88) 2-CBTF	10.650	180	3751	1.07	ppb	# 87
89) Isopropylbenzene	10.742	105	13043	1.10	ppb	93
90) Cyclohexanone	10.803	55	21541	18.77	ppb	80
91) trans-1,4-Dichloro-2-B...	11.047	53	1569	0.84	ppb	86
92) 1,1,2,2-Tetrachloroethane	11.004	83	3666	0.98	ppb	90
93) Bromobenzene	10.986	156	3388	1.12	ppb	# 52
94) 1,2,3-Trichloropropane	11.034	110	1514	1.19	ppb	# 56
95) n-Propylbenzene	11.095	91	14838	1.04	ppb	91
96) 2-Chlorotoluene	11.156	91	9674	1.12	ppb	89
97) 3-Chlorotoluene	11.217	91	9775	1.08	ppb	95
98) 4-Chlorotoluene	11.254	91	10322	1.06	ppb	95
99) 1,3,5-Trimethylbenzene	11.254	105	10381	1.03	ppb	# 70
100) tert-Butylbenzene	11.522	119	10409	1.13	ppb	88
101) 1,2,4-Trimethylbenzene	11.565	105	10606	1.03	ppb	99
102) 3,4-DCBTF	11.626	214	3197	1.20	ppb	# 77
103) sec-Butylbenzene	11.705	105	14196	1.12	ppb	96
104) p-Isopropyltoluene	11.827	119	11397	1.01	ppb	80

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11691.D
Acq On : 31 Aug 2017 5:20 pm
Operator : B.ALLGEIER
Sample : 1.0ppb
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:34:48 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.784	146	6218	1.04	ppb	94
106) 1,4-Dclbenz	11.857	146	6245	1.02	ppb	91
107) 2,4-DCBTF	11.912	214	2389	0.66	ppb	94
108) 2,5-DCBTF	11.955	214	3193m	1.23	ppb	
109) n-Butylbenzene	12.162	91	9563	0.92	ppb	87
110) 1,2-Dclbenz	12.162	146	6014	1.04	ppb	92
111) 1,2-Dibromo-3-chloropr...	12.784	157	999	0.92	ppb #	83
112) Trielution Dichlorotol...	12.912	125	17497	3.06	ppb	94
113) 1,3,5 Trichlorobenzene	12.961	180	4555	1.04	ppb #	73
114) Coelution Dichlorotoluene	13.235	125	11891	1.84	ppb #	87
115) 1,2,4-Tcbenzene	13.442	180	4969	1.15	ppb	87
116) Hexachlorobt	13.589	225	2235	1.26	ppb #	41
117) Naphthalen	13.631	128	13455	0.89	ppb	97
118) 1,2,3-Tclbenzene	13.820	180	5082	1.07	ppb	88
119) 2,4,5-Trichlorotoluene	14.406	159	3923	0.94	ppb	95
120) 2,3,6-Trichlorotoluene	14.491	159	3619m	0.92	ppb	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

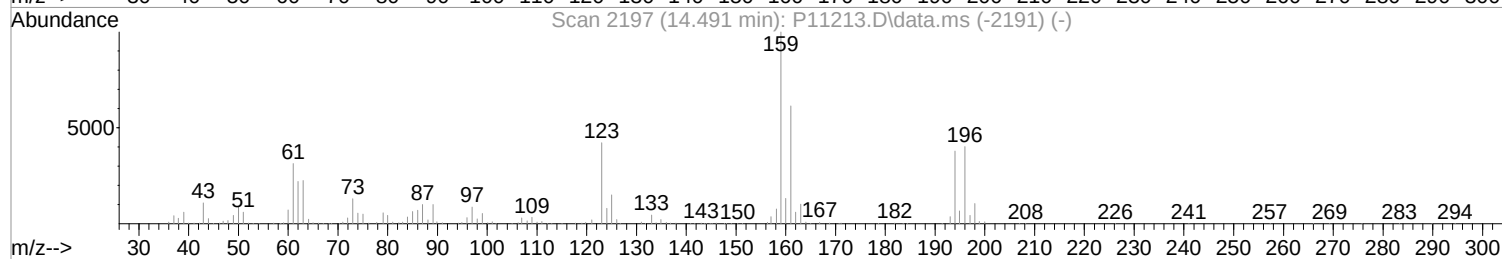
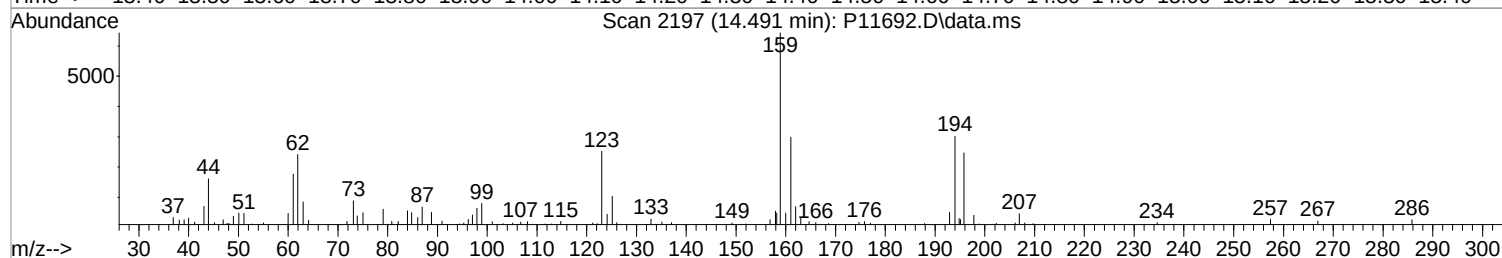
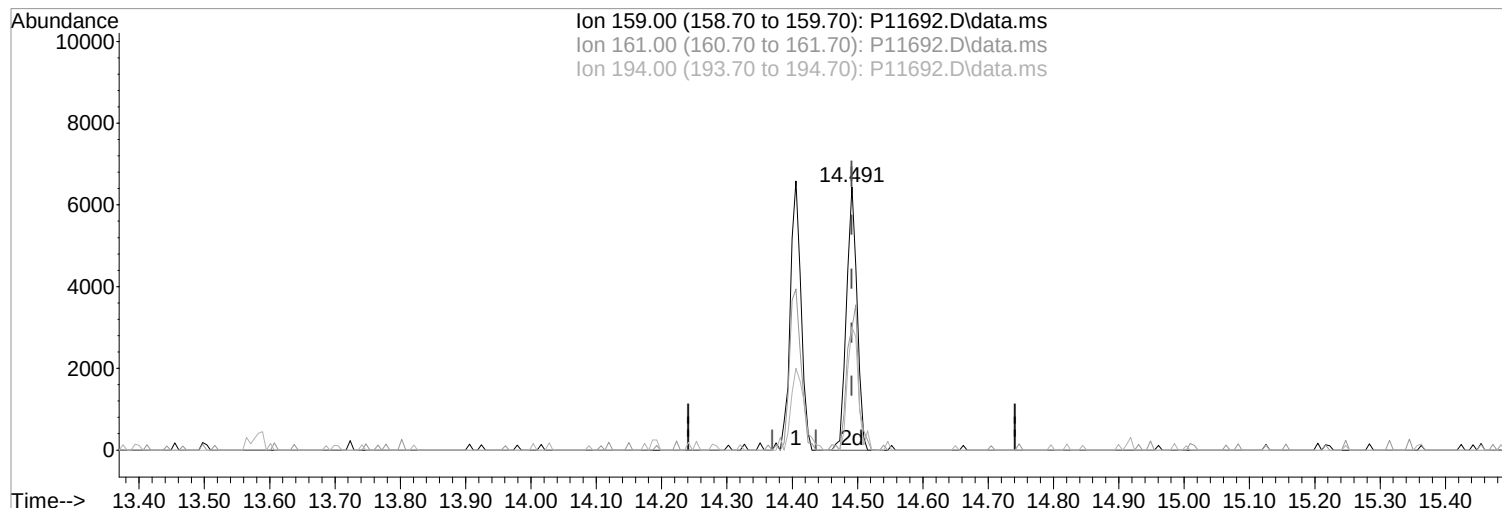
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11692.D
Acq On : 31 Aug 2017 5:42 pm
Operator : B.ALLGEIER
Sample : 2.0ppb
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:07 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11692.D\data.ms

(120) 2,3,6-Trichlorotoluene

14.491min (+0.000) 1.91 ppb m

response 7292

Ion Exp% Act%

159.00 100 100

161.00 61.30 46.37#

194.00 37.80 46.80#

0.00 0.00 0.00

Manual Integration:

After

Poor integration.

09/01/17

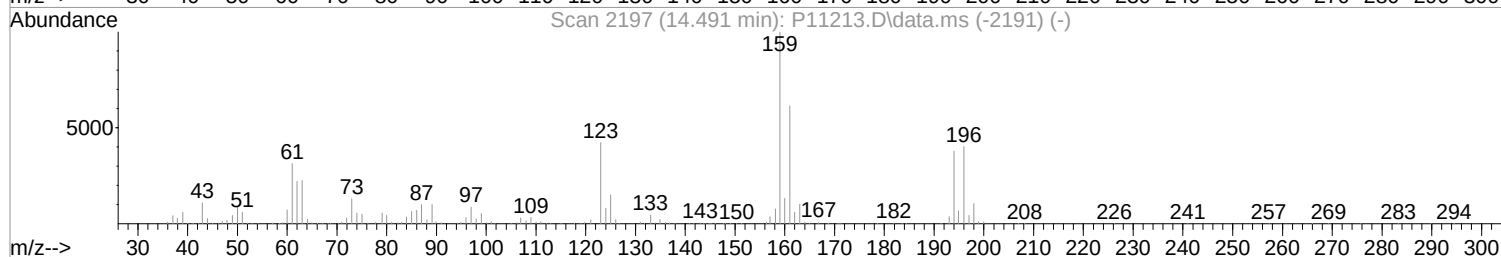
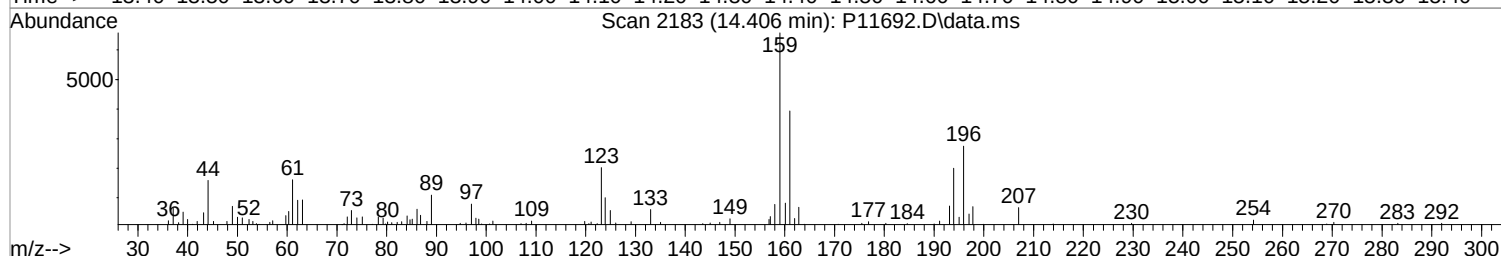
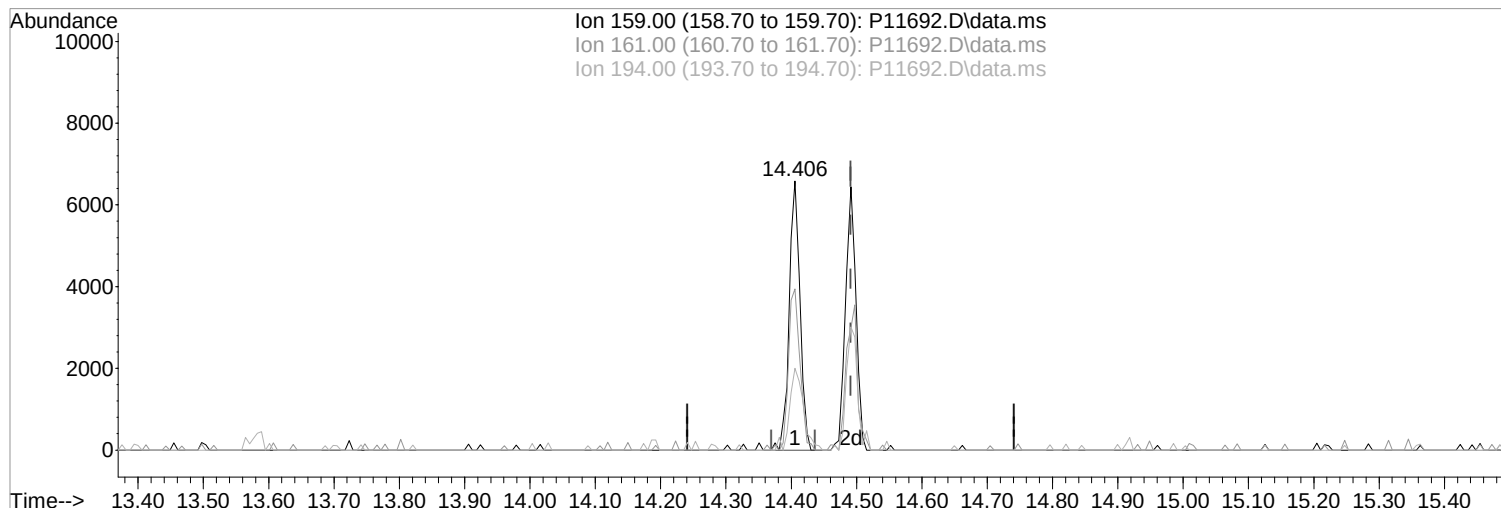
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11692.D
Acq On : 31 Aug 2017 5:42 pm
Operator : B.ALLGEIER
Sample : 2.0ppb
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:07 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11692.D\data.ms

(120) 2,3,6-Trichlorotoluene

Manual Integration:

14.406min (-0.085) 1.97 ppb

Before

response 7533

Ion Exp% Act%

09/01/17

159.00 100 100

161.00 61.30 59.85

194.00 37.80 30.40

0.00 0.00 0.00

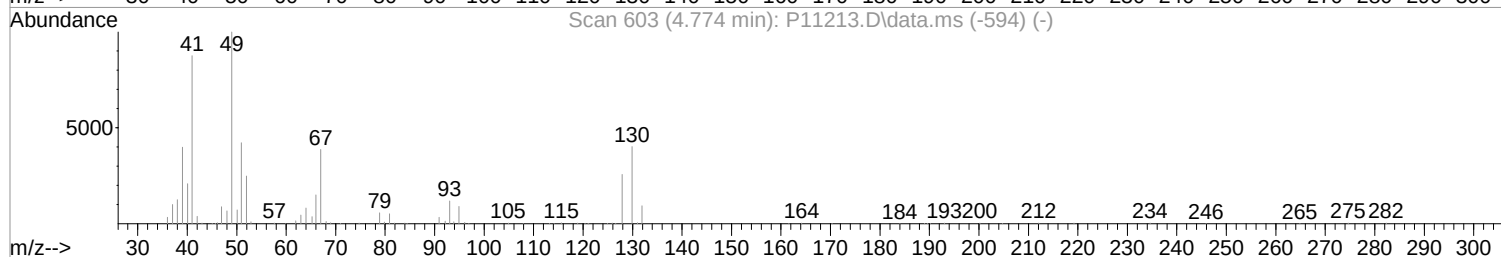
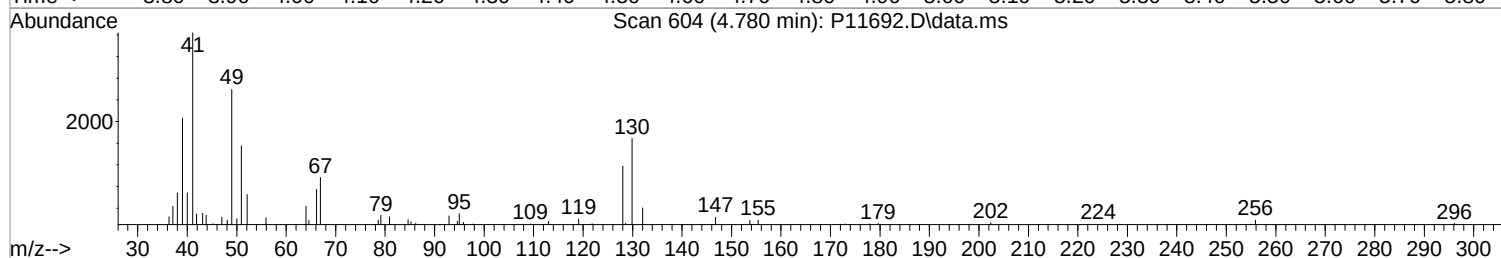
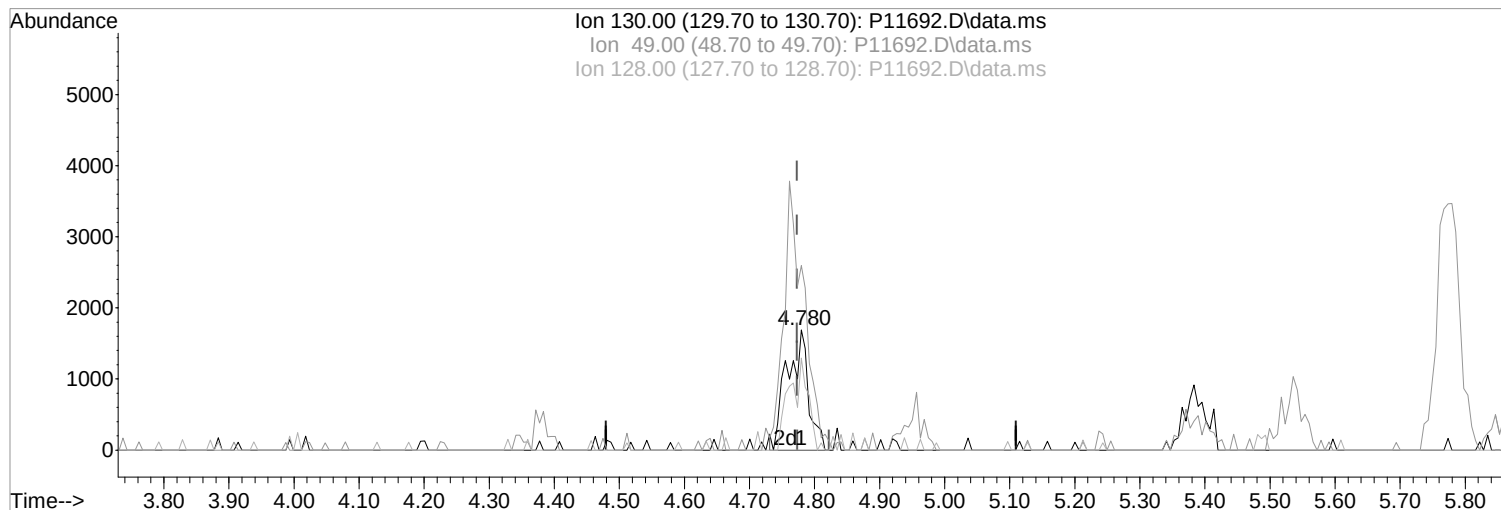
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11692.D
Acq On : 31 Aug 2017 5:42 pm
Operator : B.ALLGEIER
Sample : 2.0ppb
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:07 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11692.D\data.ms

(37) Bromochloromethane

4.780min (+0.006) 2.10 ppb m

response 3844

Ion	Exp%	Act%
130.00	100	100
49.00	255.50	153.67#
128.00	66.10	69.79
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

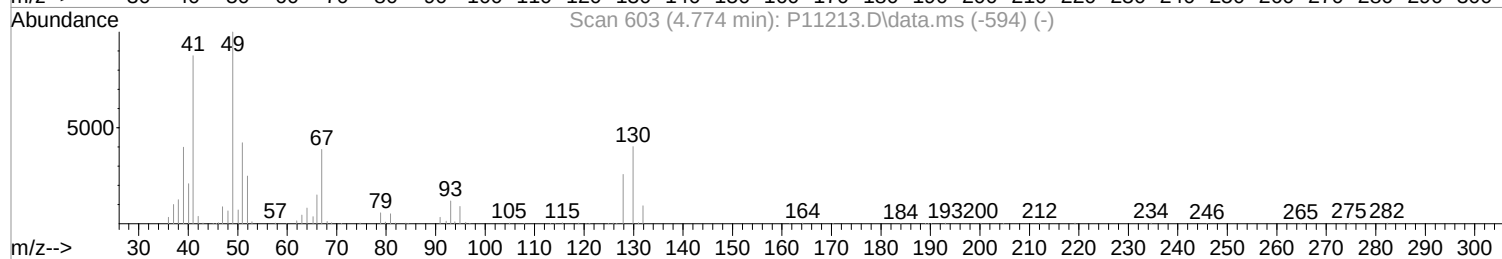
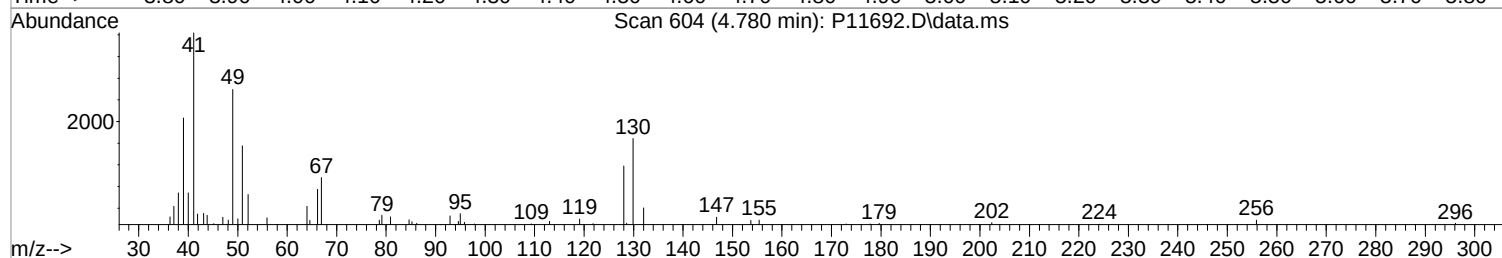
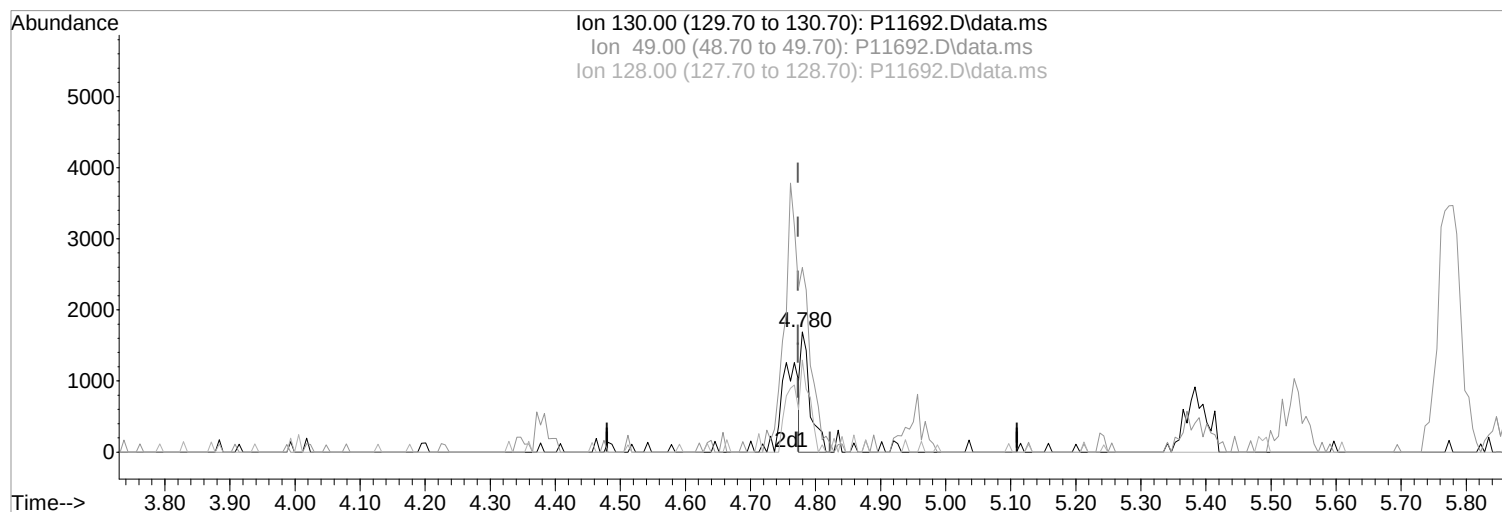
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11692.D
Acq On : 31 Aug 2017 5:42 pm
Operator : B.ALLGEIER
Sample : 2.0ppb
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:07 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11692.D\data.ms

(37) Bromochloromethane

Manual Integration:

4.780min (+0.006) 0.93 ppb

Before

response 1690

Ion	Exp%	Act%

09/01/17

130.00	100	100

49.00	255.50	153.67#

128.00	66.10	76.78

0.00	0.00	0.00

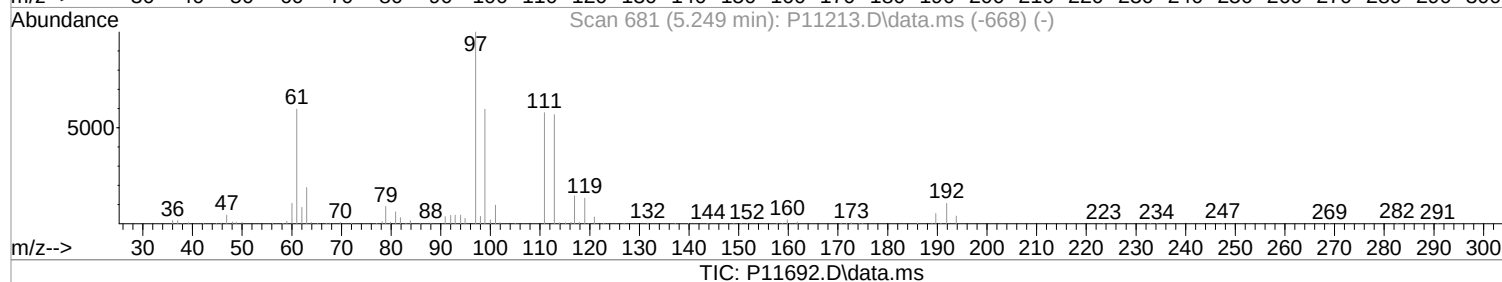
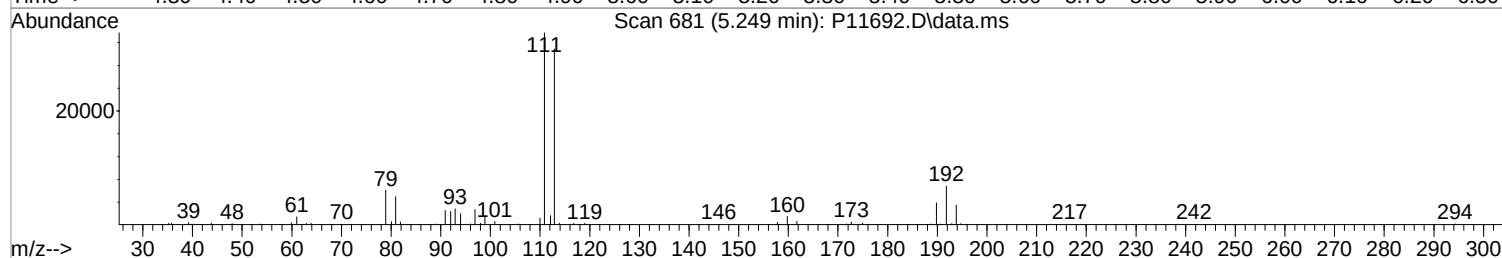
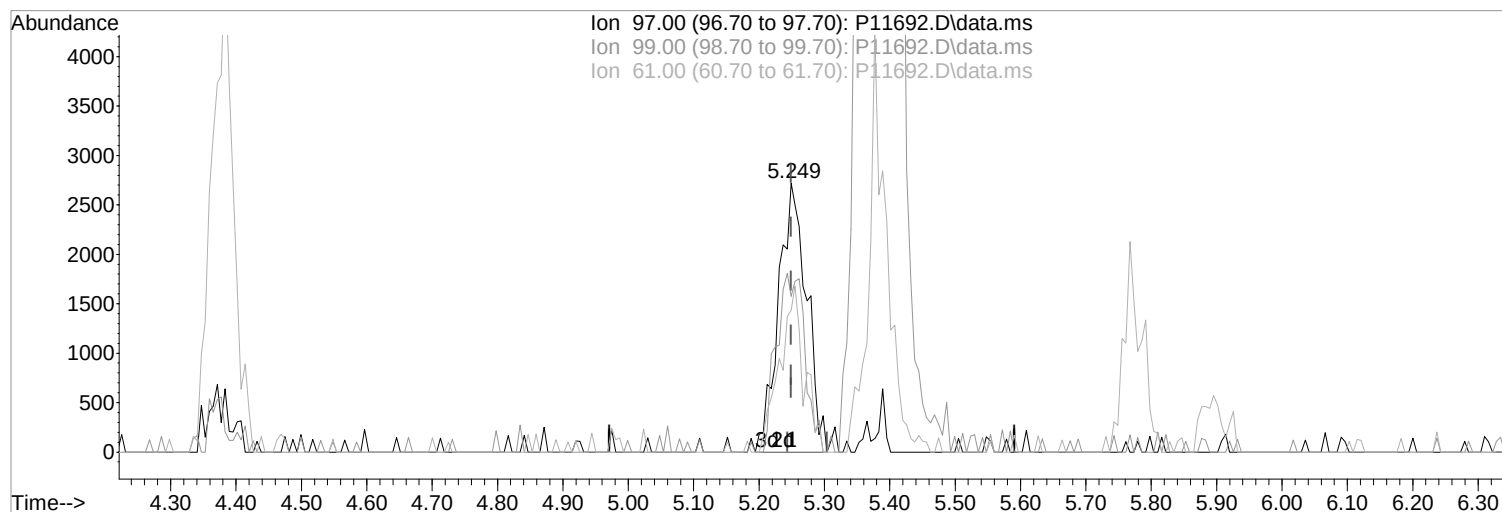
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11692.D
Acq On : 31 Aug 2017 5:42 pm
Operator : B.ALLGEIER
Sample : 2.0ppb
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:07 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



(41) 1,1,1-Trichloroethane (P)

5.249min (+0.000) 1.98 ppb m

response 8096

Ion	Exp%	Act%
97.00	100	100
99.00	59.70	57.88
61.00	59.70	52.81
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

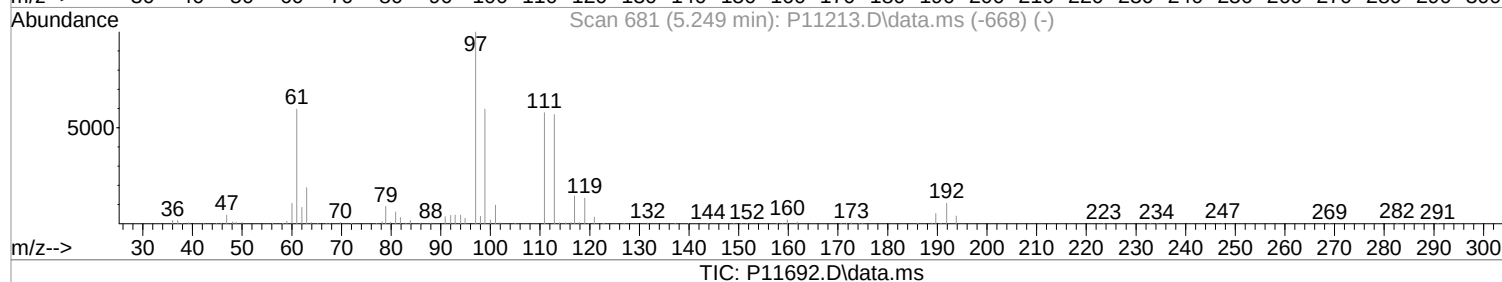
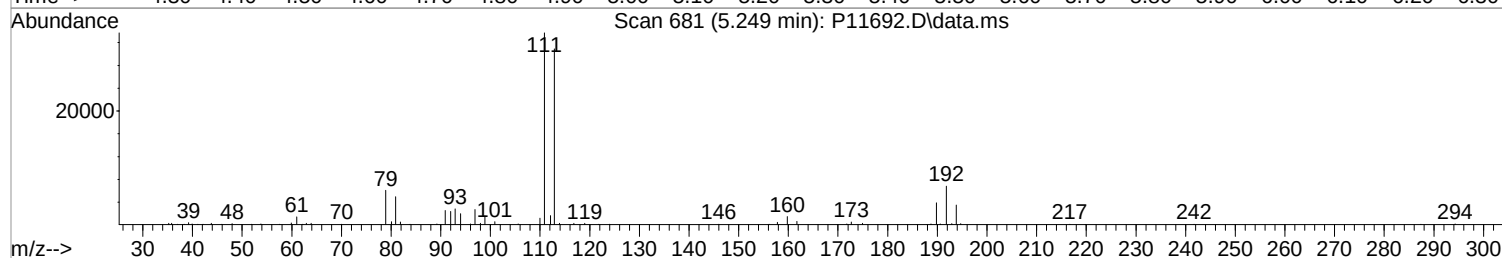
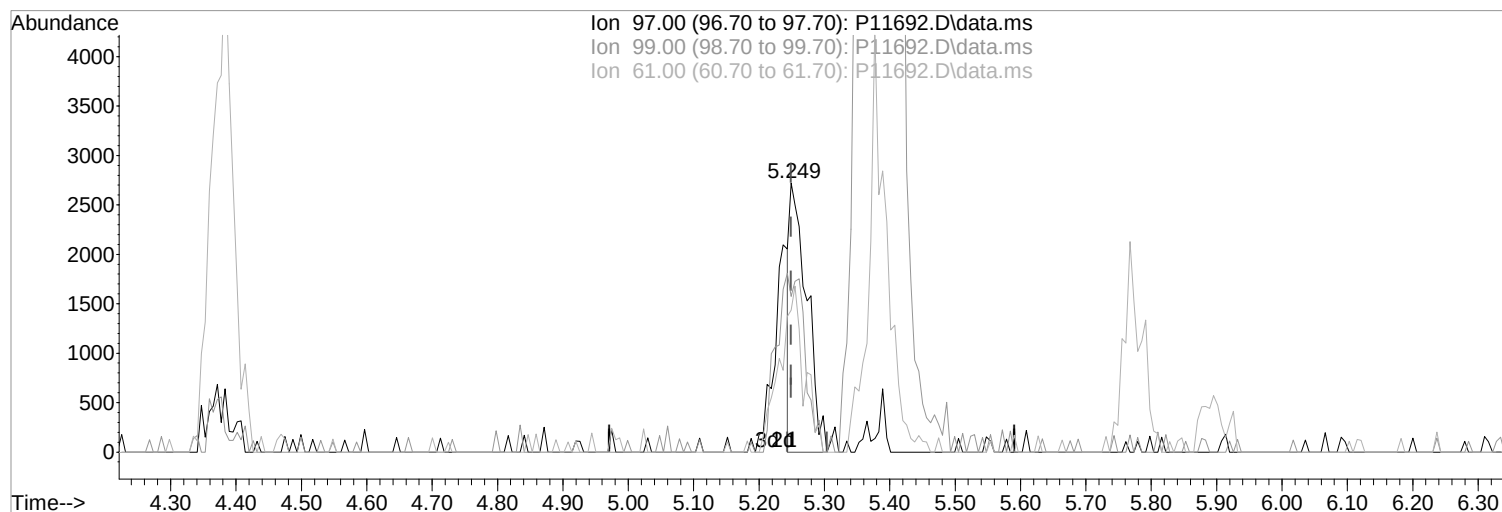
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11692.D
Acq On : 31 Aug 2017 5:42 pm
Operator : B.ALLGEIER
Sample : 2.0ppb
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:07 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



(41) 1,1,1-Trichloroethane (P)

Manual Integration:

5.249min (+0.000) 1.21 ppb

Before

response 4944

Ion	Exp%	Act%
97.00	100	100
99.00	59.70	57.88
61.00	59.70	52.81
0.00	0.00	0.00

09/01/17

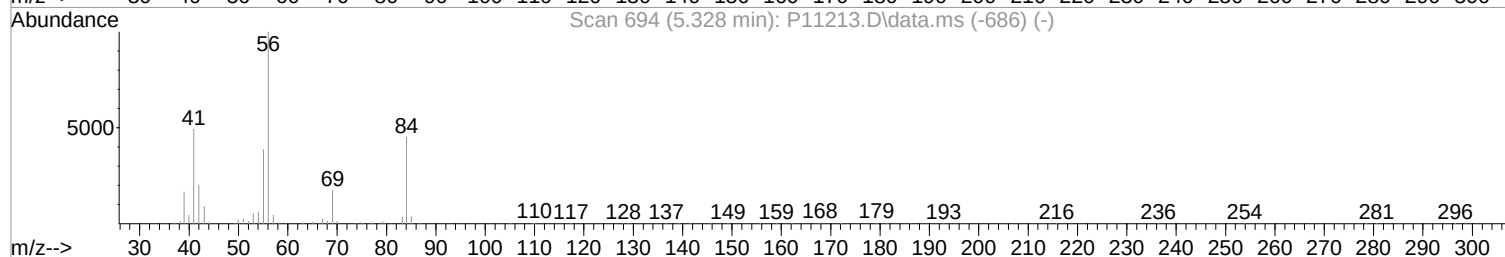
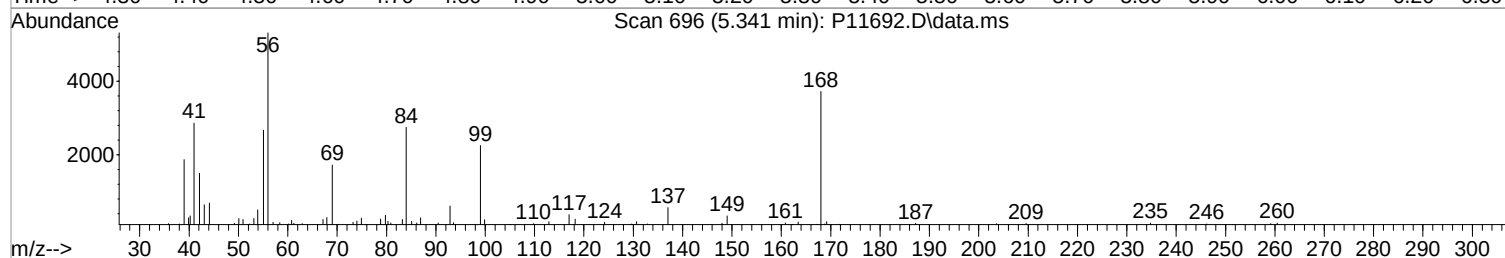
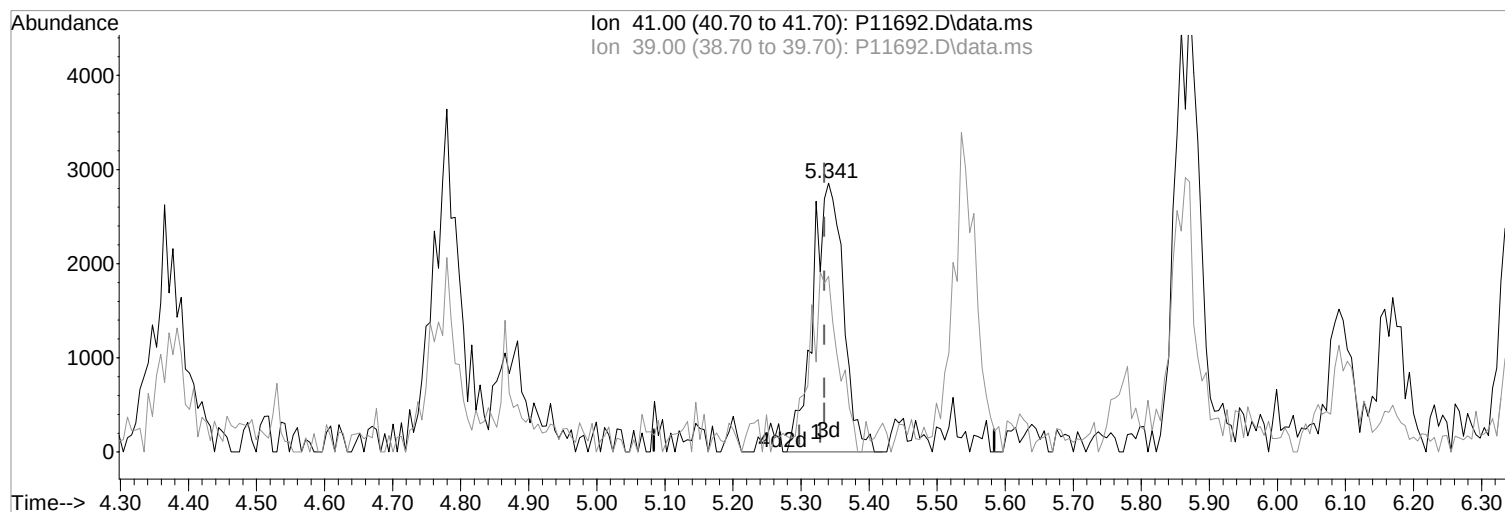
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11692.D
Acq On : 31 Aug 2017 5:42 pm
Operator : B.ALLGEIER
Sample : 2.0ppb
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:07 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11692.D\data.ms

(44) Cyclohexane (P)

5.341min (+0.006) 2.06 ppb m

response 8917

Ion	Exp%	Act%
41.00	100	100
39.00	33.90	65.35#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

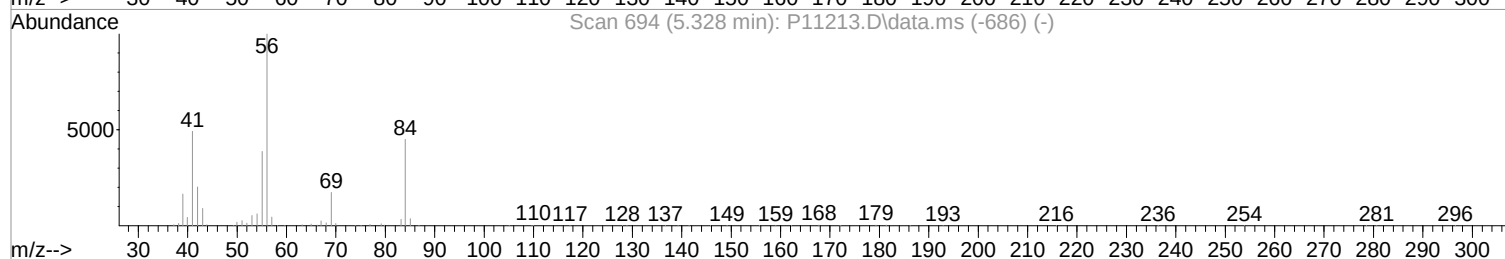
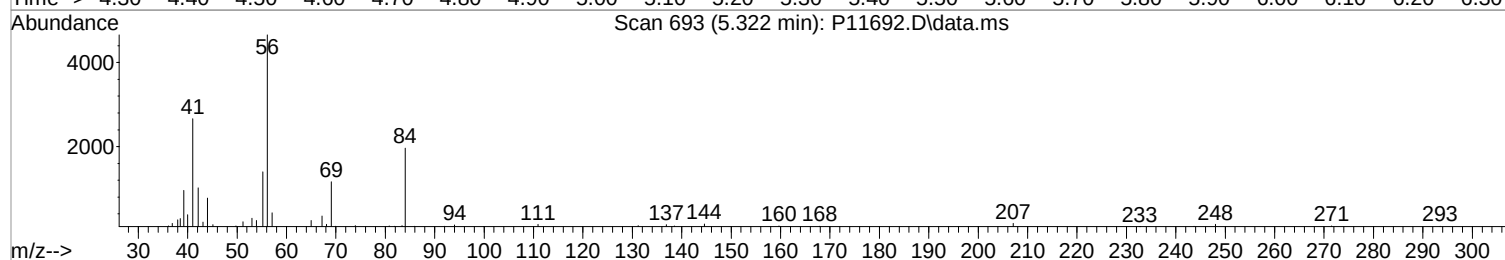
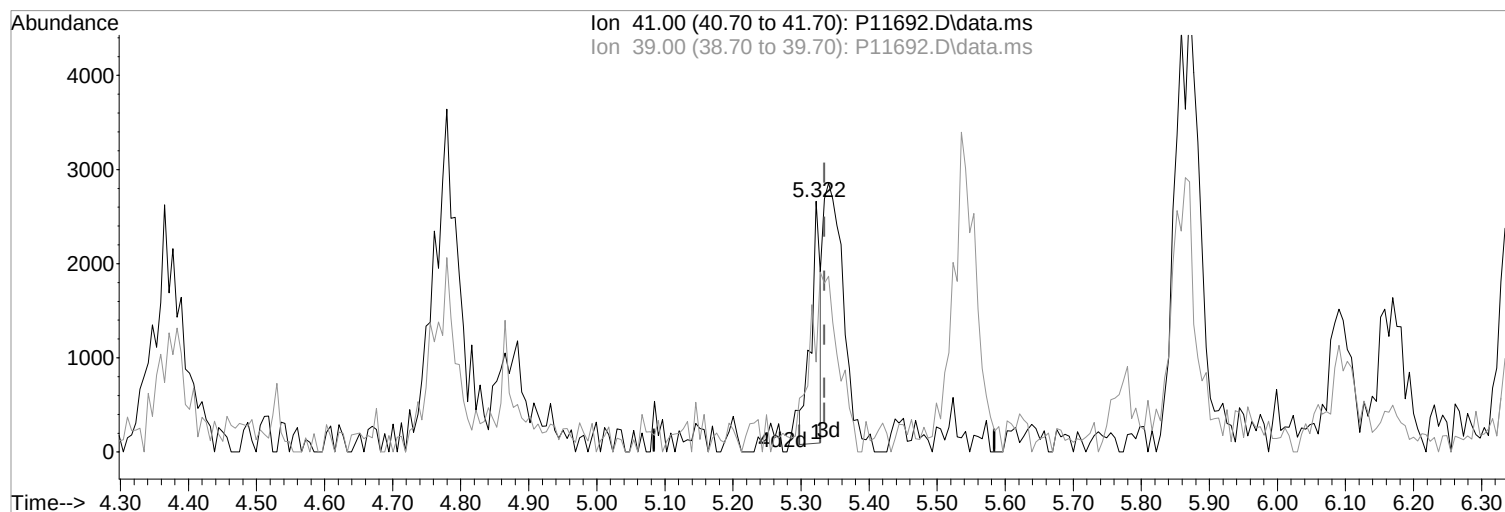
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11692.D
Acq On : 31 Aug 2017 5:42 pm
Operator : B.ALLGEIER
Sample : 2.0ppb
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:07 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11692.D\data.ms

(44) Cyclohexane (P)

Manual Integration:

5.322min (-0.012) 0.57 ppb

Before

response 2470

Ion	Exp%	Act%
41.00	100	100
39.00	33.90	35.99
0.00	0.00	0.00
0.00	0.00	0.00

09/01/17

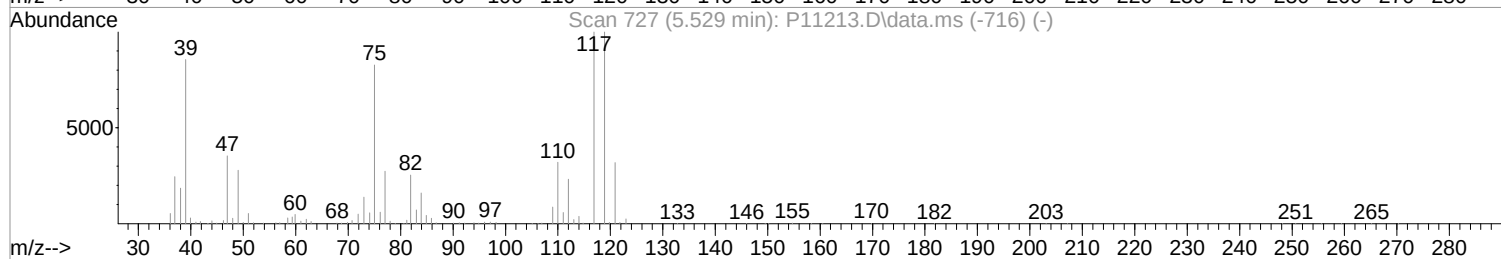
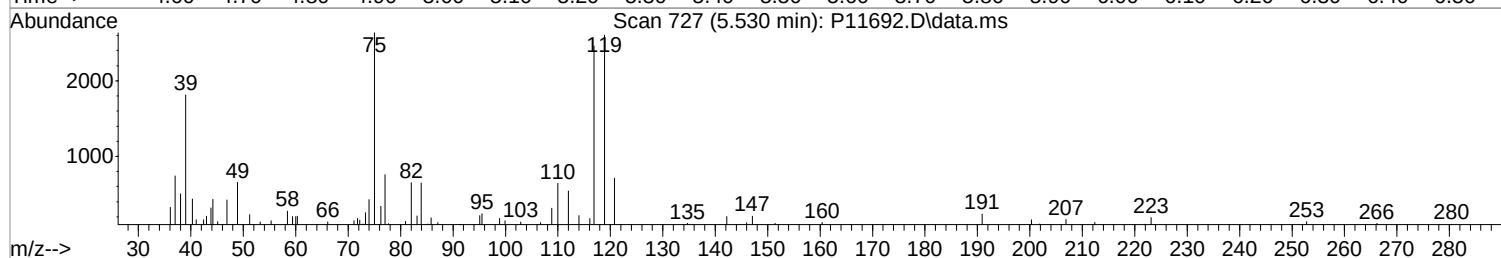
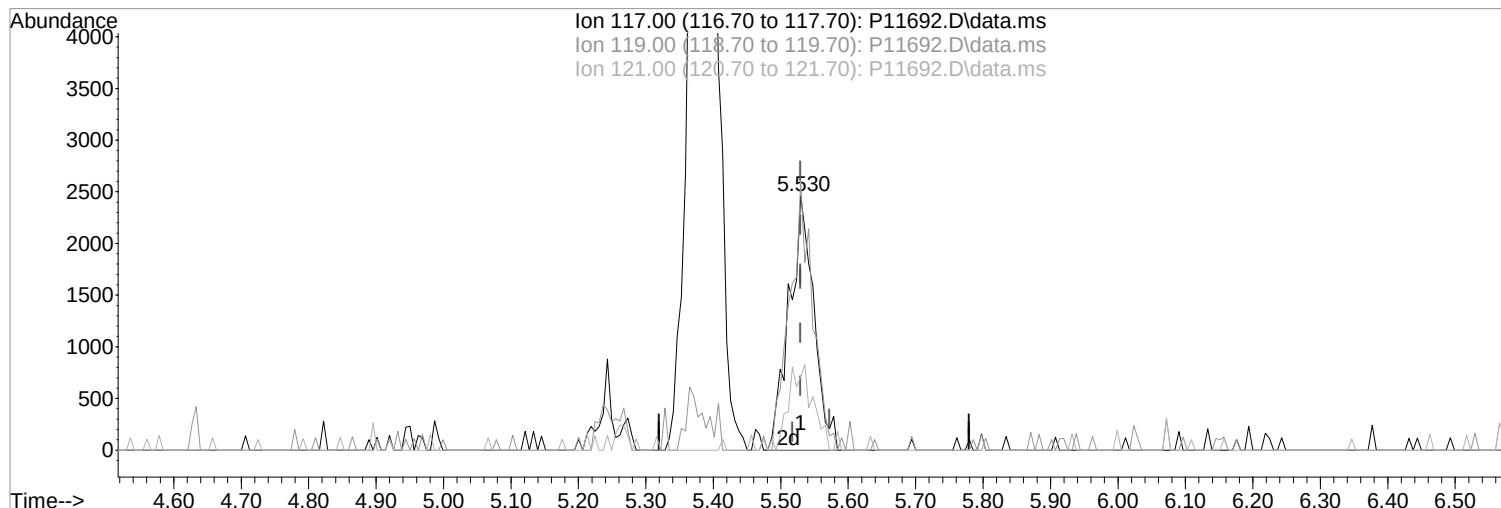
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11692.D
Acq On : 31 Aug 2017 5:42 pm
Operator : B.ALLGEIER
Sample : 2.0ppb
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:07 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11692.D\data.ms

(46) Carbontetrachloride (P)

5.530min (+0.000) 1.94 ppb m

response 6263

Ion	Exp%	Act%
117.00	100	100
119.00	100.10	105.85
121.00	31.80	28.90
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

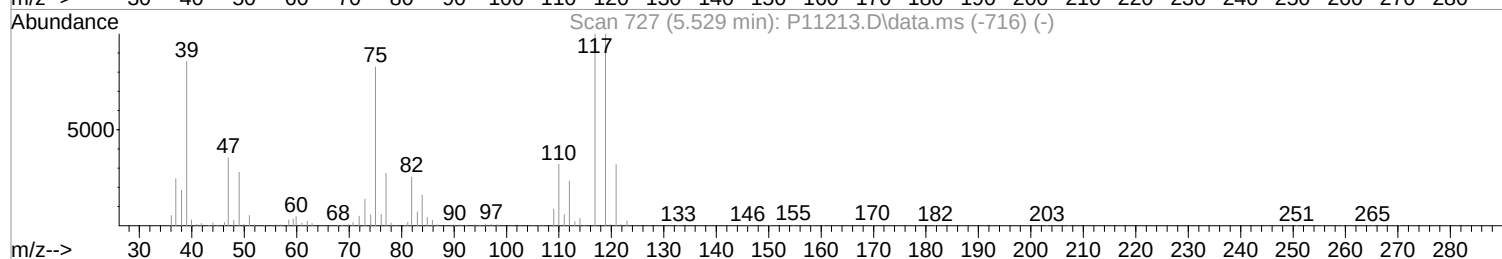
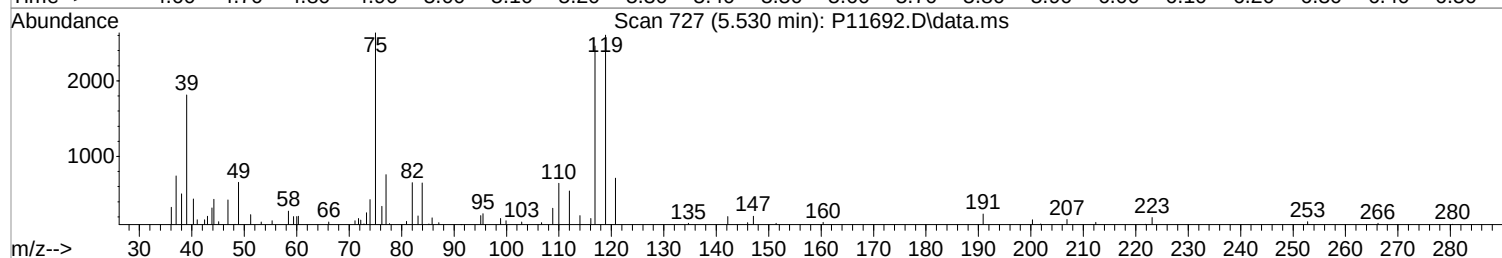
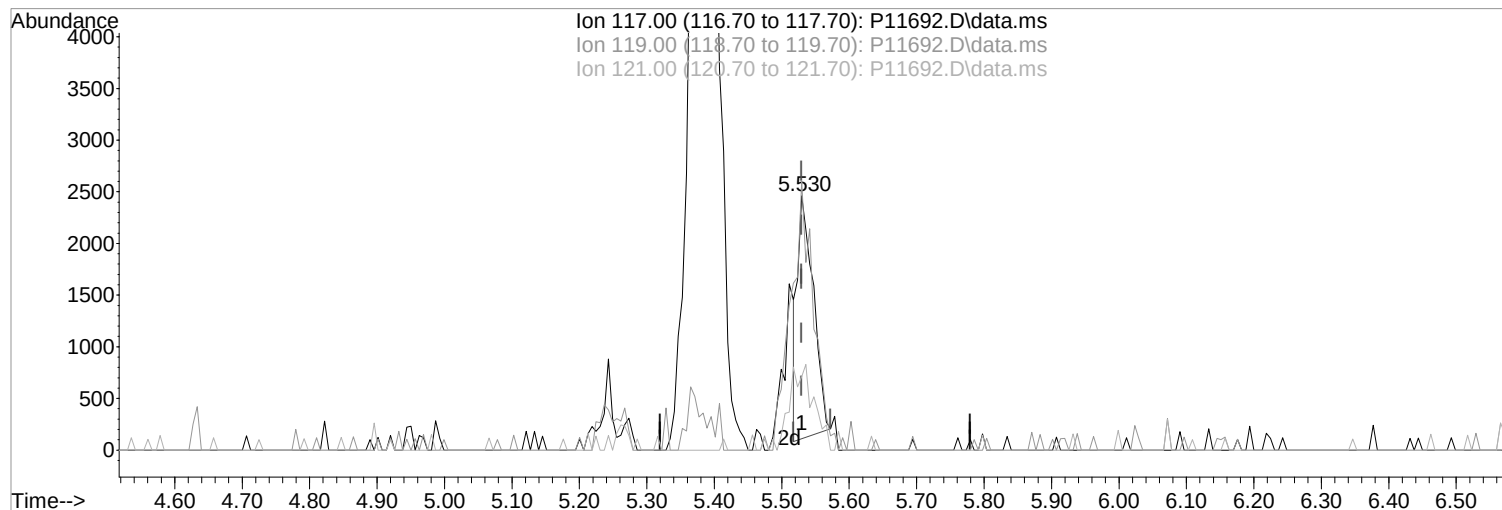
Quantitation Report (Qedit)

1st *BA* 09/01/17
2nd *RL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11692.D
Acq On : 31 Aug 2017 5:42 pm
Operator : B.ALLGEIER
Sample : 2.0ppb
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:07 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11692.D\data.ms

(46) Carbontetrachloride (P)

Manual Integration:

5.530min (+0.000) 1.18 ppb

Before

response 3808

Ion Exp% Act%

09/01/17

117.00 100 100

119.00 100.10 105.85

121.00 31.80 28.90

0.00 0.00 0.00

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11692.D
 Acq On : 31 Aug 2017 5:42 pm
 Operator : B.ALLGEIER
 Sample : 2.0ppb
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:39:17 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.383	168	238473	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	388855	50.00	ppb	0.00
71) d5-Chlorobenzene	9.791	117	347493	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	171035	50.00	ppb	0.00

System Monitoring Compounds						
45) surr4,Dibrflmethane	5.231	113	104030	44.30	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	88.60%#	
48) surr1,1,2-dichloroetha...	5.773	65	178775	49.70	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	99.40%	
65) SURR3,Toluene-d8	8.297	98	516236	53.17	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	106.34%	
70) SURR2,BFB	10.864	95	200988	53.50	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	107.00%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.183	85	6631	1.86	ppb	83
3) Chloromethane	1.305	50	11133	1.48	ppb	83
4) Vinyl Chloride	1.384	62	8031	1.55	ppb	94
5) Bromomethane	1.610	94	5215	1.67	ppb	93
6) Chloroethane	1.683	64	4667	1.68	ppb	82
7) Freon 21	1.835	67	10191	1.90	ppb	91
8) Trichlorofluoromethane	1.884	101	7577	1.98	ppb	81
9) Diethyl Ether	2.122	59	7497	1.49	ppb	# 71
10) Freon 123a	2.122	67	7112	2.06	ppb	94
11) Freon 123	2.170	83	8065	2.23	ppb	96
12) Acrolein	2.219	56	12604	8.47	ppb	81
13) 1,1-Dicethene	2.311	96	5366	2.02	ppb	# 81
14) Freon 113	2.317	101	4368	1.89	ppb	100
15) Acetone	2.359	43	7714	2.80	ppb	83
16) 2-Propanol	2.487	45	25280	38.00	ppb	96
17) Iodomethane	2.445	142	1401	5.14	ppb	# 56
18) Carbon Disulfide	2.506	76	14059	1.76	ppb	95
19) Acetonitrile	2.597	40	6760	12.26	ppb	# 77
20) Allyl Chloride	2.640	76	2399	1.86	ppb	# 87
21) Methyl Acetate	2.664	43	16914	2.12	ppb	98
22) Methylene Chloride	2.756	84	6547	2.32	ppb	# 80
23) TBA	2.884	59	35379	34.73	ppb	97
24) Acrylonitrile	3.012	53	26414	7.73	ppb	88
25) Methyl-t-Butyl Ether	3.061	73	20336	2.16	ppb	90
26) trans-1,2-Dichloroethene	3.048	96	4940	1.76	ppb	98
28) 1,1-Dicethane	3.542	63	10963	1.51	ppb	85
29) Vinyl Acetate	3.627	86	1533	2.29	ppb	# 1
30) DIPE	3.670	45	32831	1.86	ppb	96
31) 2-Chloro-1,3-Butadiene	3.664	53	11906	1.43	ppb	66
32) ETBE	4.194	59	25214	1.52	ppb	87
33) 2,2-Dichloropropane	4.371	77	8815	2.24	ppb	92
34) cis-1,2-Dichloroethene	4.377	96	6206	2.01	ppb	# 48
35) 2-Butanone	4.432	43	9296	2.37	ppb	87
36) Propionitrile	4.518	54	11925	8.53	ppb	95
37) Bromochloromethane	4.780	130	3844m	2.10	ppb	
38) Methacrylonitrile	4.767	67	3981	1.95	ppb	# 51
39) Tetrahydrofuran	4.871	42	4822	1.86	ppb	91
40) Chloroform	4.963	83	9646	2.18	ppb	# 70
41) 1,1,1-Trichloroethane	5.249	97	8096m	1.98	ppb	

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11692.D
 Acq On : 31 Aug 2017 5:42 pm
 Operator : B.ALLGEIER
 Sample : 2.0ppb
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:39:17 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.096	73	18421	1.96	ppb	83
44) Cyclohexane	5.341	41	8917m	2.06	ppb	
46) Carbontetrachloride	5.530	117	6263m	1.94	ppb	
47) 1,1-Dichloropropene	5.548	75	7964	2.39	ppb	76
49) Benzene	5.859	78	24408	2.36	ppb	80
50) 1,2-Dichloroethane	5.895	62	10105	1.96	ppb	96
51) Iso-Butyl Alcohol	5.865	43	17670	38.84	ppb	79
52) n-Heptane	6.346	43	12482	1.85	ppb	90
53) 1-Butanol	6.834	56	24367	81.21	ppb	87
54) Trichloroethene	6.798	130	6479	2.33	ppb	86
55) Methylcyclohexane	7.048	55	11750	1.61	ppb	80
56) 1,2-Dicloropropane	7.078	63	6808	1.58	ppb	99
57) Dibromomethane	7.230	93	3682	2.04	ppb	96
58) 1,4-Dioxane	7.291	88	2488	40.80	ppb	# 69
59) Methyl Methacrylate	7.316	69	5313	1.90	ppb	# 85
60) Bromodichloromethane	7.450	83	5630	1.73	ppb	89
61) 2-Nitropropane	7.730	41	4762	3.25	ppb	# 51
62) 2-Chloroethylvinyl Ether	7.864	63	3588	1.18	ppb	83
63) cis-1,3-Dichloropropene	7.992	75	8448	1.88	ppb	84
64) 4-Methyl-2-pentanone	8.206	43	14226	2.14	ppb	85
66) Toluene	8.370	91	25838	2.20	ppb	96
67) trans-1,3-Dichloropropene	8.639	75	7530	1.83	ppb	93
68) Ethyl Methacrylate	8.779	69	9017	1.98	ppb	84
69) 1,1,2-Trichloroethane	8.828	97	6367	2.34	ppb	87
72) Tetrachloroethene	8.962	164	4225	2.09	ppb	# 79
73) 2-Hexanone	9.114	43	10734	2.13	ppb	# 72
74) 1,3-Dichloropropane	8.998	76	10827	2.43	ppb	# 80
75) Dibromochloromethane	9.218	129	4369	1.69	ppb	96
76) N-Butyl Acetate	9.279	43	17839	1.73	ppb	97
77) 1,2-Dibromoethane	9.321	107	5105	2.11	ppb	95
78) Chlorobenzene	9.815	112	15235	2.12	ppb	96
79) 3-CBTF	9.834	180	7902	2.14	ppb	95
80) 4-CBTF	9.888	180	6548	2.03	ppb	89
81) 1,1,1,2-Tetrachloroethane	9.895	131	4843	1.81	ppb	87
82) Ethylbenzene	9.937	106	8585	2.25	ppb	# 76
83) (m+p)Xylene	10.053	106	17930	3.82	ppb	99
84) o-Xylene	10.407	106	9802	2.02	ppb	# 87
85) Styrene	10.419	104	15637	1.98	ppb	95
87) Bromoform	10.565	173	2814	1.73	ppb	99
88) 2-CBTF	10.650	180	7699	2.27	ppb	91
89) Isopropylbenzene	10.742	105	25862	2.25	ppb	96
90) Cyclohexanone	10.803	55	47213	42.39	ppb	# 70
91) trans-1,4-Dichloro-2-B...	11.053	53	3132	1.73	ppb	97
92) 1,1,2,2-Tetrachloroethane	10.998	83	7246	1.99	ppb	80
93) Bromobenzene	10.986	156	6403	2.18	ppb	90
94) 1,2,3-Trichloropropane	11.028	110	2769	2.25	ppb	# 76
95) n-Propylbenzene	11.096	91	31753	2.30	ppb	93
96) 2-Chlorotoluene	11.163	91	20478	2.43	ppb	95
97) 3-Chlorotoluene	11.211	91	20842	2.37	ppb	93
98) 4-Chlorotoluene	11.254	91	22662	2.39	ppb	89
99) 1,3,5-Trimethylbenzene	11.248	105	21078	2.16	ppb	93
100) tert-Butylbenzene	11.522	119	18651	2.09	ppb	91
101) 1,2,4-Trimethylbenzene	11.559	105	22622	2.26	ppb	79
102) 3,4-DCBTF	11.626	214	5965	2.30	ppb	# 73
103) sec-Butylbenzene	11.705	105	28024	2.27	ppb	99
104) p-Isopropyltoluene	11.827	119	22499	2.06	ppb	97

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11692.D
 Acq On : 31 Aug 2017 5:42 pm
 Operator : B.ALLGEIER
 Sample : 2.0ppb
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA-12

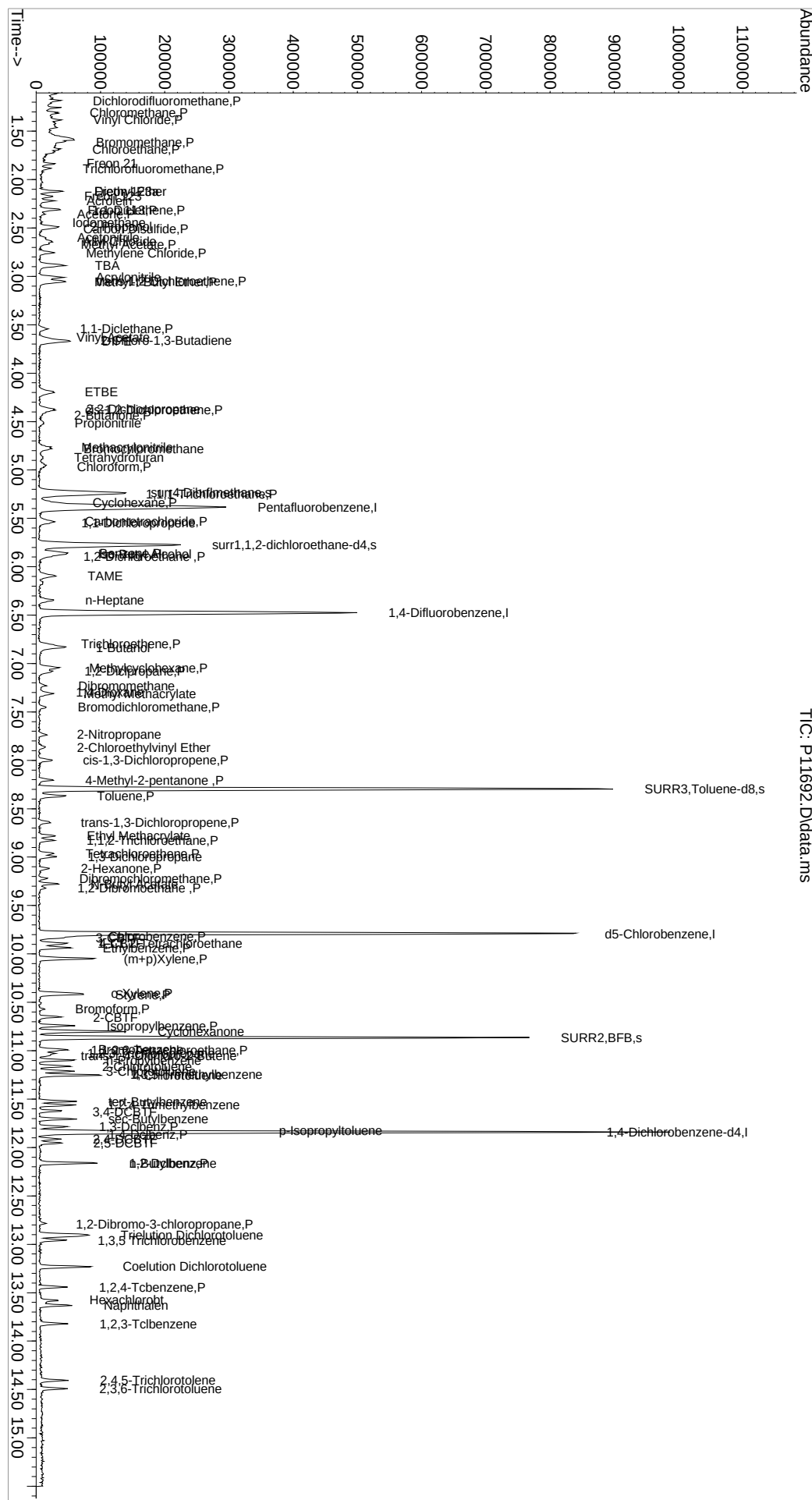
Quant Time: Sep 01 09:39:17 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.784	146	12736	2.19	ppb	91
106) 1,4-Dclbenz	11.864	146	11781	1.99	ppb	96
107) 2,4-DCBTF	11.912	214	4866	1.80	ppb #	84
108) 2,5-DCBTF	11.955	214	5483	2.18	ppb #	83
109) n-Butylbenzene	12.162	91	20753	2.05	ppb	90
110) 1,2-Dclbenz	12.162	146	12008	2.15	ppb	92
111) 1,2-Dibromo-3-chloropr...	12.790	157	2105	2.00	ppb #	75
112) Trielution Dichlorotol...	12.906	125	34058	6.13	ppb	91
113) 1,3,5 Trichlorobenzene	12.961	180	8842	2.08	ppb #	82
114) Coelution Dichlorotoluene	13.229	125	25245	4.02	ppb #	90
115) 1,2,4-Tcbenzene	13.443	180	9396	2.24	ppb	88
116) Hexachlorobt	13.577	225	3413	1.98	ppb	83
117) Naphthalen	13.632	128	27552	1.88	ppb	96
118) 1,2,3-Tclbenzene	13.821	180	9086	1.97	ppb #	79
119) 2,4,5-Trichlorotoluene	14.406	159	7533	1.87	ppb	98
120) 2,3,6-Trichlorotoluene	14.491	159	7292m	1.91	ppb	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQDATA\msvoa12\Data\083117\
 Data File : P1692.D
 Acq On : 31 Aug 2017 5:42 pm
 Operator : B.ALGEIER
 Sample : 2.0ppb
 Inst : MSVOA-12
 PALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 01 09:39:17 2017
 Quant Method : I:\ACQDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 Quant Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration



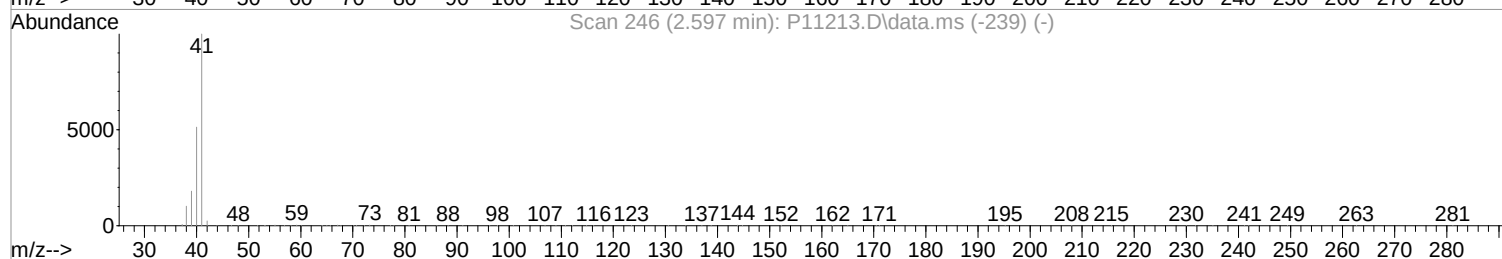
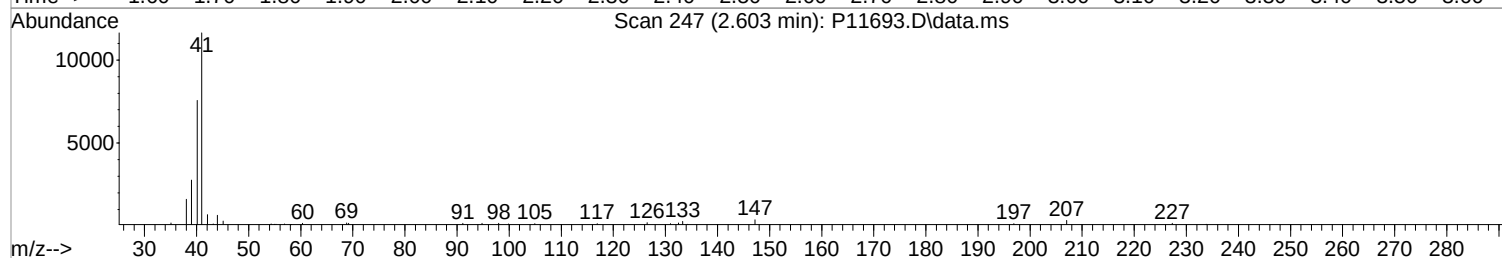
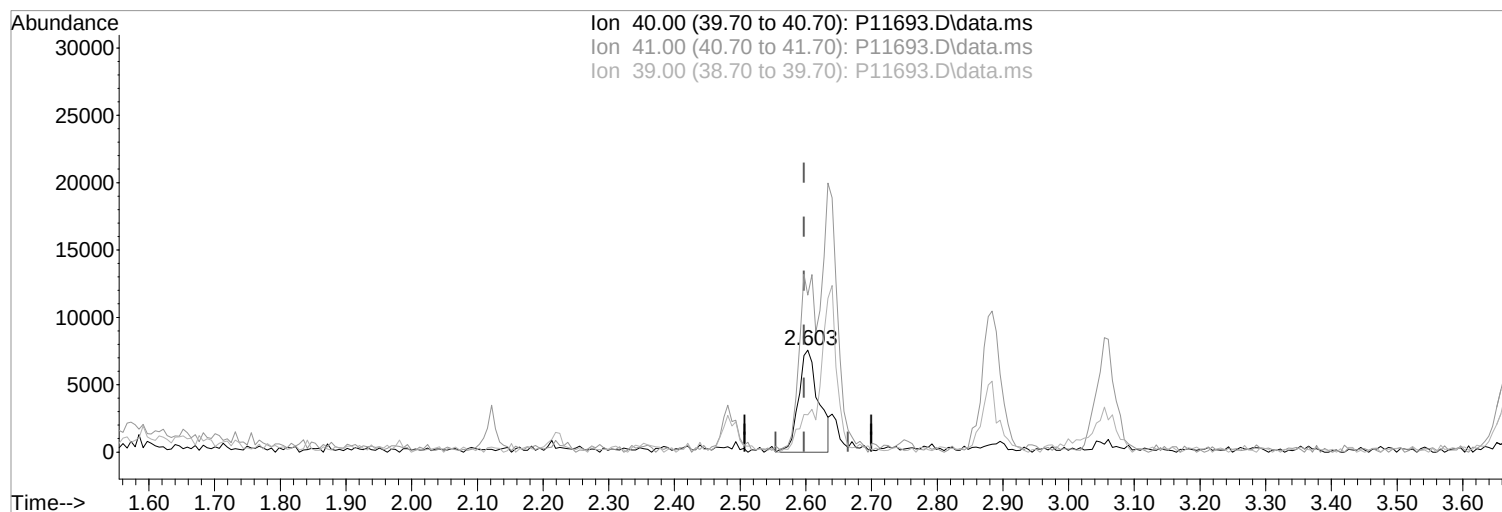
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11693.D
Acq On : 31 Aug 2017 6:04 pm
Operator : B.ALLGEIER
Sample : 5.0ppb
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:10 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11693.D\data.ms

(19) Acetonitrile

2.603min (+0.006) 28.10 ppb m

response 15980

Ion	Exp%	Act%
40.00	100	100
41.00	195.10	153.69#
39.00	35.40	36.65
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

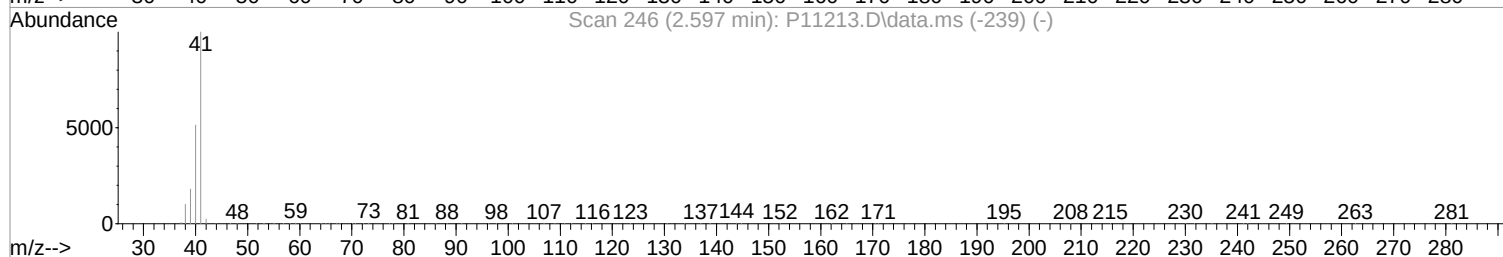
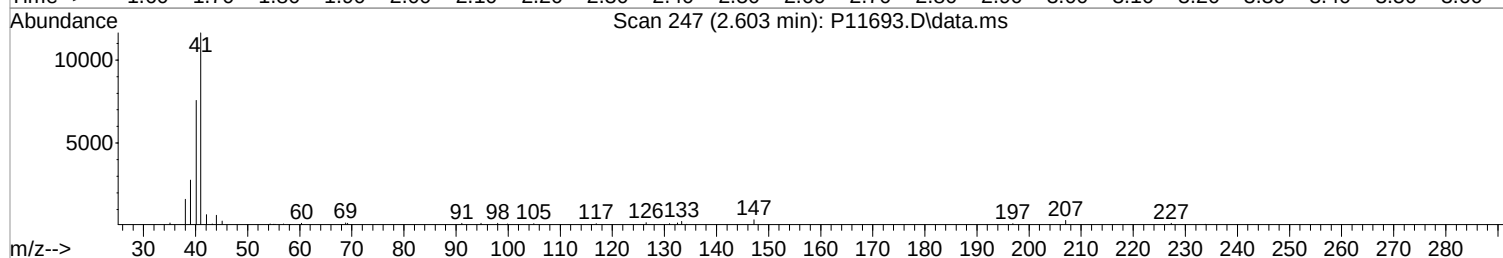
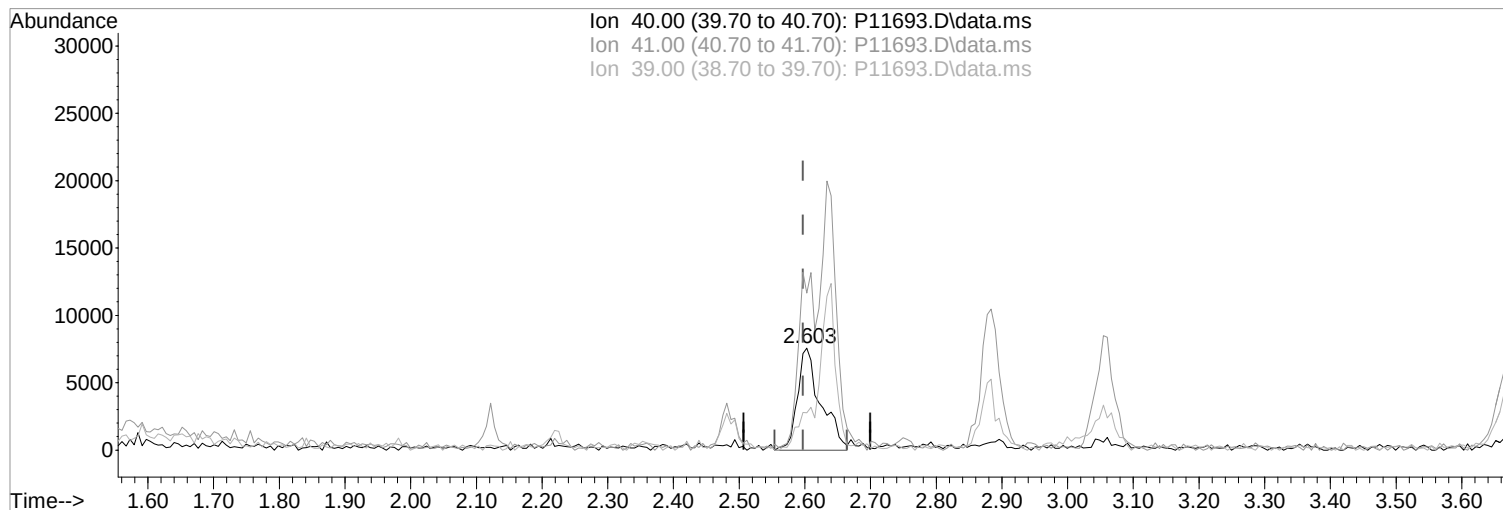
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11693.D
Acq On : 31 Aug 2017 6:04 pm
Operator : B.ALLGEIER
Sample : 5.0ppb
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:10 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11693.D\data.ms

(19) Acetonitrile

Manual Integration:

2.603min (+0.006) 32.83 ppb

Before

response 18666

Ion Exp% Act%

09/01/17

40.00 100 100

41.00 195.10 153.69#

39.00 35.40 36.65

0.00 0.00 0.00

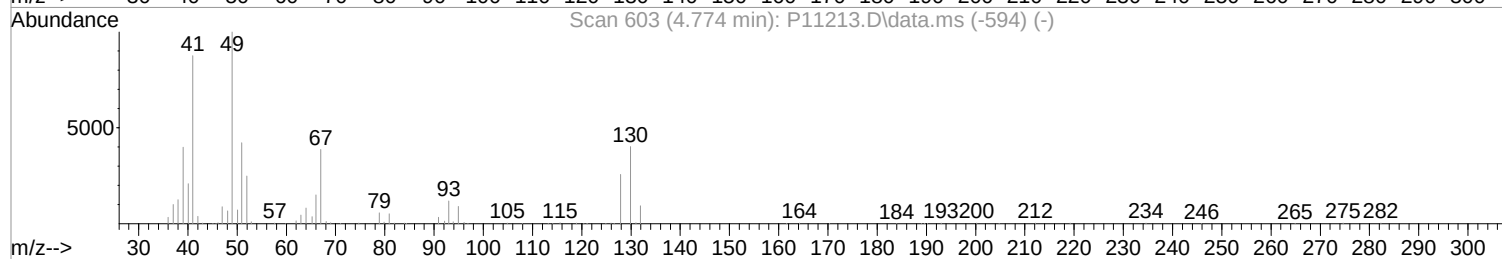
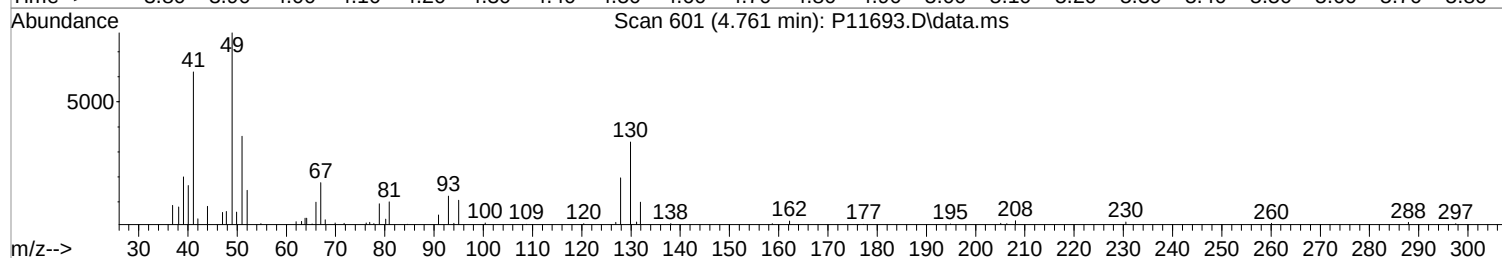
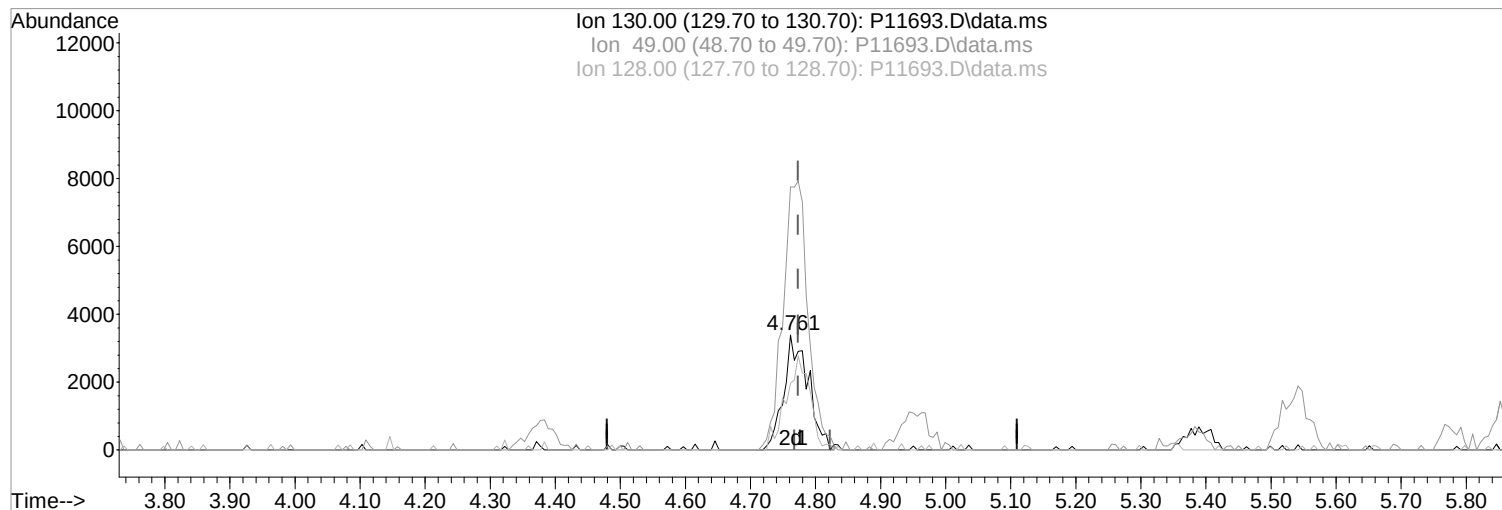
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11693.D
Acq On : 31 Aug 2017 6:04 pm
Operator : B.ALLGEIER
Sample : 5.0ppb
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:10 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11693.D\data.ms

(37) Bromochloromethane

4.761min (-0.012) 4.72 ppb m

response 8895

Ion	Exp%	Act%
130.00	100	100
49.00	255.50	228.45#
128.00	66.10	57.88
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

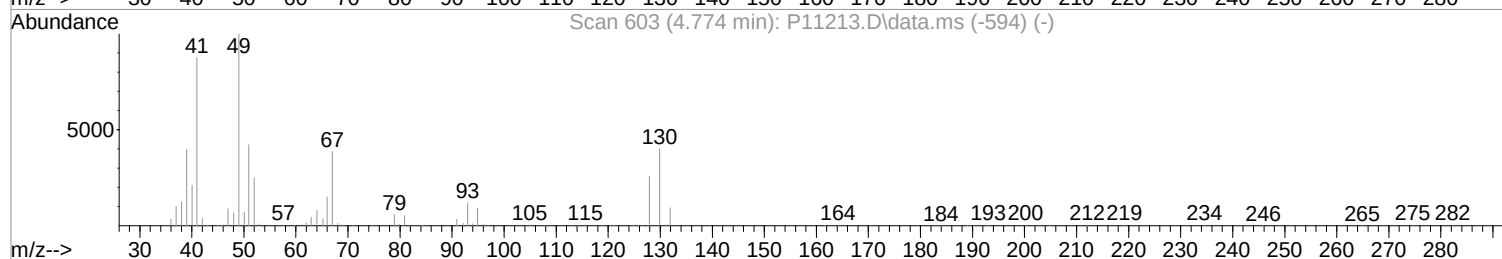
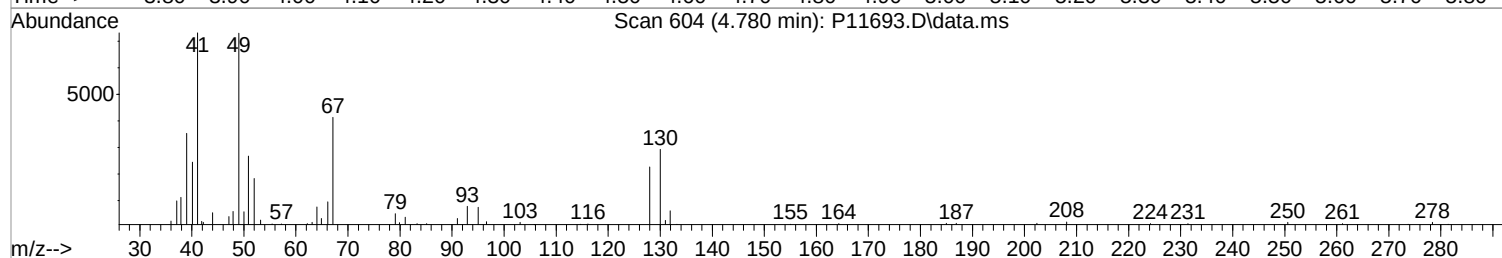
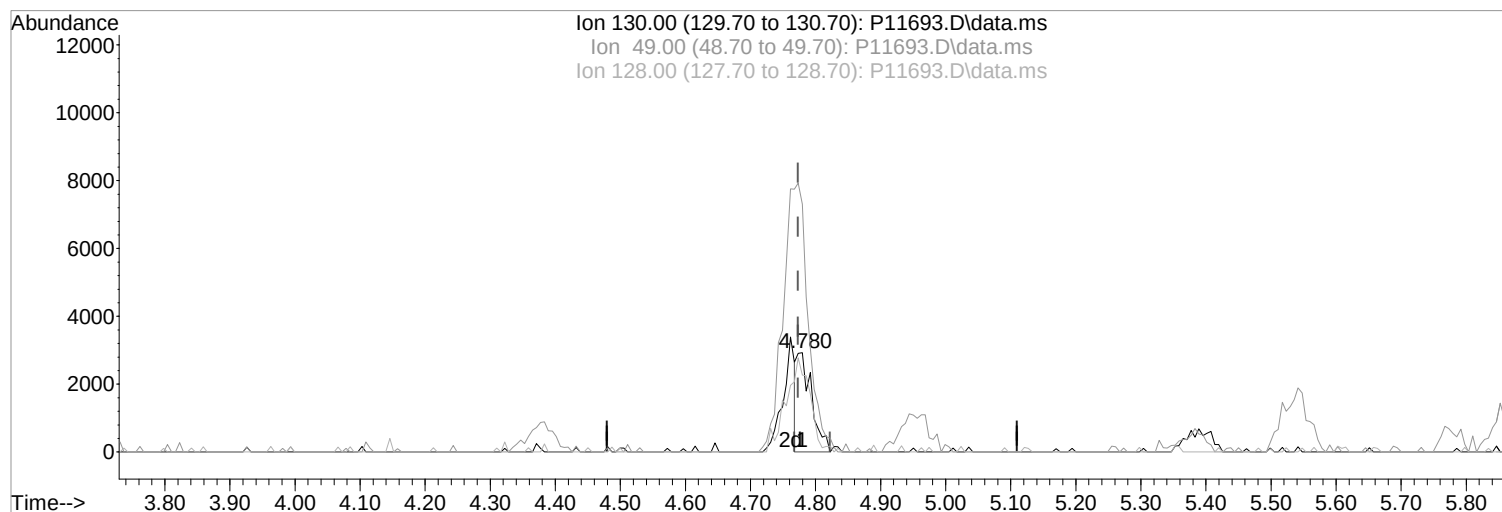
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11693.D
Acq On : 31 Aug 2017 6:04 pm
Operator : B.ALLGEIER
Sample : 5.0ppb
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:10 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11693.D\data.ms

(37) Bromochloromethane

Manual Integration:

4.780min (+0.006) 2.44 ppb

Before

response 4600

Ion Exp% Act%

09/01/17

130.00 100 100

49.00 255.50 249.37

128.00 66.10 77.50

0.00 0.00 0.00

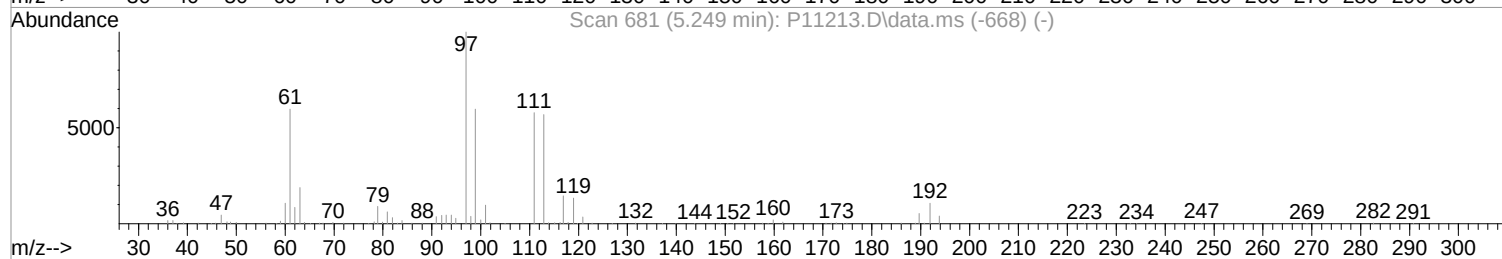
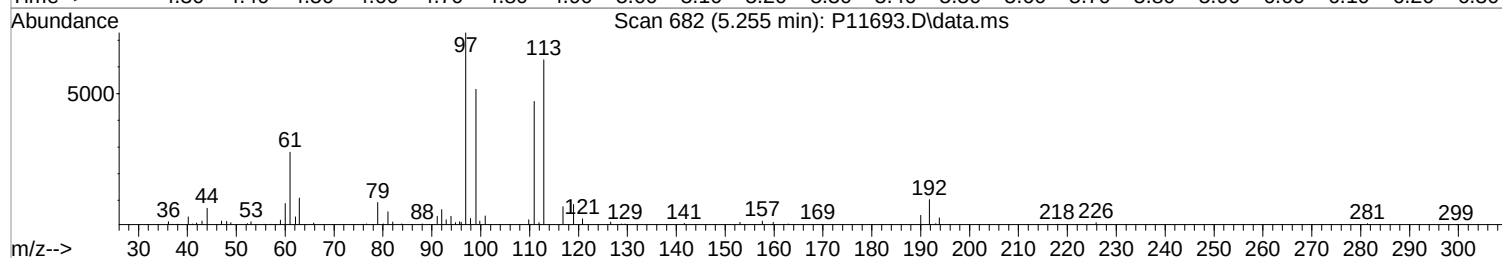
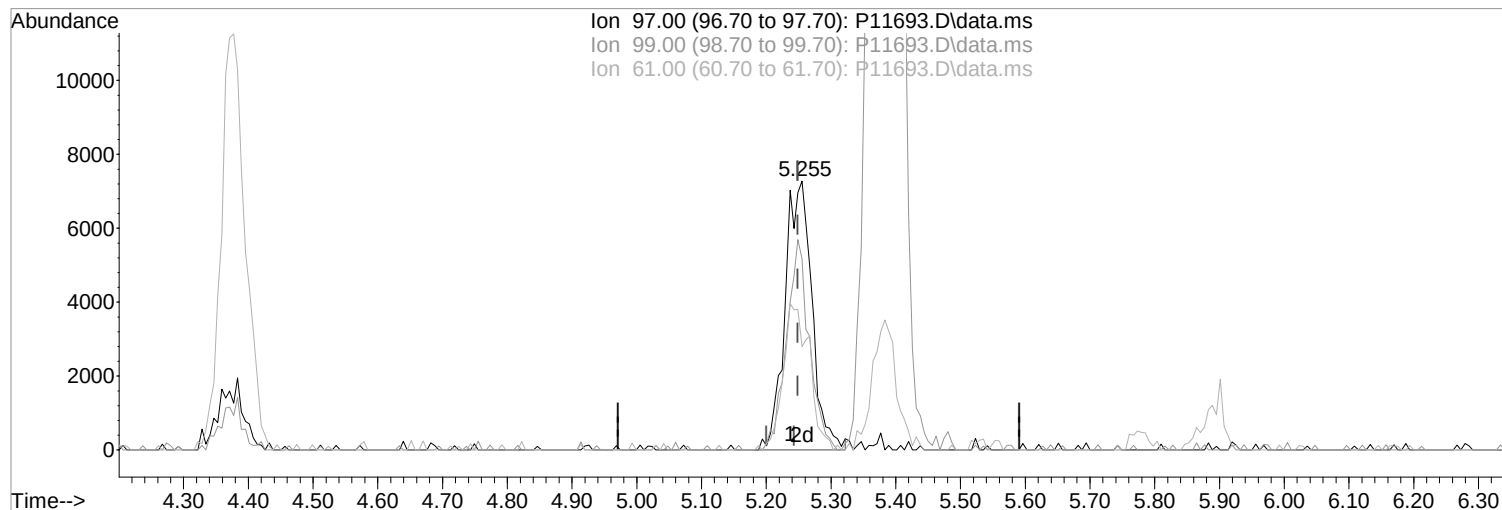
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11693.D
Acq On : 31 Aug 2017 6:04 pm
Operator : B.ALLGEIER
Sample : 5.0ppb
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:10 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11693.D\data.ms

(41) 1,1,1-Trichloroethane (P)

5.255min (+0.006) 4.98 ppb m

response 20985

Ion	Exp%	Act%
97.00	100	100
99.00	59.70	71.02
61.00	59.70	38.47#
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

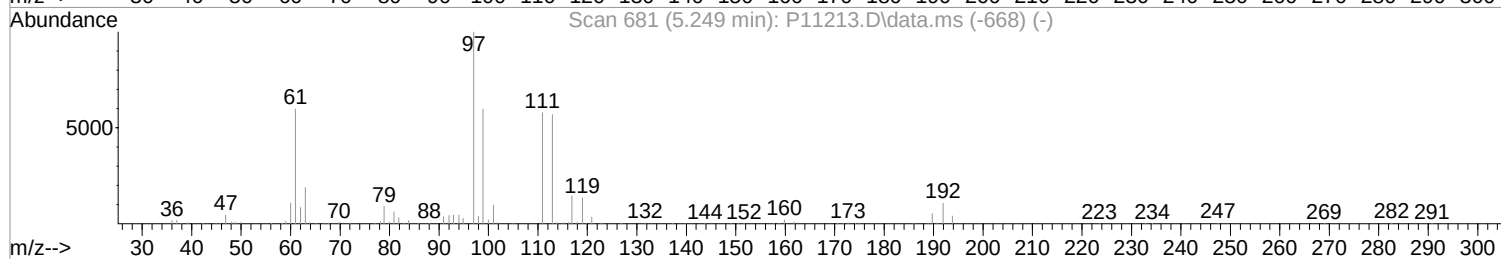
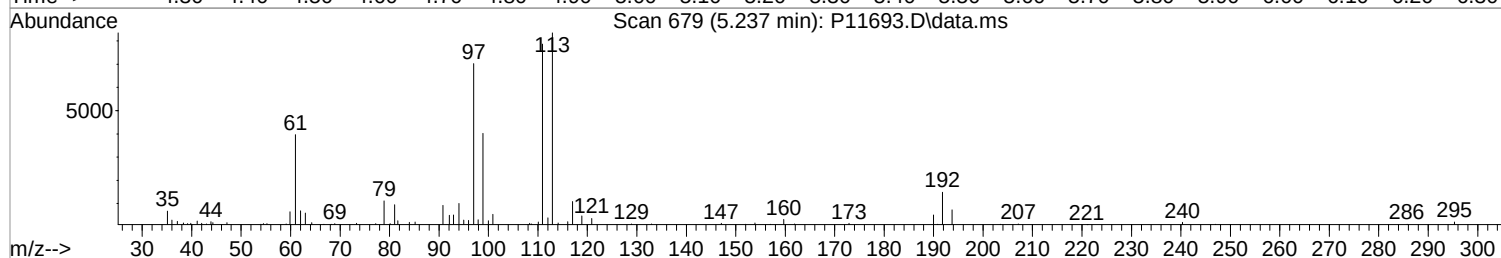
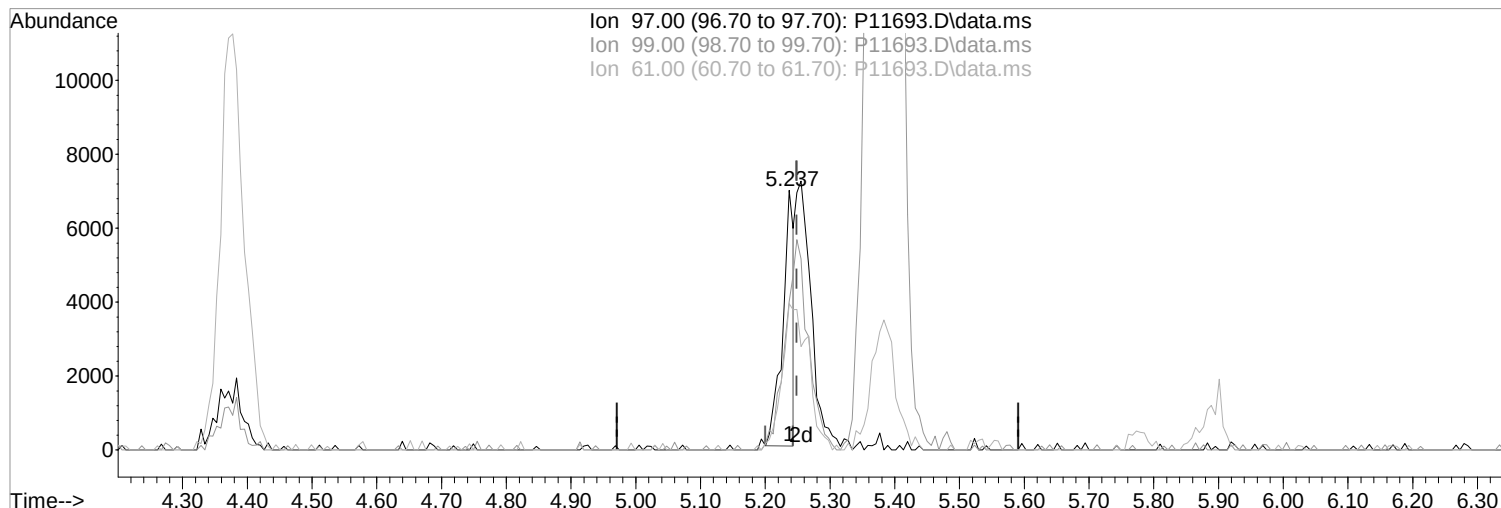
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11693.D
Acq On : 31 Aug 2017 6:04 pm
Operator : B.ALLGEIER
Sample : 5.0ppb
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:10 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11693.D\data.ms

(41) 1,1,1-Trichloroethane (P)

Manual Integration:

5.237min (-0.012) 1.95 ppb

Before

response 8200

Ion	Exp%	Act%
97.00	100	100
99.00	59.70	57.25
61.00	59.70	56.38
0.00	0.00	0.00

09/01/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11693.D
 Acq On : 31 Aug 2017 6:04 pm
 Operator : B.ALLGEIER
 Sample : 5.0ppb
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:41:40 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.389	168	245822	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	404072	50.00	ppb	0.00
71) d5-Chlorobenzene	9.791	117	365194	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	178968	50.00	ppb	0.00

System Monitoring Compounds						
45) surr4,Dibrflmethane	5.237	113	22224	9.11	ppb	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	18.22%#
48) surr1,1,2-dichloroetha...	5.779	65	38565	10.32	ppb	0.00
Spiked Amount	50.000	Range	73 - 125	Recovery	=	20.64%#
65) SURR3,Toluene-d8	8.297	98	111821	11.08	ppb	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	22.16%#
70) SURR2,BFB	10.864	95	42743	10.95	ppb	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	21.90%#

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.183	85	11692	3.18	ppb	93
3) Chloromethane	1.311	50	28316	3.66	ppb	97
4) Vinyl Chloride	1.384	62	19586	3.66	ppb	95
5) Bromomethane	1.609	94	10874	4.17	ppb	89
6) Chloroethane	1.683	64	11023	3.84	ppb	99
7) Freon 21	1.835	67	26805	4.85	ppb	99
8) Trichlorofluoromethane	1.884	101	20452	5.18	ppb	95
9) Diethyl Ether	2.122	59	18926	3.65	ppb	# 64
10) Freon 123a	2.122	67	17808	5.00	ppb	98
11) Freon 123	2.170	83	18820	5.06	ppb	95
12) Acrolein	2.219	56	29338	19.12	ppb	96
13) 1,1-Dicethene	2.304	96	12304	4.50	ppb	# 84
14) Freon 113	2.311	101	11032	4.63	ppb	95
15) Acetone	2.353	43	16342	5.76	ppb	95
16) 2-Propanol	2.481	45	58452	85.23	ppb	98
17) Iodomethane	2.439	142	5245	6.22	ppb	90
18) Carbon Disulfide	2.499	76	32844	3.99	ppb	96
19) Acetonitrile	2.603	40	15980m	28.10	ppb	
20) Allyl Chloride	2.634	76	6093	4.58	ppb	# 94
21) Methyl Acetate	2.664	43	40045	4.87	ppb	97
22) Methylene Chloride	2.756	84	13922	4.78	ppb	# 78
23) TBA	2.884	59	85034	80.97	ppb	90
24) Acrylonitrile	3.005	53	70900	20.12	ppb	99
25) Methyl-t-Butyl Ether	3.060	73	49051	5.04	ppb	92
26) trans-1,2-Dichloroethene	3.048	96	13651	4.71	ppb	# 76
28) 1,1-Dicethane	3.542	63	31642	4.22	ppb	92
29) Vinyl Acetate	3.646	86	3080	4.47	ppb	# 62
30) DIPE	3.664	45	81794	4.50	ppb	88
31) 2-Chloro-1,3-Butadiene	3.664	53	32271	3.77	ppb	87
32) ETBE	4.194	59	67785	3.97	ppb	92
33) 2,2-Dichloropropane	4.377	77	20337	5.00	ppb	92
34) cis-1,2-Dichloroethene	4.377	96	16765	5.27	ppb	# 56
35) 2-Butanone	4.426	43	18823	4.66	ppb	96
36) Propionitrile	4.505	54	27818	19.30	ppb	93
37) Bromochloromethane	4.761	130	8895m	4.72	ppb	
38) Methacrylonitrile	4.780	67	10423	4.95	ppb	# 67
39) Tetrahydrofuran	4.865	42	11551	4.33	ppb	71
40) Chloroform	4.956	83	24699	5.40	ppb	79
41) 1,1,1-Trichloroethane	5.255	97	20985m	4.98	ppb	

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11693.D
 Acq On : 31 Aug 2017 6:04 pm
 Operator : B.ALLGEIER
 Sample : 5.0ppb
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:41:40 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.090	73	48284	4.99	ppb	97
44) Cyclohexane	5.340	41	22185	4.94	ppb	# 60
46) Carbontetrachloride	5.523	117	15350	4.58	ppb	# 71
47) 1,1-Dichloropropene	5.535	75	18272	5.27	ppb	88
49) Benzene	5.853	78	60884	5.67	ppb	90
50) 1,2-Dichloroethane	5.889	62	27713	5.18	ppb	98
51) Iso-Butyl Alcohol	5.859	43	44456	94.04	ppb	98
52) n-Heptane	6.346	43	30738	4.39	ppb	75
53) 1-Butanol	6.828	56	59099	189.54	ppb	82
54) Trichloroethene	6.804	130	15557	5.38	ppb	88
55) Methylcyclohexane	7.047	55	28656	3.78	ppb	83
56) 1,2-Dicloropropane	7.078	63	18525	4.14	ppb	87
57) Dibromomethane	7.224	93	9332	4.97	ppb	88
58) 1,4-Dioxane	7.291	88	7041	111.13	ppb	# 76
59) Methyl Methacrylate	7.316	69	14403	4.97	ppb	93
60) Bromodichloromethane	7.450	83	15715	4.64	ppb	91
61) 2-Nitropropane	7.730	41	13403	8.80	ppb	88
62) 2-Chloroethylvinyl Ether	7.858	63	9777	3.08	ppb	87
63) cis-1,3-Dichloropropene	7.992	75	22986	4.93	ppb	91
64) 4-Methyl-2-pentanone	8.200	43	33027	4.78	ppb	88
66) Toluene	8.370	91	65514	5.36	ppb	98
67) trans-1,3-Dichloropropene	8.639	75	20326	4.76	ppb	94
68) Ethyl Methacrylate	8.779	69	23620	4.99	ppb	95
69) 1,1,2-Trichloroethane	8.828	97	13867	4.91	ppb	95
72) Tetrachloroethene	8.962	164	10484	4.93	ppb	84
73) 2-Hexanone	9.120	43	24748	4.66	ppb	80
74) 1,3-Dichloropropane	8.992	76	28984	6.20	ppb	# 83
75) Dibromochloromethane	9.224	129	11177	4.10	ppb	94
76) N-Butyl Acetate	9.273	43	46776	4.31	ppb	85
77) 1,2-Dibromoethane	9.321	107	14325	5.65	ppb	89
78) Chlorobenzene	9.815	112	41413	5.49	ppb	97
79) 3-CBTF	9.833	180	19165	4.94	ppb	# 83
80) 4-CBTF	9.888	180	16639	4.91	ppb	90
81) 1,1,1,2-Tetrachloroethane	9.900	131	13463	4.77	ppb	89
82) Ethylbenzene	9.937	106	22097	5.51	ppb	# 81
83) (m+p)Xylene	10.047	106	52925	10.72	ppb	98
84) o-Xylene	10.406	106	25951	5.09	ppb	98
85) Styrene	10.419	104	43630	5.26	ppb	97
87) Bromoform	10.565	173	6729	3.96	ppb	98
88) 2-CBTF	10.650	180	19054	5.37	ppb	97
89) Isopropylbenzene	10.742	105	66431	5.52	ppb	96
90) Cyclohexanone	10.803	55	122769	105.34	ppb	77
91) trans-1,4-Dichloro-2-B...	11.047	53	7080	3.73	ppb	81
92) 1,1,2,2-Tetrachloroethane	10.998	83	18842	4.94	ppb	95
93) Bromobenzene	10.986	156	17282	5.63	ppb	98
94) 1,2,3-Trichloropropane	11.028	110	6928	5.37	ppb	# 71
95) n-Propylbenzene	11.095	91	78730	5.44	ppb	98
96) 2-Chlorotoluene	11.162	91	48650	5.52	ppb	98
97) 3-Chlorotoluene	11.211	91	53602	5.82	ppb	93
98) 4-Chlorotoluene	11.254	91	55108	5.56	ppb	92
99) 1,3,5-Trimethylbenzene	11.254	105	56647	5.54	ppb	90
100) tert-Butylbenzene	11.522	119	49007	5.26	ppb	94
101) 1,2,4-Trimethylbenzene	11.559	105	57154	5.45	ppb	84
102) 3,4-DCBTF	11.626	214	13648	5.03	ppb	# 84
103) sec-Butylbenzene	11.705	105	75740	5.87	ppb	94
104) p-Isopropyltoluene	11.827	119	60290	5.29	ppb	98

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11693.D
 Acq On : 31 Aug 2017 6:04 pm
 Operator : B.ALLGEIER
 Sample : 5.0ppb
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:41:40 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.784	146	31189	5.12	ppb	93
106) 1,4-Dclbenz	11.857	146	32143	5.19	ppb	93
107) 2,4-DCBTF	11.912	214	13303	5.33	ppb	95
108) 2,5-DCBTF	11.955	214	14539	5.53	ppb	91
109) n-Butylbenzene	12.156	91	52043	4.91	ppb	97
110) 1,2-Dclbenz	12.162	146	31702	5.42	ppb	96
111) 1,2-Dibromo-3-chloropr...	12.784	157	4651	4.22	ppb	87
112) Trielution Dichlorotol...	12.906	125	90917	15.63	ppb	95
113) 1,3,5 Trichlorobenzene	12.961	180	23077	5.19	ppb	97
114) Coelution Dichlorotoluene	13.235	125	65693	10.00	ppb	95
115) 1,2,4-Tcbenzene	13.442	180	23664	5.40	ppb	90
116) Hexachlorobt	13.583	225	9016	5.01	ppb	83
117) Naphthalen	13.631	128	74888	4.87	ppb	97
118) 1,2,3-Tclbenzene	13.820	180	24053	4.99	ppb	93
119) 2,4,5-Trichlorotoluene	14.406	159	18749	4.44	ppb #	88
120) 2,3,6-Trichlorotoluene	14.491	159	18951	4.75	ppb	93

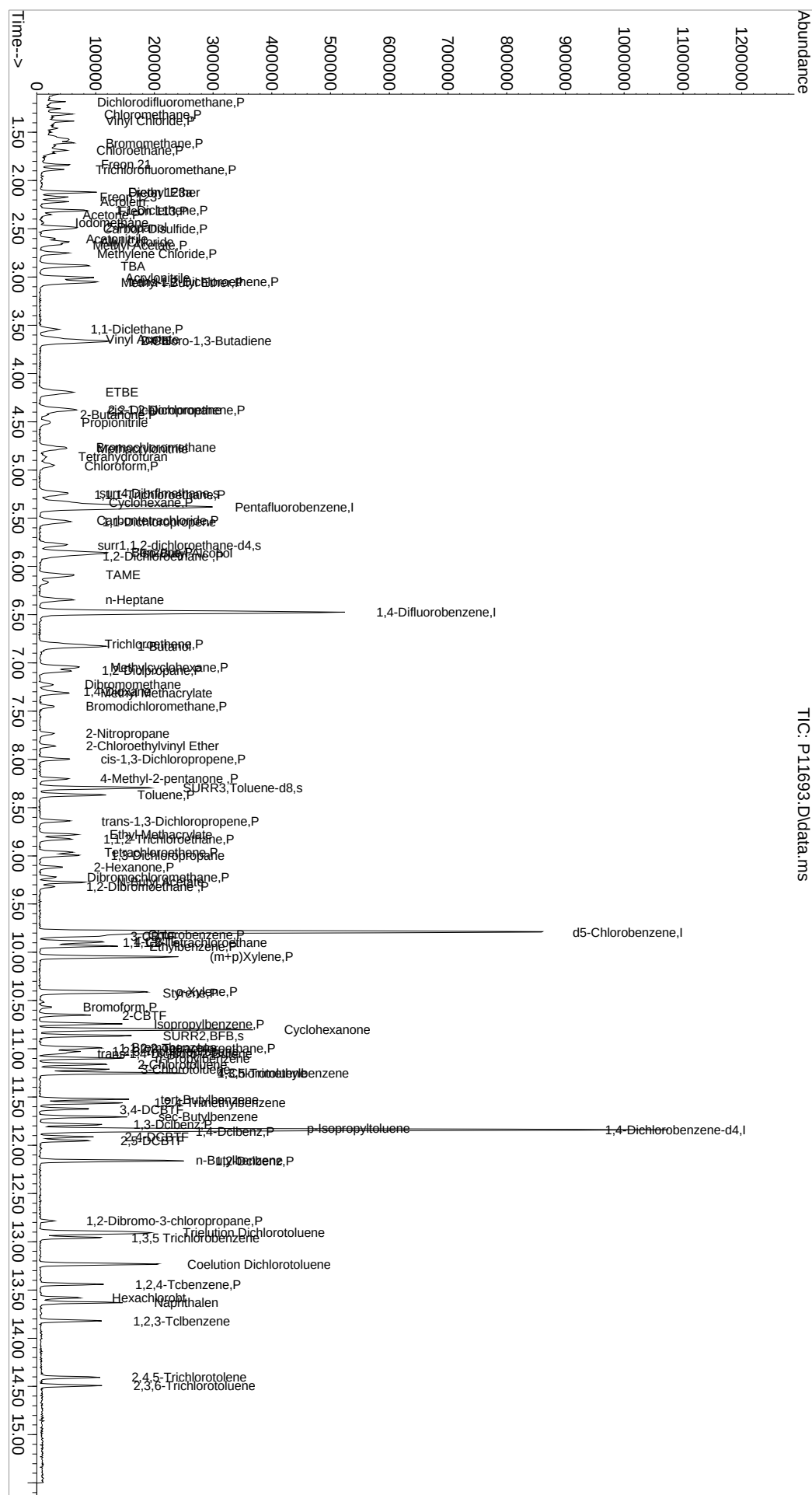
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2nd A *WR* 09/05/17

Quantitation Report (QT Reviewed)

Quant Time: Sep 01 09:41:40 2017
Quant Method : I:\ACQDATA\msv0a12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10ML Purge
Qlast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration

Inst : MSV0A-12



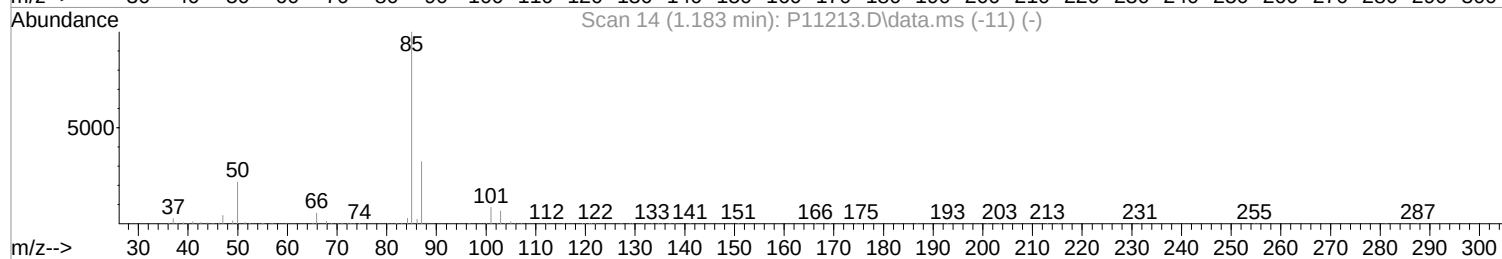
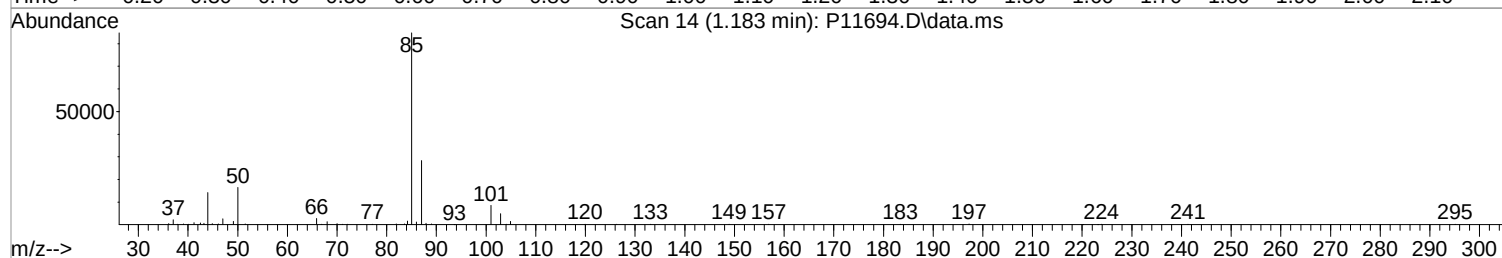
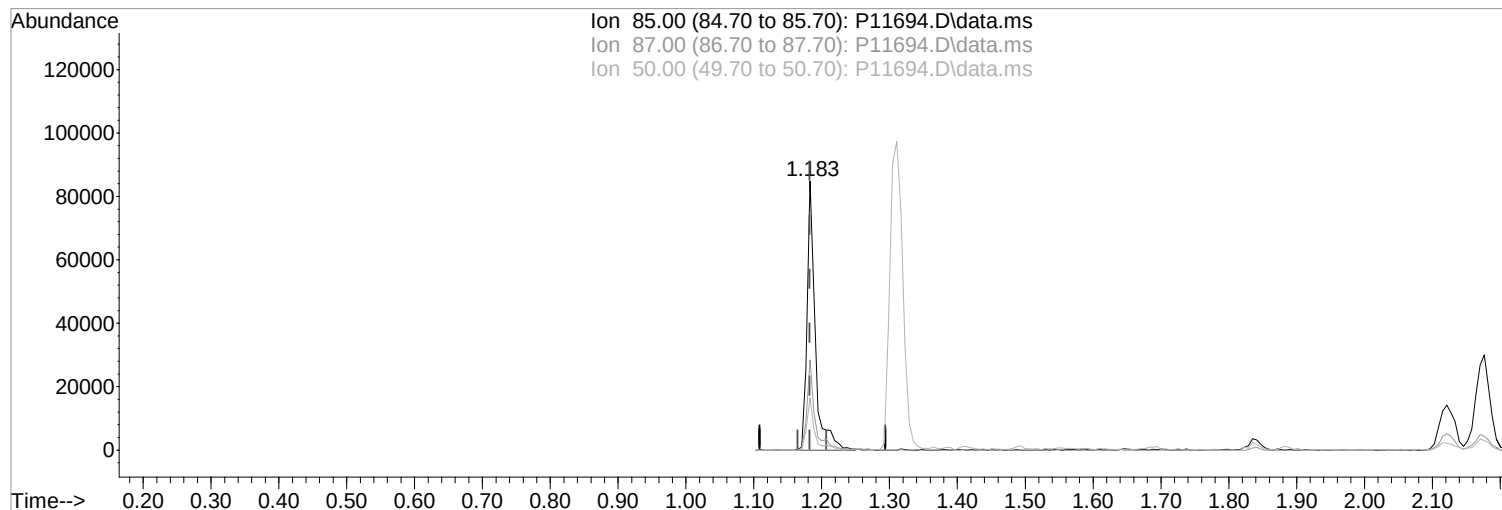
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11694.D
Acq On : 31 Aug 2017 6:26 pm
Operator : B.ALLGEIER
Sample : 20.0ppb
Misc :
ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:13 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11694.D\data.ms

(2) Dichlorodifluoromethane (P)

1.183min (0.000) 19.54 ppb m

response 72962

Ion	Exp%	Act%
85.00	100	100
87.00	32.40	33.48
50.00	21.60	19.46
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

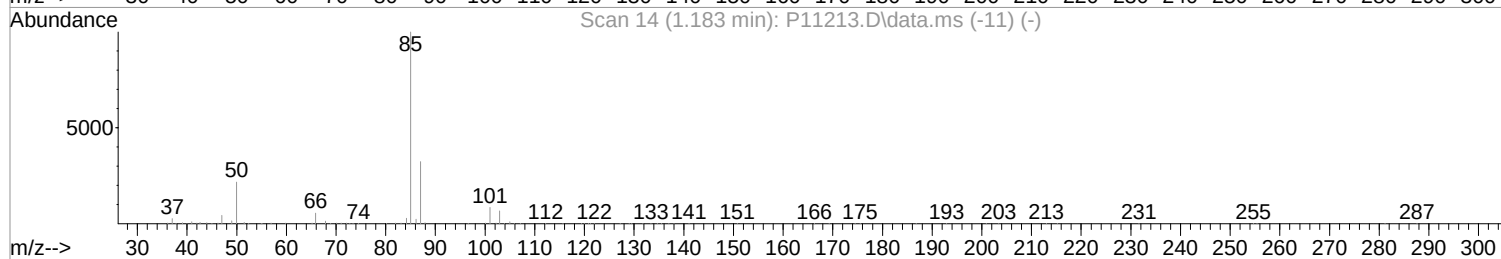
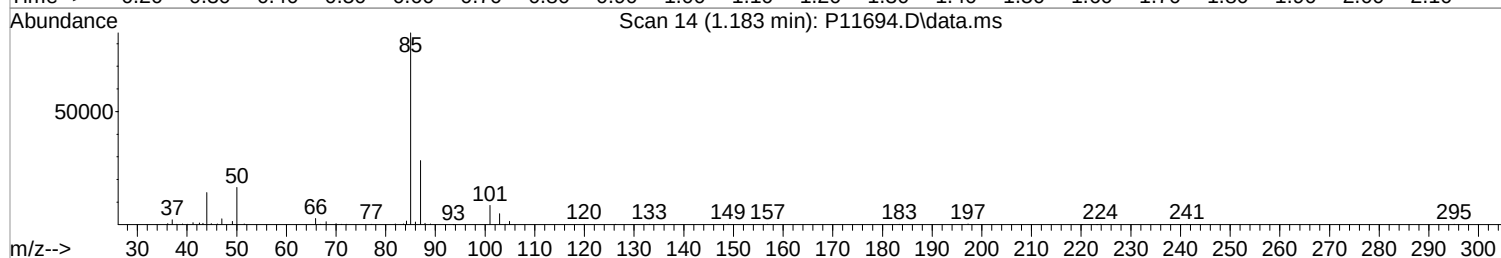
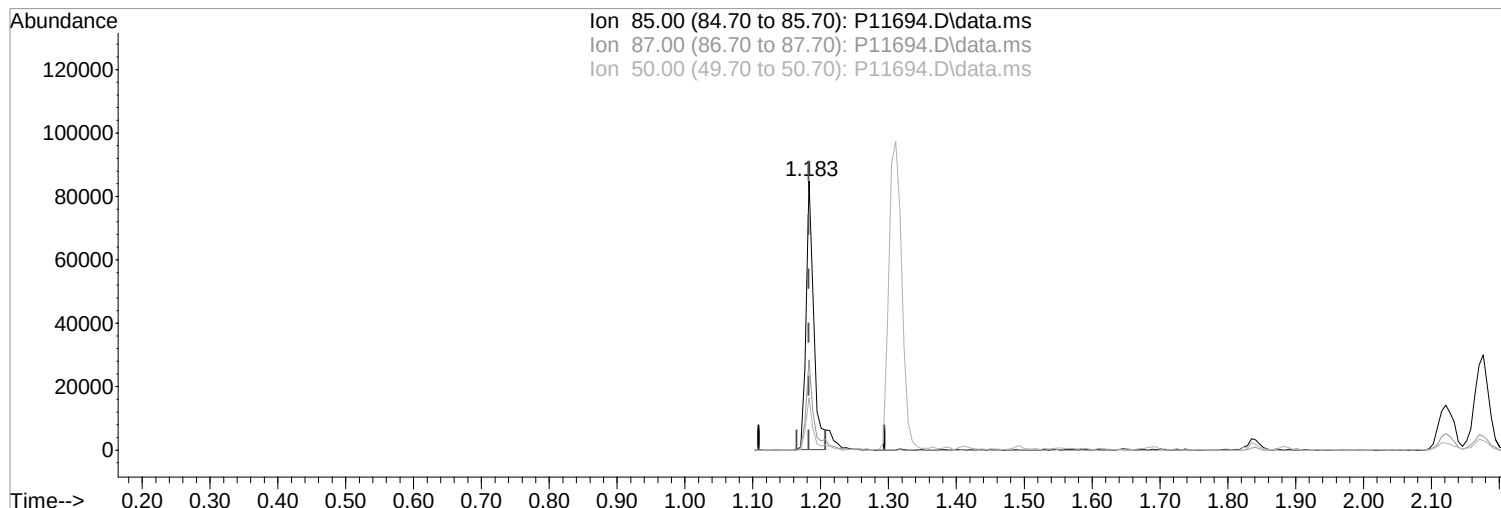
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11694.D
Acq On : 31 Aug 2017 6:26 pm
Operator : B.ALLGEIER
Sample : 20.0ppb
Misc :
ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:13 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11694.D\data.ms

(2) Dichlorodifluoromethane (P)

Manual Integration:

1.183min (0.000) 18.14 ppb

Before

response 67745

09/01/17

Ion	Exp%	Act%
85.00	100	100
87.00	32.40	33.48
50.00	21.60	19.46
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11694.D
 Acq On : 31 Aug 2017 6:26 pm
 Operator : B.ALLGEIER
 Sample : 20.0ppb
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:46:18 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.383	168	249652	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	400391	50.00	ppb	0.00
71) d5-Chlorobenzene	9.791	117	351019	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	174511	50.00	ppb	0.00

System Monitoring Compounds						
45) surr4,Dibrflmethane	5.237	113	41985	17.36	ppb	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	34.72%#
48) surr1,1,2-dichloroetha...	5.773	65	67709	18.28	ppb	0.00
Spiked Amount	50.000	Range	73 - 125	Recovery	=	36.56%#
65) SURR3,Toluene-d8	8.297	98	194624	19.47	ppb	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	38.94%#
70) SURR2,BFB	10.864	95	73277	18.94	ppb	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	37.88%#

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.183	85	72962m	19.54	ppb	
3) Chloromethane	1.311	50	127747	16.26	ppb	92
4) Vinyl Chloride	1.384	62	87741	16.16	ppb	98
5) Bromomethane	1.609	94	41607	18.52	ppb	98
6) Chloroethane	1.689	64	46898	16.11	ppb	83
7) Freon 21	1.835	67	103599	18.47	ppb	100
8) Trichlorofluoromethane	1.890	101	90208	22.49	ppb	98
9) Diethyl Ether	2.121	59	78347	14.90	ppb	85
10) Freon 123a	2.121	67	61202	16.91	ppb	94
11) Freon 123	2.176	83	67577	17.88	ppb	97
12) Acrolein	2.219	56	122257	78.44	ppb	91
13) 1,1-Dicethene	2.310	96	52120	18.76	ppb	# 82
14) Freon 113	2.317	101	49115	20.29	ppb	87
15) Acetone	2.353	43	62365	21.65	ppb	87
16) 2-Propanol	2.481	45	251150	360.57	ppb	93
17) Iodomethane	2.438	142	44569	17.02	ppb	95
18) Carbon Disulfide	2.499	76	141225	16.89	ppb	98
19) Acetonitrile	2.597	40	52807	91.45	ppb	# 86
20) Allyl Chloride	2.640	76	26836	19.86	ppb	# 90
21) Methyl Acetate	2.658	43	161540	19.36	ppb	97
22) Methylene Chloride	2.755	84	59150	20.00	ppb	89
23) TBA	2.884	59	348209	326.50	ppb	90
24) Acrylonitrile	3.005	53	282677	79.00	ppb	99
25) Methyl-t-Butyl Ether	3.054	73	211495	21.42	ppb	86
26) trans-1,2-Dichloroethene	3.048	96	57938	19.68	ppb	# 76
28) 1,1-Dicethane	3.542	63	126821	16.65	ppb	96
29) Vinyl Acetate	3.639	86	11501	16.44	ppb	# 52
30) DIPE	3.670	45	294412	15.97	ppb	96
31) 2-Chloro-1,3-Butadiene	3.664	53	129931	14.96	ppb	79
32) ETBE	4.194	59	247471	14.29	ppb	86
33) 2,2-Dichloropropane	4.371	77	86934	21.07	ppb	94
34) cis-1,2-Dichloroethene	4.383	96	66947	20.71	ppb	# 76
35) 2-Butanone	4.426	43	79476	19.36	ppb	92
36) Propionitrile	4.505	54	114710	78.35	ppb	99
37) Bromochloromethane	4.773	130	38532	20.15	ppb	# 78
38) Methacrylonitrile	4.767	67	38538	18.01	ppb	# 82
39) Tetrahydrofuran	4.859	42	45244	16.68	ppb	79
40) Chloroform	4.956	83	100563	21.66	ppb	91
41) 1,1,1-Trichloroethane	5.249	97	87921	20.55	ppb	86

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11694.D
 Acq On : 31 Aug 2017 6:26 pm
 Operator : B.ALLGEIER
 Sample : 20.0ppb
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:46:18 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.096	73	189234	19.27	ppb	89
44) Cyclohexane	5.340	41	73542	16.53	ppb	89
46) Carbontetrachloride	5.523	117	69439	20.92	ppb	87
47) 1,1-Dichloropropene	5.542	75	78731	22.93	ppb	92
49) Benzene	5.859	78	249311	23.42	ppb	87
50) 1,2-Dichloroethane	5.895	62	99792	18.83	ppb	96
51) Iso-Butyl Alcohol	5.865	43	187642	400.56	ppb	100
52) n-Heptane	6.346	43	128750	18.54	ppb	85
53) 1-Butanol	6.828	56	256923	831.57	ppb	84
54) Trichloroethene	6.803	130	63172	22.03	ppb	94
55) Methylcyclohexane	7.041	55	101782	13.56	ppb	82
56) 1,2-Dicloropropane	7.084	63	78978	17.81	ppb	98
57) Dibromomethane	7.224	93	38290	20.56	ppb	87
58) 1,4-Dioxane	7.285	88	24960	397.56	ppb	# 72
59) Methyl Methacrylate	7.309	69	60950	21.22	ppb	95
60) Bromodichloromethane	7.456	83	67009	19.98	ppb	96
61) 2-Nitropropane	7.730	41	54599	36.17	ppb	89
62) 2-Chloroethylvinyl Ether	7.858	63	43622	13.88	ppb	88
63) cis-1,3-Dichloropropene	7.998	75	97154	21.04	ppb	93
64) 4-Methyl-2-pentanone	8.206	43	140258	20.47	ppb	88
66) Toluene	8.370	91	269219	22.24	ppb	97
67) trans-1,3-Dichloropropene	8.638	75	89479	21.13	ppb	99
68) Ethyl Methacrylate	8.779	69	105541	22.52	ppb	86
69) 1,1,2-Trichloroethane	8.827	97	56373	20.15	ppb	95
72) Tetrachloroethene	8.962	164	44085	21.58	ppb	91
73) 2-Hexanone	9.114	43	100966	19.80	ppb	88
74) 1,3-Dichloropropane	8.998	76	113171	25.19	ppb	88
75) Dibromochloromethane	9.224	129	51389	19.63	ppb	96
76) N-Butyl Acetate	9.273	43	206768	19.81	ppb	86
77) 1,2-Dibromoethane	9.321	107	58436	23.97	ppb	97
78) Chlorobenzene	9.815	112	165217	22.77	ppb	95
79) 3-CBTF	9.833	180	57754	15.48	ppb	91
80) 4-CBTF	9.888	180	53578	16.45	ppb	92
81) 1,1,1,2-Tetrachloroethane	9.900	131	53835	19.86	ppb	90
82) Ethylbenzene	9.937	106	88945	23.07	ppb	94
83) (m+p)Xylene	10.047	106	220886	46.55	ppb	95
84) o-Xylene	10.406	106	107124	21.86	ppb	92
85) Styrene	10.419	104	182491	22.87	ppb	95
87) Bromoform	10.571	173	30437	18.38	ppb	97
88) 2-CBTF	10.650	180	60761	17.55	ppb	97
89) Isopropylbenzene	10.742	105	285847	24.34	ppb	97
90) Cyclohexanone	10.803	55	501544	441.33	ppb	83
91) trans-1,4-Dichloro-2-B...	11.047	53	31711	17.13	ppb	91
92) 1,1,2,2-Tetrachloroethane	10.998	83	79583	21.39	ppb	95
93) Bromobenzene	10.986	156	65469	21.89	ppb	# 86
94) 1,2,3-Trichloropropane	11.028	110	29989	23.85	ppb	97
95) n-Propylbenzene	11.095	91	333296	23.62	ppb	97
96) 2-Chlorotoluene	11.162	91	201807	23.49	ppb	96
97) 3-Chlorotoluene	11.211	91	183564	20.45	ppb	94
98) 4-Chlorotoluene	11.254	91	224025	23.18	ppb	97
99) 1,3,5-Trimethylbenzene	11.254	105	232964	23.35	ppb	95
100) tert-Butylbenzene	11.522	119	205008	22.55	ppb	98
101) 1,2,4-Trimethylbenzene	11.565	105	239378	23.43	ppb	95
102) 3,4-DCBTF	11.626	214	48335	18.28	ppb	89
103) sec-Butylbenzene	11.705	105	311503	24.74	ppb	96
104) p-Isopropyltoluene	11.827	119	248628	22.35	ppb	98

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11694.D
 Acq On : 31 Aug 2017 6:26 pm
 Operator : B.ALLGEIER
 Sample : 20.0ppb
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA-12

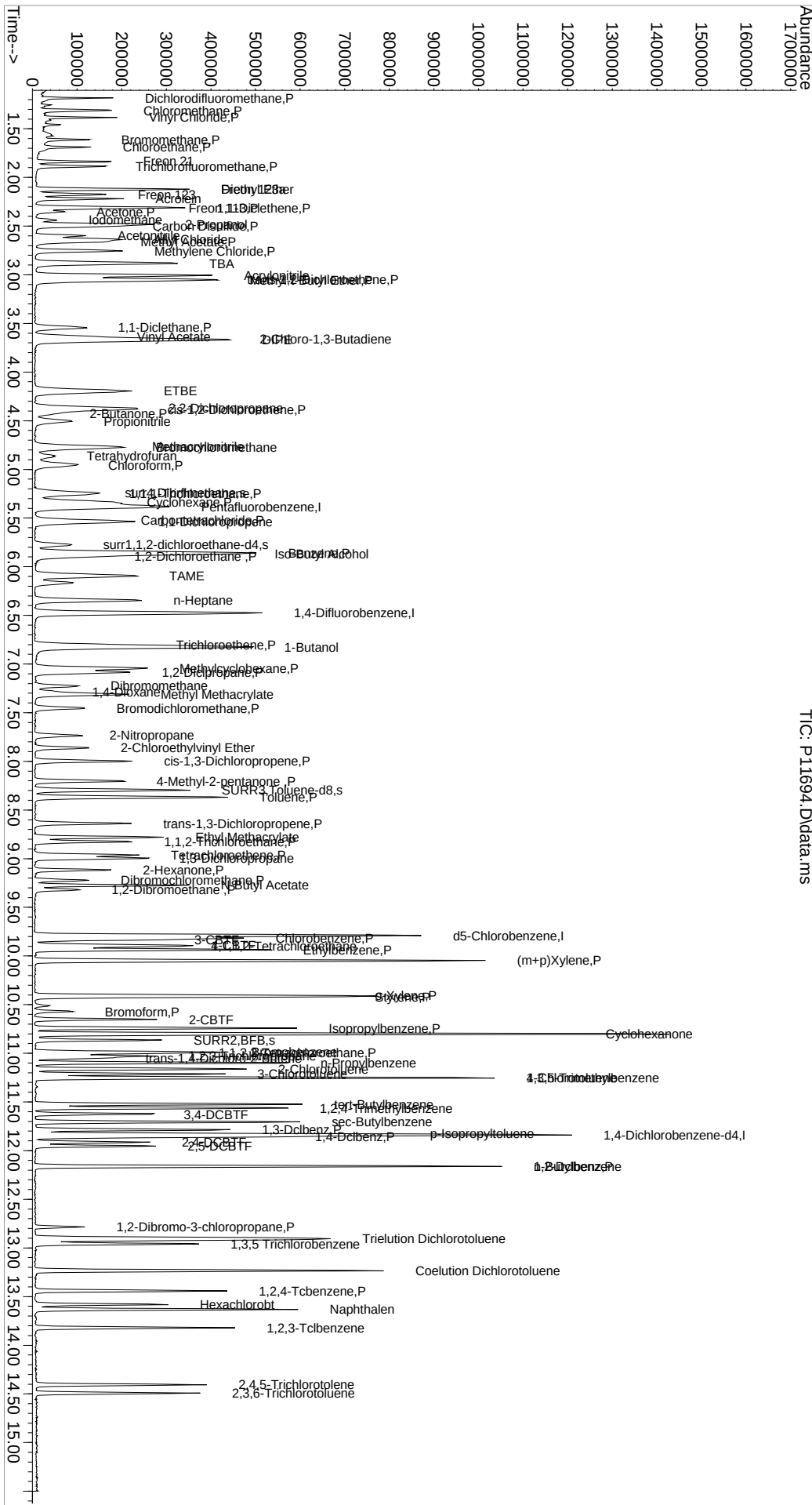
Quant Time: Sep 01 09:46:18 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.784	146	129550	21.80	ppb	95
106) 1,4-Dclbenz	11.857	146	129850	21.50	ppb	95
107) 2,4-DCBTF	11.912	214	43130	18.61	ppb	94
108) 2,5-DCBTF	11.955	214	48416	18.87	ppb	91
109) n-Butylbenzene	12.162	91	236539	22.87	ppb	98
110) 1,2-Dclbenz	12.162	146	123187	21.61	ppb	99
111) 1,2-Dibromo-3-chloropr...	12.784	157	19935	18.53	ppb	96
112) Trielution Dichlorotol...	12.906	125	317768	56.04	ppb #	94
113) 1,3,5 Trichlorobenzene	12.961	180	80608	18.58	ppb	93
114) Coelution Dichlorotoluene	13.235	125	248990	38.86	ppb	98
115) 1,2,4-Tcbenzene	13.442	180	90352	21.13	ppb	95
116) Hexachlorobt	13.583	225	39583	22.56	ppb	92
117) Naphthalen	13.631	128	309130	20.64	ppb	98
118) 1,2,3-Tclbenzene	13.820	180	94312	20.07	ppb	97
119) 2,4,5-Trichlorotoluene	14.406	159	71179	17.29	ppb	93
120) 2,3,6-Trichlorotoluene	14.491	159	66439	17.06	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQDATA\msvoa12\Data\083117\
 Data File : P1694.D
 Acq On : 31 Aug 2017 6:26 pm
 Operator : B.ALGEIER
 Sample : 20.0ppb
 Inst : MSVOA-12
 1st BA 09/01/17
 2nd 09/05/17

Quant Time: Sep 01 09:46:18 2017
 Quant Method : I:\ACQDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 Quant Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11695.D
 Acq On : 31 Aug 2017 6:48 pm
 Operator : B.ALLGEIER
 Sample : 50.0ppb
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:16 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.389	168	247078	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.480	114	398163	50.00	ppb	0.00
71) d5-Chlorobenzene	9.791	117	358323	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	181619	50.00	ppb	0.00

System Monitoring Compounds						
45) surr4,Dibrflmethane	5.237	113	113576	47.23	ppb	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	94.46%
48) surr1,1,2-dichloroetha...	5.767	65	179904	48.84	ppb	0.00
Spiked Amount	50.000	Range	73 - 125	Recovery	=	97.68%
65) SURR3,Toluene-d8	8.297	98	528316	53.15	ppb	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	106.30%
70) SURR2,BFB	10.864	95	209624	54.49	ppb	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	108.98%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.183	85	166550	45.07	ppb	95
3) Chloromethane	1.311	50	312662	40.21	ppb	92
4) Vinyl Chloride	1.384	62	208851	38.86	ppb	97
5) Bromomethane	1.609	94	80902	39.63	ppb	98
6) Chloroethane	1.689	64	115666	40.14	ppb	98
7) Freon 21	1.835	67	272206	49.05	ppb	99
8) Trichlorofluoromethane	1.884	101	199792	50.33	ppb	98
9) Diethyl Ether	2.121	59	184996	35.54	ppb	77
10) Freon 123a	2.121	67	160565	44.83	ppb	98
11) Freon 123	2.176	83	180606	48.30	ppb	99
12) Acrolein	2.219	56	269470	174.69	ppb	97
13) 1,1-Dicethene	2.310	96	121837	44.32	ppb	# 78
14) Freon 113	2.310	101	108158	45.15	ppb	85
15) Acetone	2.353	43	151325	53.08	ppb	94
16) 2-Propanol	2.487	45	617927	896.38	ppb	95
17) Iodomethane	2.438	142	148015	44.99	ppb	89
18) Carbon Disulfide	2.499	76	349663	42.26	ppb	97
19) Acetonitrile	2.597	40	148803	260.37	ppb	95
20) Allyl Chloride	2.640	76	64393	48.14	ppb	# 88
21) Methyl Acetate	2.658	43	389324	47.15	ppb	98
22) Methylene Chloride	2.755	84	137866	47.09	ppb	92
23) TBA	2.884	59	949895	899.94	ppb	90
24) Acrylonitrile	3.005	53	710753	200.69	ppb	98
25) Methyl-t-Butyl Ether	3.060	73	520693	53.27	ppb	90
26) trans-1,2-Dichloroethene	3.048	96	135285	46.43	ppb	# 85
28) 1,1-Dicethane	3.542	63	305180	40.48	ppb	95
29) Vinyl Acetate	3.633	86	30765	44.43	ppb	# 51
30) DIPE	3.670	45	799921	43.83	ppb	96
31) 2-Chloro-1,3-Butadiene	3.670	53	325155	37.82	ppb	84
32) ETBE	4.200	59	648356	37.82	ppb	90
33) 2,2-Dichloropropane	4.371	77	204141	49.98	ppb	98
34) cis-1,2-Dichloroethene	4.377	96	156714	48.97	ppb	# 78
35) 2-Butanone	4.426	43	198905	48.96	ppb	89
36) Propionitrile	4.505	54	292733	202.02	ppb	94
37) Bromochloromethane	4.773	130	92469	48.85	ppb	# 77
38) Methacrylonitrile	4.779	67	96166	45.41	ppb	# 76
39) Tetrahydrofuran	4.859	42	121202	45.16	ppb	83
40) Chloroform	4.956	83	243207	52.93	ppb	92
41) 1,1,1-Trichloroethane	5.249	97	210047	49.61	ppb	94

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11695.D
 Acq On : 31 Aug 2017 6:48 pm
 Operator : B.ALLGEIER
 Sample : 50.0ppb
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:16 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.096	73	486976	50.11	ppb	92
44) Cyclohexane	5.340	41	196109	44.33	ppb	88
46) Carbontetrachloride	5.529	117	162784	49.32	ppb	98
47) 1,1-Dichloropropene	5.542	75	192059	56.24	ppb	94
49) Benzene	5.859	78	579203	54.72	ppb	88
50) 1,2-Dichloroethane	5.895	62	250660	47.56	ppb	99
51) Iso-Butyl Alcohol	5.865	43	516953	1109.71	ppb	96
52) n-Heptane	6.346	43	295792	42.83	ppb	87
53) 1-Butanol	6.828	56	682285	2220.68	ppb	82
54) Trichloroethene	6.803	130	148357	52.03	ppb	95
55) Methylcyclohexane	7.041	55	277164	37.14	ppb	82
56) 1,2-Dicloropropane	7.084	63	184895	41.92	ppb	97
57) Dibromomethane	7.224	93	90263	48.74	ppb	94
58) 1,4-Dioxane	7.285	88	76620	1227.23	ppb	# 76
59) Methyl Methacrylate	7.309	69	153128	53.61	ppb	96
60) Bromodichloromethane	7.456	83	176706	52.99	ppb	99
61) 2-Nitropropane	7.736	41	153284	102.12	ppb	96
62) 2-Chloroethylvinyl Ether	7.858	63	119081	38.11	ppb	95
63) cis-1,3-Dichloropropene	7.998	75	243911	53.12	ppb	97
64) 4-Methyl-2-pentanone	8.206	43	333832	49.00	ppb	88
66) Toluene	8.370	91	629913	52.33	ppb	96
67) trans-1,3-Dichloropropene	8.638	75	221738	52.64	ppb	98
68) Ethyl Methacrylate	8.779	69	256590	55.05	ppb	89
69) 1,1,2-Trichloroethane	8.827	97	137734	49.52	ppb	97
72) Tetrachloroethene	8.962	164	104618	50.18	ppb	91
73) 2-Hexanone	9.114	43	265100	50.92	ppb	83
74) 1,3-Dichloropropane	8.998	76	269822	58.83	ppb	90
75) Dibromochloromethane	9.224	129	132744	49.66	ppb	97
76) N-Butyl Acetate	9.272	43	499350	46.87	ppb	91
77) 1,2-Dibromoethane	9.321	107	143846	57.79	ppb	92
78) Chlorobenzene	9.815	112	397338	53.64	ppb	94
79) 3-CBTF	9.833	180	185272	48.65	ppb	94
80) 4-CBTF	9.888	180	165822	49.87	ppb	97
81) 1,1,1,2-Tetrachloroethane	9.900	131	133189	48.14	ppb	92
82) Ethylbenzene	9.937	106	213374	54.22	ppb	97
83) (m+p)Xylene	10.047	106	528354	109.07	ppb	98
84) o-Xylene	10.406	106	261128	52.21	ppb	96
85) Styrene	10.419	104	448466	55.05	ppb	97
87) Bromoform	10.571	173	81514	47.30	ppb	95
88) 2-CBTF	10.650	180	183956	51.06	ppb	97
89) Isopropylbenzene	10.742	105	676890	55.39	ppb	99
90) Cyclohexanone	10.803	55	1383310	1169.59	ppb	81
91) trans-1,4-Dichloro-2-B...	11.047	53	87155	45.22	ppb	95
92) 1,1,2,2-Tetrachloroethane	10.998	83	210759	54.44	ppb	96
93) Bromobenzene	10.986	156	159377	51.20	ppb	90
94) 1,2,3-Trichloropropane	11.028	110	76451	58.43	ppb	91
95) n-Propylbenzene	11.095	91	778422	53.00	ppb	98
96) 2-Chlorotoluene	11.162	91	487961	54.58	ppb	98
97) 3-Chlorotoluene	11.211	91	510035	54.60	ppb	95
98) 4-Chlorotoluene	11.254	91	562534	55.92	ppb	94
99) 1,3,5-Trimethylbenzene	11.254	105	564353	54.36	ppb	98
100) tert-Butylbenzene	11.522	119	486974	51.47	ppb	100
101) 1,2,4-Trimethylbenzene	11.565	105	584973	55.01	ppb	97
102) 3,4-DCBTF	11.626	214	133820	48.63	ppb	91
103) sec-Butylbenzene	11.705	105	732147	55.87	ppb	98
104) p-Isopropyltoluene	11.827	119	607086	52.45	ppb	95

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11695.D
 Acq On : 31 Aug 2017 6:48 pm
 Operator : B.ALLGEIER
 Sample : 50.0ppb
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:16 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.784	146	310126	50.13	ppb	97
106) 1,4-Dclbenz	11.863	146	313880	49.94	ppb	95
107) 2,4-DCBTF	11.912	214	127113	53.39	ppb	95
108) 2,5-DCBTF	11.955	214	140348	52.57	ppb	96
109) n-Butylbenzene	12.162	91	562560	52.27	ppb	99
110) 1,2-Dclbenz	12.162	146	309366	52.15	ppb	93
111) 1,2-Dibromo-3-chloropr...	12.784	157	53932	48.17	ppb	96
112) Trielution Dichlorotol...	12.906	125	916705	155.33	ppb #	94
113) 1,3,5 Trichlorobenzene	12.961	180	225902	50.03	ppb	92
114) Coelution Dichlorotoluene	13.235	125	677106	101.55	ppb	98
115) 1,2,4-Tcbenzene	13.442	180	234667	52.72	ppb	95
116) Hexachlorobt	13.583	225	97616	53.45	ppb	97
117) Naphthalen	13.631	128	848326	54.42	ppb	99
118) 1,2,3-Tclbenzene	13.820	180	254142	51.97	ppb	95
119) 2,4,5-Trichlorotoluene	14.406	159	203837	47.59	ppb #	91
120) 2,3,6-Trichlorotoluene	14.491	159	185169	45.69	ppb	95

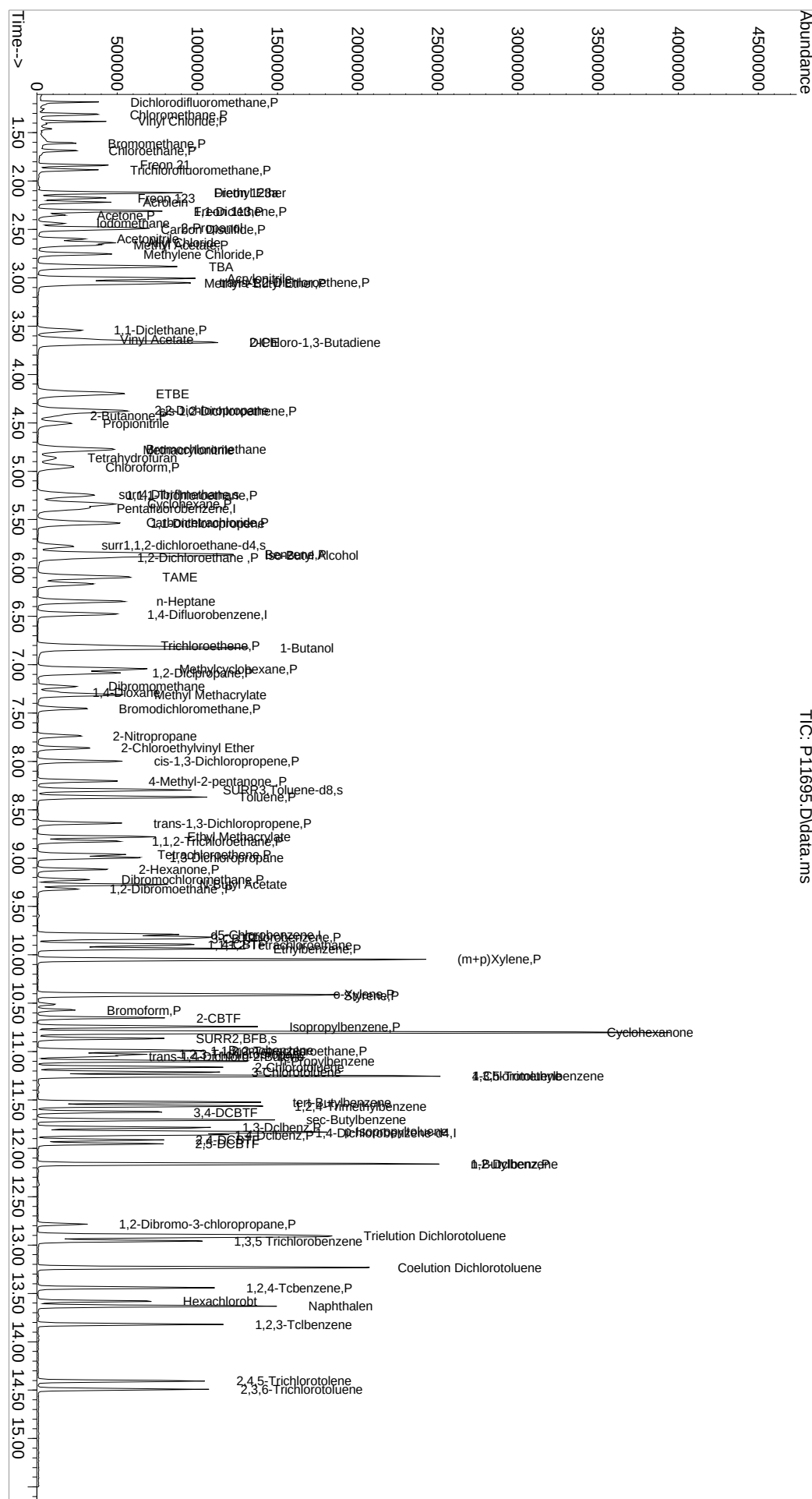
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2nd 100 09/05/17
A O A D D

Quantitation Report (QT Reviewed)

Quant Time: Sep 01 09:01:16 2017
Quant Method : I:\ACQ\DATA\msv0a12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10ML Purge
Quant Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration

Inst : MSV0A-12



Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11696.D
 Acq On : 31 Aug 2017 7:09 pm
 Operator : B.ALLGEIER
 Sample : 100.0ppb
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:19 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.389	168	248985	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	406261	50.00	ppb	0.00
71) d5-Chlorobenzene	9.791	117	367122	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	197037	50.00	ppb	0.00

System Monitoring Compounds						
45) surr4,Dibrflmethane	5.243	113	240386	97.98	ppb	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	195.96%#
48) surr1,1,2-dichloroetha...	5.773	65	370449	98.57	ppb	0.00
Spiked Amount	50.000	Range	73 - 125	Recovery	=	197.14%#
65) SURR3,Toluene-d8	8.297	98	1077238	106.20	ppb	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	212.40%#
70) SURR2,BFB	10.864	95	423916	108.00	ppb	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	216.00%#

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.183	85	359347	96.50	ppb	95
3) Chloromethane	1.305	50	636494	81.24	ppb	95
4) Vinyl Chloride	1.384	62	425814	78.62	ppb	96
5) Bromomethane	1.603	94	115963	60.82	ppb	97
6) Chloroethane	1.683	64	230777	79.47	ppb	96
7) Freon 21	1.835	67	542730	97.04	ppb	98
8) Trichlorofluoromethane	1.884	101	422886	105.71	ppb	99
9) Diethyl Ether	2.122	59	378300	72.13	ppb	80
10) Freon 123a	2.122	67	339308	94.00	ppb	100
11) Freon 123	2.177	83	369487	98.05	ppb	98
12) Acrolein	2.219	56	491628	316.26	ppb	97
13) 1,1-Dicethene	2.305	96	256976	92.76	ppb	# 78
14) Freon 113	2.311	101	235247	97.44	ppb	93
15) Acetone	2.353	43	293169	102.04	ppb	96
16) 2-Propanol	2.487	45	1247043	1795.13	ppb	93
17) Iodomethane	2.439	142	309362	85.44	ppb	91
18) Carbon Disulfide	2.500	76	662583	79.46	ppb	98
19) Acetonitrile	2.597	40	285039	494.93	ppb	98
20) Allyl Chloride	2.640	76	130848	97.07	ppb	# 88
21) Methyl Acetate	2.658	43	778777	93.59	ppb	97
22) Methylene Chloride	2.756	84	279330	94.69	ppb	95
23) TBA	2.890	59	1690666	1589.49	ppb	89
24) Acrylonitrile	3.006	53	1375489	385.42	ppb	100
25) Methyl-t-Butyl Ether	3.054	73	1019714	103.53	ppb	89
26) trans-1,2-Dichloroethene	3.048	96	277587	94.54	ppb	# 84
28) 1,1-Dicethane	3.542	63	622630	81.96	ppb	97
29) Vinyl Acetate	3.634	86	56329	80.73	ppb	# 92
30) DIPE	3.670	45	1589661	86.44	ppb	94
31) 2-Chloro-1,3-Butadiene	3.664	53	624372	72.07	ppb	83
32) ETBE	4.194	59	1308897	75.77	ppb	90
33) 2,2-Dichloropropane	4.371	77	407867	99.10	ppb	93
34) cis-1,2-Dichloroethene	4.383	96	317808	98.56	ppb	# 72
35) 2-Butanone	4.420	43	385595	94.18	ppb	90
36) Propionitrile	4.505	54	567795	388.85	ppb	92
37) Bromochloromethane	4.774	130	181966	95.40	ppb	# 80
38) Methacrylonitrile	4.774	67	186198	87.25	ppb	88
39) Tetrahydrofuran	4.859	42	239875	88.68	ppb	93
40) Chloroform	4.950	83	481307	103.95	ppb	98
41) 1,1,1-Trichloroethane	5.249	97	440407	103.22	ppb	94

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11696.D
 Acq On : 31 Aug 2017 7:09 pm
 Operator : B.ALLGEIER
 Sample : 100.0ppb
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:19 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.097	73	971518	99.21	ppb	94
44) Cyclohexane	5.334	41	426050	94.39	ppb	92
46) Carbontetrachloride	5.530	117	351604	104.41	ppb	98
47) 1,1-Dichloropropene	5.542	75	399263	114.58	ppb	94
49) Benzene	5.859	78	1158449	107.25	ppb	88
50) 1,2-Dichloroethane	5.895	62	501383	93.23	ppb	96
51) Iso-Butyl Alcohol	5.871	43	971729	2044.37	ppb	100
52) n-Heptane	6.346	43	636188	90.29	ppb	87
53) 1-Butanol	6.834	56	1388999	4430.76	ppb	82
54) Trichloroethene	6.804	130	306552	105.38	ppb	97
55) Methylcyclohexane	7.048	55	579046	76.04	ppb	79
56) 1,2-Dichloropropane	7.084	63	376660	83.70	ppb	99
57) Dibromomethane	7.224	93	181703	96.16	ppb	95
58) 1,4-Dioxane	7.285	88	147907	2321.82	ppb	# 71
59) Methyl Methacrylate	7.310	69	298434	102.39	ppb	99
60) Bromodichloromethane	7.456	83	354646	104.22	ppb	97
61) 2-Nitropropane	7.736	41	303642	198.25	ppb	98
62) 2-Chloroethylvinyl Ether	7.858	63	244583	76.71	ppb	83
63) cis-1,3-Dichloropropene	7.999	75	492763	105.19	ppb	95
64) 4-Methyl-2-pentanone	8.206	43	666611	95.89	ppb	87
66) Toluene	8.370	91	1281585	104.35	ppb	97
67) trans-1,3-Dichloropropene	8.639	75	455329	105.95	ppb	99
68) Ethyl Methacrylate	8.779	69	517041	108.71	ppb	91
69) 1,1,2-Trichloroethane	8.828	97	273129	96.23	ppb	97
72) Tetrachloroethene	8.962	164	207802	97.28	ppb	91
73) 2-Hexanone	9.114	43	521899	97.84	ppb	87
74) 1,3-Dichloropropane	8.992	76	517670	110.16	ppb	96
75) Dibromochloromethane	9.224	129	273005	99.69	ppb	97
76) N-Butyl Acetate	9.273	43	1046567	95.88	ppb	89
77) 1,2-Dibromoethane	9.321	107	279628	109.65	ppb	99
78) Chlorobenzene	9.815	112	788366	103.87	ppb	96
79) 3-CBTF	9.834	180	360048	92.28	ppb	96
80) 4-CBTF	9.888	180	315259	92.54	ppb	99
81) 1,1,1,2-Tetrachloroethane	9.901	131	273876	96.63	ppb	96
82) Ethylbenzene	9.937	106	434766	107.84	ppb	98
83) (m+p)Xylene	10.047	106	1059092	213.39	ppb	93
84) o-Xylene	10.407	106	538308	105.05	ppb	97
85) Styrene	10.419	104	884286	105.95	ppb	98
87) Bromoform	10.571	173	172450	92.24	ppb	92
88) 2-CBTF	10.650	180	353299	90.39	ppb	99
89) Isopropylbenzene	10.742	105	1350477	101.86	ppb	98
90) Cyclohexanone	10.803	55	2564480	1998.60	ppb	78
91) trans-1,4-Dichloro-2-B...	11.053	53	165439	79.13	ppb	91
92) 1,1,2,2-Tetrachloroethane	10.998	83	393865	93.78	ppb	94
93) Bromobenzene	10.986	156	318197	94.23	ppb	95
94) 1,2,3-Trichloropropane	11.028	110	141450	99.65	ppb	93
95) n-Propylbenzene	11.102	91	1593666	100.02	ppb	96
96) 2-Chlorotoluene	11.163	91	967506	99.75	ppb	96
97) 3-Chlorotoluene	11.211	91	991346	97.82	ppb	96
98) 4-Chlorotoluene	11.254	91	1101640	100.95	ppb	96
99) 1,3,5-Trimethylbenzene	11.254	105	1127765	100.12	ppb	95
100) tert-Butylbenzene	11.522	119	987025	96.15	ppb	99
101) 1,2,4-Trimethylbenzene	11.565	105	1201502	104.14	ppb	97
102) 3,4-DCBTF	11.626	214	271187	90.85	ppb	94
103) sec-Butylbenzene	11.705	105	1487035	104.60	ppb	97
104) p-Isopropyltoluene	11.827	119	1231239	98.04	ppb	97

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11696.D
 Acq On : 31 Aug 2017 7:09 pm
 Operator : B.ALLGEIER
 Sample : 100.0ppb
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Inst : MSVOA-12

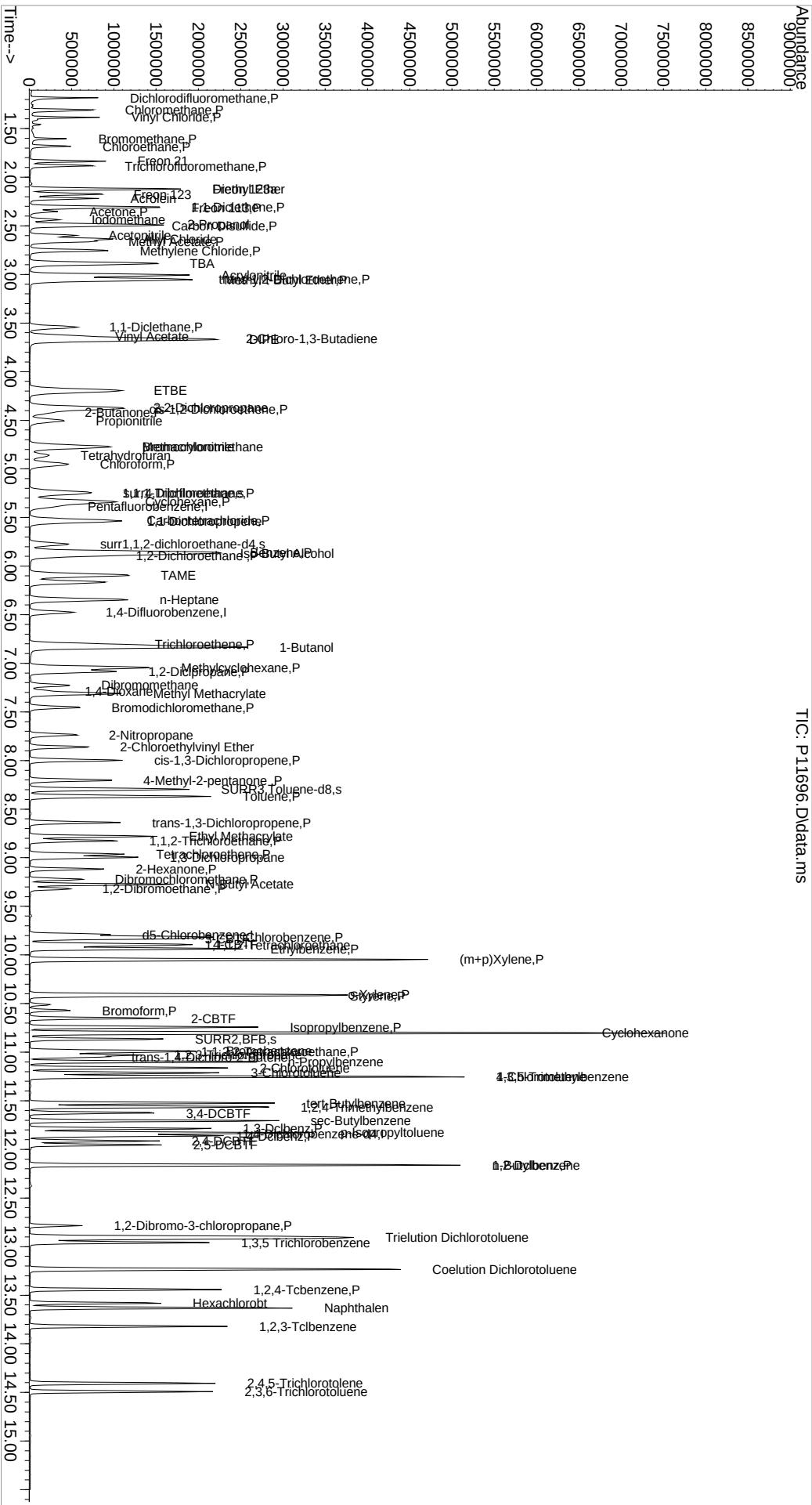
Quant Time: Sep 01 09:01:19 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.784	146	623065	92.84	ppb	97
106) 1,4-Dclbenz	11.864	146	631243	92.57	ppb	93
107) 2,4-DCBTF	11.912	214	258249	100.32	ppb	97
108) 2,5-DCBTF	11.955	214	278164	96.04	ppb	98
109) n-Butylbenzene	12.162	91	1164341	99.72	ppb	100
110) 1,2-Dclbenz	12.162	146	629845	97.87	ppb	98
111) 1,2-Dibromo-3-chloropr...	12.784	157	107457	88.47	ppb	89
112) Trielution Dichlorotol...	12.906	125	1850799	289.06	ppb #	93
113) 1,3,5 Trichlorobenzene	12.961	180	472329	96.42	ppb	95
114) Coelution Dichlorotoluene	13.235	125	1407822	194.61	ppb	98
115) 1,2,4-Tcbenzene	13.443	180	497960	103.12	ppb	95
116) Hexachlorobt	13.583	225	210309	106.15	ppb	96
117) Naphthalen	13.632	128	1689215	99.88	ppb	99
118) 1,2,3-Tclbenzene	13.821	180	511784	96.47	ppb	96
119) 2,4,5-Trichlorotoluene	14.406	159	434487	93.49	ppb #	92
120) 2,3,6-Trichlorotoluene	14.491	159	393637	89.53	ppb	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQDATA\msvoa12\Data\083117\
 Data File : P1696.D
 Acq On : 31 Aug 2017 7:09 pm
 Operator : B.ALGEIER
 Sample : 100.0ppb
 Inst : MSVOA-12
 PALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 01 09:01:19 2017
 Quant Method : I:\ACQDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 Quant Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration



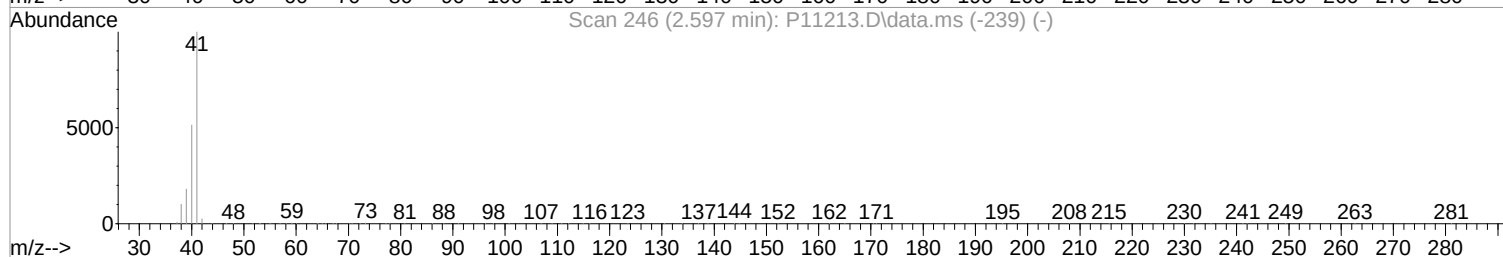
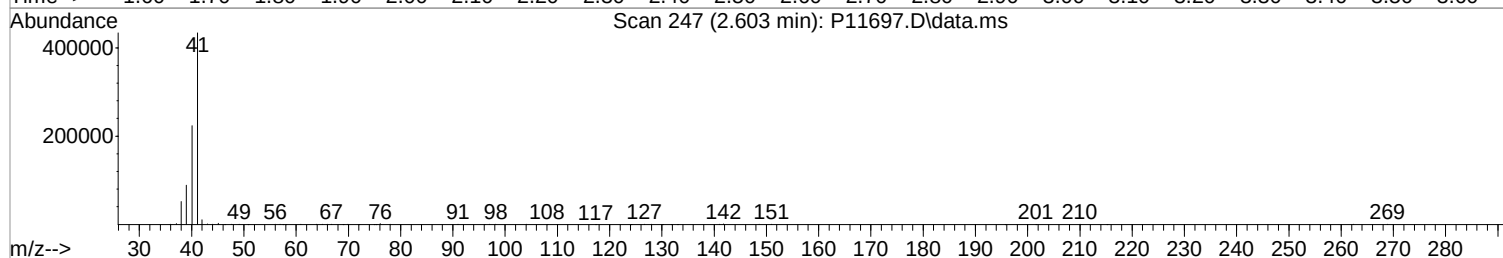
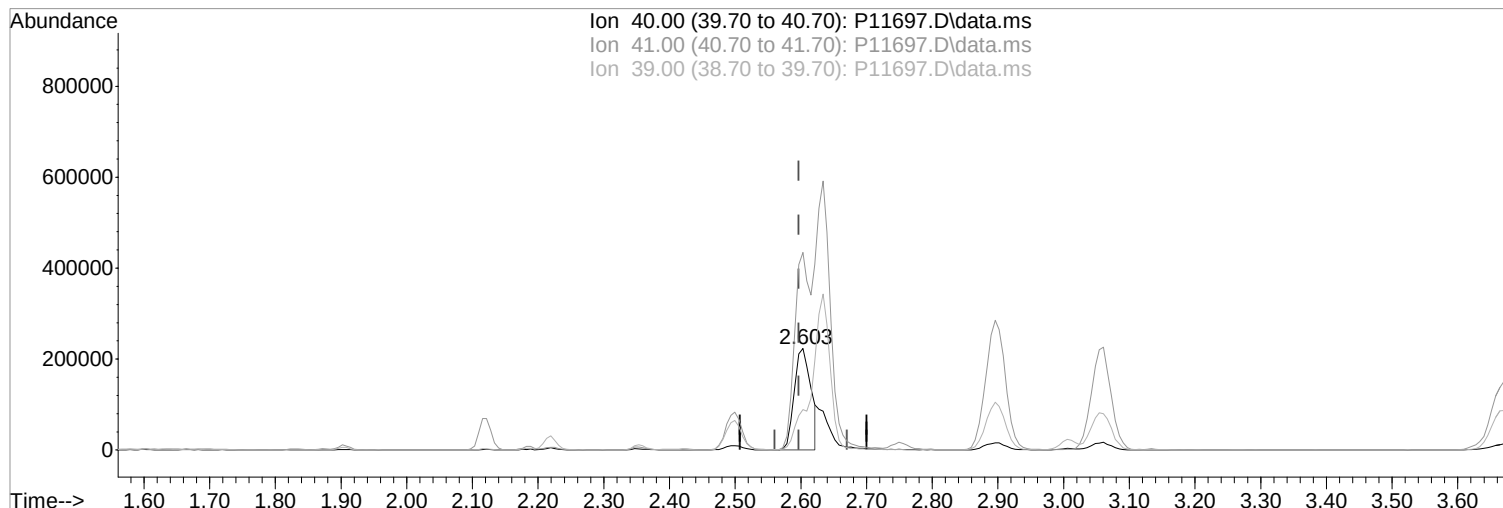
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11697.D
Acq On : 31 Aug 2017 7:31 pm
Operator : B.ALLGEIER
Sample : 150.0ppb
Misc :
ALS Vial : 10 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:22 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11697.D\data.ms

(19) Acetonitrile

2.603min (+0.006) 706.20 ppb m

response 393791

Ion	Exp%	Act%
40.00	100	100
41.00	195.10	194.11
39.00	35.40	39.88
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

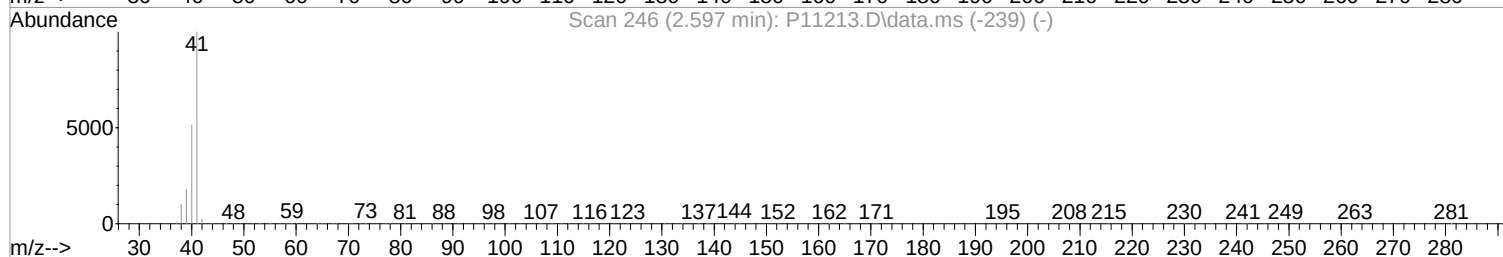
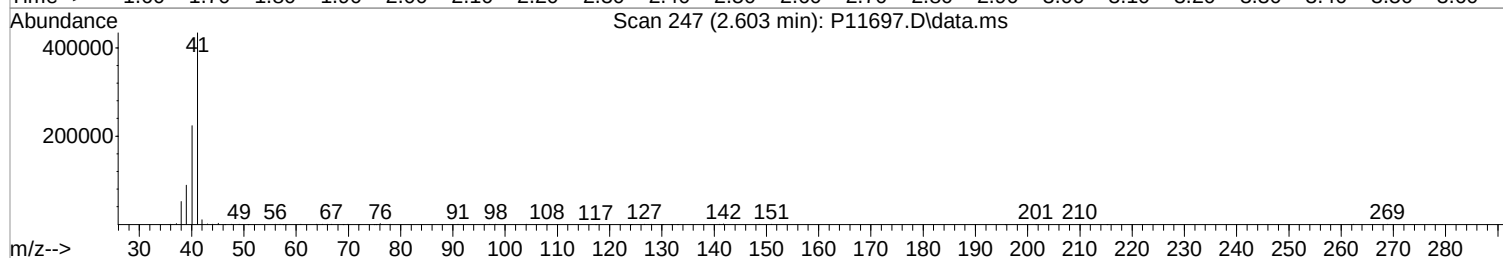
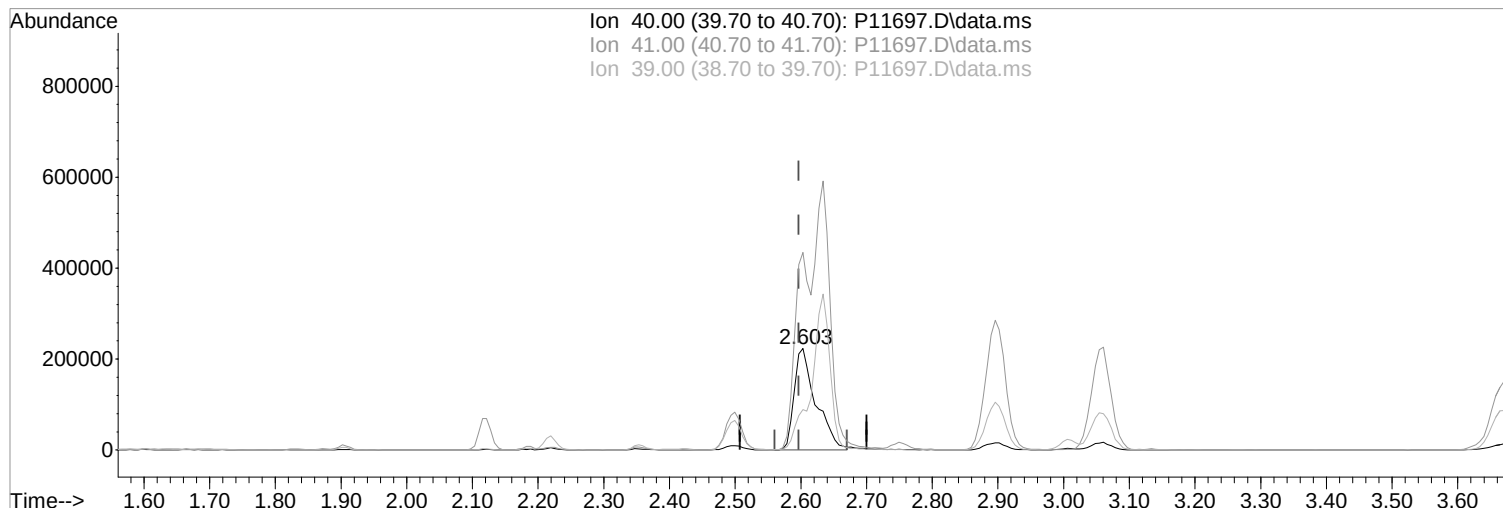
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11697.D
Acq On : 31 Aug 2017 7:31 pm
Operator : B.ALLGEIER
Sample : 150.0ppb
Misc :
ALS Vial : 10 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:22 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Tue Aug 15 11:01:26 2017
Response via : Initial Calibration



TIC: P11697.D\data.ms

(19) Acetonitrile

Manual Integration:

2.603min (+0.006) 918.02 ppb

Before

response 511907

Ion	Exp%	Act%
40.00	100	100
41.00	195.10	194.11
39.00	35.40	39.88
0.00	0.00	0.00

09/01/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11697.D
 Acq On : 31 Aug 2017 7:31 pm
 Operator : B.ALLGEIER
 Sample : 150.0ppb
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:53:23 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.383	168	241077	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	410828	50.00	ppb	0.00
71) d5-Chlorobenzene	9.791	117	363886	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.839	152	201107	50.00	ppb	0.00

System Monitoring Compounds						
45) surr4,Dibrflmethane	5.237	113	453471	182.78	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	365.56%#	
48) surr1,1,2-dichloroetha...	5.773	65	681192	179.24	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	358.48%#	
65) SURR3,Toluene-d8	8.297	98	1957015	190.80	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	381.60%#	
70) SURR2,BFB	10.864	95	818734	206.26	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	412.52%#	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.183	85	488564	135.50	ppb	94
3) Chloromethane	1.305	50	903598	119.11	ppb	96
4) Vinyl Chloride	1.384	62	599243	114.27	ppb	96
5) Bromomethane	1.603	94	159953	100.81	ppb	91
6) Chloroethane	1.670	64	306232	108.91	ppb	97
7) Freon 21	1.829	67	813557	150.24	ppb	98
8) Trichlorofluoromethane	1.872	101	578954	149.48	ppb	98
9) Diethyl Ether	2.122	59	553078	108.91	ppb	81
10) Freon 123a	2.115	67	497267	142.28	ppb	98
11) Freon 123	2.170	83	549683	150.65	ppb	100
12) Acrolein	2.219	56	690187	458.55	ppb	96
13) 1,1-Dicethene	2.304	96	361540	134.79	ppb	# 72
14) Freon 113	2.311	101	323851	138.54	ppb	95
15) Acetone	2.353	43	416132	149.59	ppb	94
16) 2-Propanol	2.499	45	1888532	2807.74	ppb	94
17) Iodomethane	2.432	142	462260	125.33	ppb	92
18) Carbon Disulfide	2.493	76	1071806	132.75	ppb	99
19) Acetonitrile	2.603	40	393791m	706.20	ppb	
20) Allyl Chloride	2.634	76	184295	141.21	ppb	# 91
21) Methyl Acetate	2.658	43	1140448	141.55	ppb	98
22) Methylene Chloride	2.749	84	403311	141.20	ppb	96
23) TBA	2.896	59	2569651	2495.12	ppb	89
24) Acrylonitrile	3.006	53	2013204	582.62	ppb	99
25) Methyl-t-Butyl Ether	3.060	73	1495753	156.85	ppb	91
26) trans-1,2-Dichloroethene	3.042	96	394061	138.61	ppb	# 84
28) 1,1-Dicethane	3.542	63	888244	120.77	ppb	97
29) Vinyl Acetate	3.627	86	96263	142.50	ppb	# 78
30) DIPE	3.670	45	2414133	135.58	ppb	95
31) 2-Chloro-1,3-Butadiene	3.664	53	992576	118.32	ppb	82
32) ETBE	4.194	59	1967788	117.65	ppb	90
33) 2,2-Dichloropropane	4.371	77	578109	145.07	ppb	95
34) cis-1,2-Dichloroethene	4.377	96	451176	144.50	ppb	# 80
35) 2-Butanone	4.426	43	552379	139.35	ppb	91
36) Propionitrile	4.505	54	843219	596.42	ppb	95
37) Bromochloromethane	4.773	130	269832	146.11	ppb	# 81
38) Methacrylonitrile	4.773	67	272692	131.97	ppb	91
39) Tetrahydrofuran	4.859	42	352807	134.72	ppb	86
40) Chloroform	4.950	83	690262	153.96	ppb	97
41) 1,1,1-Trichloroethane	5.249	97	619772	150.02	ppb	92

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11697.D
 Acq On : 31 Aug 2017 7:31 pm
 Operator : B.ALLGEIER
 Sample : 150.0ppb
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:53:23 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.096	73	1454393	153.40	ppb	93
44) Cyclohexane	5.334	41	627870	137.56	ppb	87
46) Carbontetrachloride	5.529	117	496020	145.66	ppb	92
47) 1,1-Dichloropropene	5.542	75	555815	157.73	ppb	91
49) Benzene	5.853	78	1672492	153.13	ppb	88
50) 1,2-Dichloroethane	5.895	62	723367	133.02	ppb	96
51) Iso-Butyl Alcohol	5.877	43	1496265	3112.92	ppb	99
52) n-Heptane	6.346	43	879855	123.49	ppb	87
53) 1-Butanol	6.840	56	2160240	6814.33	ppb	83
54) Trichloroethene	6.804	130	435972	148.20	ppb	94
55) Methylcyclohexane	7.041	55	849082	110.27	ppb	78
56) 1,2-Dichloropropane	7.084	63	549176	120.68	ppb	98
57) Dibromomethane	7.224	93	276103	144.49	ppb	92
58) 1,4-Dioxane	7.285	88	232320	3606.38	ppb	# 79
59) Methyl Methacrylate	7.310	69	442115	150.00	ppb	98
60) Bromodichloromethane	7.450	83	521946	151.69	ppb	98
61) 2-Nitropropane	7.736	41	461131	297.73	ppb	100
62) 2-Chloroethylvinyl Ether	7.864	63	373602	115.88	ppb	85
63) cis-1,3-Dichloropropene	7.998	75	721160	152.23	ppb	97
64) 4-Methyl-2-pentanone	8.206	43	982608	139.78	ppb	89
66) Toluene	8.370	91	1823333	146.81	ppb	97
67) trans-1,3-Dichloropropene	8.639	75	662627	152.47	ppb	100
68) Ethyl Methacrylate	8.779	69	767666	159.61	ppb	88
69) 1,1,2-Trichloroethane	8.828	97	398994	139.02	ppb	97
72) Tetrachloroethene	8.962	164	297644	140.57	ppb	91
73) 2-Hexanone	9.114	43	792049	149.80	ppb	86
74) 1,3-Dichloropropane	8.998	76	763082	163.83	ppb	91
75) Dibromochloromethane	9.224	129	413234	152.24	ppb	97
76) N-Butyl Acetate	9.273	43	1531886	141.59	ppb	91
77) 1,2-Dibromoethane	9.321	107	415609	164.42	ppb	97
78) Chlorobenzene	9.815	112	1124947	149.53	ppb	93
79) 3-CBTF	9.833	180	579818	149.92	ppb	96
80) 4-CBTF	9.888	180	522028	154.60	ppb	98
81) 1,1,1,2-Tetrachloroethane	9.900	131	399834	142.32	ppb	95
82) Ethylbenzene	9.937	106	625954	156.64	ppb	94
83) (m+p)Xylene	10.047	106	1514545	307.87	ppb	92
84) o-Xylene	10.406	106	765818	150.77	ppb	97
85) Styrene	10.419	104	1297403	156.83	ppb	98
87) Bromoform	10.571	173	271813	142.44	ppb	93
88) 2-CBTF	10.650	180	574769	144.07	ppb	96
89) Isopropylbenzene	10.742	105	1926312	142.35	ppb	98
90) Cyclohexanone	10.803	55	3764378	2874.36	ppb	75
91) trans-1,4-Dichloro-2-B...	11.053	53	257176	120.52	ppb	85
92) 1,1,2,2-Tetrachloroethane	11.004	83	630056	146.98	ppb	94
93) Bromobenzene	10.986	156	473338	137.33	ppb	93
94) 1,2,3-Trichloropropane	11.028	110	231903	160.07	ppb	100
95) n-Propylbenzene	11.101	91	2238930	137.67	ppb	97
96) 2-Chlorotoluene	11.162	91	1409333	142.36	ppb	96
97) 3-Chlorotoluene	11.211	91	1555503	150.38	ppb	99
98) 4-Chlorotoluene	11.254	91	1626341	146.01	ppb	97
99) 1,3,5-Trimethylbenzene	11.254	105	1640348	142.68	ppb	97
100) tert-Butylbenzene	11.522	119	1440540	137.49	ppb	99
101) 1,2,4-Trimethylbenzene	11.565	105	1728002	146.74	ppb	97
102) 3,4-DCBTF	11.626	214	451042	148.04	ppb	94
103) sec-Butylbenzene	11.705	105	2132544	146.96	ppb	97
104) p-Isopropyltoluene	11.827	119	1786392	139.37	ppb	97

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11697.D
 Acq On : 31 Aug 2017 7:31 pm
 Operator : B.ALLGEIER
 Sample : 150.0ppb
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:53:23 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

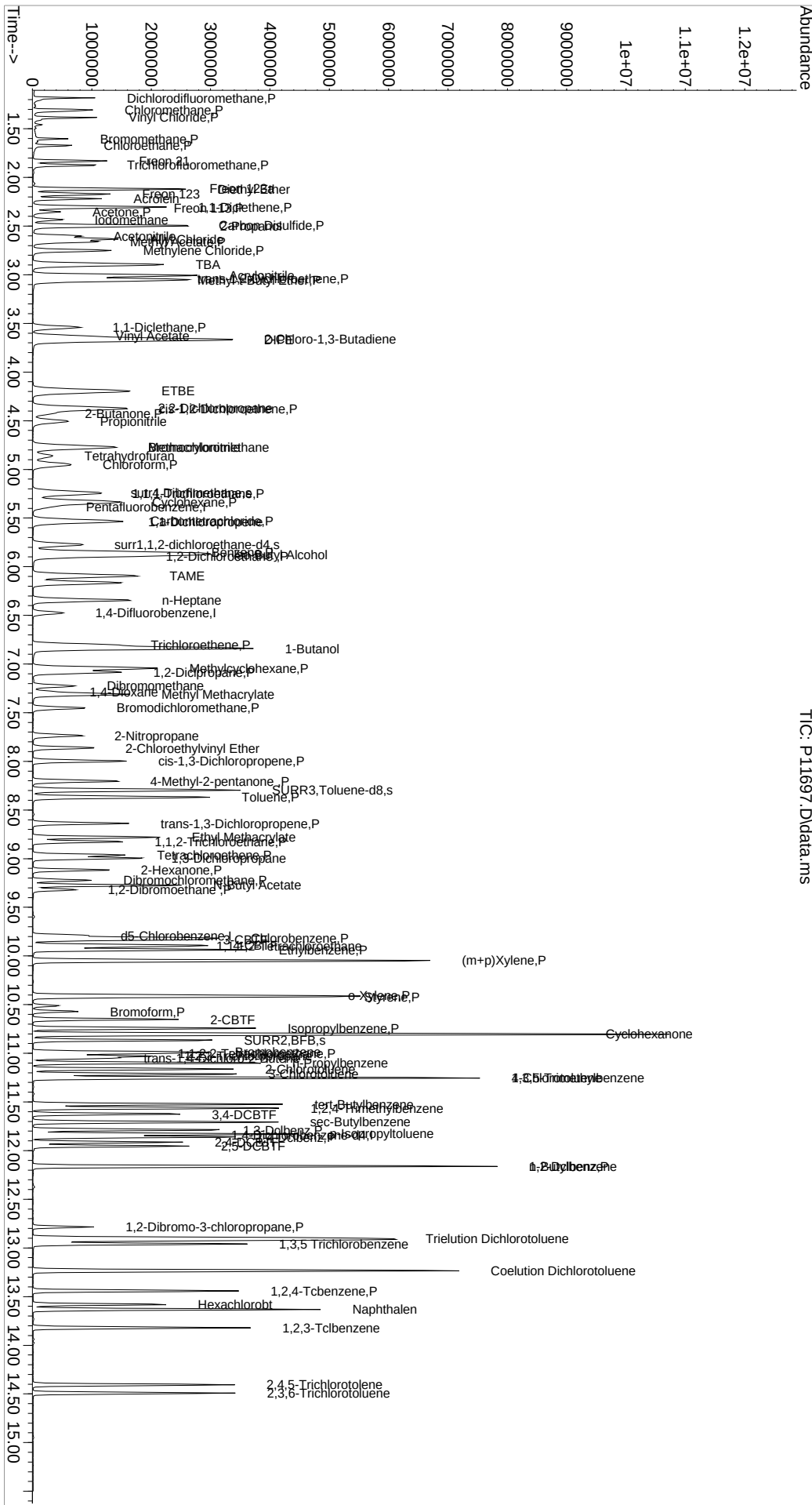
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.790	146	941428	137.44	ppb	99
106) 1,4-Dclbenz	11.864	146	974712	140.04	ppb	95
107) 2,4-DCBTF	11.912	214	430461	164.07	ppb	98
108) 2,5-DCBTF	11.955	214	470504	159.16	ppb	96
109) n-Butylbenzene	12.162	91	1700464	142.68	ppb	99
110) 1,2-Dclbenz	12.162	146	983591	149.75	ppb	98
111) 1,2-Dibromo-3-chloropr...	12.784	157	180536	145.63	ppb	93
112) Trielution Dichlorotol...	12.906	125	3020992	462.27	ppb #	93
113) 1,3,5 Trichlorobenzene	12.961	180	761916	152.39	ppb	95
114) Coelution Dichlorotoluene	13.235	125	2259197	305.99	ppb	96
115) 1,2,4-Tcbenzene	13.442	180	777639	157.77	ppb	98
116) Hexachlorobt	13.583	225	317067	156.79	ppb	95
117) Naphthalen	13.631	128	2583927	149.69	ppb	98
118) 1,2,3-Tclbenzene	13.820	180	792372	146.33	ppb	98
119) 2,4,5-Trichlorotoluene	14.406	159	680792	143.53	ppb #	93
120) 2,3,6-Trichlorotoluene	14.491	159	613891	136.79	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQDATA\msvoa12\Data\083117\
 Data File : P1697.D
 Acq On : 31 Aug 2017 7:31 pm
 Operator : B.ALGEIER
 Sample : 150.0ppb
 1st 09/01/17
 2nd 09/05/17
 PALS Vial : 10 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:53:23 2017
 Quant Method : I:\ACQDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 Quant Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11698.D
 Acq On : 31 Aug 2017 7:53 pm
 Operator : B.ALLGEIER
 Sample : 200.0ppb
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:25 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.383	168	250234	50.00	ppb	0.00
43) 1,4-Difluorobenzene	6.474	114	412294	50.00	ppb	0.00
71) d5-Chlorobenzene	9.791	117	369412	50.00	ppb	0.00
86) 1,4-Dichlorobenzene-d4	11.845	152	203322	50.00	ppb	0.00

System Monitoring Compounds						
45) surr4,Dibrflmethane	5.237	113	127173	51.08	ppb	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	102.16%	
48) surr1,1,2-dichloroetha...	5.773	65	191767	50.28	ppb	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	100.56%	
65) SURR3,Toluene-d8	8.297	98	559142	54.32	ppb	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	108.64%	
70) SURR2,BFB	10.864	95	227920	57.22	ppb	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	114.44%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.183	85	720976	192.64	ppb	95
3) Chloromethane	1.305	50	1349900	171.43	ppb	98
4) Vinyl Chloride	1.384	62	875883	160.90	ppb	94
5) Bromomethane	1.603	94	239086	Below	Cal	98
6) Chloroethane	1.676	64	471398	161.52	ppb	97
7) Freon 21	1.835	67	1026027	182.55	ppb	98
8) Trichlorofluoromethane	1.878	101	848053	210.94	ppb	99
9) Diethyl Ether	2.121	59	759206	144.03	ppb	83
10) Freon 123a	2.121	67	637475	175.72	ppb	99
11) Freon 123	2.170	83	716309	189.14	ppb	98
12) Acrolein	2.219	56	952205	609.49	ppb	97
13) 1,1-Dicethene	2.304	96	525517	188.76	ppb	# 77
14) Freon 113	2.310	101	483613	199.32	ppb	93
15) Acetone	2.353	43	589943	204.32	ppb	94
16) 2-Propanol	2.493	45	2548019	3649.60	ppb	95
17) Iodomethane	2.438	142	683955	170.64	ppb	92
18) Carbon Disulfide	2.499	76	1451397	173.19	ppb	99
19) Acetonitrile	2.597	40	548021	946.82	ppb	98
20) Allyl Chloride	2.634	76	269794	199.15	ppb	# 89
21) Methyl Acetate	2.658	43	1593072	190.49	ppb	97
22) Methylene Chloride	2.755	84	576269	194.37	ppb	91
23) TBA	2.890	59	3453619	3230.73	ppb	88
24) Acrylonitrile	3.005	53	2808981	783.17	ppb	99
25) Methyl-t-Butyl Ether	3.060	73	2082305	210.36	ppb	89
26) trans-1,2-Dichloroethene	3.048	96	571241	193.58	ppb	# 82
28) 1,1-Dicethane	3.542	63	1269810	166.33	ppb	96
29) Vinyl Acetate	3.633	86	120360	171.65	ppb	# 92
30) DIPE	3.670	45	3125446	169.10	ppb	95
31) 2-Chloro-1,3-Butadiene	3.664	53	1350228	155.07	ppb	83
32) ETBE	4.194	59	2592358	149.33	ppb	90
33) 2,2-Dichloropropane	4.371	77	832068	201.15	ppb	97
34) cis-1,2-Dichloroethene	4.377	96	639057	197.19	ppb	# 80
35) 2-Butanone	4.420	43	785972	191.02	ppb	92
36) Propionitrile	4.505	54	1198246	816.51	ppb	93
37) Bromochloromethane	4.773	130	387333	202.06	ppb	# 80
38) Methacrylonitrile	4.773	67	375837	175.23	ppb	96
39) Tetrahydrofuran	4.865	42	500344	184.06	ppb	85
40) Chloroform	4.950	83	981508	210.91	ppb	97
41) 1,1,1-Trichloroethane	5.249	97	899321	209.72	ppb	92

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11698.D
 Acq On : 31 Aug 2017 7:53 pm
 Operator : B.ALLGEIER
 Sample : 200.0ppb
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 09:01:25 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) TAME	6.096	73	1937777	196.90	ppb	92
44) Cyclohexane	5.340	41	839264	183.22	ppb	84
46) Carbontetrachloride	5.529	117	747277	218.66	ppb	94
47) 1,1-Dichloropropene	5.542	75	810108	229.08	ppb	96
49) Benzene	5.859	78	2386376	217.71	ppb	88
50) 1,2-Dichloroethane	5.895	62	998944	183.04	ppb	97
51) Iso-Butyl Alcohol	5.877	43	2034001	4216.61	ppb	100
52) n-Heptane	6.346	43	1283085	179.44	ppb	88
53) 1-Butanol	6.840	56	2876814	9042.44	ppb	82
54) Trichloroethene	6.803	130	623224	211.10	ppb	98
55) Methylcyclohexane	7.047	55	1143394	147.96	ppb	79
56) 1,2-Dicloropropane	7.084	63	770441	168.70	ppb	96
57) Dibromomethane	7.224	93	382066	199.24	ppb	94
58) 1,4-Dioxane	7.285	88	308510	4772.08	ppb	# 73
59) Methyl Methacrylate	7.316	69	616458	208.41	ppb	96
60) Bromodichloromethane	7.456	83	743351	215.26	ppb	97
61) 2-Nitropropane	7.736	41	657421	422.96	ppb	97
62) 2-Chloroethylvinyl Ether	7.864	63	521996	161.33	ppb	85
63) cis-1,3-Dichloropropene	7.998	75	1032454	217.16	ppb	96
64) 4-Methyl-2-pentanone	8.206	43	1399886	198.43	ppb	89
66) Toluene	8.370	91	2584883	207.39	ppb	96
67) trans-1,3-Dichloropropene	8.638	75	939378	215.37	ppb	99
68) Ethyl Methacrylate	8.779	69	1072132	222.12	ppb	90
69) 1,1,2-Trichloroethane	8.827	97	556932	193.36	ppb	98
72) Tetrachloroethene	8.962	164	429087	199.62	ppb	91
73) 2-Hexanone	9.120	43	1097648	204.49	ppb	89
74) 1,3-Dichloropropane	8.998	76	1072302	226.77	ppb	93
75) Dibromochloromethane	9.224	129	594871	215.87	ppb	98
76) N-Butyl Acetate	9.272	43	2103162	191.48	ppb	90
77) 1,2-Dibromoethane	9.321	107	580702	226.30	ppb	95
78) Chlorobenzene	9.815	112	1590640	208.27	ppb	94
79) 3-CBTF	9.833	180	717448	182.73	ppb	95
80) 4-CBTF	9.888	180	651844	190.16	ppb	98
81) 1,1,1,2-Tetrachloroethane	9.900	131	568980	199.50	ppb	94
82) Ethylbenzene	9.937	106	889359	219.23	ppb	91
83) (m+p)Xylene	10.053	106	2163007	433.11	ppb	# 86
84) o-Xylene	10.406	106	1092805	211.93	ppb	96
85) Styrene	10.419	104	1843093	219.46	ppb	97
87) Bromoform	10.571	173	389064	201.67	ppb	95
88) 2-CBTF	10.650	180	737852	182.93	ppb	98
89) Isopropylbenzene	10.748	105	2757224	201.53	ppb	99
90) Cyclohexanone	10.809	55	4922679	3717.85	ppb	76
91) trans-1,4-Dichloro-2-B...	11.053	53	358135	166.00	ppb	86
92) 1,1,2,2-Tetrachloroethane	11.004	83	850485	196.24	ppb	93
93) Bromobenzene	10.992	156	675922	193.98	ppb	95
94) 1,2,3-Trichloropropane	11.028	110	306902	209.53	ppb	98
95) n-Propylbenzene	11.101	91	3198440	194.53	ppb	96
96) 2-Chlorotoluene	11.162	91	2023614	202.18	ppb	96
97) 3-Chlorotoluene	11.217	91	1992109	190.49	ppb	96
98) 4-Chlorotoluene	11.254	91	2303142	204.52	ppb	99
99) 1,3,5-Trimethylbenzene	11.254	105	2348529	202.05	ppb	98
100) tert-Butylbenzene	11.522	119	2092026	197.50	ppb	98
101) 1,2,4-Trimethylbenzene	11.565	105	2504223	210.35	ppb	99
102) 3,4-DCBTF	11.626	214	575593	186.86	ppb	93
103) sec-Butylbenzene	11.705	105	3063235	208.80	ppb	99
104) p-Isopropyltoluene	11.827	119	2588559	199.76	ppb	96

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11698.D
 Acq On : 31 Aug 2017 7:53 pm
 Operator : B.ALLGEIER
 Sample : 200.0ppb
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA-12

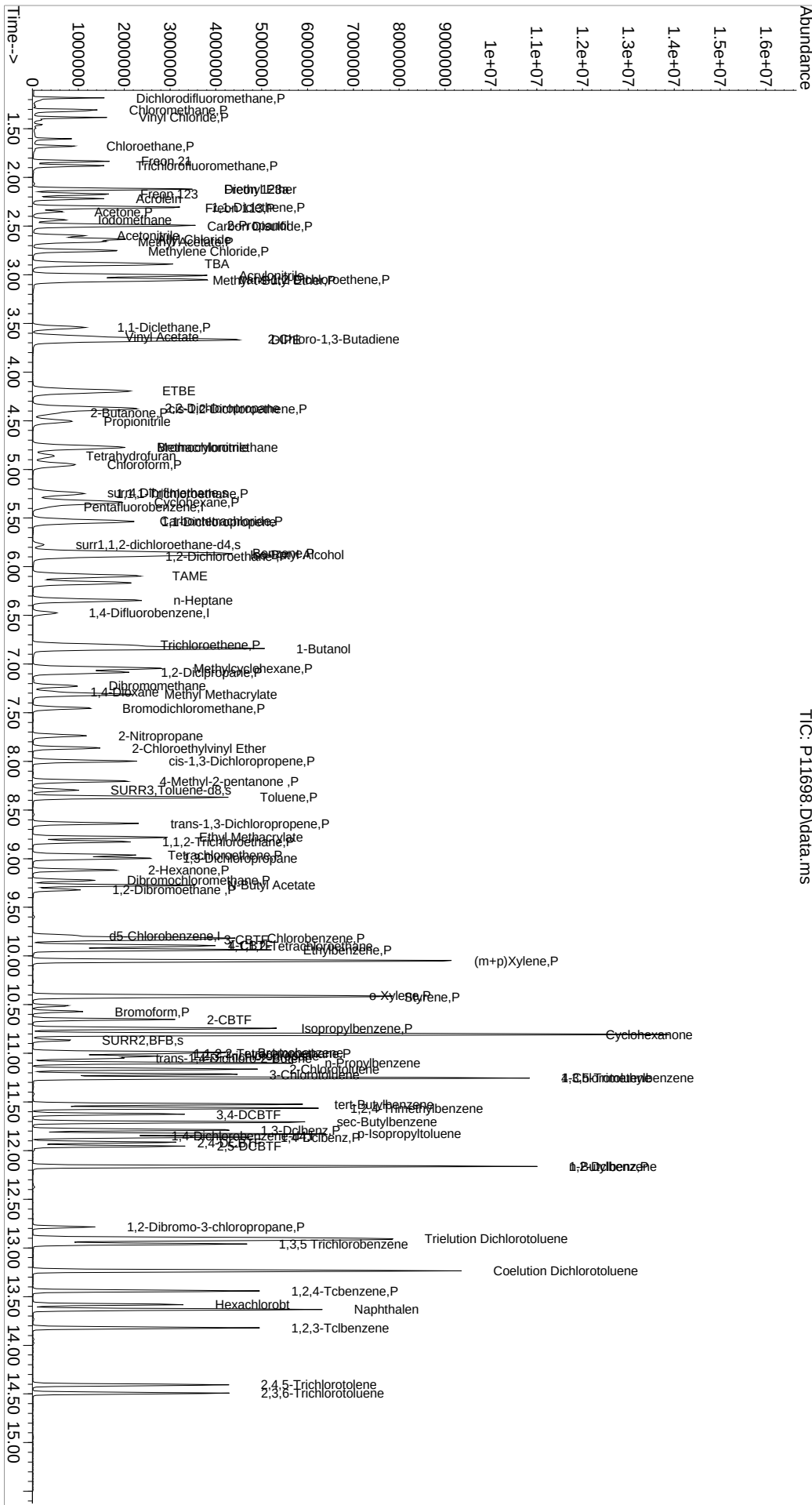
Quant Time: Sep 01 09:01:25 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 1,3-Dclbenz	11.790	146	1332265	192.38	ppb	100
106) 1,4-Dclbenz	11.863	146	1360925	193.40	ppb	96
107) 2,4-DCBTF	11.918	214	541177	204.12	ppb	94
108) 2,5-DCBTF	11.955	214	593148	198.47	ppb	95
109) n-Butylbenzene	12.162	91	2441682	202.65	ppb	98
110) 1,2-Dclbenz	12.162	146	1351487	203.51	ppb	96
111) 1,2-Dibromo-3-chloropr...	12.784	157	246014	196.28	ppb	96
112) Trielution Dichlorotol...	12.906	125	3804655	575.85	ppb #	92
113) 1,3,5 Trichlorobenzene	12.961	180	1000546	197.94	ppb	98
114) Coelution Dichlorotoluene	13.235	125	2852972	382.20	ppb #	95
115) 1,2,4-Tcbenzene	13.442	180	1068862	214.50	ppb	97
116) Hexachlorobt	13.583	225	454448	222.28	ppb	96
117) Naphthalen	13.631	128	3492410	200.11	ppb	96
118) 1,2,3-Tclbenzene	13.820	180	1090065	199.12	ppb	98
119) 2,4,5-Trichlorotoluene	14.406	159	873992	182.25	ppb	96
120) 2,3,6-Trichlorotoluene	14.491	159	800515	176.44	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQDATA\msvoa12\Data\083117\
 Data File : P1698.D
 Acq On : 31 Aug 2017 7:53 pm
 Operator : B.ALGEIER
 Sample : 200.0ppb
 PALS Vial : 11 Sample Multiplier: 1
 Inst : MSVOA-12

Quant Time: Sep 01 09:01:25 2017
 Quant Method : I:\ACQDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 Quant Update : Tue Aug 15 11:01:26 2017
 Response via : Initial Calibration



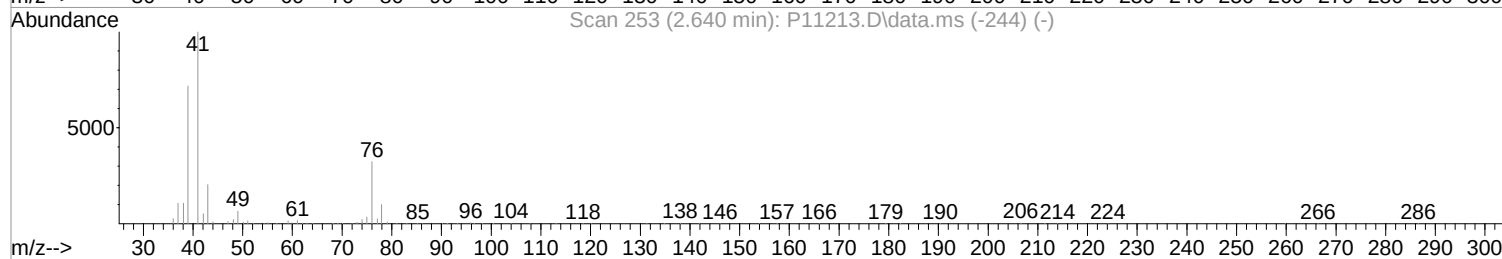
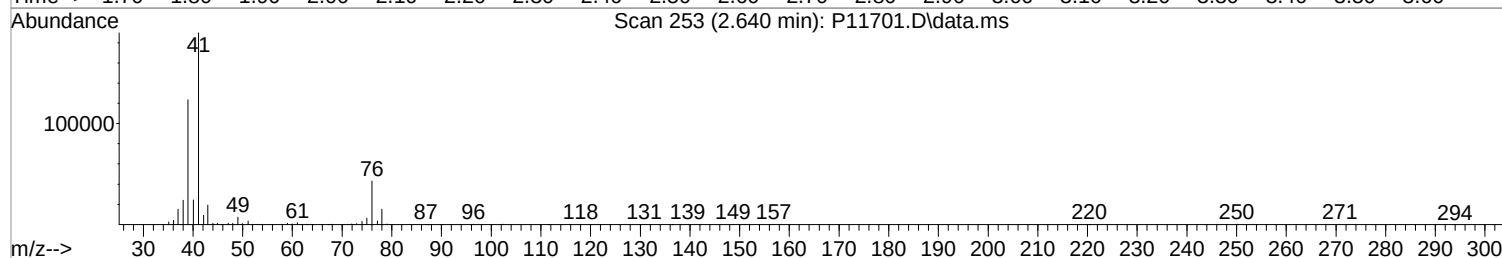
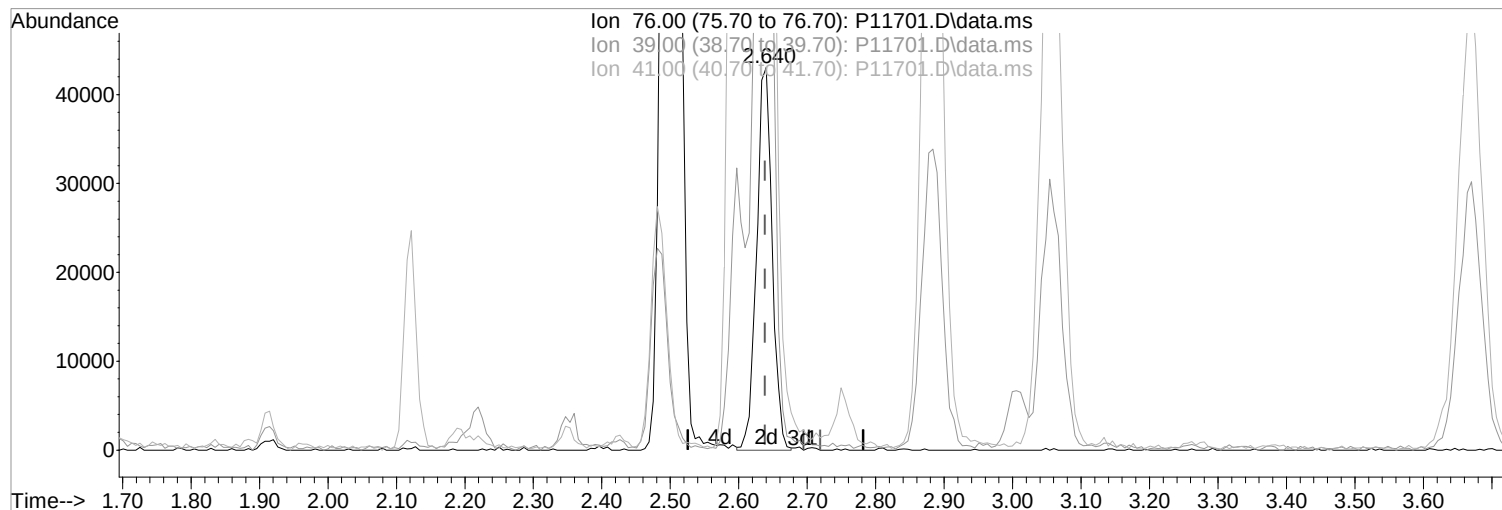
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11701.D
Acq On : 31 Aug 2017 8:59 pm
Operator : B.ALLGEIER
Sample : icv
Misc :
ALS Vial : 14 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 13:48:45 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 13:46:44 2017
Response via : Initial Calibration



TIC: P11701.D\data.ms

(20) Allyl Chloride

2.640min (+0.002) 52.90 ppb m

response 67297

Ion	Exp%	Act%
76.00	100	100
39.00	247.10	286.60#
41.00	480.70	441.11#
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

09/01/17

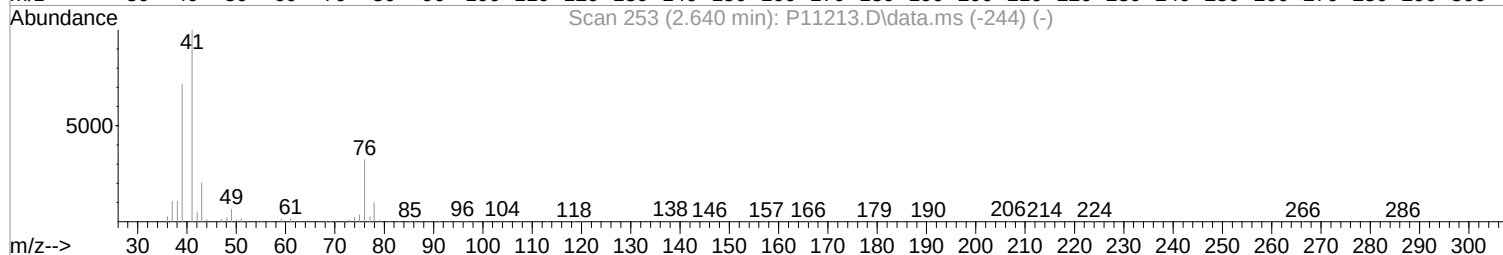
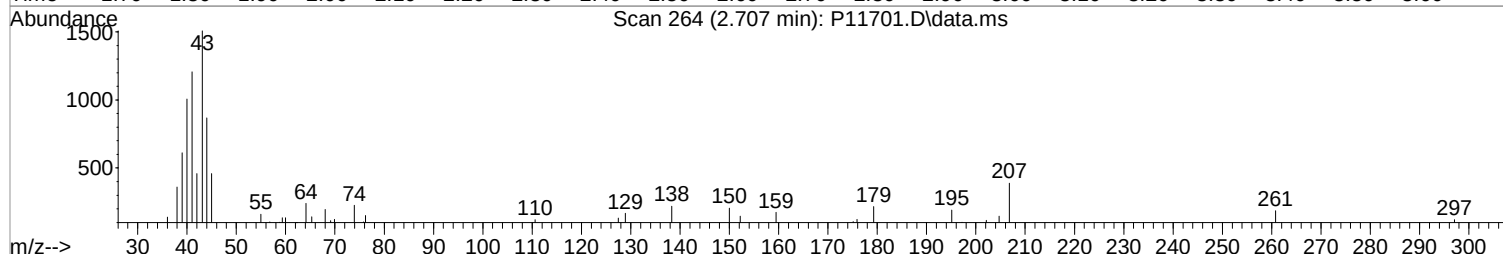
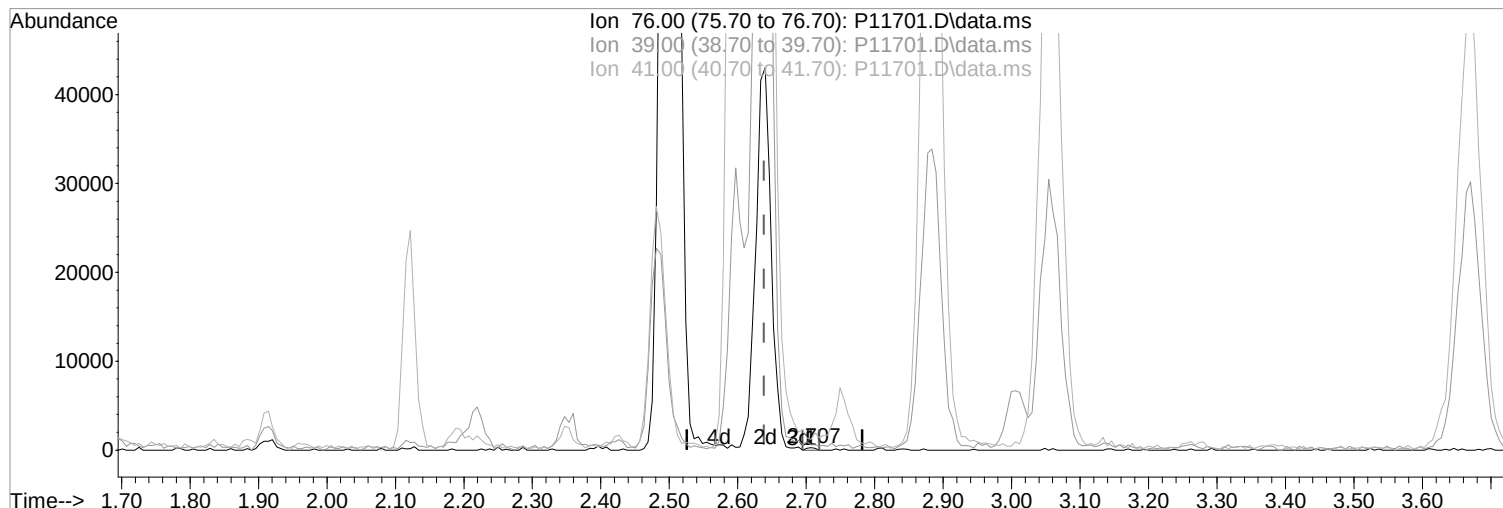
Quantitation Report (Qedit)

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
Data File : P11701.D
Acq On : 31 Aug 2017 8:59 pm
Operator : B.ALLGEIER
Sample : icv
Misc :
ALS Vial : 14 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 10:29:55 2017
Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
Quant Title : MS#12 - 8260B WATERS 10mL Purge
QLast Update : Fri Sep 01 10:26:08 2017
Response via : Initial Calibration



(20) Allyl Chloride

Manual Integration:

2.707min (+0.069) 0.19 ppb

Before

response 242

Ion	Exp%	Act%
76.00	100	100
39.00	247.10	240.55
41.00	480.70	475.20
0.00	0.00	0.00

09/01/17

Evaluate Continuing Calibration Report

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11701.D
 Acq On : 31 Aug 2017 8:59 pm
 Operator : B.ALLGEIER
 Sample : icv
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 13:50:18 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	50.0000	50.0000	0.0	96	0.00
2 P	Dichlorodifluoromethane	50.0000	45.5549	8.9	89	0.00
3 P	Chloromethane	50.0000	45.0357	9.9	90	0.00
4 P	Vinyl Chloride	50.0000	53.2147	-6.4	104	0.00
5 P	Bromomethane	50.0000	47.0620	5.9	96	0.00
6 P	Chloroethane	50.0000	47.5096	5.0	88	0.00
7	Freon 21	50.0000	51.7831	-3.6	106	0.00
8 P	Trichlorofluoromethane	50.0000	45.0116	10.0	94	0.00
9	Diethyl Ether	50.0000	49.4368	1.1	99	0.00
10	Freon 123a	50.0000	55.8743	-11.7	115	0.00
11	Freon 123	50.0000	53.4729	-6.9	109	0.00
12	Acrolein	250.0000	104.2427	58.3#	41	0.00
13 P	1,1-Dicethene	50.0000	43.2106	13.6	92	0.00
14 P	Freon 113	50.0000	43.6168	12.8	93	0.00
15 P	Acetone	50.0000	49.8806	0.2	95	0.00
16	2-Propanol	1000.0000	1005.2526	-0.5	98	0.00
17	Iodomethane	50.0000	43.5986	12.8	79	0.00
18 P	Carbon Disulfide	50.0000	51.4794	-3.0	101	0.00
19	Acetonitrile	250.0000	238.4591	4.6	88	0.00
20	Allyl Chloride	50.0000	52.9011	-5.8	105	0.00
21 P	Methyl Acetate	50.0000	35.5811	28.8#	70	0.00
22 P	Methylene Chloride	50.0000	49.6396	0.7	101	0.00
23	TBA	1000.0000	996.5381	0.3	88	0.00
24	Acrylonitrile	250.0000	257.9259	-3.2	96	0.00
25 P	Methyl-t-Butyl Ether	50.0000	49.1104	1.8	95	0.00
26 P	trans-1,2-Dichloroethene	50.0000	46.0474	7.9	91	0.00
27	Halothane	-1.0000	0.0000	0.0	0	-4.00#
28 P	1,1-Dicethane	50.0000	48.7244	2.6	96	0.00
29	Vinyl Acetate	50.0000	46.5512	6.9	93	0.00
30	DIPE	50.0000	51.1806	-2.4	100	0.00
31	2-Chloro-1,3-Butadiene	50.0000	54.9091	-9.8	106	0.00
32	ETBE	50.0000	51.9966	-4.0	101	0.00
33	2,2-Dichloropropane	50.0000	43.0852	13.8	88	0.01
34 P	cis-1,2-Dichloroethene	50.0000	45.3235	9.4	90	0.00
35 P	2-Butanone	50.0000	51.7993	-3.6	97	-0.05
36	Propionitrile	250.0000	251.0645	-0.4	96	0.00
37	Bromochloromethane	50.0000	46.0595	7.9	94	0.00
38	Methacrylonitrile	50.0000	50.4188	-0.8	96	0.00
39	Tetrahydrofuran	50.0000	52.6292	-5.3	100	0.00
40 P	Chloroform	50.0000	48.4512	3.1	96	0.00
41 P	1,1,1-Trichloroethane	50.0000	50.3400	-0.7	97	0.00
42	TAME	50.0000	52.0291	-4.1	100	0.00
43 I	1,4-Difluorobenzene	50.0000	50.0000	0.0	100	0.00
44 P	Cyclohexane	50.0000	48.6692	2.7	104	0.00
45 s	surr4,Dibrflmethane	50.0000	50.7115	-1.4	99	0.00
46 P	Carbontetrachloride	50.0000	47.2342	5.5	97	0.00
47	1,1-Dichloropropene	50.0000	44.7411	10.5	91	0.00
48 s	surr1,1,2-dichloroethane-d4	50.0000	49.4884	1.0	97	0.00
49 P	Benzene	50.0000	45.6244	8.8	93	0.00
50 P	1,2-Dichloroethane	50.0000	48.4077	3.2	99	0.00
51	Iso-Butyl Alcohol	1000.0000	958.0139	4.2	88	0.00

Evaluate Continuing Calibration Report

1st BA 09/01/17
2nd KR 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11701.D
 Acq On : 31 Aug 2017 8:59 pm
 Operator : B.ALLGEIER
 Sample : icv
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 13:50:18 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	n-Heptane	50.0000	41.9137	16.2	88	0.00
53	1-Butanol	2500.0000	9.1694	99.6#	0	0.00
54 P	Trichloroethene	50.0000	48.0628	3.9	98	0.00
55 P	Methylcyclohexane	50.0000	51.1463	-2.3	103	0.00
56 P	1,2-Dicloropropane	50.0000	46.3056	7.4	94	0.00
57	Dibromomethane	50.0000	48.7405	2.5	100	0.00
58	1,4-Dioxane	1000.0000	1001.9085	-0.2	92	0.00
59	Methyl Methacrylate	50.0000	49.2535	1.5	93	0.00
60 P	Bromodichloromethane	50.0000	52.8614	-5.7	99	0.00
61	2-Nitropropane	100.0000	100.0356	-0.0	95	0.00
62	2-Chloroethylvinyl Ether	50.0000	56.7170	-13.4	104	0.00
63 P	cis-1,3-Dichloropropene	50.0000	48.8155	2.4	93	0.00
64 P	4-Methyl-2-pentanone	50.0000	50.8963	-1.8	103	0.00
65 s	SURR3,Toluene-d8	50.0000	50.1174	-0.2	97	0.00
66 P	Toluene	50.0000	46.8404	6.3	95	0.00
67 P	trans-1,3-Dichloropropene	50.0000	49.3957	1.2	95	0.00
68	Ethyl Methacrylate	50.0000	52.4996	-5.0	102	0.00
69 P	1,1,2-Trichloroethane	50.0000	49.8238	0.4	103	0.00
70 s	SURR2,BFB	50.0000	49.7964	0.4	96	0.00
71 I	d5-Chlorobenzene	50.0000	50.0000	0.0	100	0.00
72 P	Tetrachloroethene	50.0000	44.1572	11.7	93	0.00
73 P	2-Hexanone	50.0000	51.2339	-2.5	99	0.00
74	1,3-Dichloropropene	50.0000	46.3588	7.3	93	0.00
75 P	Dibromochloromethane	50.0000	51.3615	-2.7	100	0.00
76	N-Butyl Acetate	50.0000	52.7908	-5.6	103	0.00
77 P	1,2-Dibromoethane	50.0000	51.5115	-3.0	100	0.00
78 P	Chlorobenzene	50.0000	46.9407	6.1	94	0.00
79	3-CBTF	50.0000	48.9742	2.1	100	0.00
80	4-CBTF	50.0000	47.8421	4.3	97	0.00
81	1,1,1,2-Tetrachloroethane	50.0000	52.2440	-4.5	103	0.00
82 P	Ethylbenzene	50.0000	49.4056	1.2	100	0.00
83 P	(m+p)Xylene	100.0000	94.4757	5.5	95	0.00
84 P	o-Xylene	50.0000	47.3852	5.2	96	0.00
85 P	Styrene	50.0000	50.7172	-1.4	96	0.00
86 I	1,4-Dichlorobenzene-d4	50.0000	50.0000	0.0	97	0.00
87 P	Bromoform	50.0000	60.6366	-21.3#	109	0.00
88	2-CBTF	50.0000	51.4714	-2.9	99	0.00
89 P	Isopropylbenzene	50.0000	49.9447	0.1	94	0.00
90	Cyclohexanone	1000.0000	1017.0475	-1.7	86	0.00
91	trans-1,4-Dichloro-2-Butene	50.0000	54.6766	-9.4	97	0.00
92 P	1,1,2,2-Tetrachloroethane	50.0000	50.7211	-1.4	93	0.00
93	Bromobenzene	50.0000	48.4420	3.1	96	0.00
94	1,2,3-Trichloropropene	50.0000	49.0720	1.9	92	0.00
95	n-Propylbenzene	50.0000	49.9131	0.2	97	0.00
96	2-Chlorotoluene	50.0000	47.8900	4.2	94	0.00
97	3-Chlorotoluene	50.0000	52.6963	-5.4	100	0.00
98	4-Chlorotoluene	50.0000	48.3152	3.4	93	0.00
99	1,3,5-Trimethylbenzene	50.0000	50.8290	-1.7	95	0.00
100	tert-Butylbenzene	50.0000	48.4354	3.1	96	0.00
101	1,2,4-Trimethylbenzene	50.0000	50.2568	-0.5	95	0.00

Evaluate Continuing Calibration Report

 1st *BA* 09/01/17
 2nd *KL* 09/05/17

Data Path : I:\ACQUDATA\msvoa12\Data\083117\
 Data File : P11701.D
 Acq On : 31 Aug 2017 8:59 pm
 Operator : B.ALLGEIER
 Sample : icv
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Inst : MSVOA-12

Quant Time: Sep 01 13:50:18 2017
 Quant Method : I:\ACQUDATA\msvoa12\Methods\W083117.M
 Quant Title : MS#12 - 8260B WATERS 10mL Purge
 QLast Update : Fri Sep 01 13:46:44 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
102	3,4-DCBTF	50.0000	47.9122	4.2	98	0.00
103	sec-Butylbenzene	50.0000	48.8062	2.4	94	0.00
104	p-Isopropyltoluene	50.0000	50.3075	-0.6	94	0.00
105 P	1,3-Dclbenz	50.0000	47.0197	6.0	93	0.00
106 P	1,4-Dclbenz	50.0000	47.4645	5.1	93	0.00
107	2,4-DCBTF	50.0000	51.8373	-3.7	98	0.00
108	2,5-DCBTF	50.0000	50.4189	-0.8	98	0.00
109	n-Butylbenzene	50.0000	51.2272	-2.5	96	0.00
110 P	1,2-Dclbenz	50.0000	48.9890	2.0	94	0.00
111 P	1,2-Dibromo-3-chloropropane	50.0000	50.7056	-1.4	93	0.00
112	Trielution Dichlorotoluene	150.0000	157.8156	-5.2	100	0.00
113	1,3,5 Trichlorobenzene	50.0000	50.8731	-1.7	101	0.00
114	Coelution Dichlorotoluene	100.0000	106.7755	-6.8	102	0.00
115 P	1,2,4-Tcbenzene	50.0000	48.4124	3.2	97	0.00
116	Hexachlorobt	50.0000	48.8619	2.3	98	0.00
117	Naphthalen	50.0000	53.1656	-6.3	94	0.00
118	1,2,3-Tclbenzene	50.0000	48.5484	2.9	91	0.00
119	2,4,5-Trichlorotoluene	50.0000	54.4064	-8.8	102	0.00
120	2,3,6-Trichlorotoluene	50.0000	65.1408	-30.3#	125	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1941.D
Acq On : 5 Oct 2017 9:56 pm
Operator : F. NAEGLER
Sample : ICV
Misc : EK
ALS Vial : 29 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 12 09:27:50 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 14:05:06 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

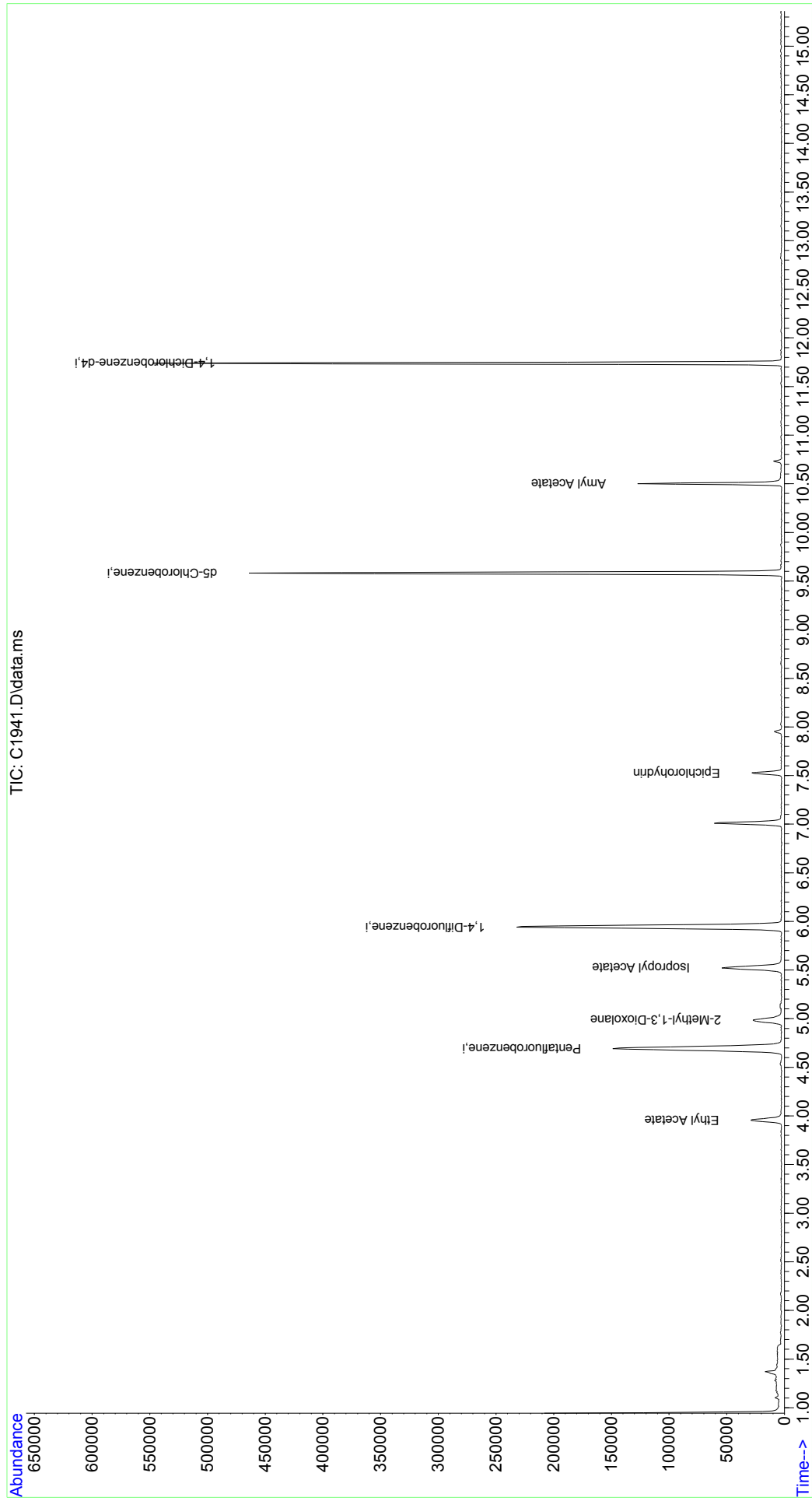
Internal Standards						
1) Pentafluorobenzene	4.692	168	141557	50.00	ug/L	0.00
3) 1,4-Difluorobenzene	5.942	114	212279	50.00	ug/L	0.00
7) d5-Chlorobenzene	9.581	117	190930	50.00	ug/L	0.00
9) 1,4-Dichlorobenzene-d4	11.740	152	97875	50.00	ug/L	0.00

Target Compounds						Qvalue
2) Ethyl Acetate	3.955	43	40230	19.39	ug/L	99
4) 2-Methyl-1,3-Dioxolane	4.985	73	27920	107.71	ug/L	97
5) Isopropyl Acetate	5.521	43	69777	19.86	ug/L	98
6) Epichlorohydrin	7.527	57	18745	97.40	ug/L	98
8) Amyl Acetate	10.502	43	55247	18.23	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1941.D
 Acq On : 5 Oct 2017 9:56 pm
 Operator : F. NAEGLER
 Sample : ICV
 Misc : EK
 ALS Vial : 29 Sample Multiplier: 1
 Inst : MSVOA14

Quant Time: Oct 12 09:27:50 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 Qlast Update : Fri Oct 06 14:05:06 2017
 Response via : Initial Calibration



Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1916.D
Acq On : 5 Oct 2017 12:29 pm
Operator : F. NAEGLER
Sample : INST BLK
Misc :
ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 12 09:32:28 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 14:05:06 2017
Response via : Initial Calibration

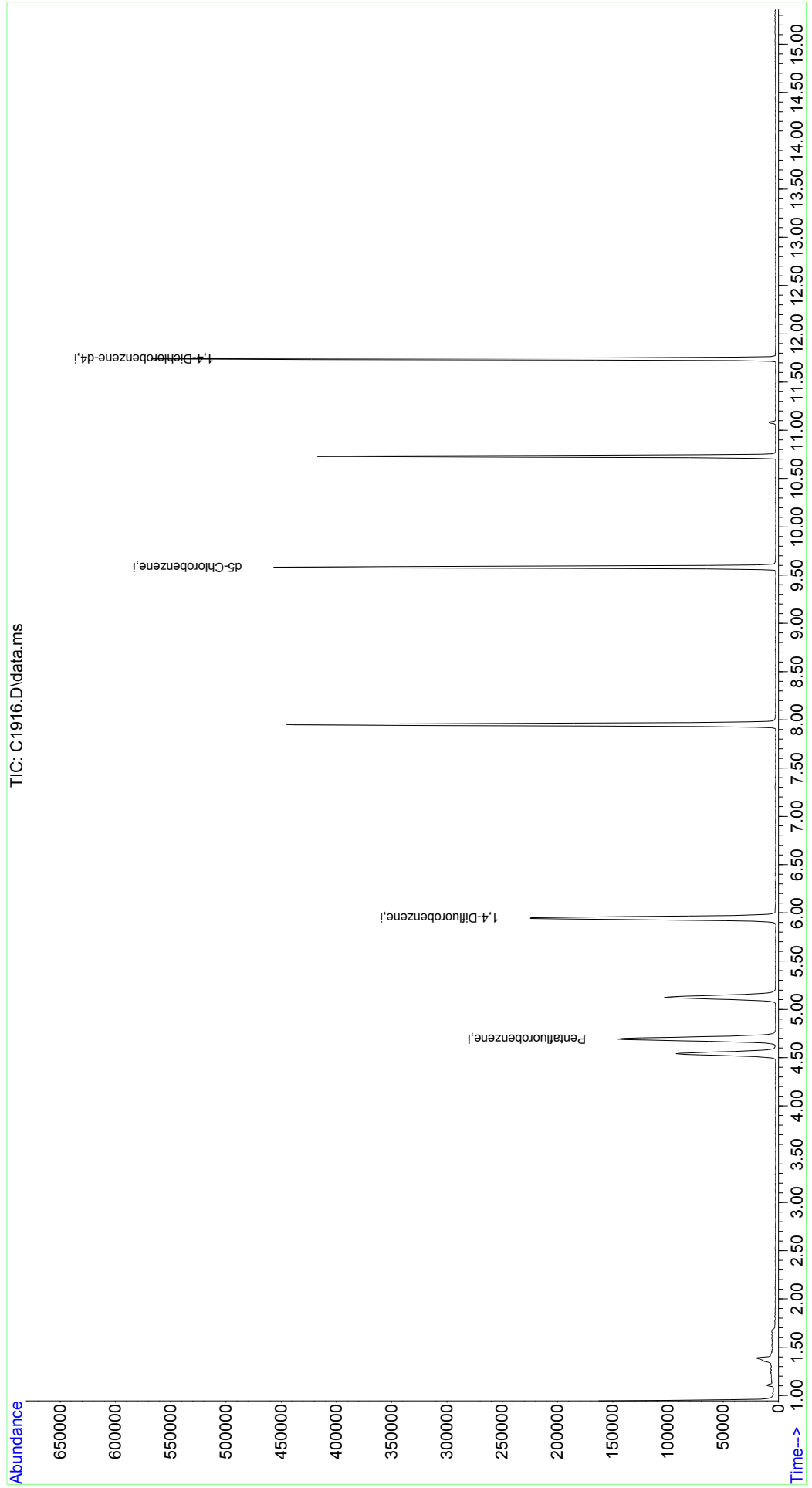
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	139912	50.00	ug/L	0.00
3) 1,4-Difluorobenzene	5.948	114	208810	50.00	ug/L	0.00
7) d5-Chlorobenzene	9.582	117	187750	50.00	ug/L	0.00
9) 1,4-Dichlorobenzene-d4	11.740	152	98439	50.00	ug/L	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1916.D
Acq On : 5 Oct 2017 12:29 pm
Operator : F. NAEGLER
Sample : INST BLK
Misc :
ALS Vial : 4 Sample Multiplier: 1
Inst : MSVOA14

Quant Time: Oct 12 09:32:28 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 14:05:06 2017
Response via : Initial Calibration



Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1916.D
 Acq On : 5 Oct 2017 12:29 pm
 Operator : F. NAEGLER
 Sample : INST BLK
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 16:35:41 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

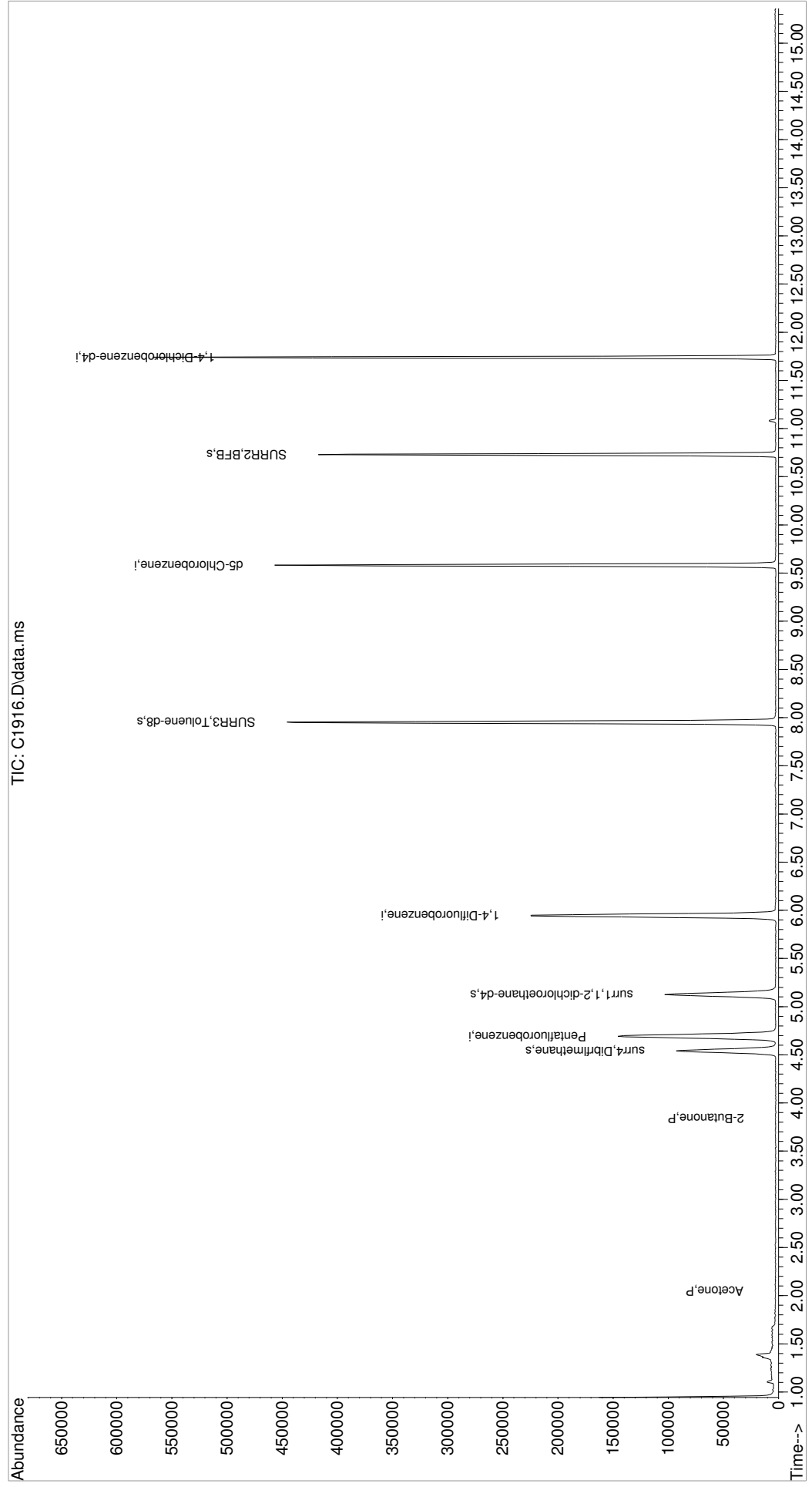
Internal Standards						
1) Pentafluorobenzene	4.692	168	139912	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.948	114	208810	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.582	117	187750	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	98439	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	69060	49.25	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	98.50%	
47) surr1,1,2-dichloroetha...	5.125	65	97467	51.12	ug/L	0.00
Spiked Amount	50.000	Range 73 - 125	Recovery	=	102.24%	
64) SURR3,Toluene-d8	7.954	98	272440	49.33	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	98.66%	
69) SURR2,BFB	10.728	95	97174	46.07	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	92.14%	
Target Compounds						
15) Acetone	2.053	43	292	0.30	ug/L	Qvalue 81
34) 2-Butanone	3.839	43	336	0.27	ug/L	73

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1916.D
 Acq On : 5 Oct 2017 12:29 pm
 Operator : F. NAEGLER
 Sample : INST BLK
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 16:35:41 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Oct 06 11:46:22 2017
 Response via : Initial Calibration



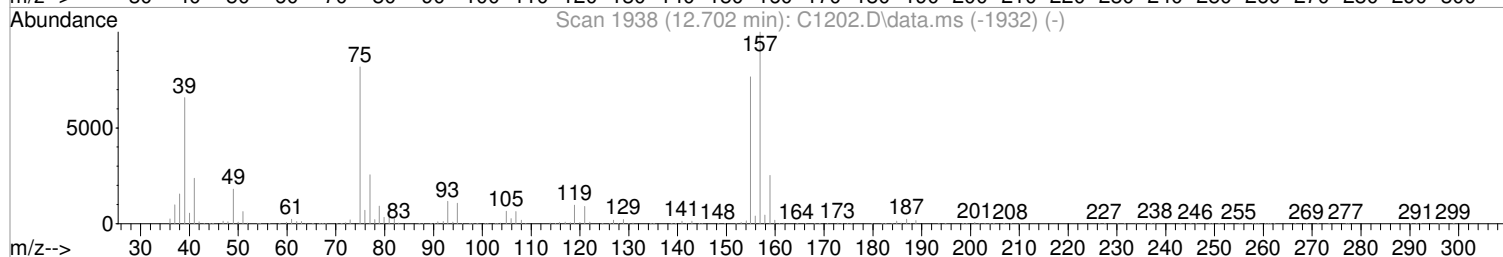
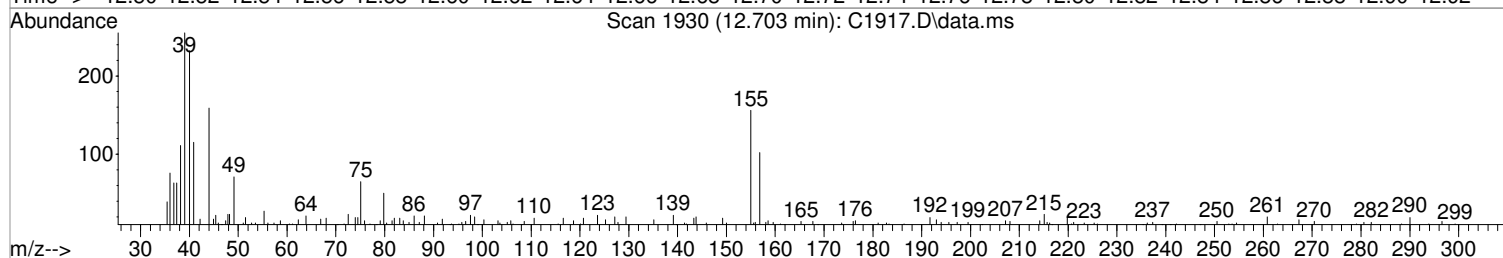
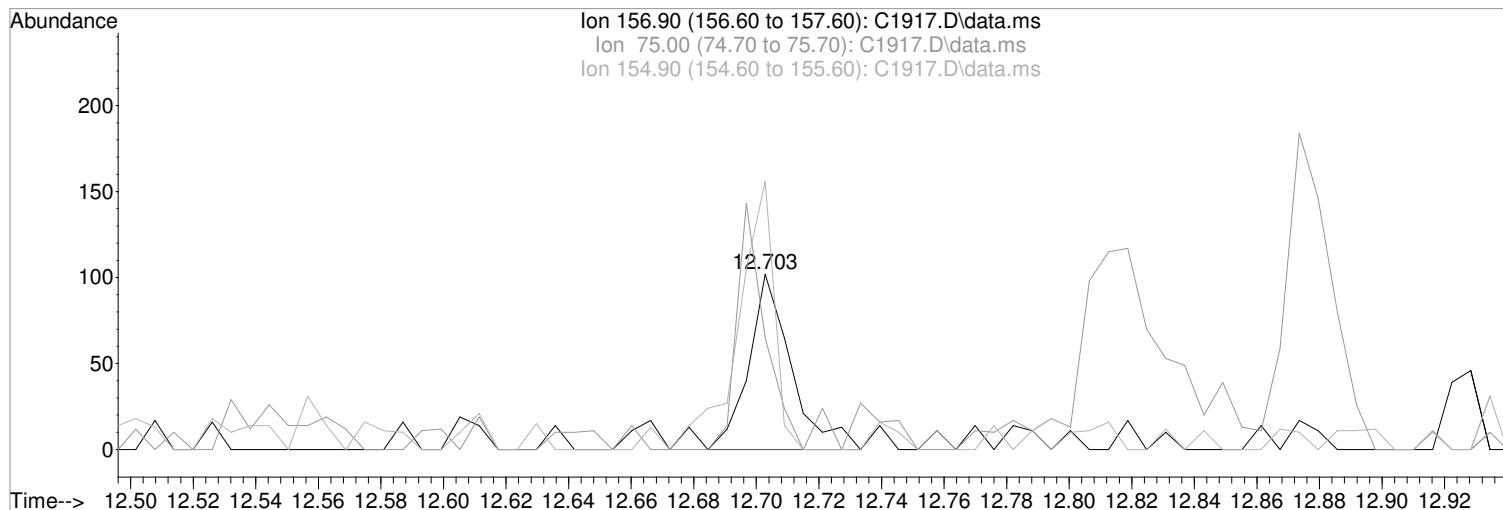
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(110) 1,2-Dibromo-3-chloropropane (P)

12.703min (+0.002) 0.19 ug/L m

response 96

Ion	Exp%	Act%
156.90	100	100
75.00	81.90	63.73
154.90	76.60	152.94#
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

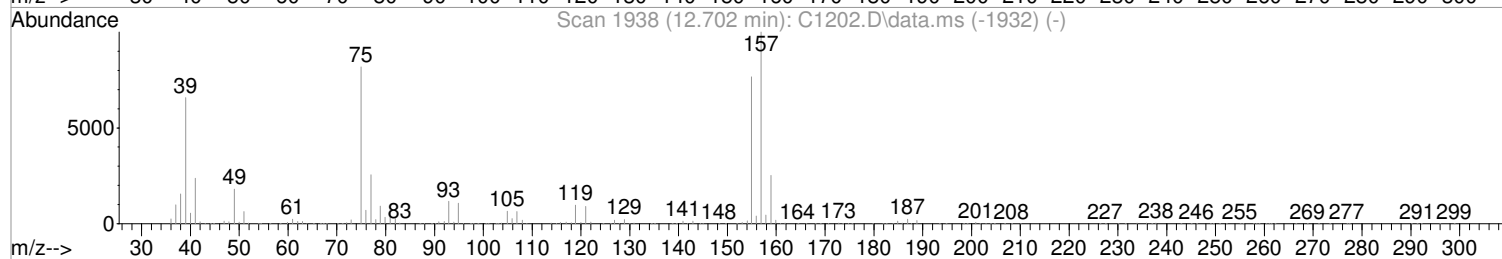
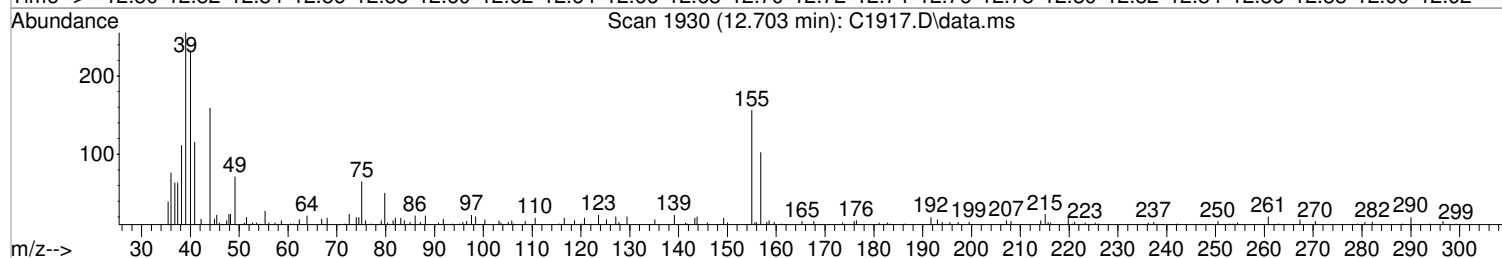
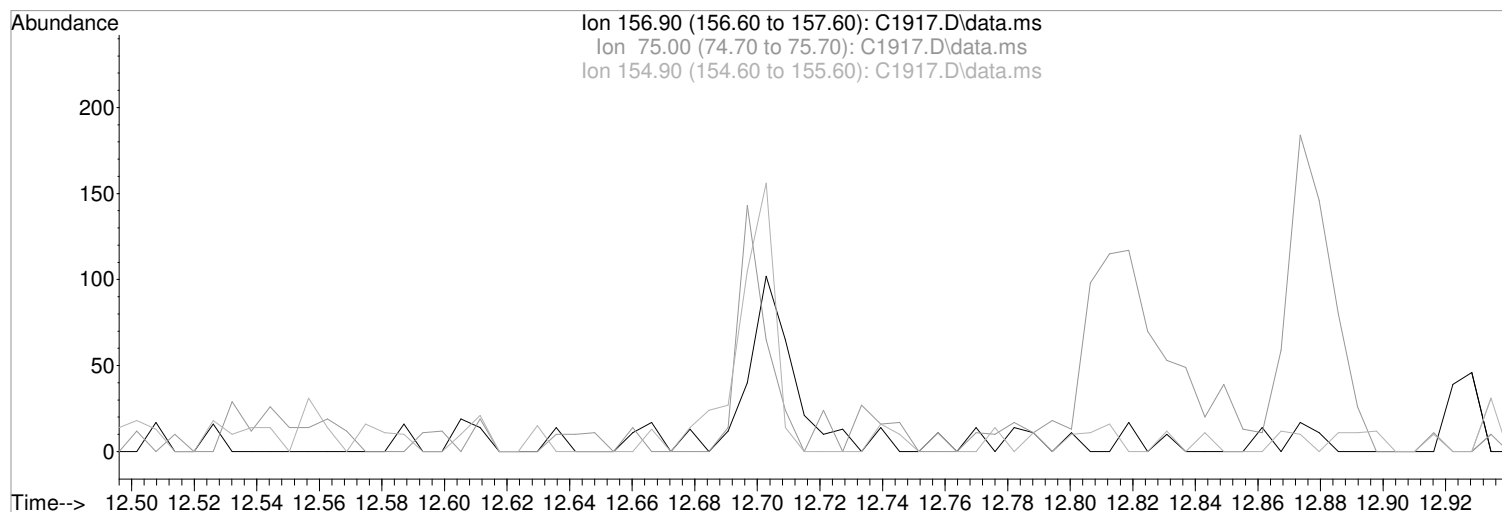
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(110) 1,2-Dibromo-3-chloropropane (P)

Manual Integration:

12.701min (-12.701) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
156.90	100	0.00
75.00	81.90	0.00#
154.90	76.60	0.00#
0.00	0.00	0.00

10/05/17

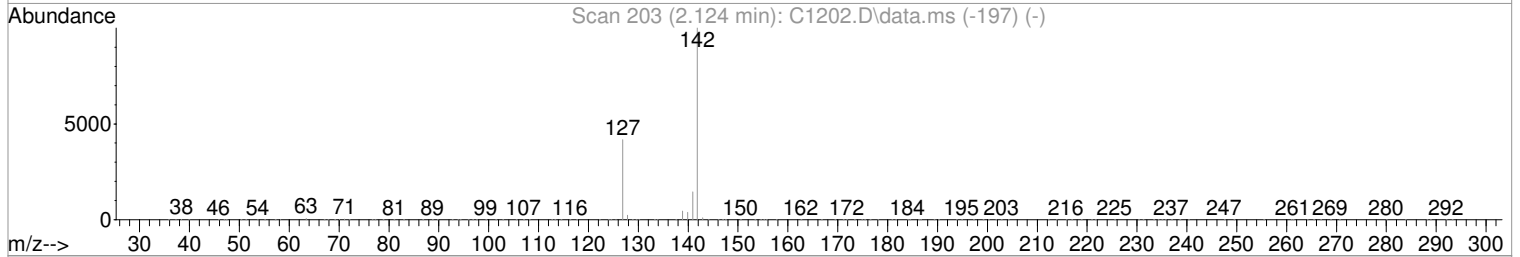
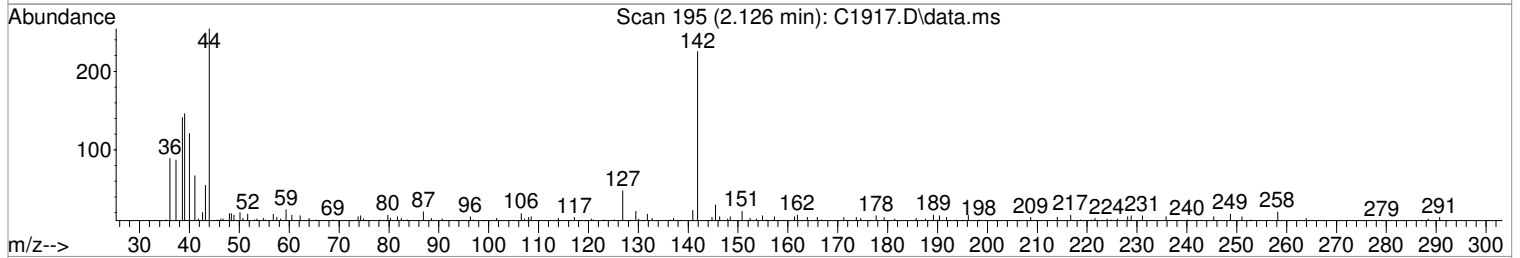
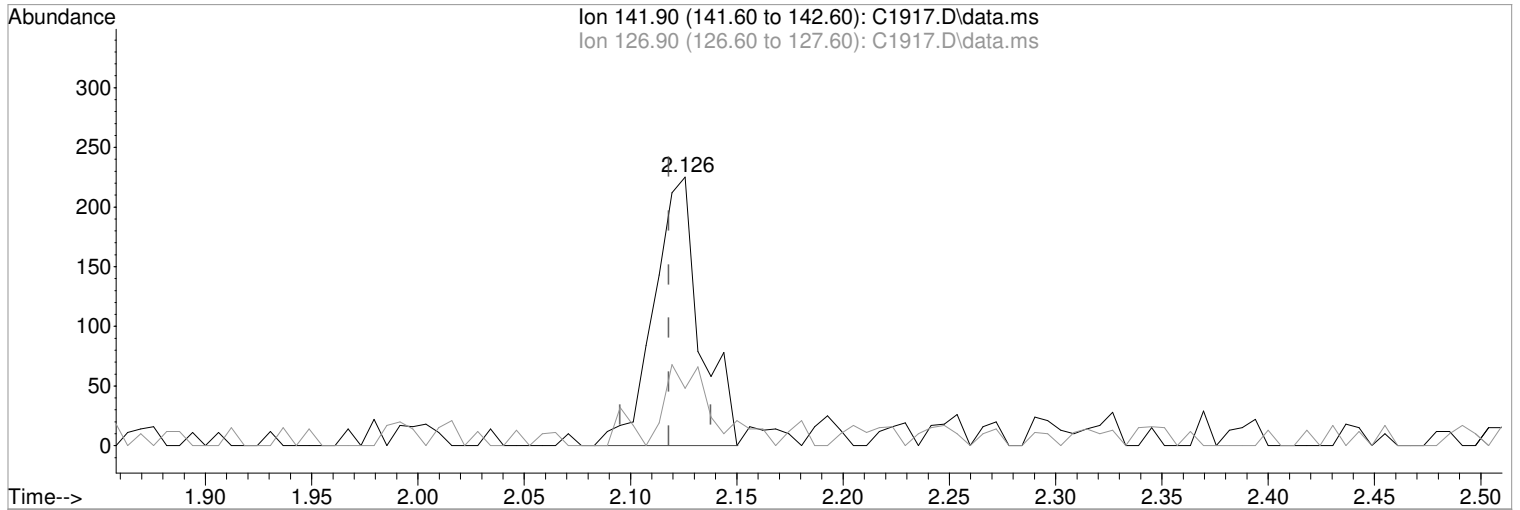
Quantitation Report (Qedit)

1st *BA* 10/09/17
2nd *FJ* 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(17) Iodomethane

2.126min (+0.008) 0.25 ug/L m

response 339

Ion	Exp%	Act%
141.90	100	100
126.90	41.80	21.33#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

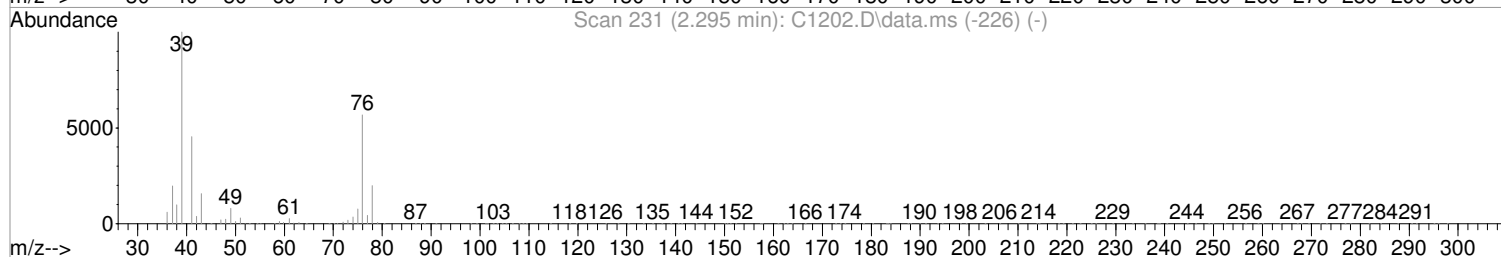
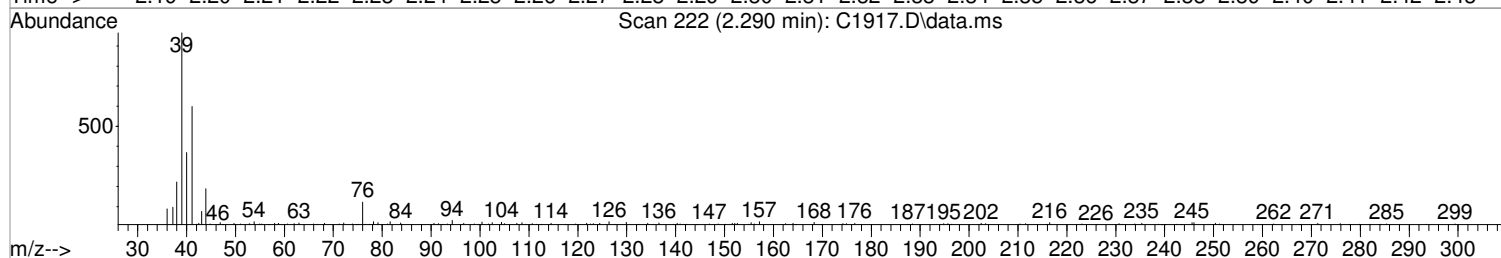
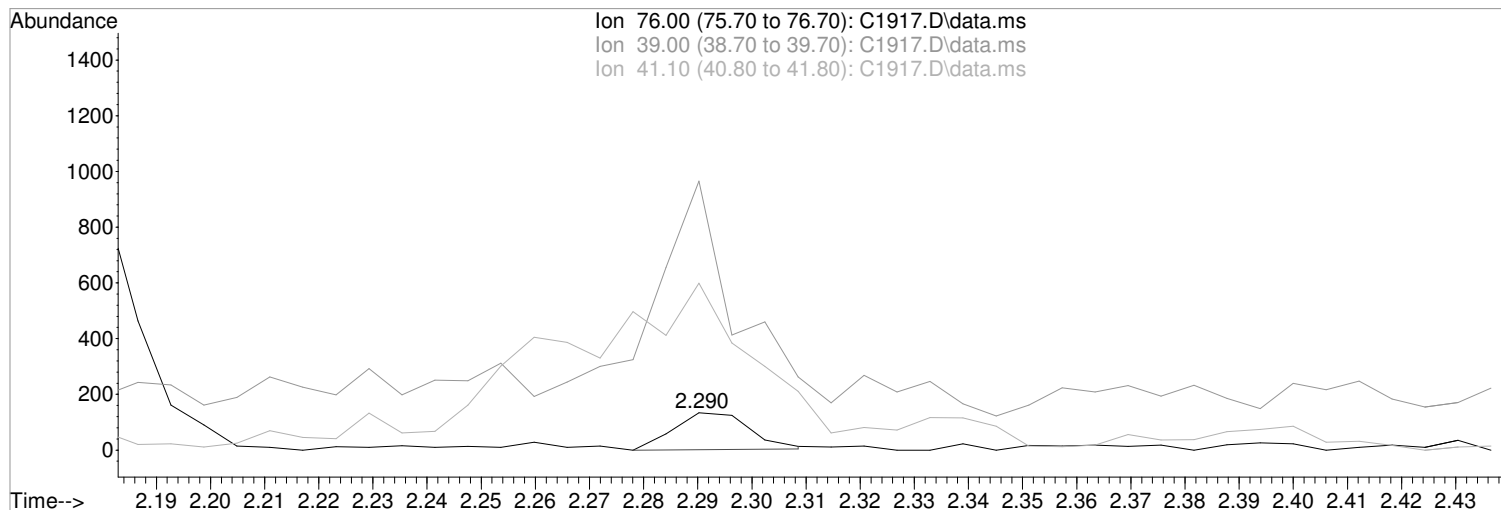
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(20) Allyl Chloride

2.290min (-0.005) 0.21 ug/L m

response 130

Ion Exp% Act%

76.00 100 100

39.00 206.70 790.98#

41.10 283.10 490.98#

0.00 0.00 0.00

Manual Integration:

After

Poor integration.

10/05/17

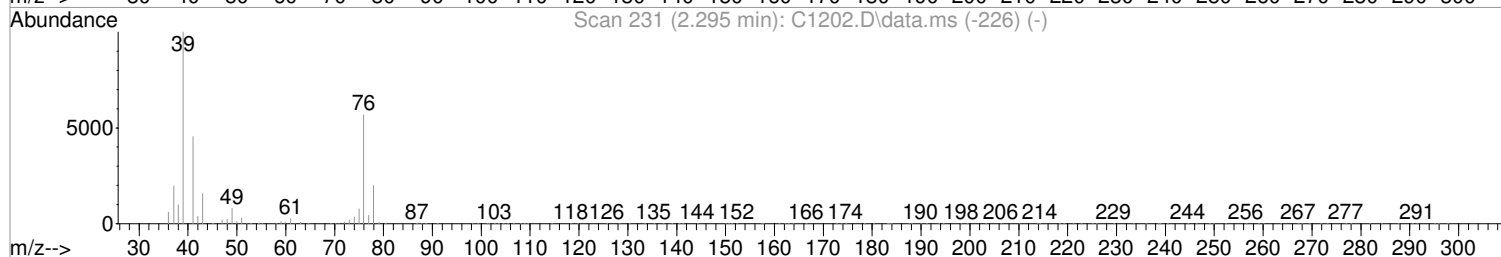
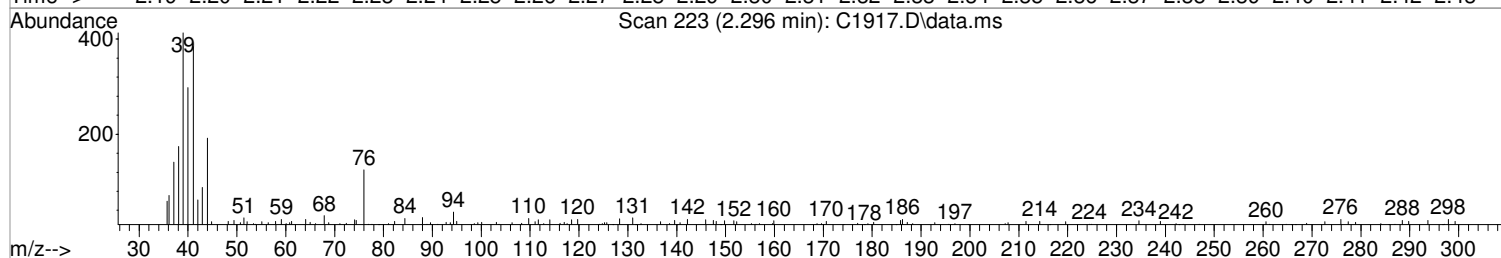
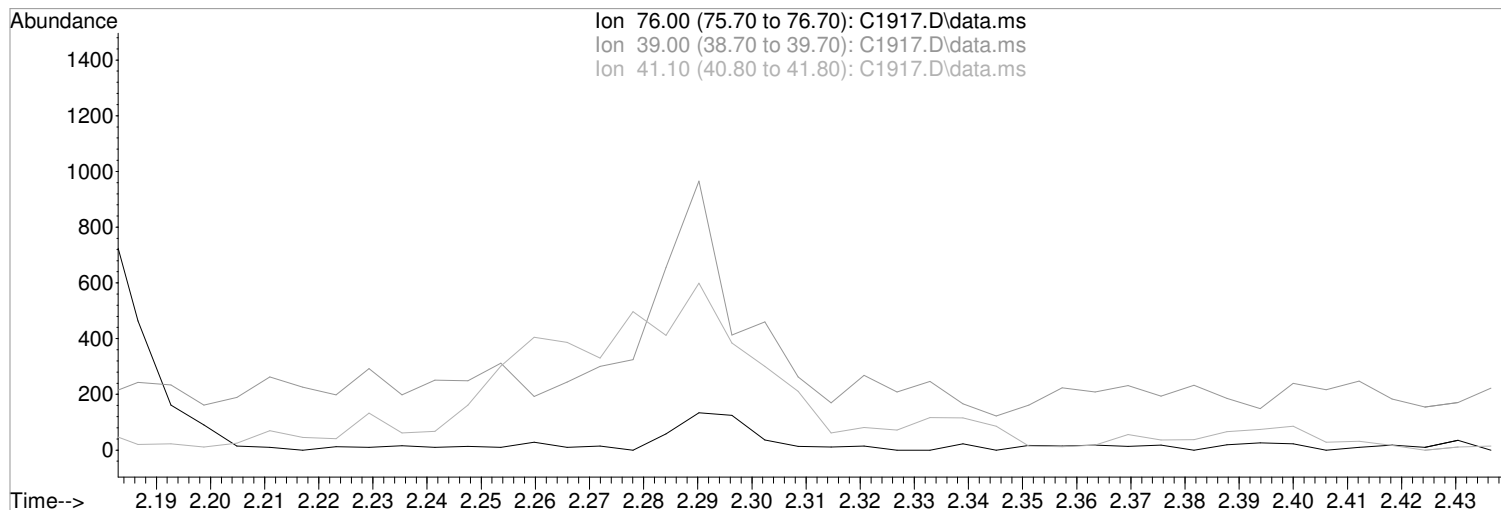
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(20) Allyl Chloride

Manual Integration:

2.295min (-2.295) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
76.00	100	0.00
39.00	206.70	0.00#
41.10	283.10	0.00#
0.00	0.00	0.00

10/05/17

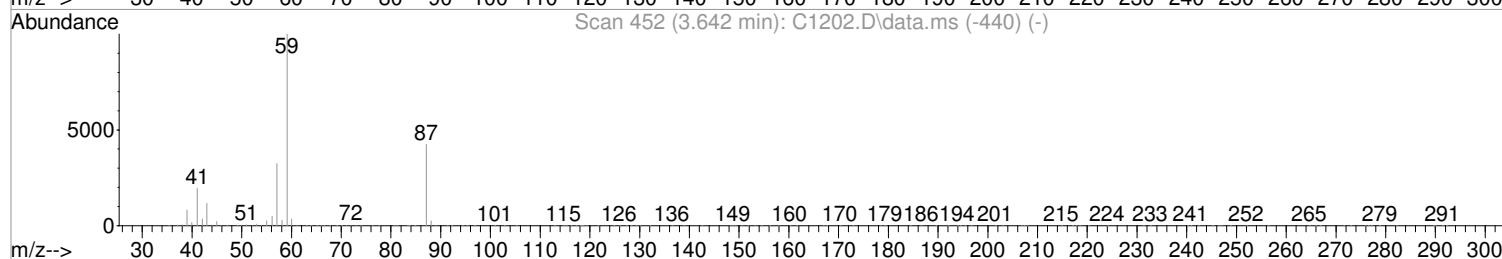
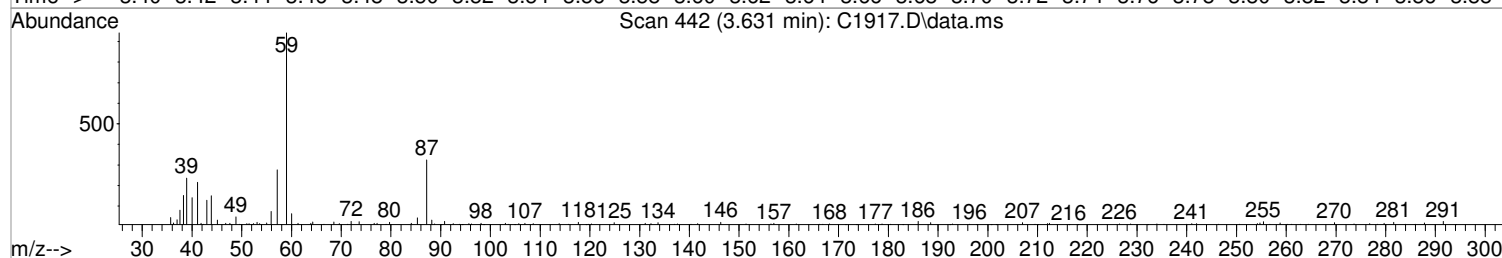
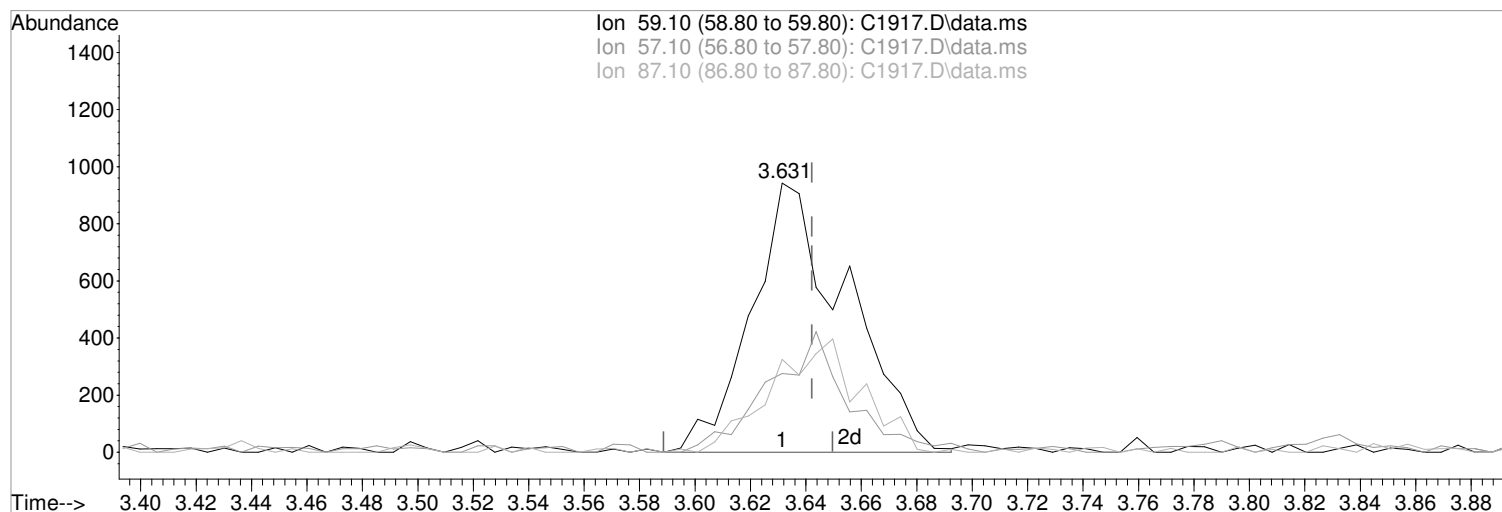
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(31) ETBE

3.631min (-0.011) 0.46 ug/L m

response 2250

Ion	Exp%	Act%
59.10	100	100
57.10	32.40	29.30
87.10	42.40	34.50
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

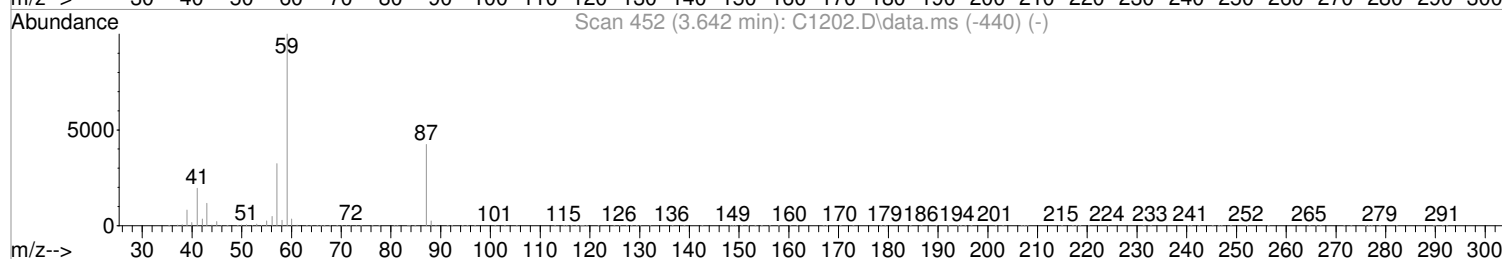
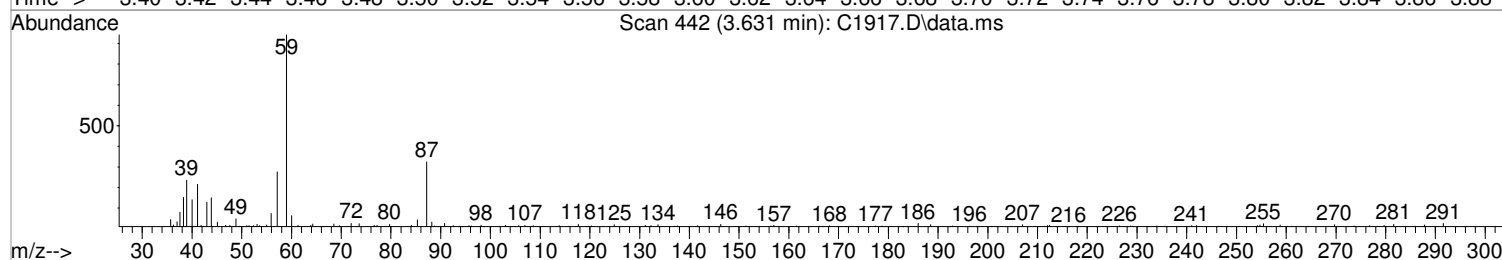
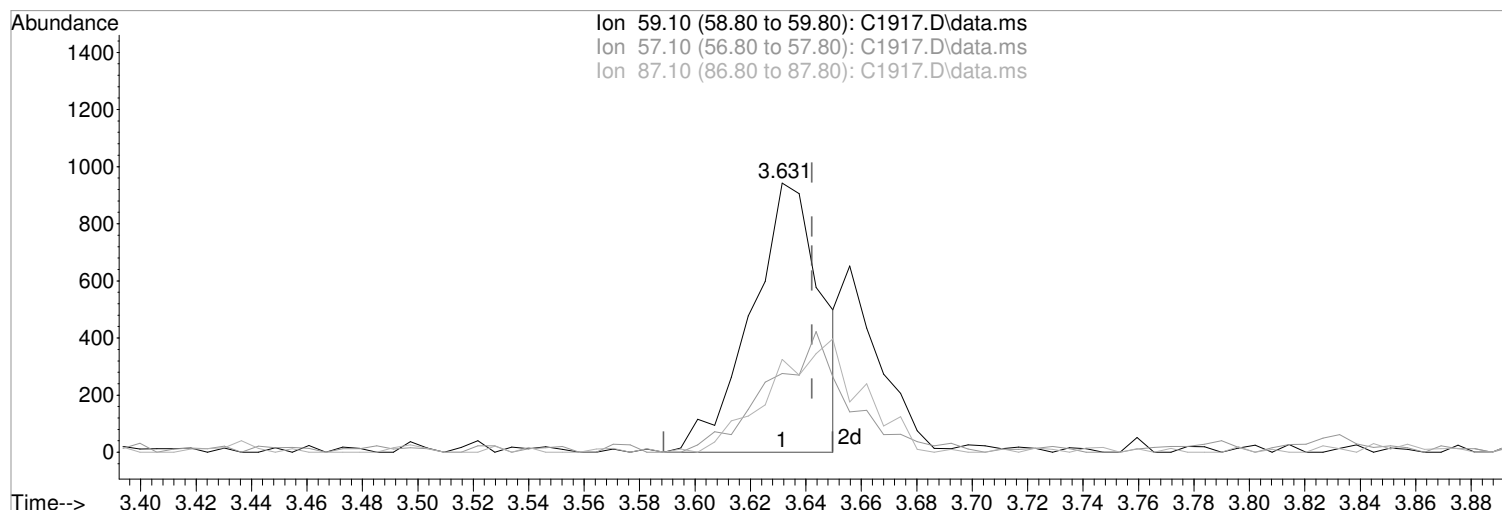
Quantitation Report (Qedit)

1st *BA* 10/09/17
2nd *FJ* 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(31) ETBE

Manual Integration:

3.631min (-0.011) 0.34 ug/L

Before

response 1640

Ion	Exp%	Act%
59.10	100	100
57.10	32.40	29.30
87.10	42.40	34.50
0.00	0.00	0.00

10/05/17

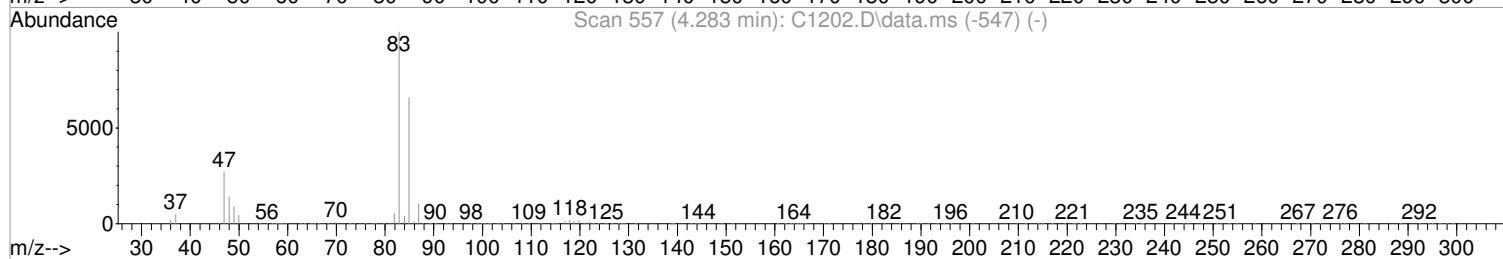
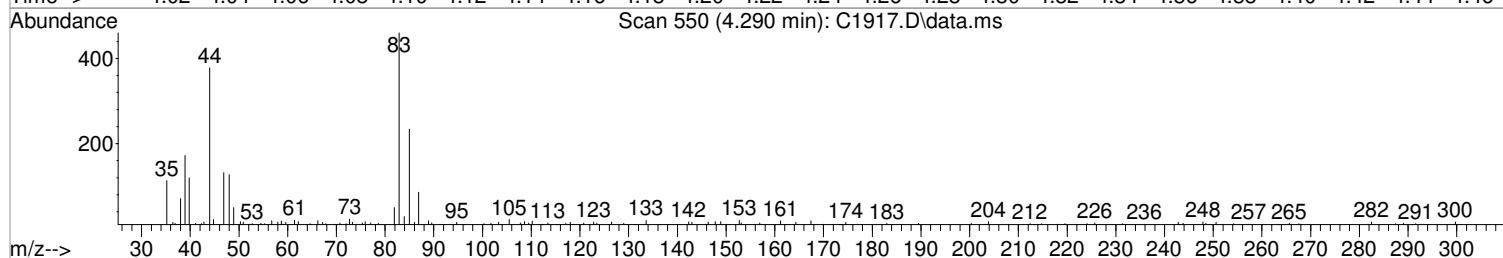
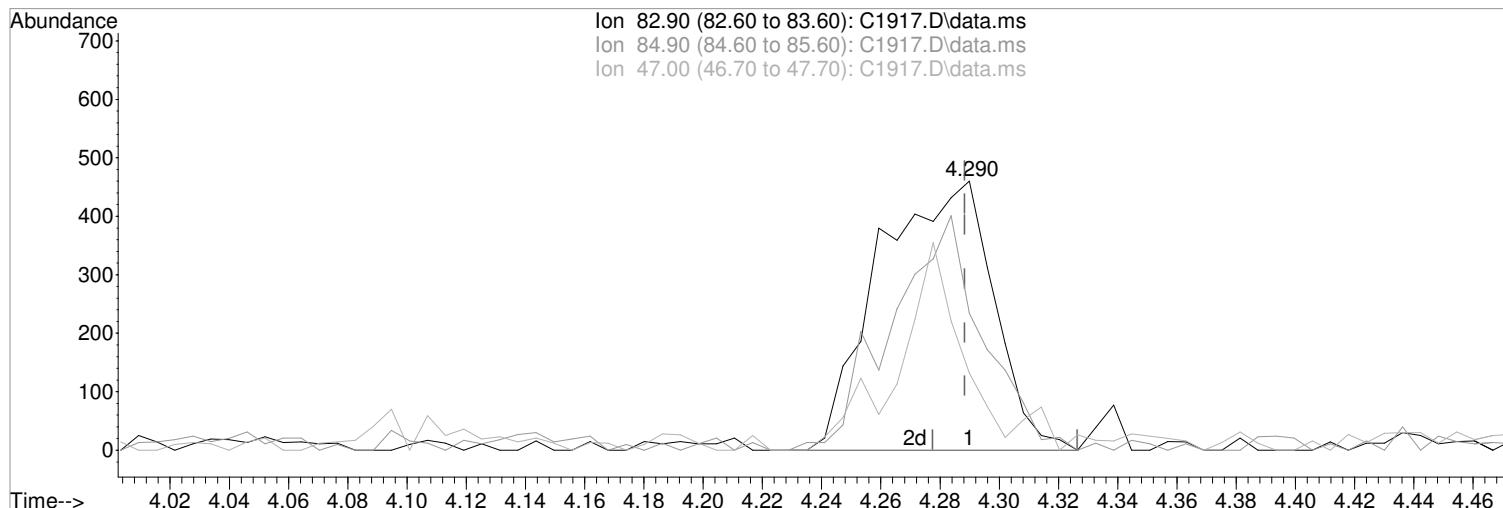
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(39) Chloroform (P)

4.290min (+0.001) 0.43 ug/L m

response 1236

Ion	Exp%	Act%
82.90	100	100
84.90	65.80	50.87
47.00	27.10	28.70
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

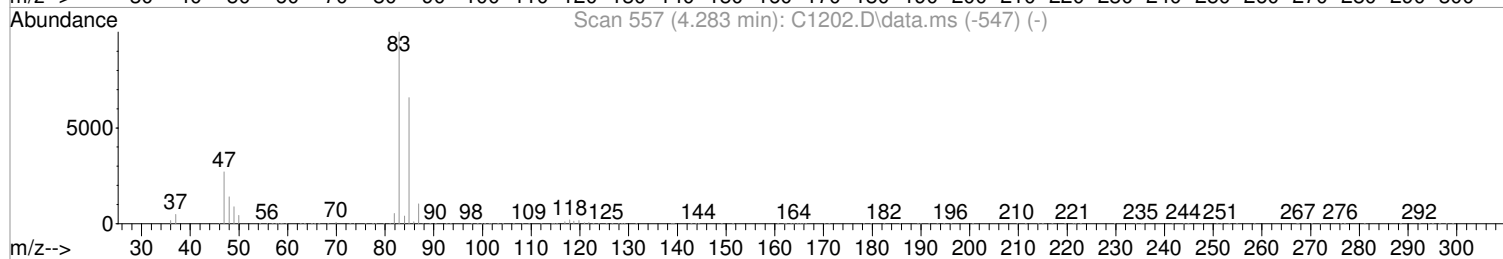
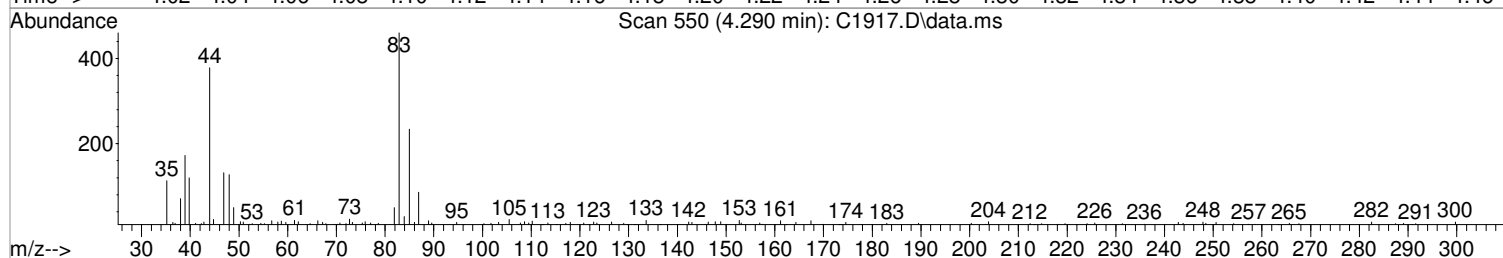
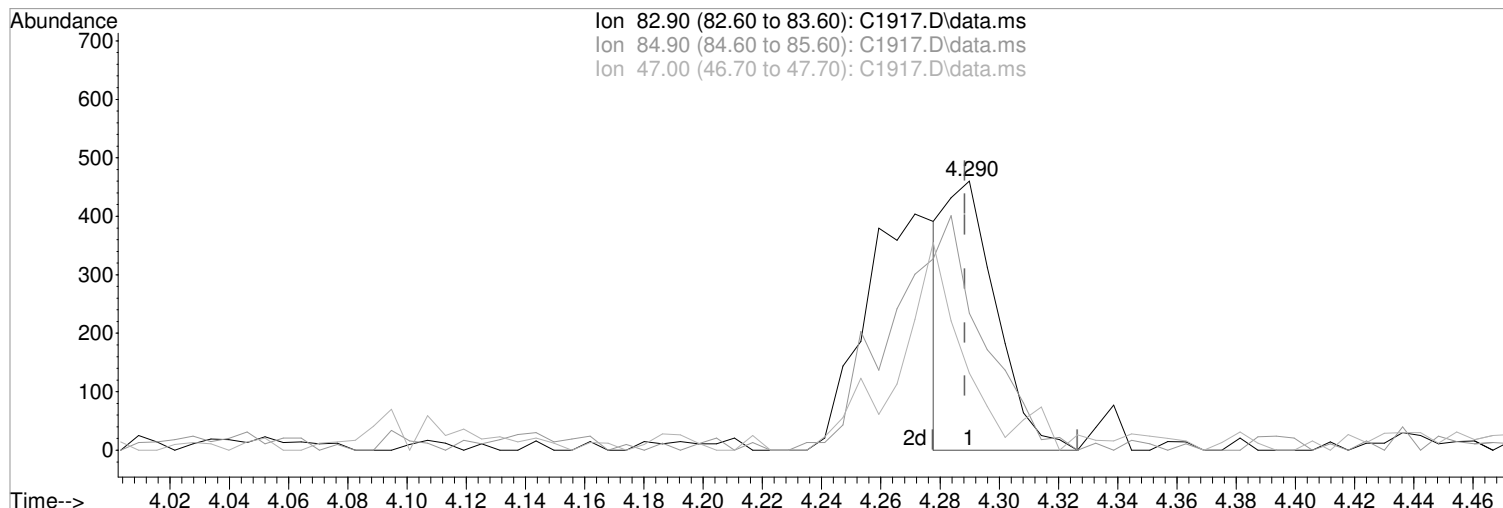
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(39) Chloroform (P)

Manual Integration:

4.290min (+0.001) 0.19 ug/L

Before

response 546

Ion	Exp%	Act%
82.90	100	100
84.90	65.80	50.87
47.00	27.10	28.70
0.00	0.00	0.00

10/05/17

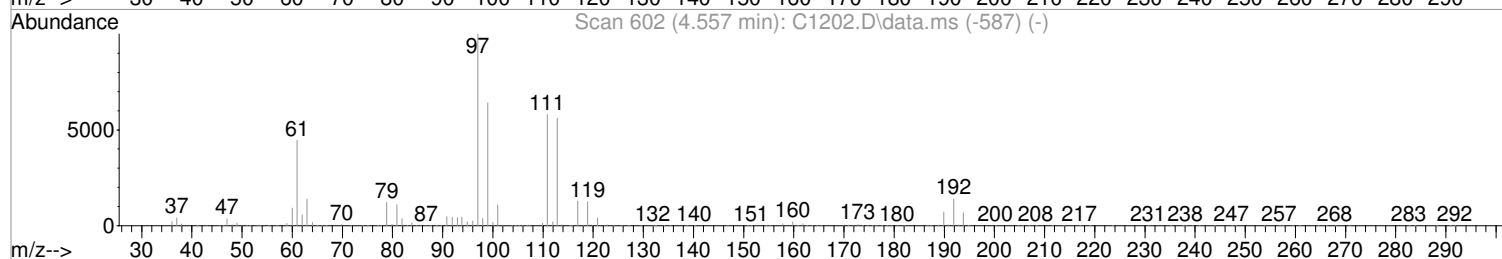
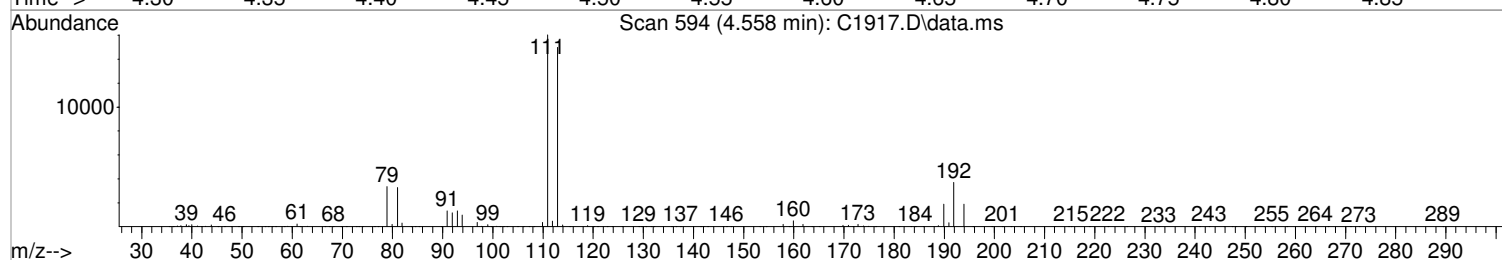
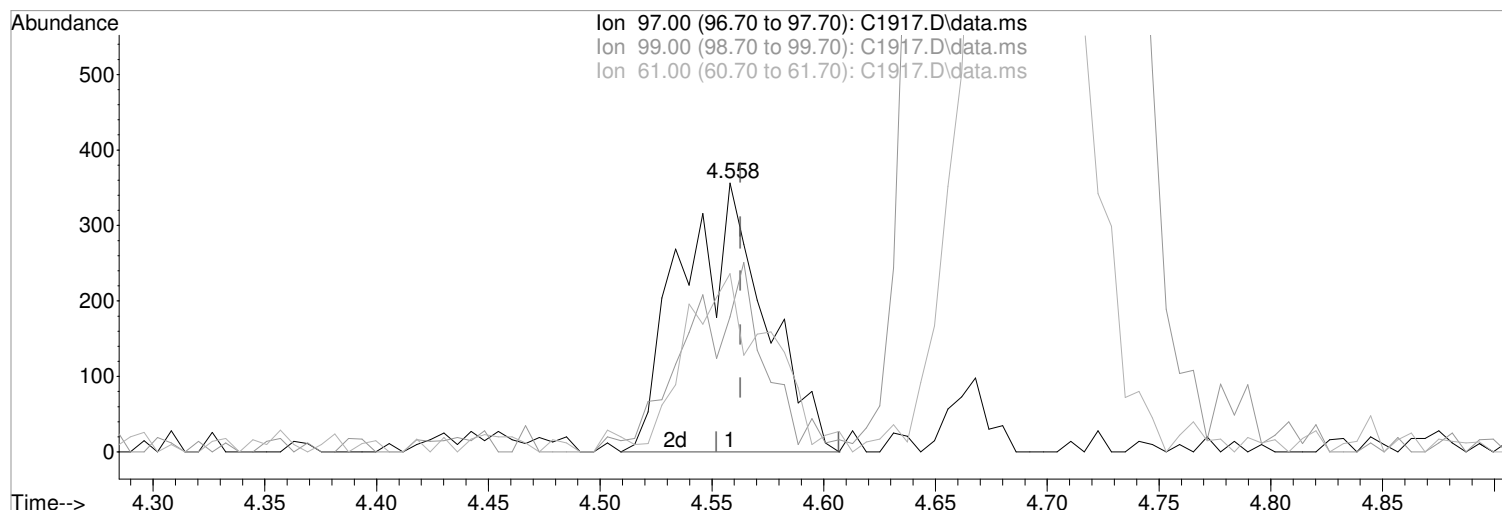
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(40) 1,1,1-Trichloroethane (P)

4.558min (-0.005) 0.39 ug/L m

response 936

Ion	Exp%	Act%
97.00	100	100
99.00	64.00	46.91
61.00	44.60	63.20
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

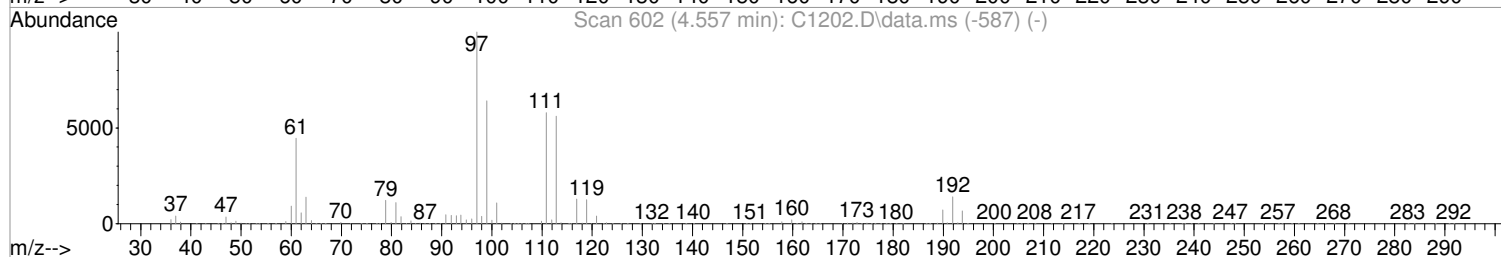
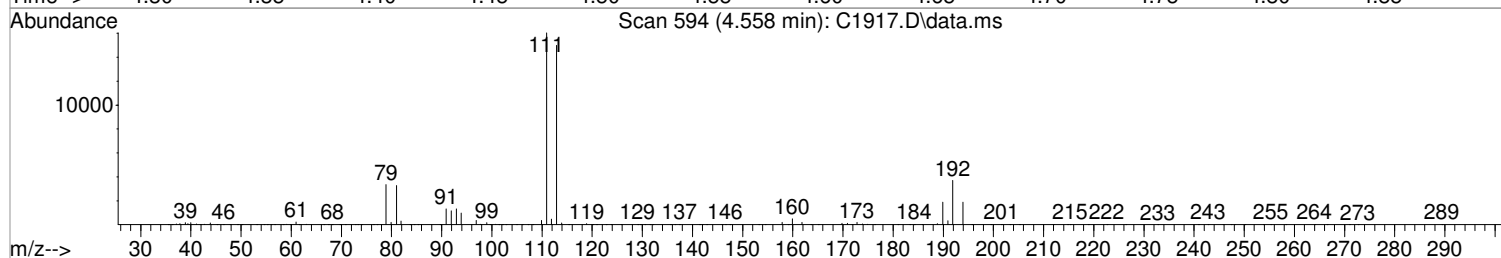
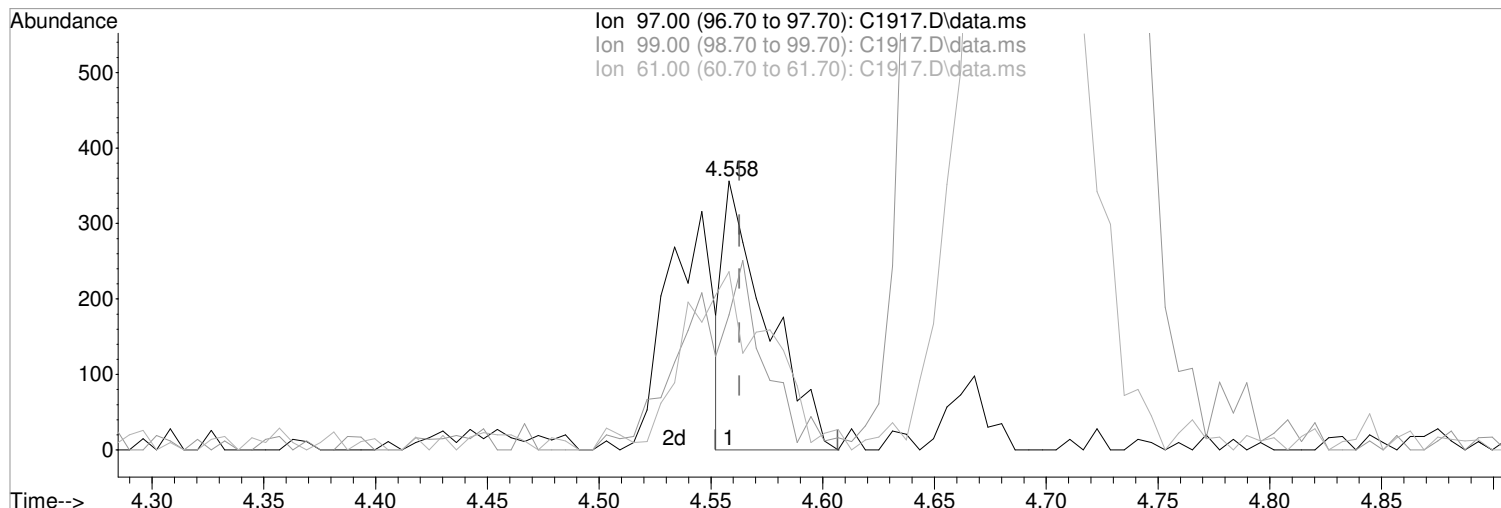
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(40) 1,1,1-Trichloroethane (P)

Manual Integration:

4.558min (-0.005) 0.20 ug/L

Before

response 479

Ion Exp% Act%

10/05/17

97.00 100 100

99.00 64.00 50.28

61.00 44.60 66.29#

0.00 0.00 0.00

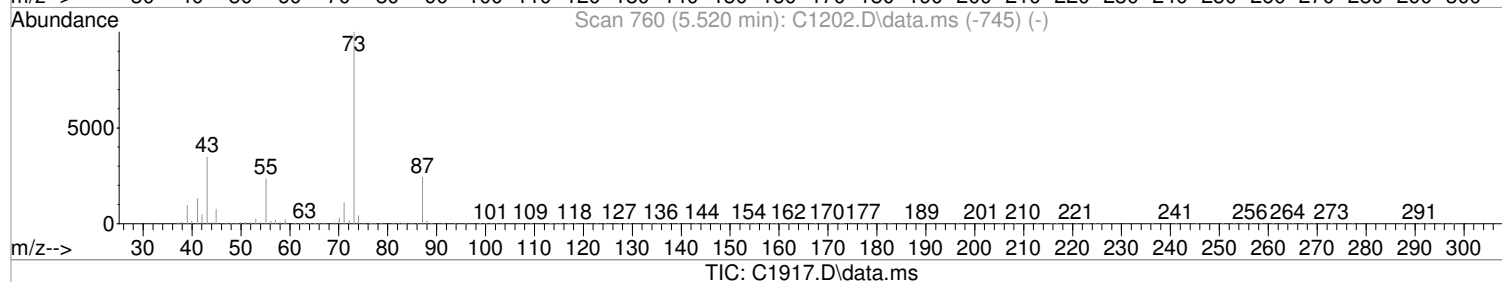
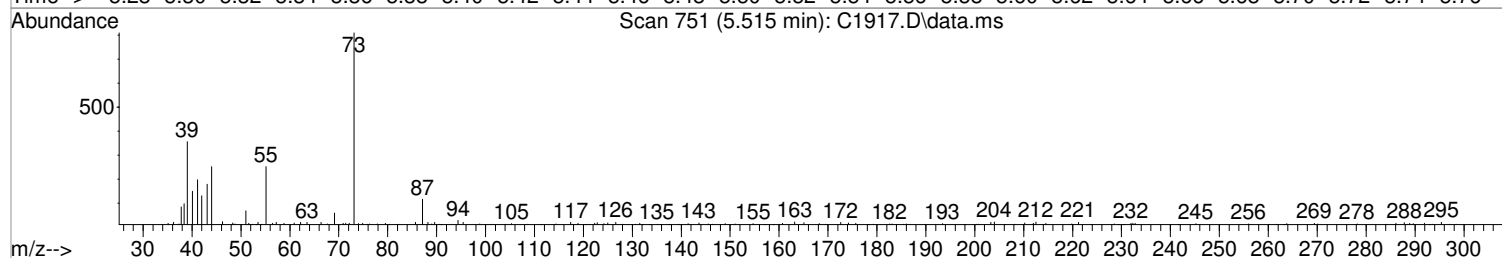
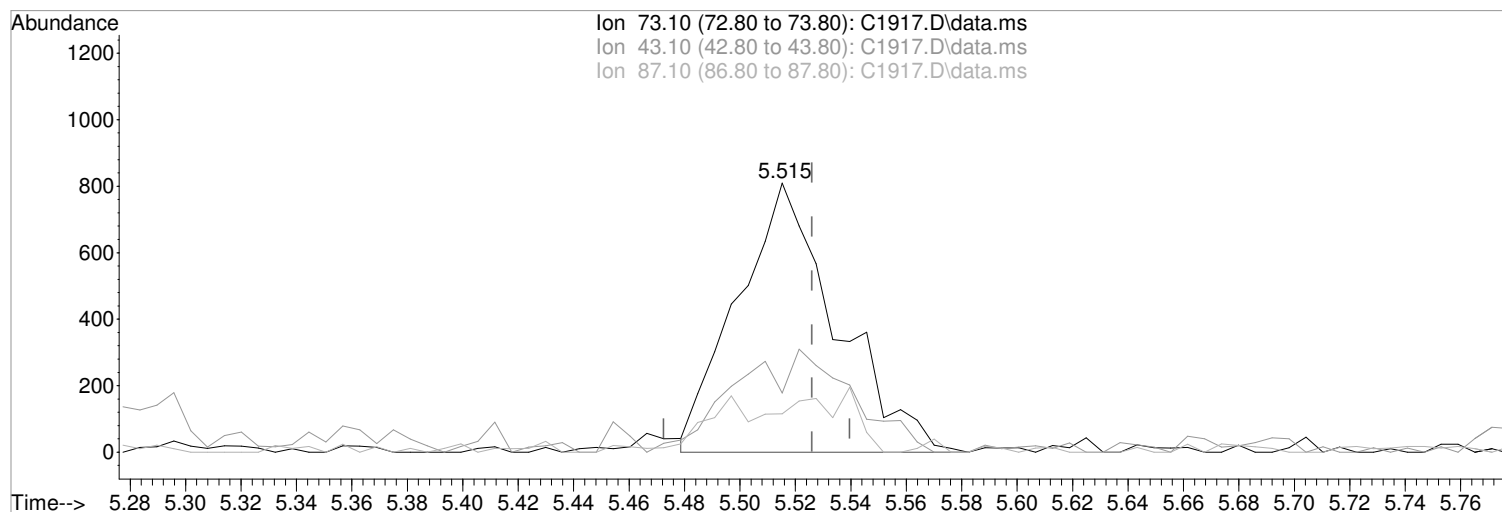
Quantitation Report (Qedit)

1st *BA* 10/09/17
2nd *FJ* 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(41) TAME

5.515min (-0.011) 0.43 ug/L m

response 2015

Ion	Exp%	Act%
73.10	100	100
43.10	35.10	22.00
87.10	24.20	14.22
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

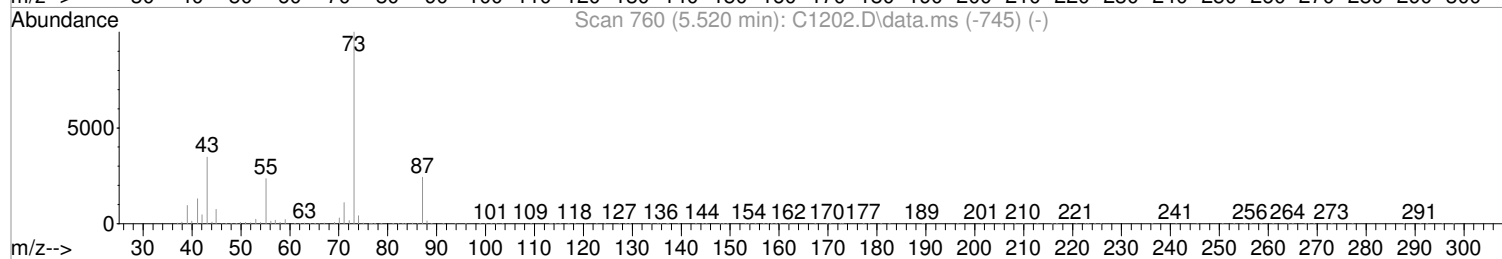
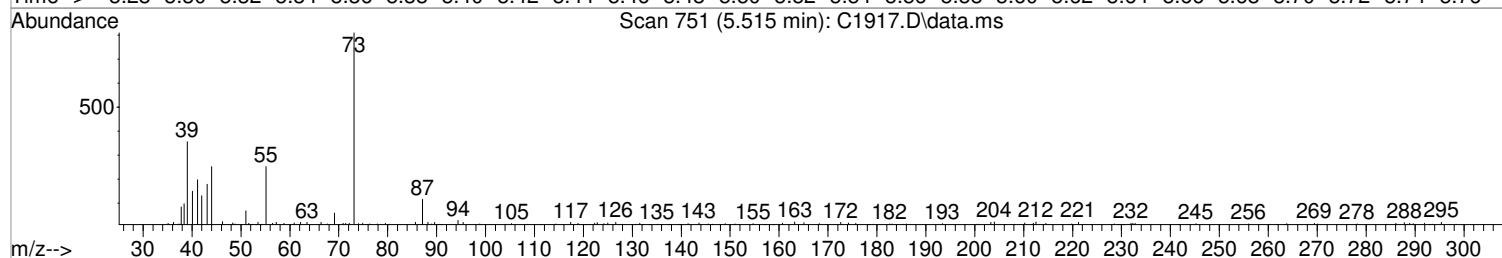
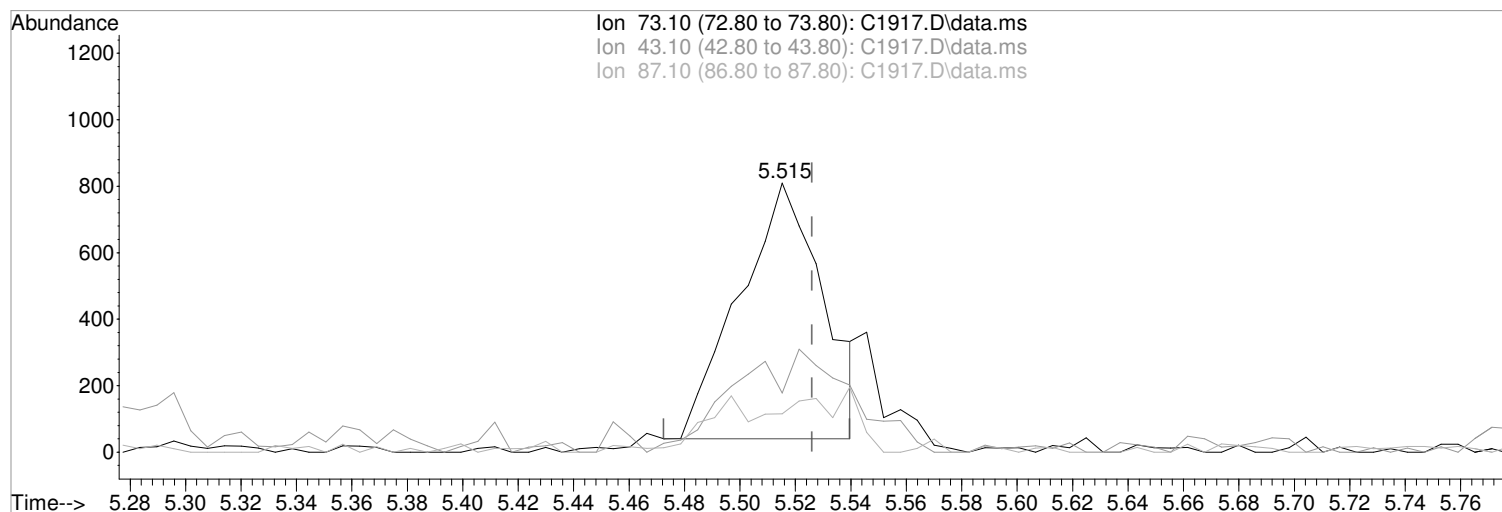
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(41) TAME

Manual Integration:

5.515min (-0.011) 0.34 ug/L

Before

response 1605

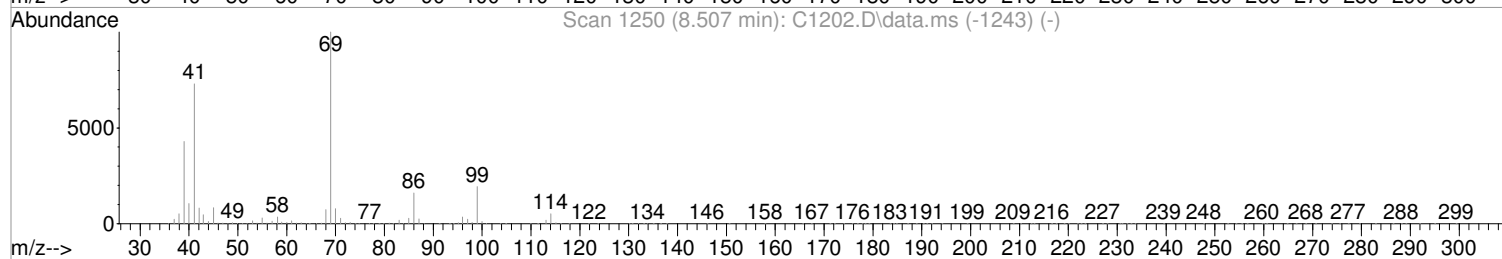
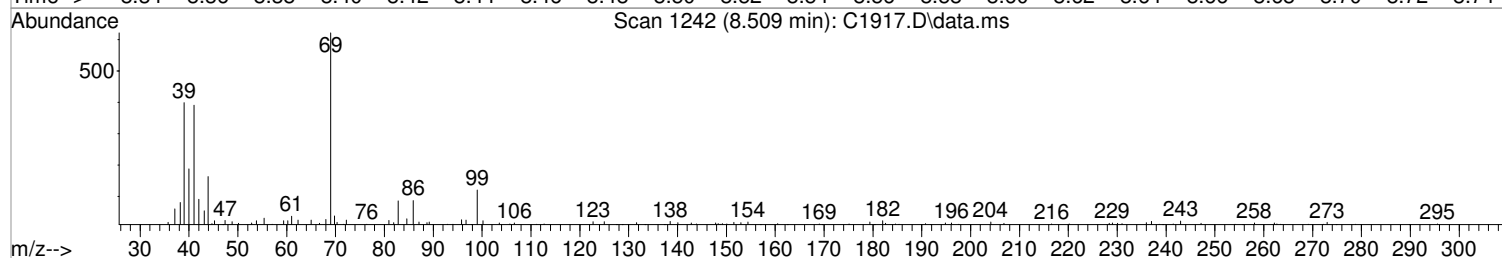
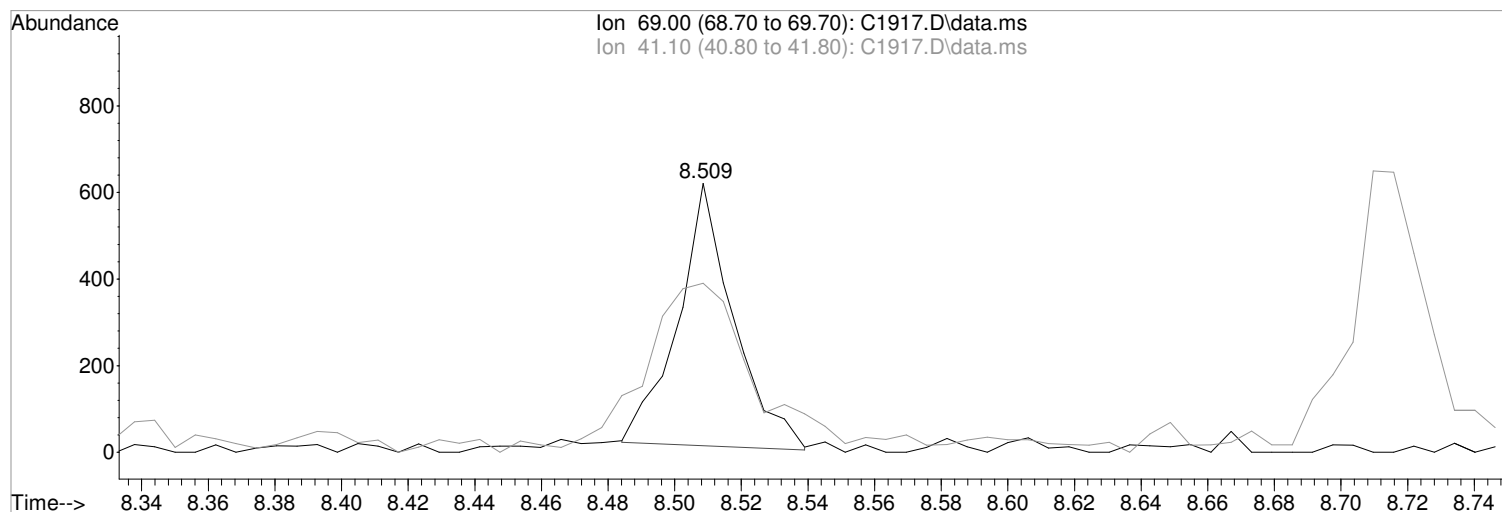
Ion	Exp%	Act%
73.10	100	100
43.10	35.10	22.00
87.10	24.20	14.22
0.00	0.00	0.00

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(67) Ethyl Methacrylate

8.509min (-0.005) 0.29 ug/L m

response 705

Ion	Exp%	Act%
69.00	100	100
41.10	73.10	62.80
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

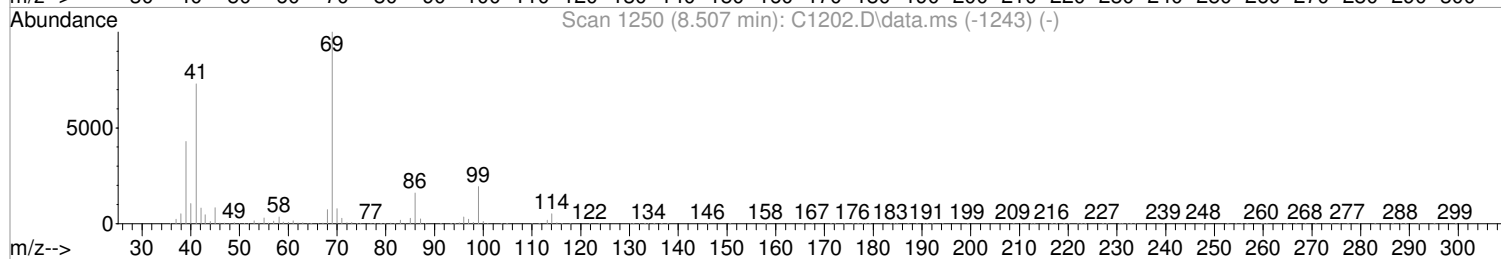
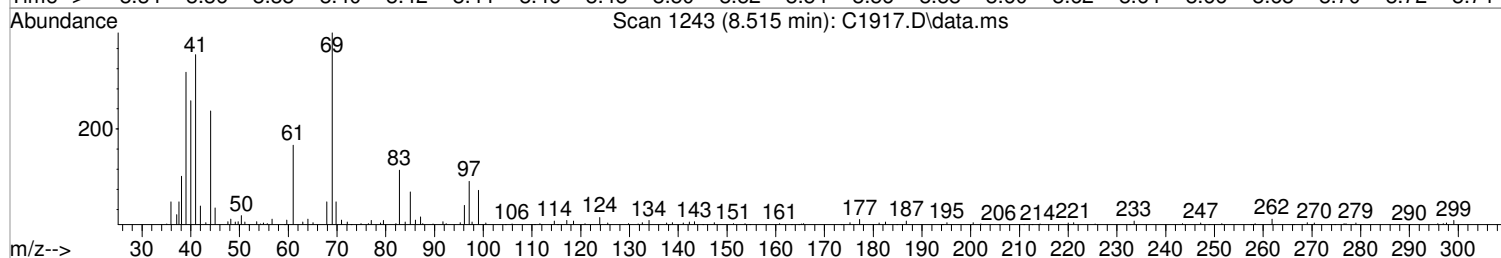
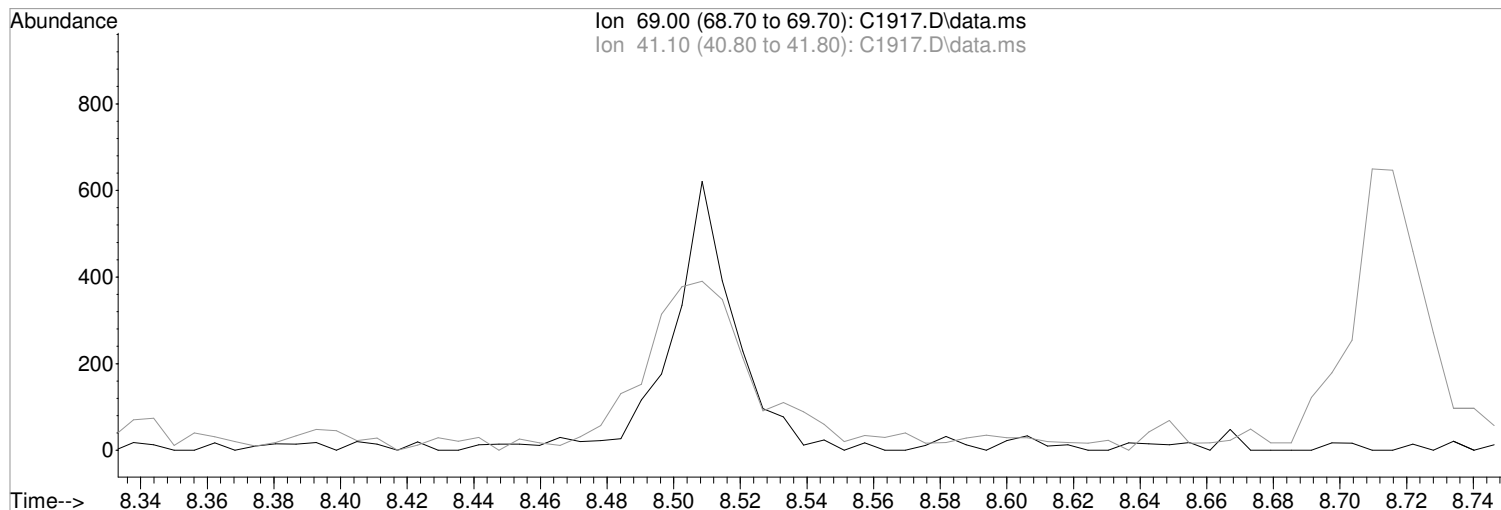
Poor integration.

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(67) Ethyl Methacrylate

Manual Integration:

8.513min (-8.513) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%

10/05/17

69.00	100	0.00

41.10	73.10	0.00#

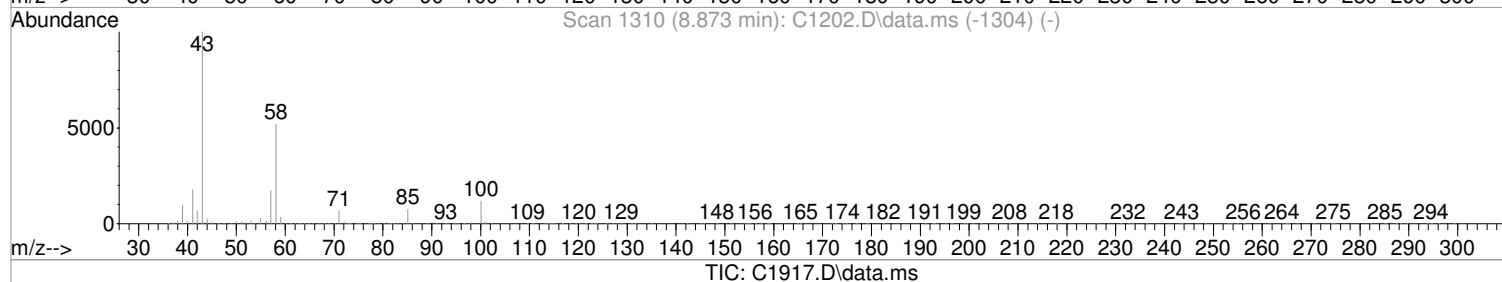
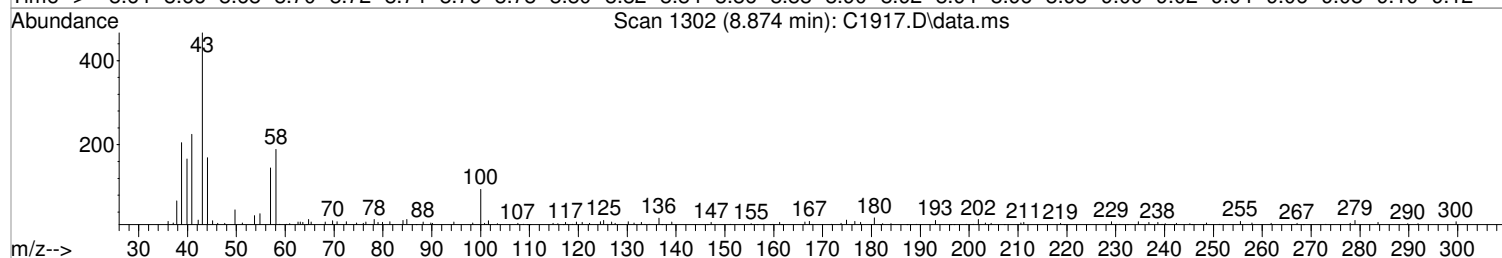
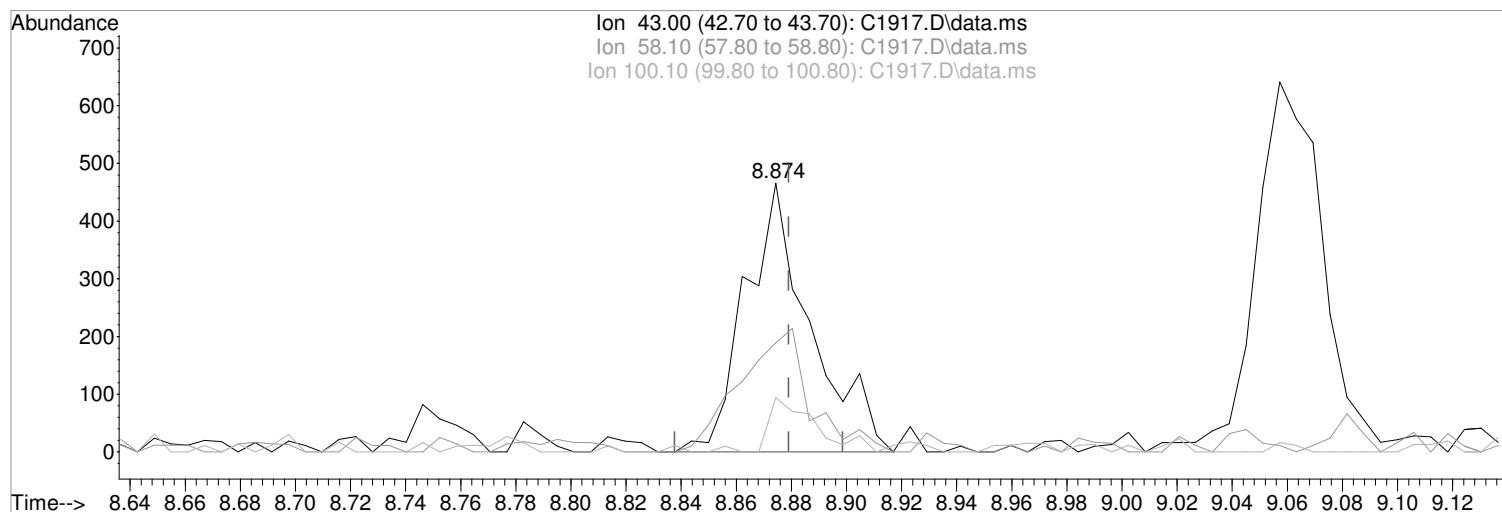
0.00	0.00	0.00

0.00	0.00	0.00

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(72) 2-Hexanone (P)

8.874min (-0.005) 0.46 ug/L m

response 760

Ion	Exp%	Act%
43.00	100	100
58.10	52.00	40.56
100.10	11.80	20.17
0.00	0.00	0.00

Manual Integration:

After

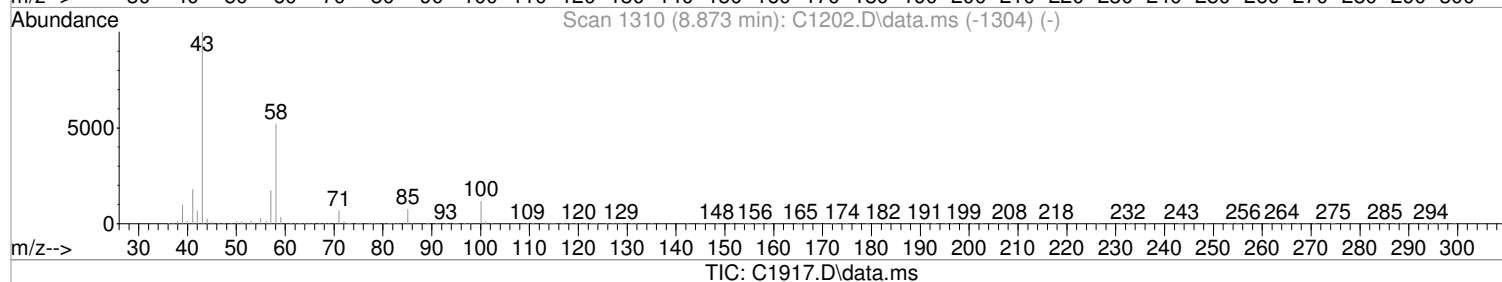
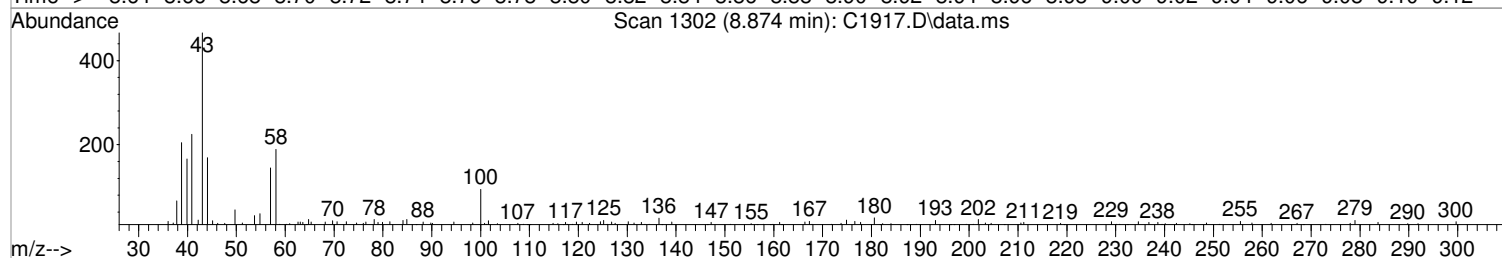
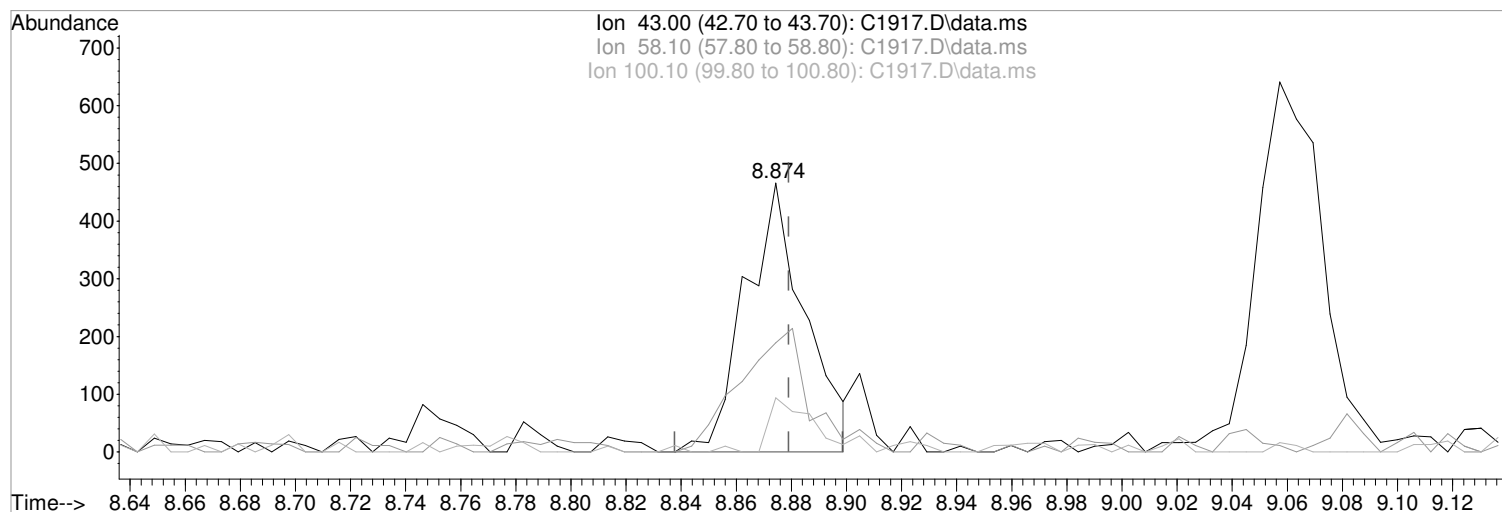
Poor integration.

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(72) 2-Hexanone (P)

Manual Integration:

8.874min (-0.005) 0.43 ug/L

Before

response 700

Ion	Exp%	Act%
43.00	100	100
58.10	52.00	40.56
100.10	11.80	22.96
0.00	0.00	0.00

10/05/17

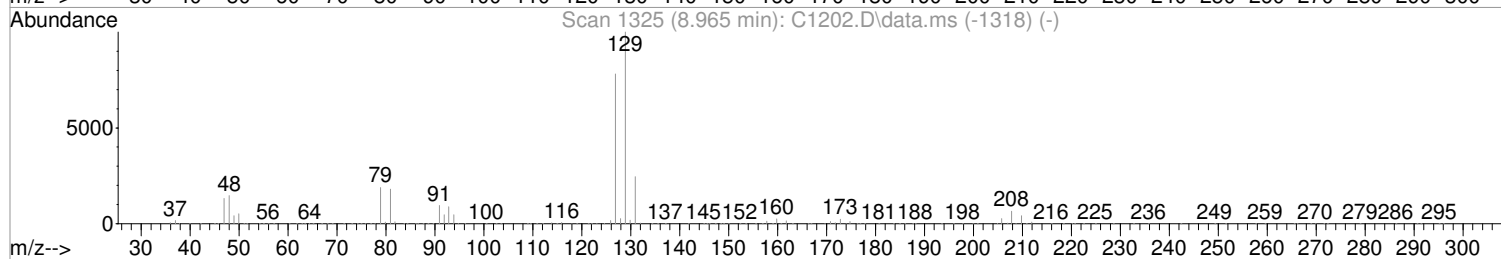
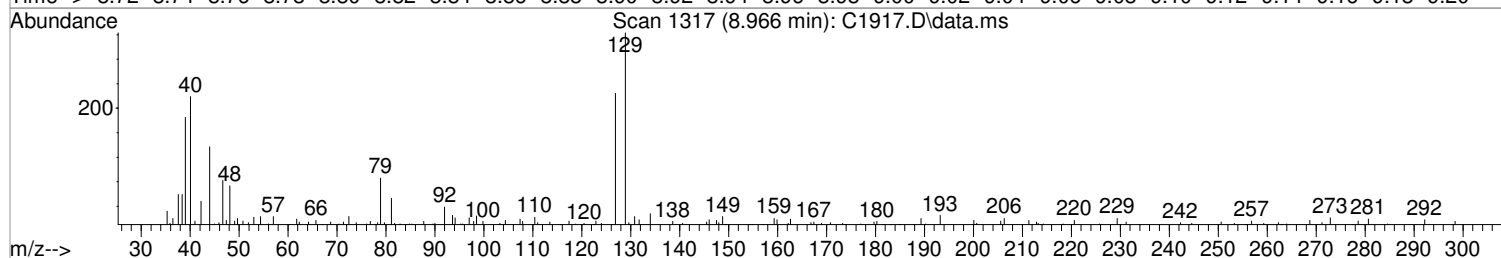
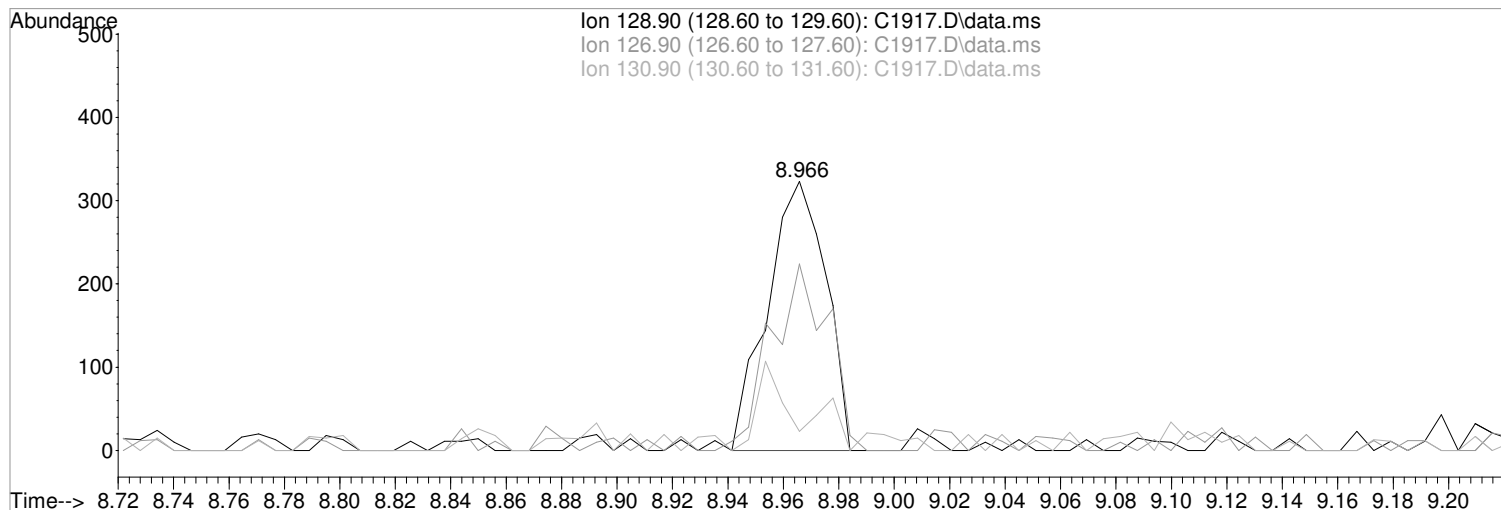
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(74) Dibromochloromethane (P)

8.966min (-0.004) 0.31 ug/L m

response 472

Ion	Exp%	Act%
128.90	100	100
126.90	78.10	69.35
130.90	24.60	7.12
0.00	0.00	0.00

Manual Integration:

After

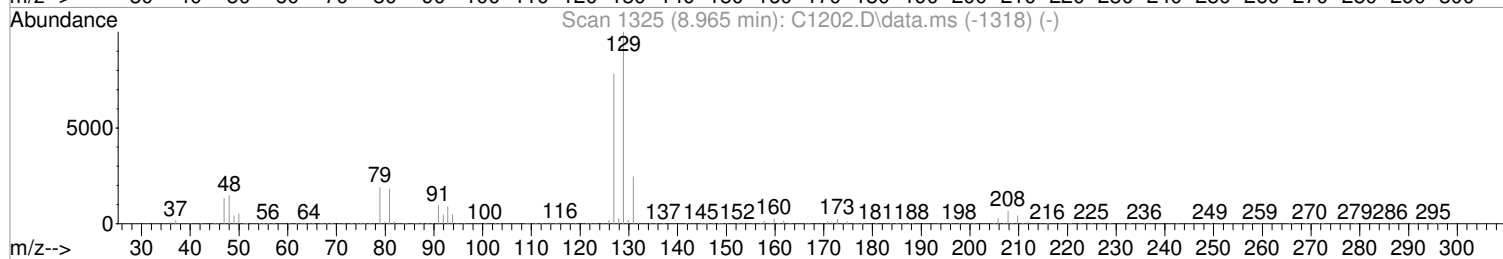
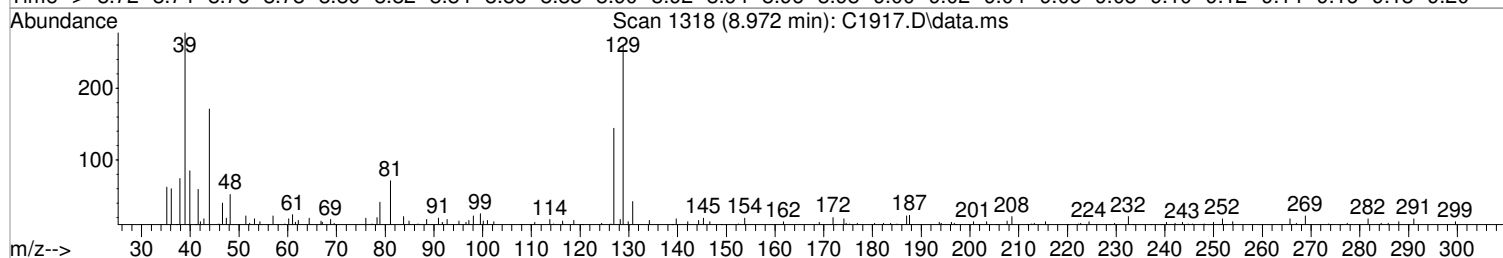
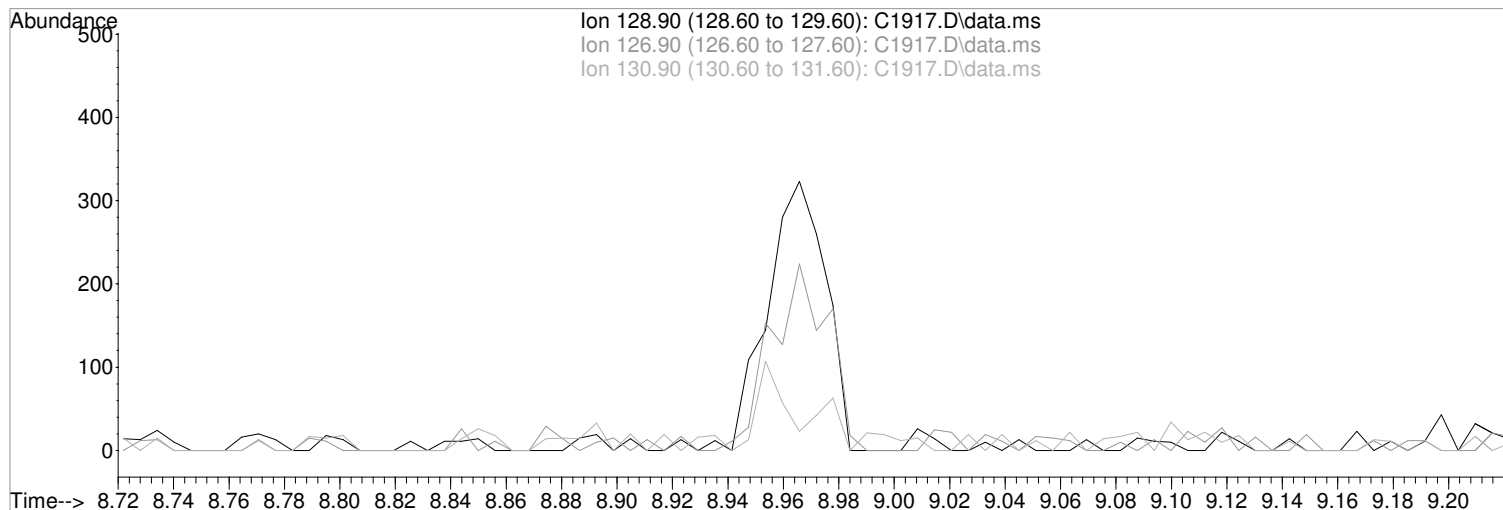
Poor integration.

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(74) Dibromochloromethane (P)

Manual Integration:

8.970min (-8.970) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%

10/05/17

128.90	100	0.00

126.90	78.10	0.00#

130.90	24.60	0.00#

0.00	0.00	0.00

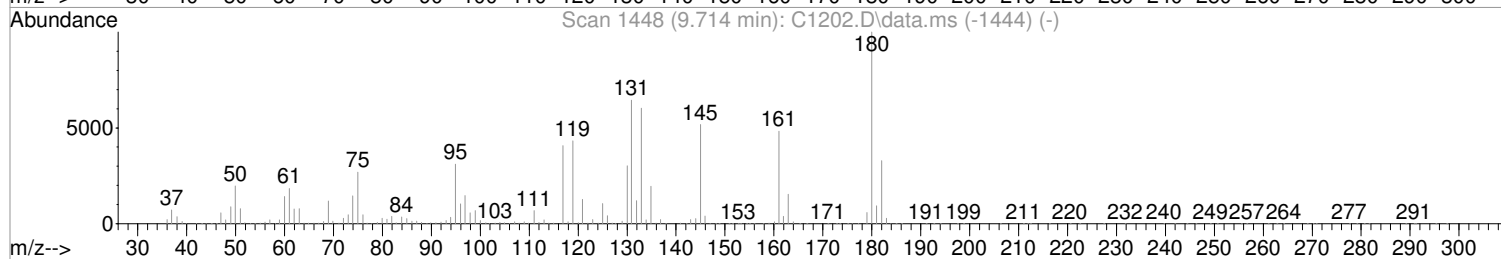
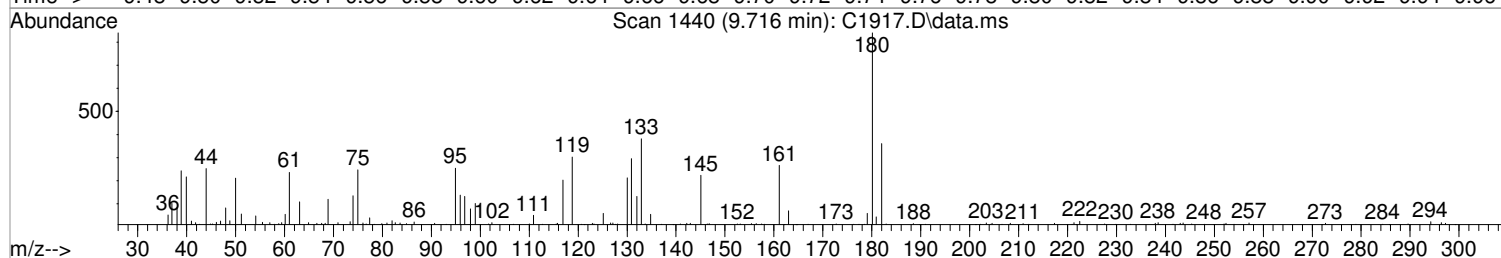
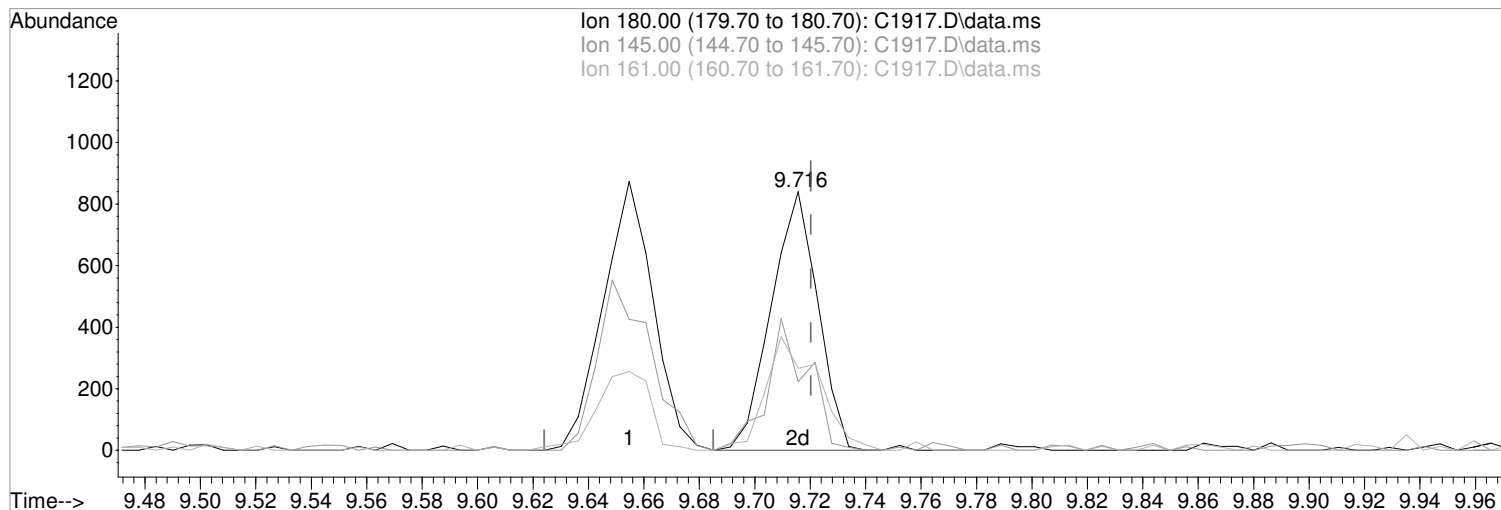
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(79) 4-Chlorobenzotrifluoride

9.716min (-0.005) 0.44 ug/L m

response 981

Ion Exp% Act%

180.00 100 100

145.00 51.90 26.55#

161.00 48.40 31.67

0.00 0.00 0.00

Manual Integration:

After

Poor integration.

10/05/17

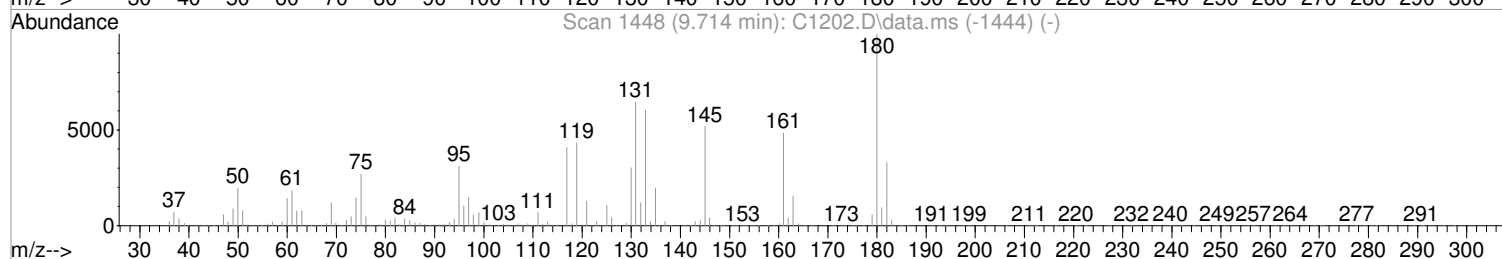
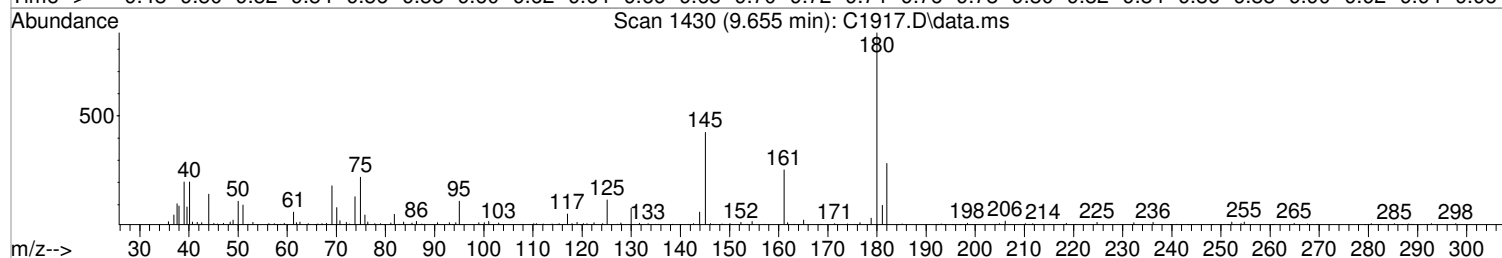
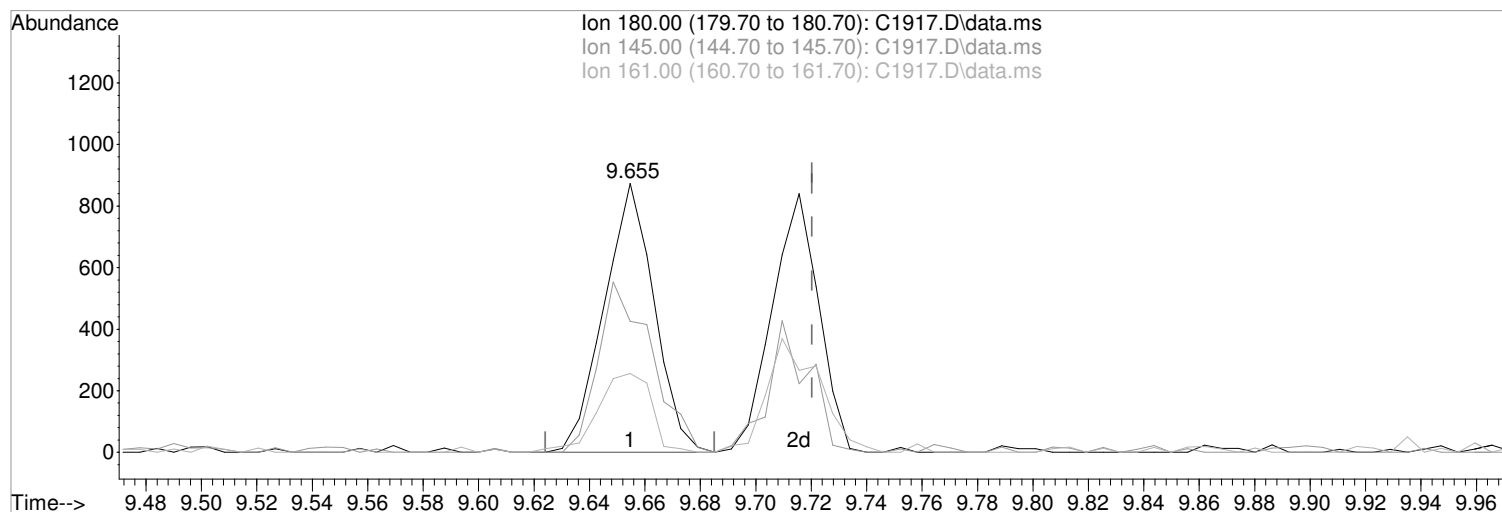
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(79) 4-Chlorobenzotrifluoride

Manual Integration:

9.655min (-0.066) 0.49 ug/L

Before

response 1099

Ion Exp% Act%

10/05/17

180.00	100	100
145.00	51.90	48.74
161.00	48.40	29.29
0.00	0.00	0.00

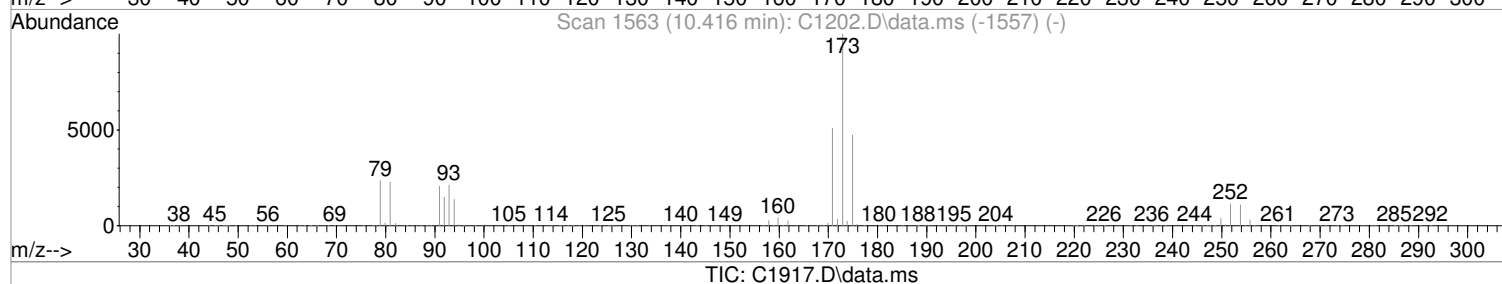
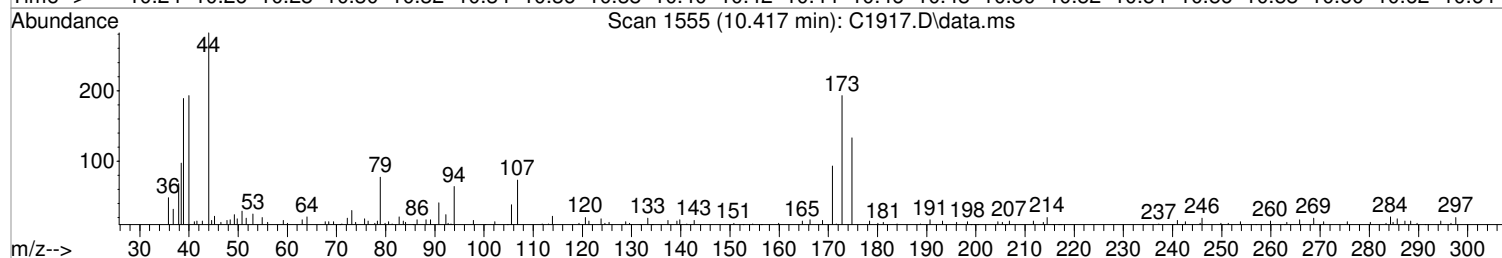
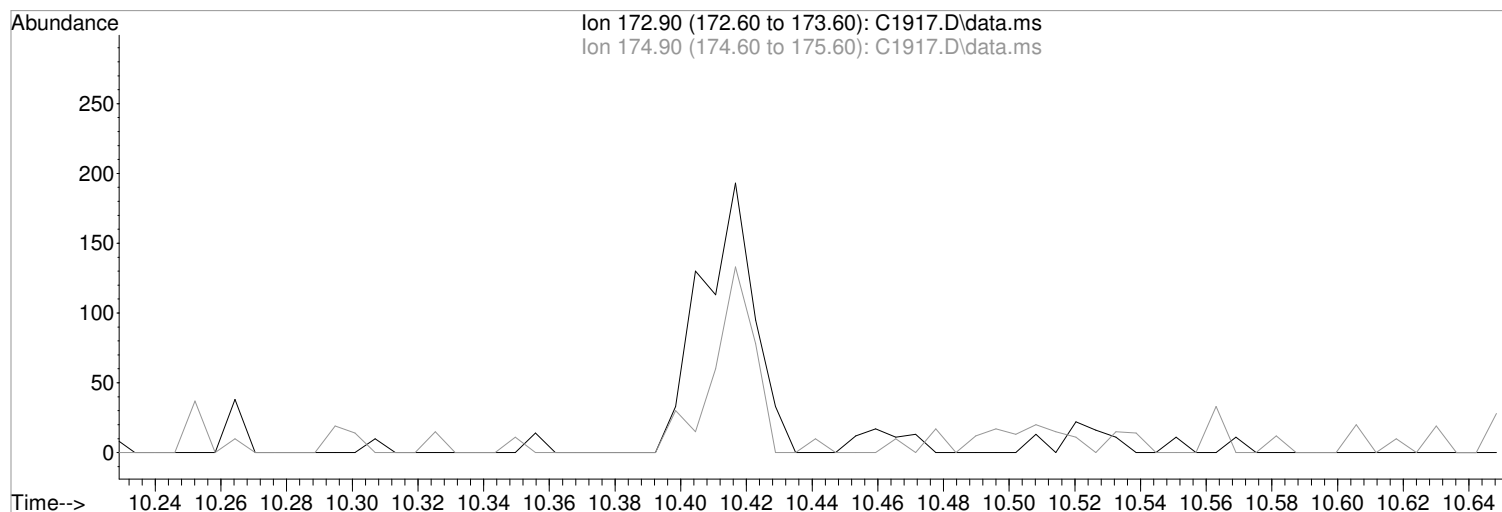
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(85) Bromoform (P)

Manual Integration:

10.415min (-10.415) 0.00 ug/L

Before

response 0

Ion Exp% Act%

10/05/17

172.90 100 0.00

174.90 47.20 0.00#

0.00 0.00 0.00

0.00 0.00 0.00

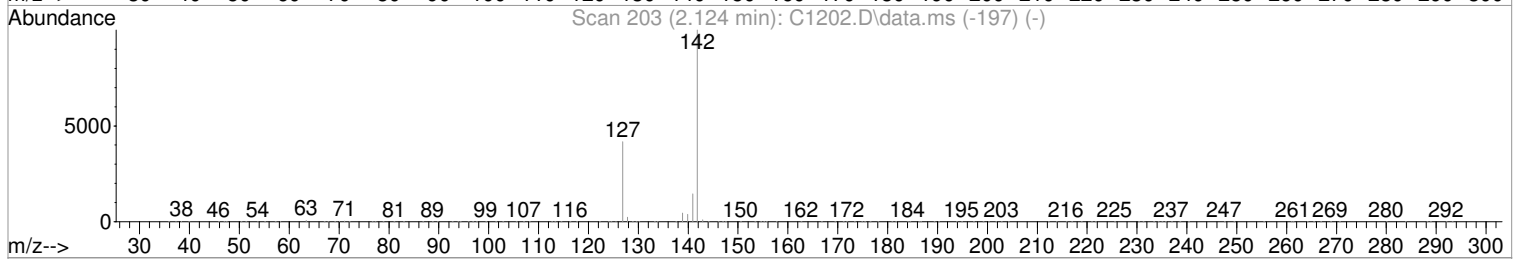
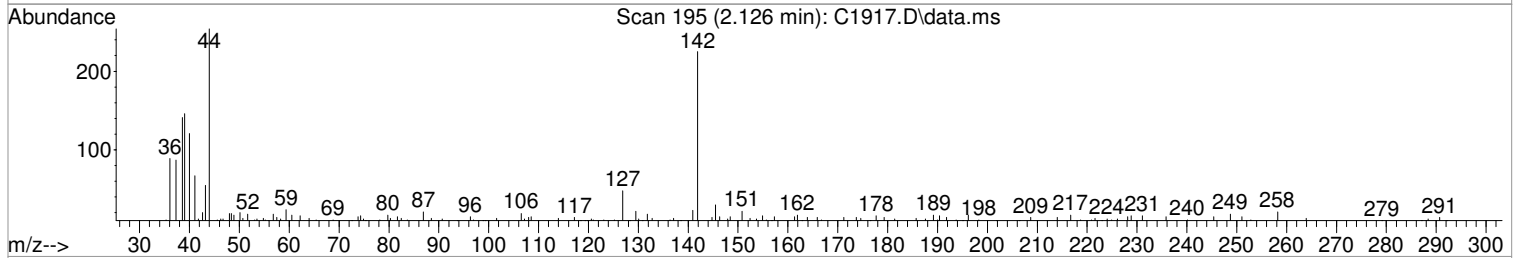
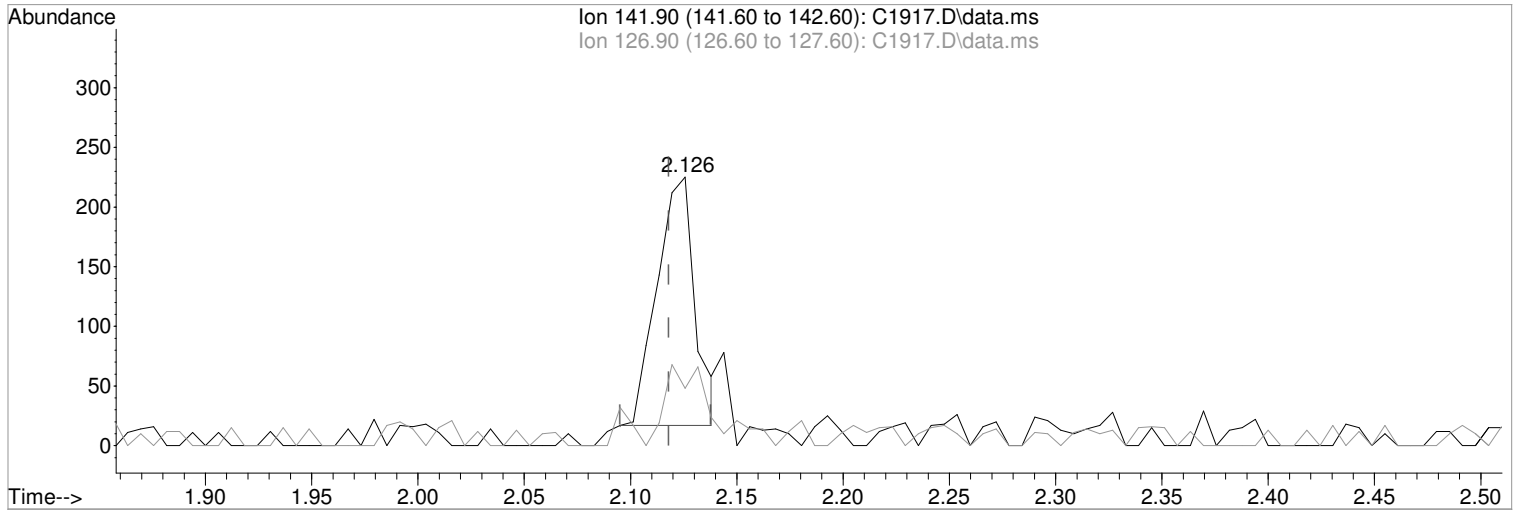
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:35 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1917.D\data.ms

(17) Iodomethane

Manual Integration:

2.126min (+0.008) 0.19 ug/L

Before

response 257

Ion Exp% Act%

10/05/17

141.90 100 100

126.90 41.80 21.33#

0.00 0.00 0.00

0.00 0.00 0.00

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1917.D
 Acq On : 5 Oct 2017 1:05 pm
 Operator : F. NAEGLER
 Sample : 0.5 PPB
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:41:30 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	4.692	168	156915	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	236137	50.00	ug/L	-0.01
70) d5-Chlorobenzene	9.581	117	202142	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	105307	50.00	ug/L	0.00

System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	77000	48.70	ug/L	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	97.40%
47) surr1,1,2-dichloroetha...	5.119	65	104395	55.31	ug/L	-0.02
Spiked Amount	50.000	Range	73 - 125	Recovery	=	110.62%
64) SURR3,Toluene-d8	7.948	98	298282	49.09	ug/L	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	98.18%
69) SURR2,BFB	10.728	95	105408	44.87	ug/L	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	89.74%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.040	85	759	0.37	ug/L	91
3) Chloromethane	1.150	50	1007	0.40	ug/L	70
4) Vinyl Chloride	1.217	62	788	0.37	ug/L	77
5) Bromomethane	1.412	94	513	0.34	ug/L	97
6) Chloroethane	1.479	64	704	0.52	ug/L	98
7) Freon 21	1.607	67	1382	0.39	ug/L	92
8) Trichlorofluoromethane	1.650	101	1312	0.50	ug/L	91
9) Diethyl Ether	1.851	59	646	0.47	ug/L #	85
10) Freon 123a	1.845	67	897	0.48	ug/L	85
11) Freon 123	1.894	83	1009	0.47	ug/L	90
12) Acrolein	1.924	56	785	1.84	ug/L #	72
13) 1,1-Dicethene	2.010	96	617	0.44	ug/L	87
14) Freon 113	2.010	101	614	0.44	ug/L #	77
15) Acetone	2.046	43	926	0.91	ug/L	89
16) 2-Propanol	2.168	45	900	5.23	ug/L #	38
17) Iodomethane	2.126	142	339m	0.25	ug/L	
18) Carbon Disulfide	2.174	76	1623	0.42	ug/L	97
20) Allyl Chloride	2.290	76	130m	0.21	ug/L	
21) Methyl Acetate	2.315	43	961	0.40	ug/L	88
22) Methylene Chloride	2.388	84	782	0.48	ug/L #	74
23) TBA	2.510	59	1676	6.20	ug/L	83
24) Acrylonitrile	2.607	53	1775	2.04	ug/L	93
25) Methyl-t-Butyl Ether	2.662	73	2155	0.43	ug/L	89
26) trans-1,2-Dichloroethene	2.638	96	531	0.35	ug/L	93
27) 1,1-Dicethane	3.071	63	1362	0.50	ug/L	95
29) DIPE	3.174	45	2357	0.44	ug/L #	75
30) 2-Chloro-1,3-Butadiene	3.174	53	1018	0.44	ug/L	88
31) ETBE	3.631	59	2250m	0.46	ug/L	
32) 2,2-Dichloropropane	3.784	77	653	0.30	ug/L #	74
33) cis-1,2-Dichloroethene	3.790	96	821	0.48	ug/L	89
34) 2-Butanone	3.851	43	836	0.65	ug/L	86
35) Propionitrile	3.906	54	766	2.16	ug/L	82
36) Bromochloromethane	4.113	130	532	0.47	ug/L #	81
37) Methacrylonitrile	4.119	67	390	0.45	ug/L #	69
38) Tetrahydrofuran	4.241	42	541	0.72	ug/L #	65
39) Chloroform	4.290	83	1236m	0.43	ug/L	
40) 1,1,1-Trichloroethane	4.558	97	936m	0.39	ug/L	
41) TAME	5.515	73	2015m	0.43	ug/L	
43) Cyclohexane	4.643	41	1164	0.67	ug/L #	36

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1917.D
 Acq On : 5 Oct 2017 1:05 pm
 Operator : F. NAEGLER
 Sample : 0.5 PPB
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:41:30 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) Carbontetrachloride	4.851	117	545	0.30	ug/L #	80
46) 1,1-Dichloropropene	4.863	75	1038	0.47	ug/L	80
48) Benzene	5.229	78	2865	0.45	ug/L	85
49) 1,2-Dichloroethane	5.259	62	1242	0.51	ug/L	86
51) n-Heptane	5.808	43	1017	0.51	ug/L #	82
52) 1-Butanol	6.381	56	696	9.15	ug/L	89
53) Trichloroethene	6.302	130	961	0.51	ug/L	89
54) Methylcyclohexane	6.564	55	1070	0.51	ug/L #	61
55) 1,2-Dicloropropane	6.606	63	874	0.50	ug/L	72
56) Dibromomethane	6.765	93	552	0.49	ug/L #	67
57) 1,4-Dioxane	6.869	88	206	5.71	ug/L #	49
58) Methyl Methacrylate	6.887	69	344	0.24	ug/L	88
59) Bromodichloromethane	7.033	83	810	0.41	ug/L	82
62) cis-1,3-Dichloropropene	8.326	75	713	0.30	ug/L	72
63) 4-Methyl-2-pentanone	7.868	43	857	0.38	ug/L	94
65) Toluene	8.027	91	2824	0.40	ug/L	89
66) trans-1,3-Dichloropropene	8.326	75	713	0.32	ug/L	70
67) Ethyl Methacrylate	8.509	69	705m	0.29	ug/L	
68) 1,1,2-Trichloroethane	8.527	97	651	0.41	ug/L #	77
71) Tetrachloroethene	8.673	164	654	0.48	ug/L #	58
72) 2-Hexanone	8.874	43	760m	0.46	ug/L	
73) 1,3-Dichloropropane	8.716	76	1244	0.46	ug/L	86
74) Dibromochloromethane	8.966	129	472m	0.31	ug/L	
75) N-Butyl Acetate	9.057	43	993	0.30	ug/L	94
76) 1,2-Dibromoethane	9.063	107	592	0.38	ug/L	97
77) 3-Chlorobenzotrifluoride	9.655	180	1099	0.43	ug/L #	87
78) Chlorobenzene	9.612	112	1874	0.43	ug/L	95
79) 4-Chlorobenzotrifluoride	9.716	180	981m	0.44	ug/L	
80) 1,1,1,2-Tetrachloroethane	9.710	131	539	0.36	ug/L	88
81) Ethylbenzene	9.752	106	930	0.41	ug/L #	85
82) (m+p)Xylene	9.874	106	2407	0.85	ug/L #	79
83) o-Xylene	10.252	106	1039	0.38	ug/L	96
84) Styrene	10.264	104	1670	0.37	ug/L	86
85) Bromoform	10.417	173	218m	0.21	ug/L	
86) 2-Chlorobenzotrifluoride	10.520	180	1097	0.44	ug/L	88
87) Isopropylbenzene	10.612	105	2827	0.39	ug/L	94
88) Cyclohexanone	10.661	55	2178	5.30	ug/L	99
91) 1,1,2,2-Tetrachloroethane	10.886	83	800	0.40	ug/L	91
92) Bromobenzene	10.850	156	708	0.38	ug/L #	60
93) 1,2,3-Trichloropropane	10.904	110	371	0.53	ug/L #	68
94) n-Propylbenzene	10.978	91	3227	0.42	ug/L	93
95) 2-Chlorotoluene	11.039	91	2007	0.44	ug/L	99
96) 3-Chlorotoluene	11.093	91	2139	0.45	ug/L	92
97) 4-Chlorotoluene	11.136	91	2630	0.49	ug/L	99
98) 1,3,5-Trimethylbenzene	11.142	105	2251	0.41	ug/L	97
99) tert-Butylbenzene	11.423	119	2209	0.44	ug/L	99
100) 1,2,4-Trimethylbenzene	11.465	105	2128	0.38	ug/L	93
101) 3,4-Dichlorobenzotrifl...	11.532	214	858	0.46	ug/L #	79
102) sec-Butylbenzene	11.612	105	2823	0.39	ug/L	98
103) p-Isopropyltoluene	11.740	119	2457	0.41	ug/L #	75
104) 1,3-Dclbenz	11.685	146	1513	0.44	ug/L	94
105) 1,4-Dclbenz	11.758	146	1550	0.43	ug/L	76
106) 2,4-Dichlorobenzotrifl...	11.831	214	709	0.41	ug/L	93
107) 2,5-Dichlorobenzotrifl...	11.874	214	869	0.46	ug/L	99
108) n-Butylbenzene	12.081	91	2055	0.38	ug/L	91
109) 1,2-Dclbenz	12.069	146	1527	0.45	ug/L	93

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1917.D
Acq On : 5 Oct 2017 1:05 pm
Operator : F. NAEGLER
Sample : 0.5 PPB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:41:30 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration

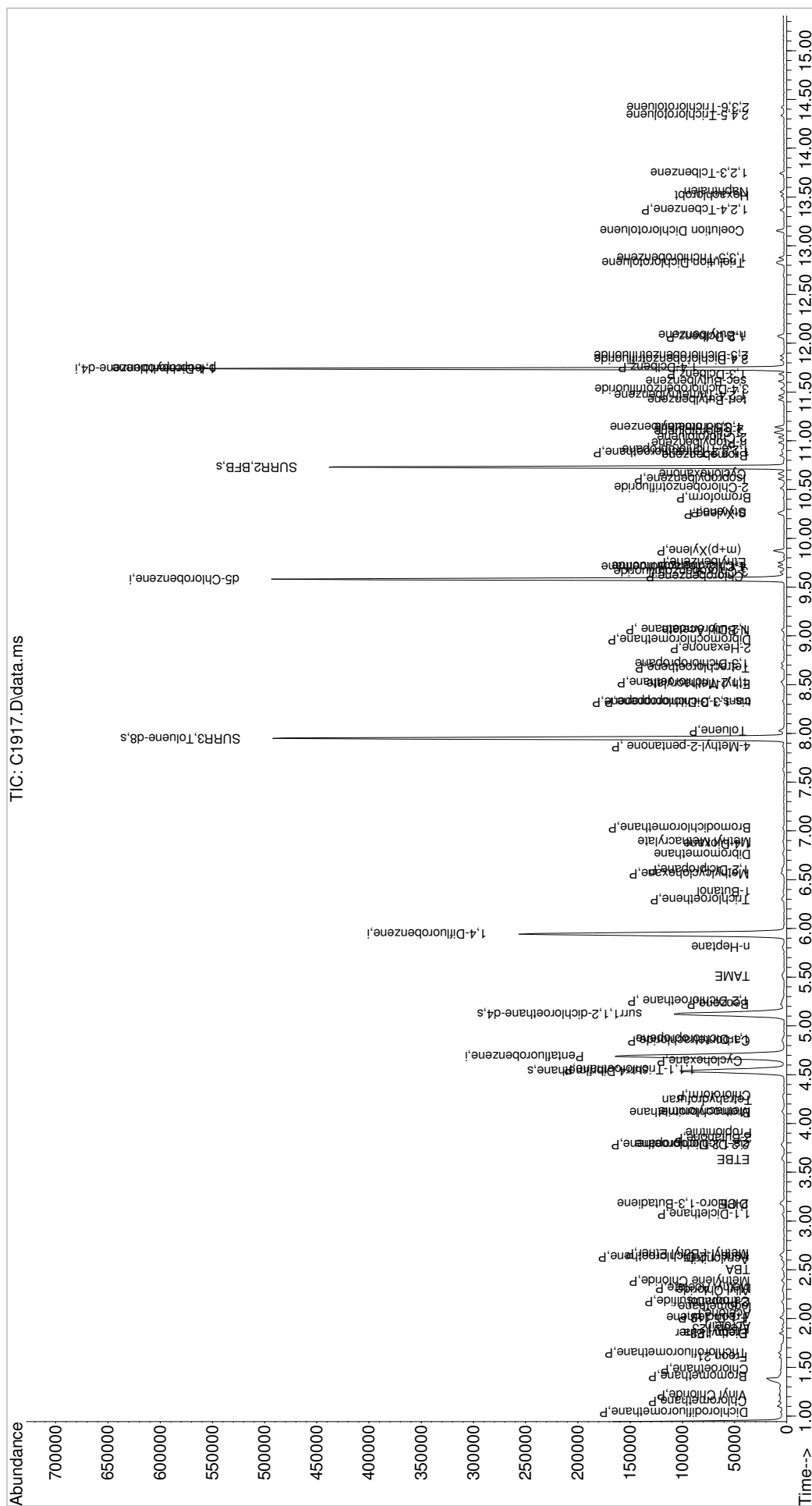
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) Trielution Dichlorotol...	12.825	125	3384	1.15	ug/L	91
112) 1,3,5-Trichlorobenzene	12.880	180	1107	0.42	ug/L	90
113) Coelution Dichlorotoluene	13.154	125	2381	0.74	ug/L	94
114) 1,2,4-Tcbenzene	13.367	180	1104	0.44	ug/L #	68
115) Hexachlorobt	13.514	225	402	0.37	ug/L	89
116) Naphthalen	13.556	128	2151	0.30	ug/L	88
117) 1,2,3-Tclbenzene	13.745	180	1043	0.40	ug/L	93
118) 2,4,5-Trichlorotoluene	14.337	159	704	0.41	ug/L	82
119) 2,3,6-Trichlorotoluene	14.422	159	544	0.34	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

(QT Reviewed)

ALS Vial : 5 Sample Multiplier: 1

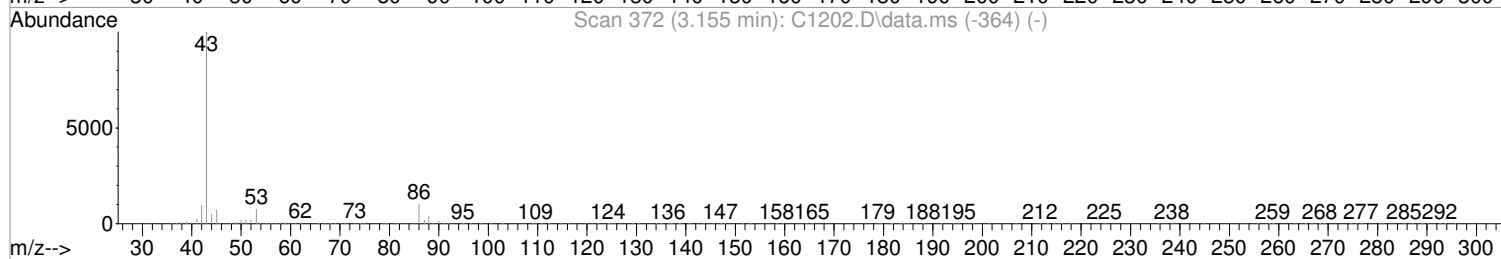
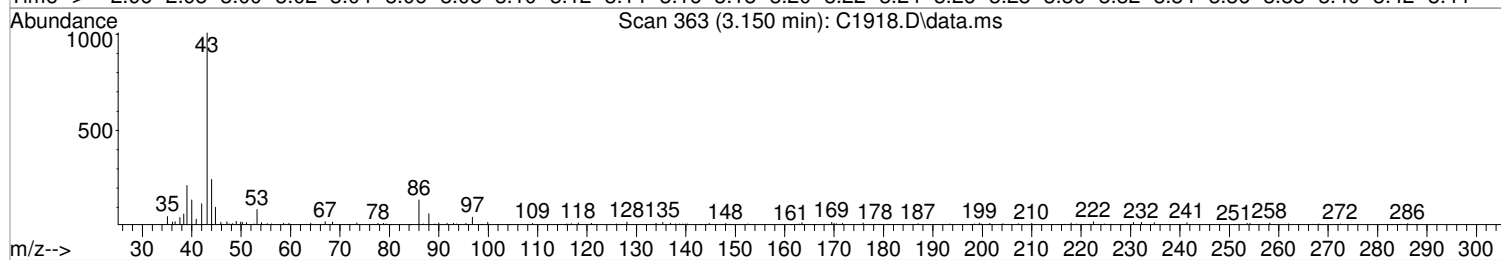
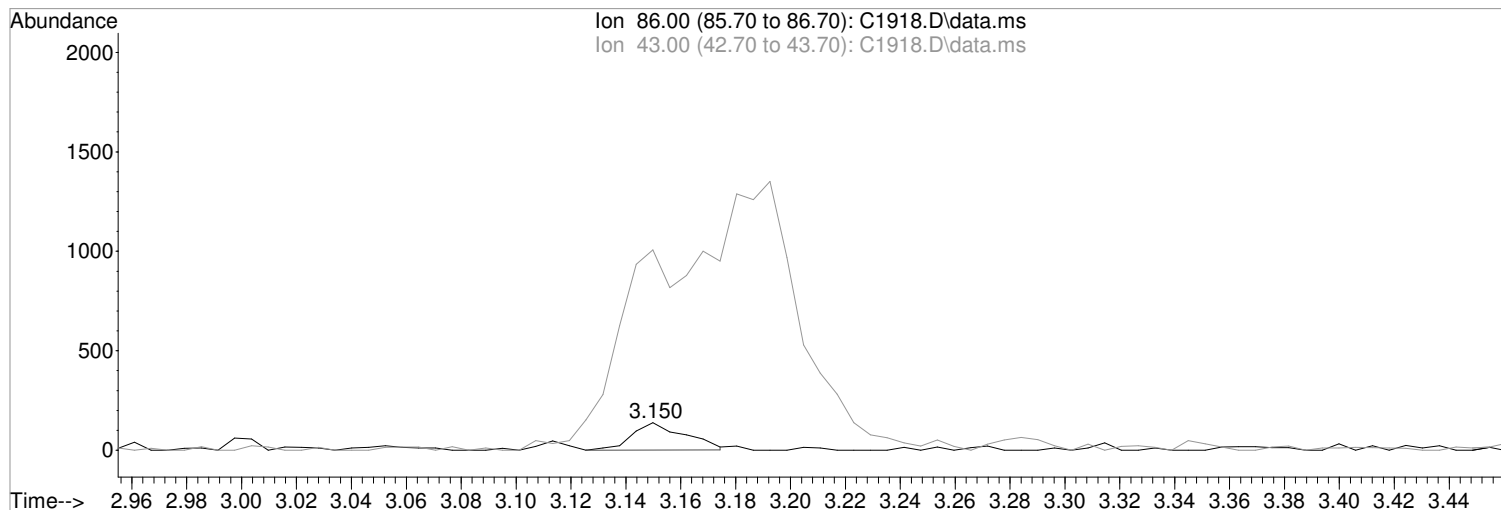
Quant Time: Oct 05 16:41:30 2017
Quant Method : I:\ACQDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1918.D
Acq On : 5 Oct 2017 1:27 pm
Operator : F. NAEGLER
Sample : 1.0 PPB
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:39 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1918.D\data.ms

(28) Vinyl Acetate

3.150min (-0.004) 0.57 ug/L m

response 184

Ion	Exp%	Act%
86.00	100	100
43.00	980.10	729.71#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

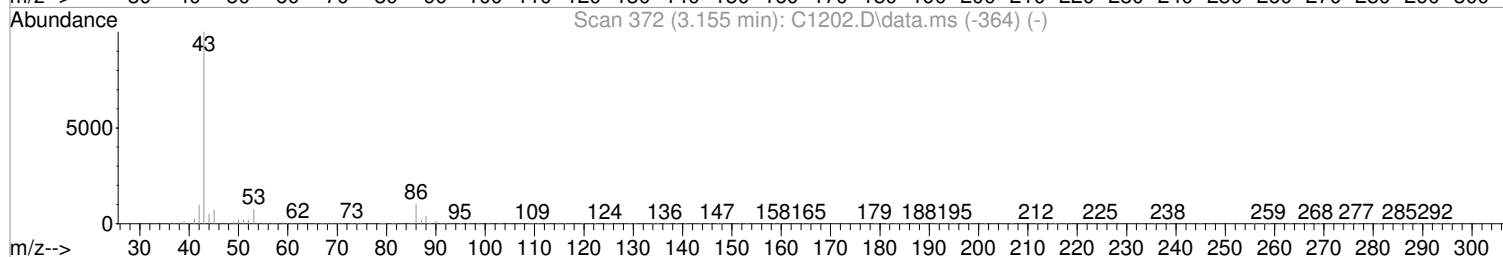
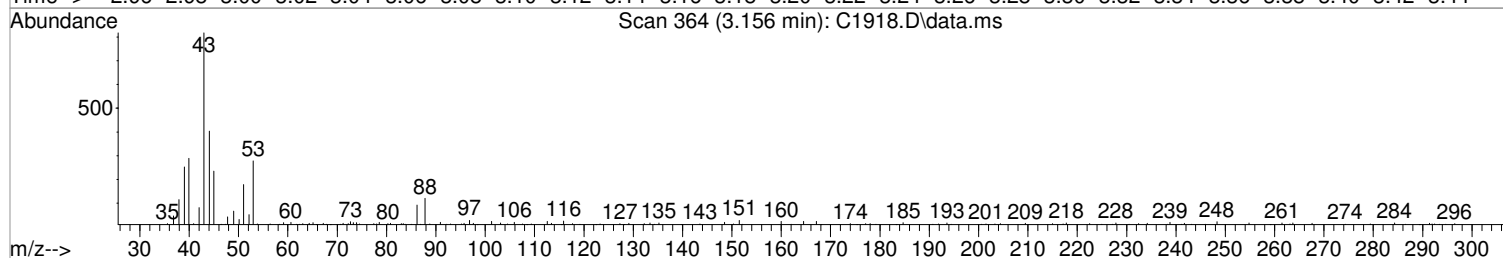
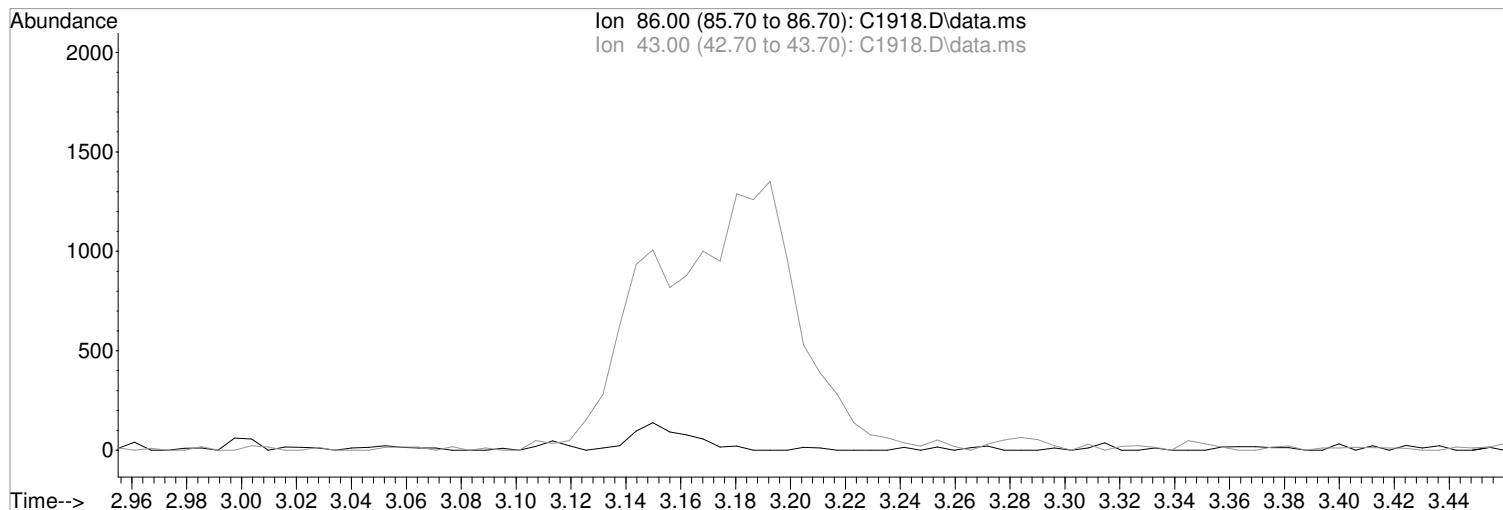
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1918.D
Acq On : 5 Oct 2017 1:27 pm
Operator : F. NAEGLER
Sample : 1.0 PPB
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:39 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1918.D\data.ms

(28) Vinyl Acetate

Manual Integration:

3.154min (-3.154) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
86.00	100	0.00
43.00	980.10	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

10/05/17

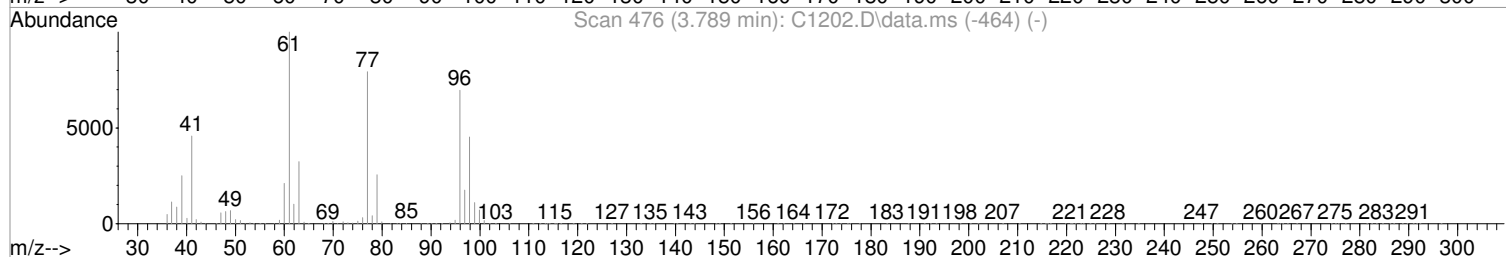
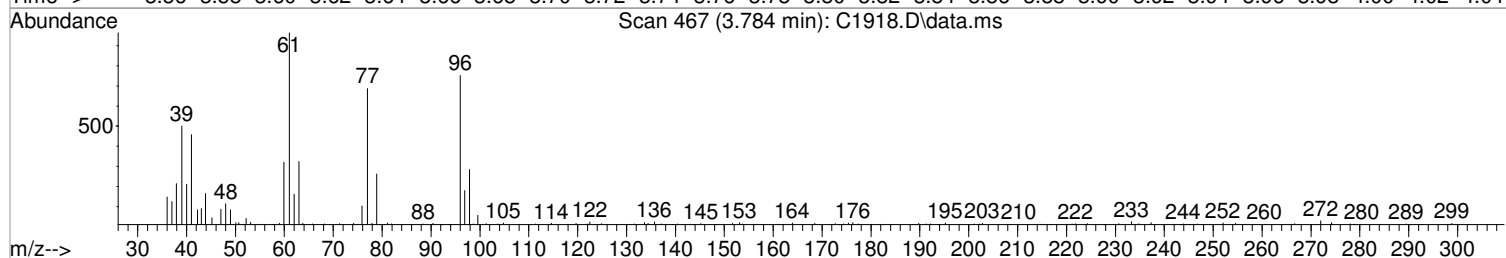
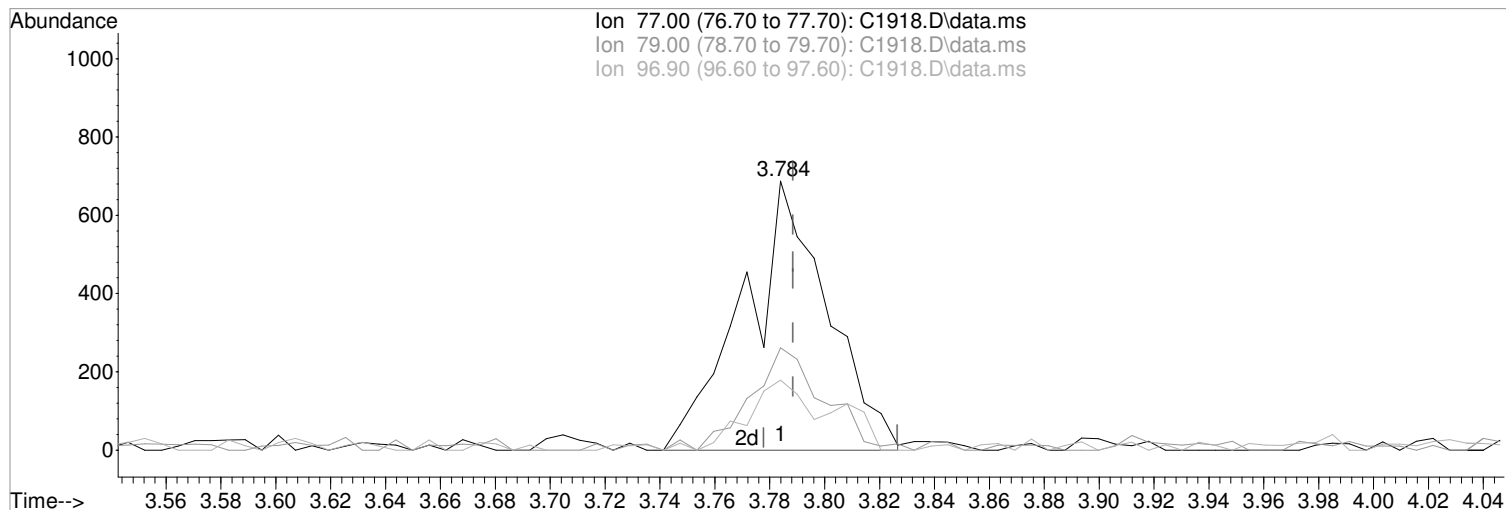
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1918.D
Acq On : 5 Oct 2017 1:27 pm
Operator : F. NAEGLER
Sample : 1.0 PPB
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:39 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1918.D\data.ms

(32) 2,2-Dichloropropane

3.784min (-0.005) 0.68 ug/L m

response 1458

Ion	Exp%	Act%
77.00	100	100
79.00	32.20	37.99
96.90	22.20	26.06
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

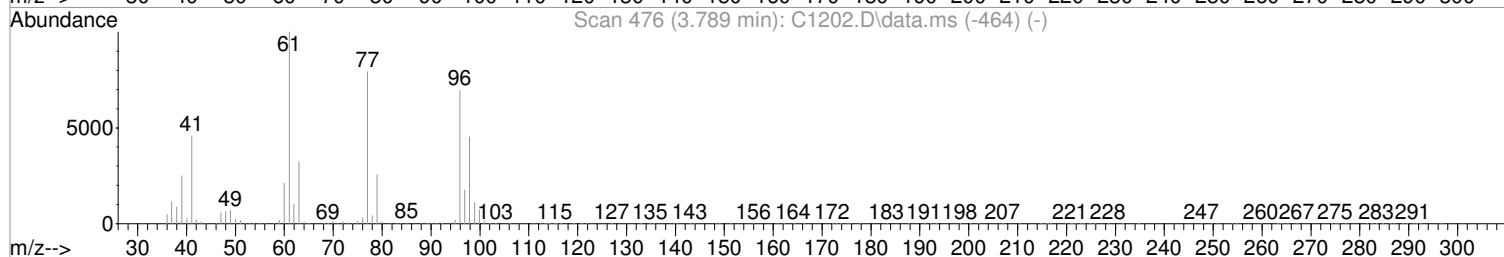
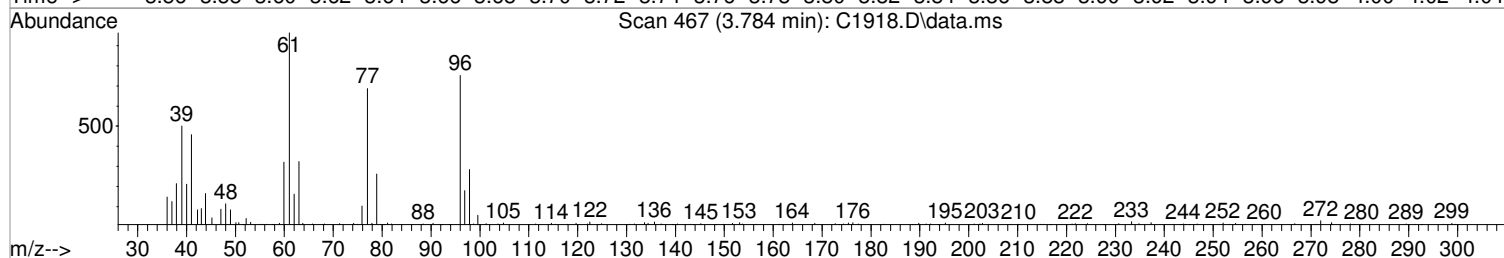
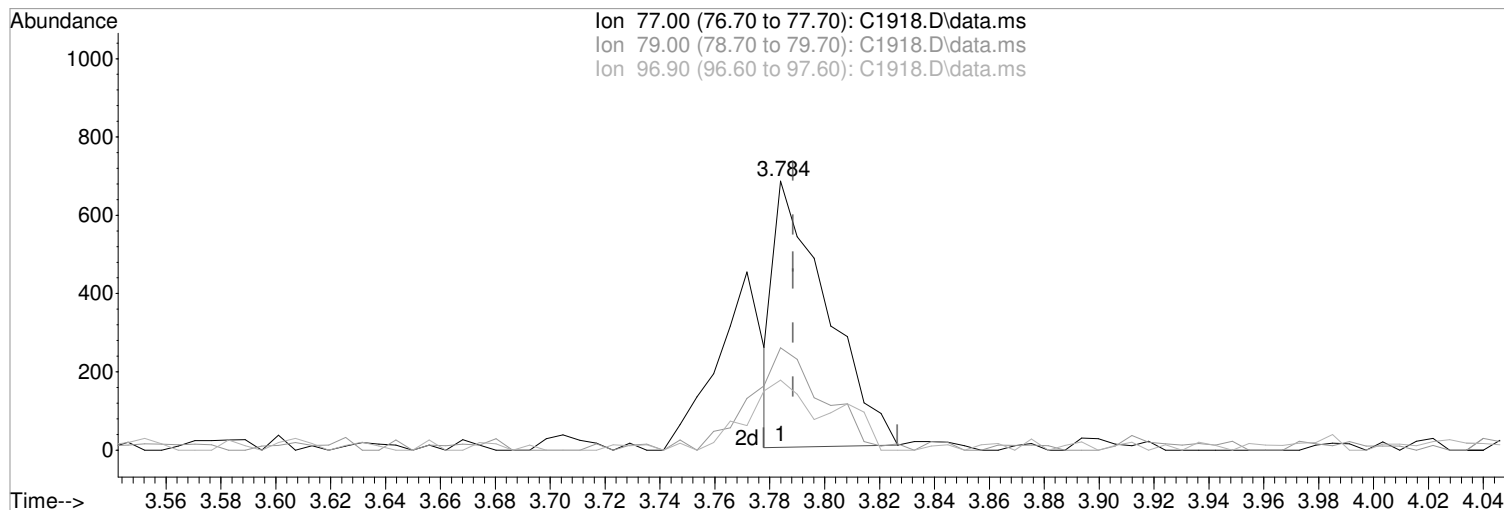
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1918.D
Acq On : 5 Oct 2017 1:27 pm
Operator : F. NAEGLER
Sample : 1.0 PPB
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:39 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1918.D\data.ms

(32) 2,2-Dichloropropane
3.784min (-0.005) 0.42 ug/L
response 907

Manual Integration:

Before

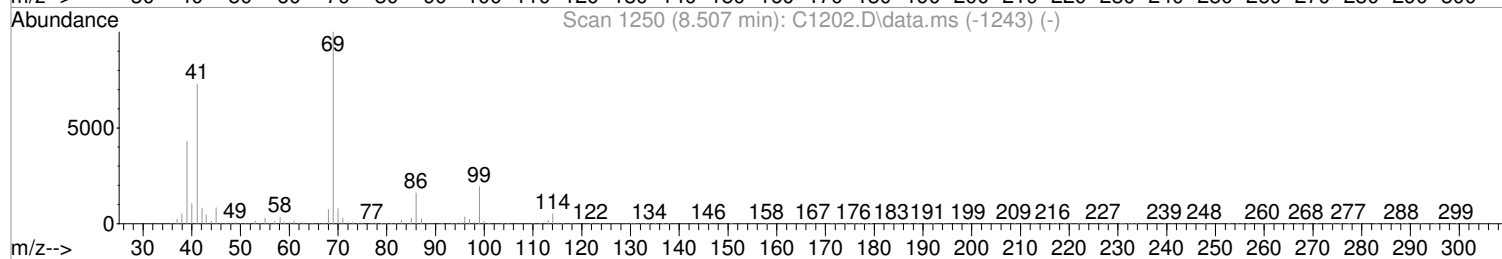
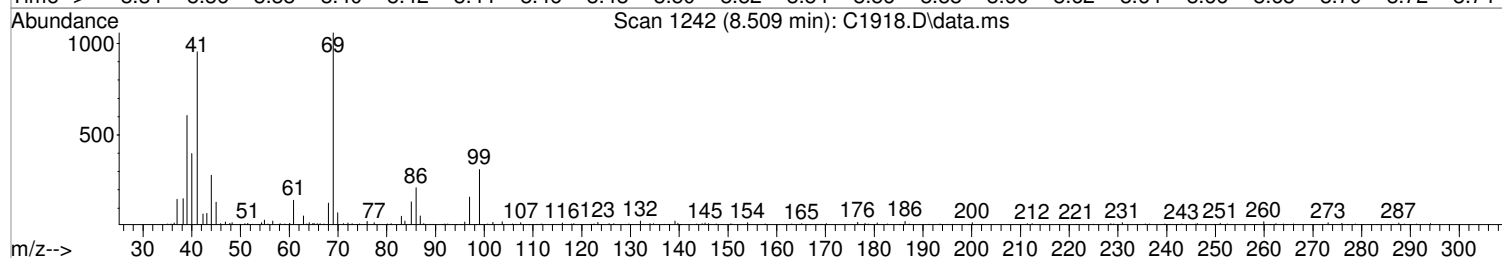
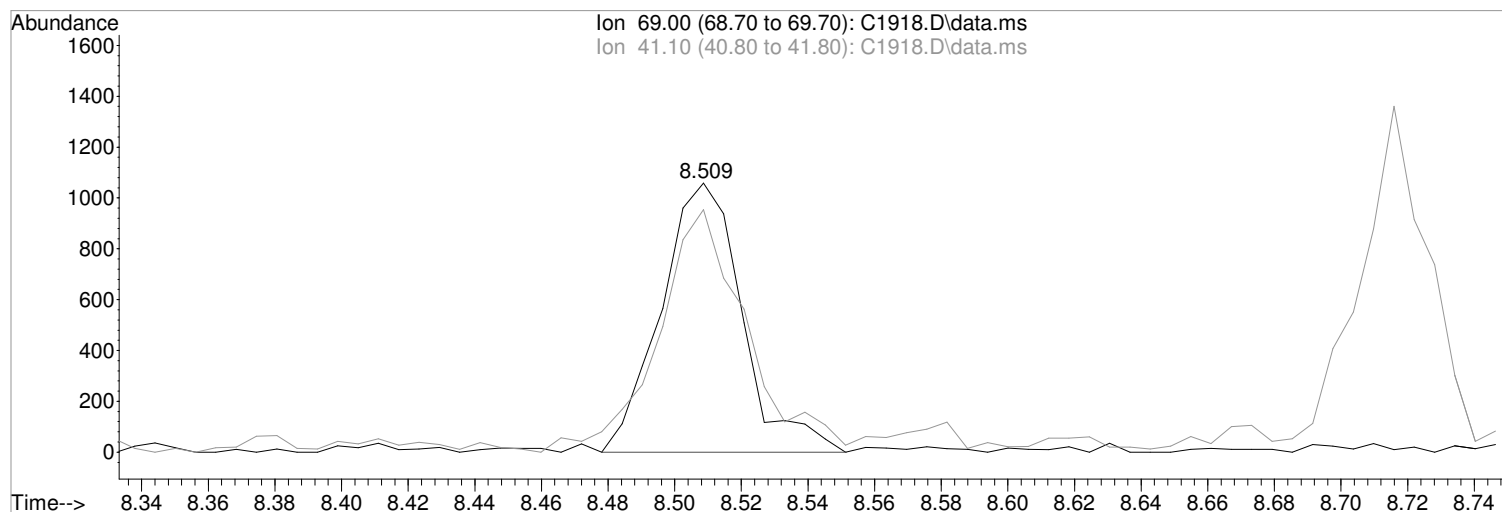
10/05/17

Ion	Exp%	Act%
77.00	100	100
79.00	32.20	39.59
96.90	22.20	26.06
0.00	0.00	0.00

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1918.D
Acq On : 5 Oct 2017 1:27 pm
Operator : F. NAEGLER
Sample : 1.0 PPB
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:39 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1918.D\data.ms

(67) Ethyl Methacrylate

8.509min (-0.005) 0.78 ug/L m

response 1786

Ion	Exp%	Act%
69.00	100	100
41.10	73.10	90.17
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

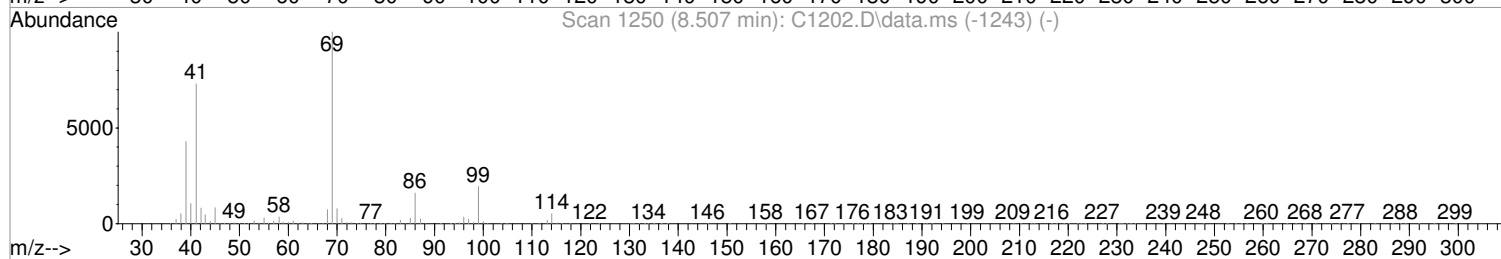
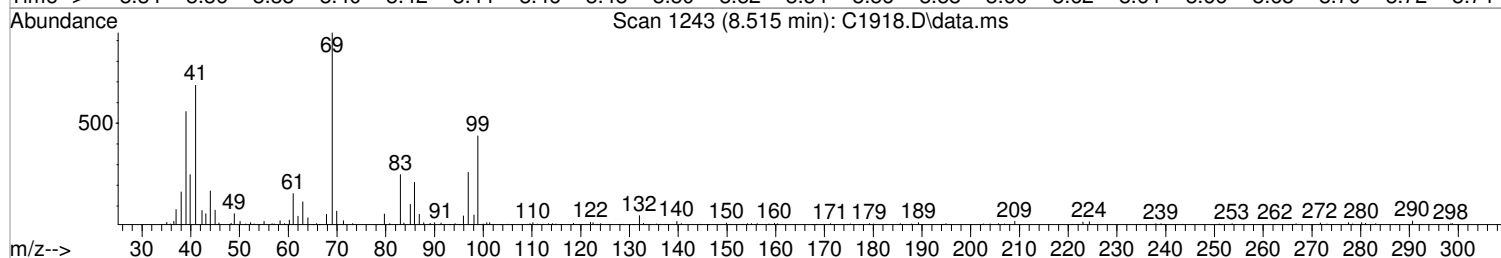
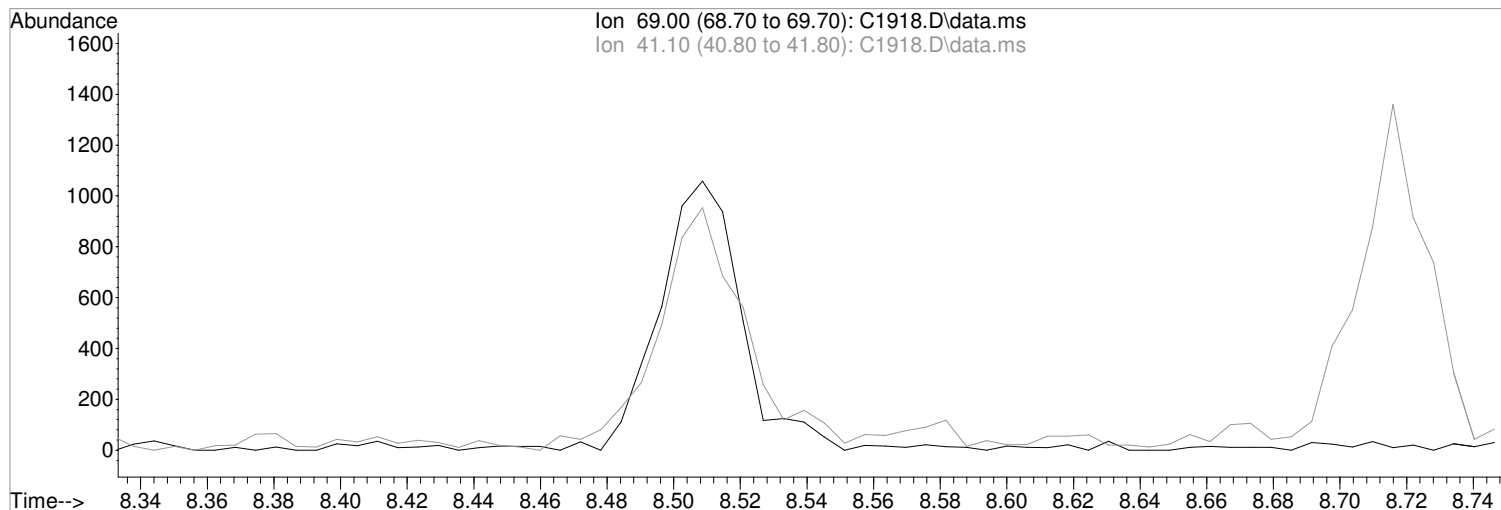
Poor integration.

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1918.D
Acq On : 5 Oct 2017 1:27 pm
Operator : F. NAEGLER
Sample : 1.0 PPB
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:39 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1918.D\data.ms

(67) Ethyl Methacrylate

Manual Integration:

8.513min (-8.513) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%

10/05/17

69.00	100	0.00

41.10	73.10	0.00#

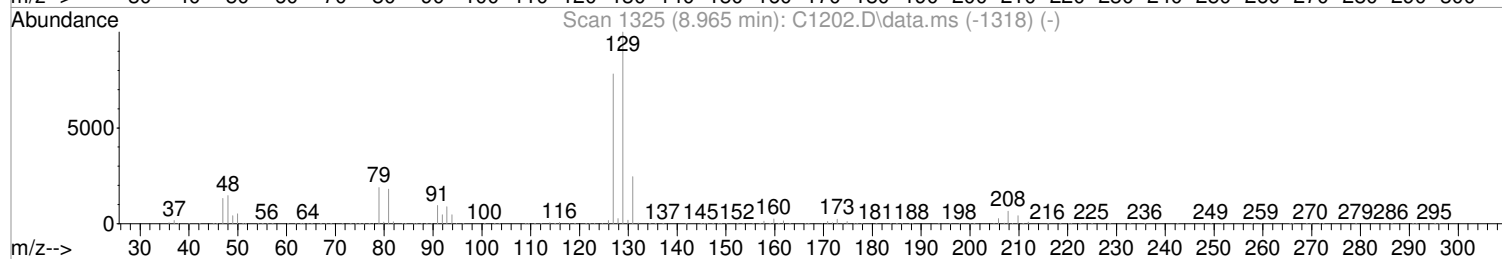
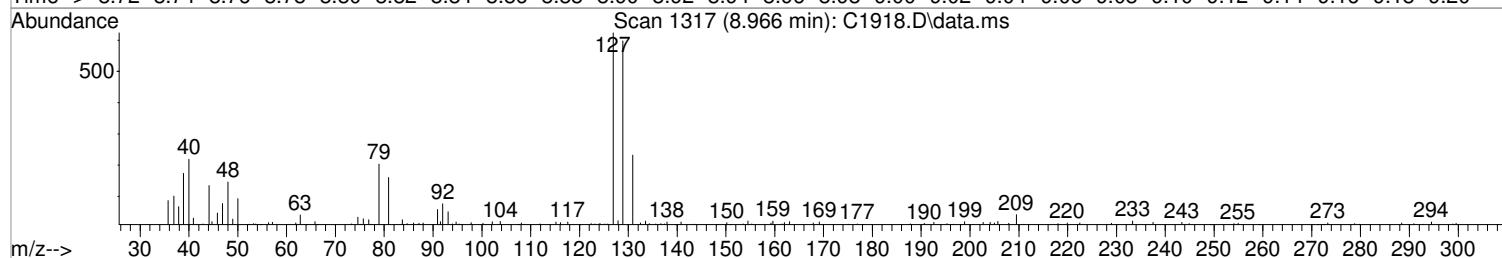
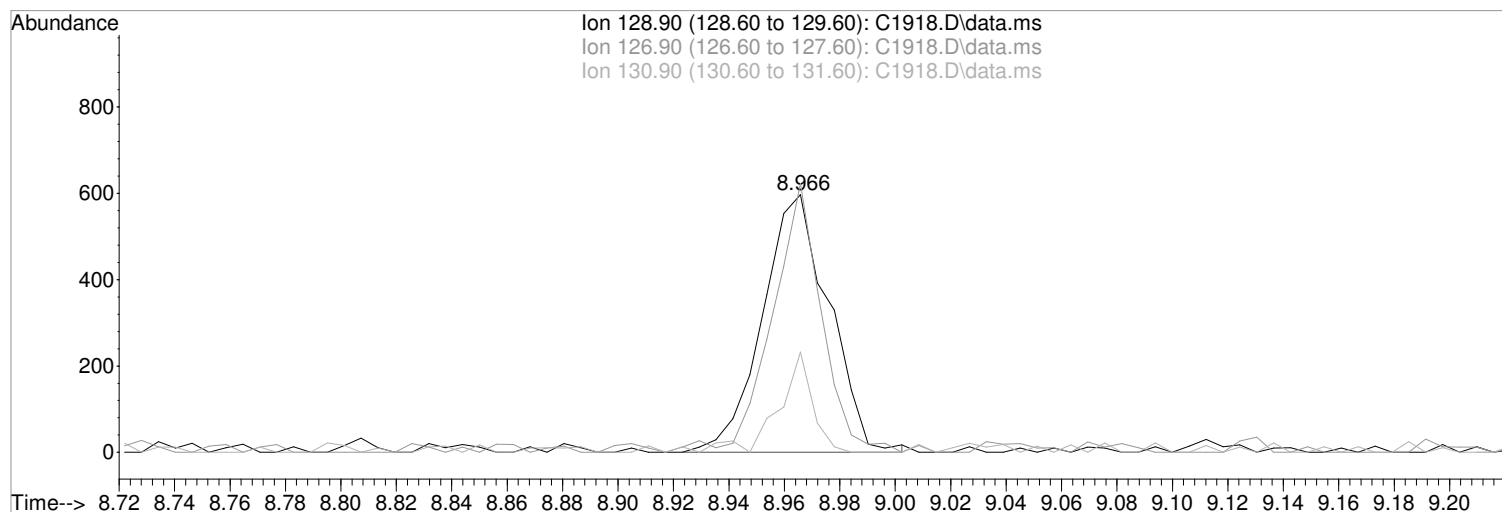
0.00	0.00	0.00

0.00	0.00	0.00

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1918.D
Acq On : 5 Oct 2017 1:27 pm
Operator : F. NAEGLER
Sample : 1.0 PPB
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:39 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1918.D\data.ms

(74) Dibromochloromethane (P)

8.966min (-0.004) 0.67 ug/L m

response 997

Ion	Exp%	Act%

128.90	100	100

126.90	78.10	104.36#

130.90	24.60	38.86

0.00	0.00	0.00

Manual Integration:

After

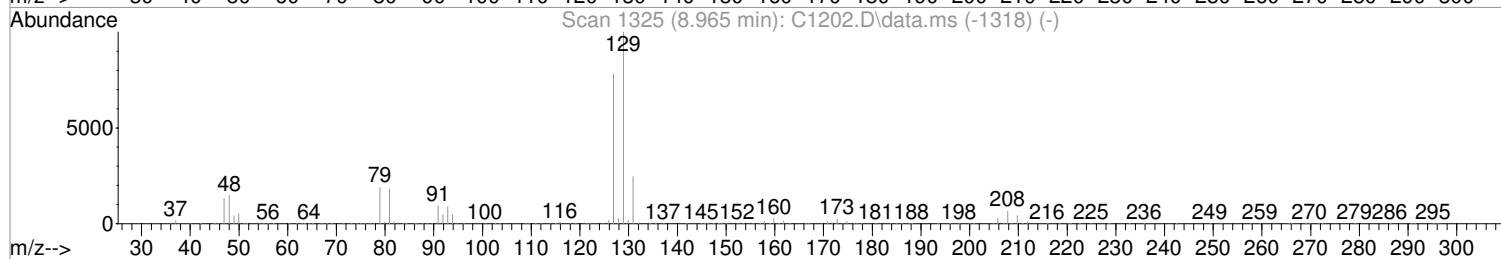
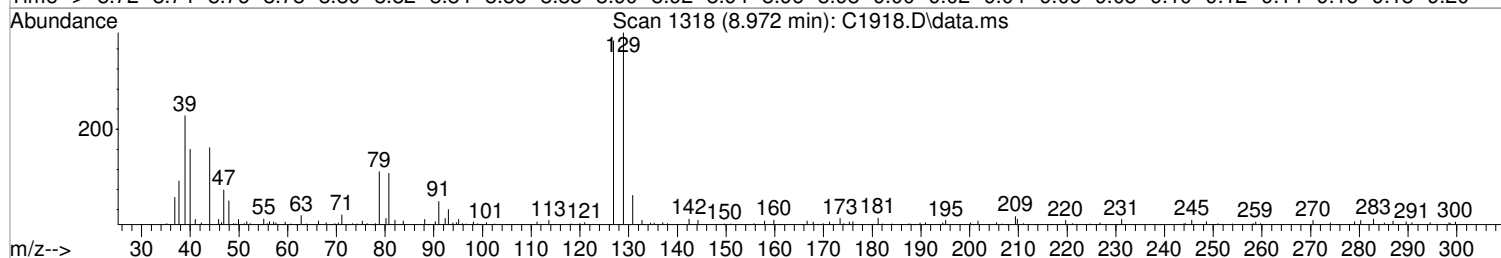
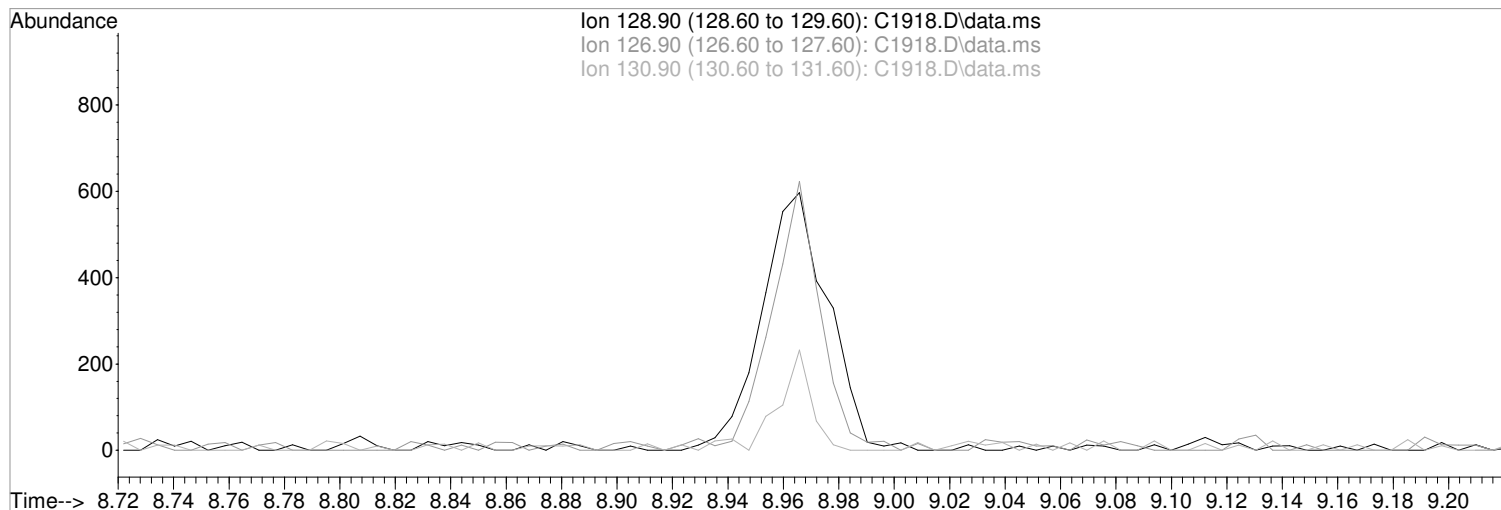
Poor integration.

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1918.D
Acq On : 5 Oct 2017 1:27 pm
Operator : F. NAEGLER
Sample : 1.0 PPB
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:39 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1918.D\data.ms

(74) Dibromochloromethane (P)

Manual Integration:

8.970min (-8.970) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%

10/05/17

128.90	100	0.00

126.90	78.10	0.00#

130.90	24.60	0.00#

0.00	0.00	0.00

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1918.D
 Acq On : 5 Oct 2017 1:27 pm
 Operator : F. NAEGLER
 Sample : 1.0 PPB
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:43:58 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	153565	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	225363	50.00	ug/L	-0.01
70) d5-Chlorobenzene	9.582	117	195412	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	101756	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	73187	48.50	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	97.00%	
47) surr1,1,2-dichloroetha...	5.125	65	101729	56.47	ug/L	-0.01
Spiked Amount	50.000	Range 73 - 125	Recovery	=	112.94%	
64) SURR3,Toluene-d8	7.954	98	283684	48.92	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	97.84%	
69) SURR2,BFB	10.728	95	99262	44.27	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	88.54%	
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	1.041	85	1533	0.77	ug/L	89
3) Chloromethane	1.150	50	2092	0.85	ug/L	90
4) Vinyl Chloride	1.217	62	1896	0.91	ug/L	95
5) Bromomethane	1.406	94	1225	0.82	ug/L	86
6) Chloroethane	1.479	64	1116	0.83	ug/L	94
7) Freon 21	1.607	67	3443	1.00	ug/L	88
8) Trichlorofluoromethane	1.644	101	2507	0.97	ug/L	96
9) Diethyl Ether	1.851	59	1387	1.03	ug/L	92
10) Freon 123a	1.851	67	1901	1.05	ug/L	97
11) Freon 123	1.888	83	2135	1.02	ug/L	88
12) Acrolein	1.937	56	1935	4.62	ug/L	88
13) 1,1-Dicethene	2.010	96	1357	0.99	ug/L	85
14) Freon 113	2.016	101	1256	0.93	ug/L	83
15) Acetone	2.046	43	1468	1.47	ug/L	91
16) 2-Propanol	2.168	45	2340	13.90	ug/L	96
17) Iodomethane	2.120	142	660	0.50	ug/L	97
18) Carbon Disulfide	2.174	76	2941	0.78	ug/L	97
19) Acetonitrile	2.266	40	512	3.11	ug/L #	68
20) Allyl Chloride	2.290	76	635	1.05	ug/L #	90
21) Methyl Acetate	2.315	43	1805	0.76	ug/L	95
22) Methylene Chloride	2.394	84	1514	0.94	ug/L	95
23) TBA	2.516	59	4000	15.13	ug/L	91
24) Acrylonitrile	2.607	53	4186	4.91	ug/L	98
25) Methyl-t-Butyl Ether	2.656	73	4247	0.87	ug/L	92
26) trans-1,2-Dichloroethene	2.644	96	1501	1.02	ug/L #	84
27) 1,1-Dicethane	3.071	63	2458	0.92	ug/L	97
28) Vinyl Acetate	3.150	86	184m	0.57	ug/L	
29) DIPE	3.186	45	5238	1.01	ug/L	95
30) 2-Chloro-1,3-Butadiene	3.180	53	2233	0.99	ug/L	92
31) ETBE	3.638	59	4536	0.96	ug/L	89
32) 2,2-Dichloropropane	3.784	77	1458m	0.68	ug/L	
33) cis-1,2-Dichloroethene	3.784	96	1637	0.97	ug/L	87
34) 2-Butanone	3.845	43	1342	1.07	ug/L	93
35) Propionitrile	3.888	54	1825	5.26	ug/L	100
36) Bromochloromethane	4.131	130	1058	0.96	ug/L	97
37) Methacrylonitrile	4.131	67	918	1.08	ug/L	85
38) Tetrahydrofuran	4.229	42	910	1.23	ug/L	81
39) Chloroform	4.284	83	2763	0.98	ug/L	80
40) 1,1,1-Trichloroethane	4.552	97	1952	0.84	ug/L	92

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1918.D
 Acq On : 5 Oct 2017 1:27 pm
 Operator : F. NAEGLER
 Sample : 1.0 PPB
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:43:58 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.521	73	3999	0.87	ug/L	97
43) Cyclohexane	4.637	41	1412	0.86	ug/L	81
45) Carbontetrachloride	4.845	117	979	0.56	ug/L #	83
46) 1,1-Dichloropropene	4.851	75	2144	1.02	ug/L	92
48) Benzene	5.229	78	5559	0.92	ug/L	84
49) 1,2-Dichloroethane	5.265	62	2634	1.13	ug/L	92
50) Iso-Butyl Alcohol	5.271	43	1546	12.46	ug/L #	72
51) n-Heptane	5.808	43	1876	0.98	ug/L	95
52) 1-Butanol	6.381	56	1723	23.73	ug/L	98
53) Trichloroethene	6.308	130	1699	0.94	ug/L #	84
54) Methylcyclohexane	6.576	55	2002	0.99	ug/L #	66
55) 1,2-Dicloropropane	6.607	63	1609	0.96	ug/L	78
56) Dibromomethane	6.771	93	908	0.84	ug/L #	70
57) 1,4-Dioxane	6.856	88	589	17.10	ug/L #	68
58) Methyl Methacrylate	6.887	69	952	0.70	ug/L	91
59) Bromodichloromethane	7.033	83	1506	0.80	ug/L	92
60) 2-Nitropropane	7.344	41	561	1.20	ug/L #	80
61) 2-Chloroethylvinyl Ether	7.497	63	405	1.07	ug/L	69
62) cis-1,3-Dichloropropene	8.332	75	1288	0.57	ug/L	94
63) 4-Methyl-2-pentanone	7.868	43	1899	0.89	ug/L	99
65) Toluene	8.033	91	5837	0.87	ug/L	98
66) trans-1,3-Dichloropropene	8.332	75	1288	0.60	ug/L	96
67) Ethyl Methacrylate	8.509	69	1786m	0.78	ug/L	
68) 1,1,2-Trichloroethane	8.533	97	1505	0.99	ug/L	87
71) Tetrachloroethene	8.679	164	1132	0.86	ug/L #	88
72) 2-Hexanone	8.874	43	1495	0.94	ug/L	94
73) 1,3-Dichloropropane	8.716	76	2429	0.93	ug/L #	80
74) Dibromochloromethane	8.966	129	997m	0.67	ug/L	
75) N-Butyl Acetate	9.063	43	2222	0.69	ug/L	98
76) 1,2-Dibromoethane	9.057	107	1173	0.78	ug/L	81
77) 3-Chlorobenzotrifluoride	9.649	180	1937	0.78	ug/L #	93
78) Chlorobenzene	9.612	112	4160	0.99	ug/L	94
79) 4-Chlorobenzotrifluoride	9.716	180	1781	0.83	ug/L	92
80) 1,1,1,2-Tetrachloroethane	9.710	131	1135	0.79	ug/L	85
81) Ethylbenzene	9.746	106	1933	0.88	ug/L #	73
82) (m+p)Xylene	9.874	106	4408	1.61	ug/L #	70
83) o-Xylene	10.252	106	2429	0.91	ug/L #	68
84) Styrene	10.264	104	3500	0.81	ug/L	98
85) Bromoform	10.417	173	604	0.61	ug/L	71
86) 2-Chlorobenzotrifluoride	10.520	180	1916	0.79	ug/L	90
87) Isopropylbenzene	10.606	105	5644	0.82	ug/L	92
88) Cyclohexanone	10.661	55	5212	13.12	ug/L	89
89) trans-1,4-Dichloro-2-B...	10.935	53	373	0.76	ug/L #	41
91) 1,1,2,2-Tetrachloroethane	10.886	83	1708	0.89	ug/L	99
92) Bromobenzene	10.850	156	1614	0.90	ug/L #	84
93) 1,2,3-Trichloropropane	10.904	110	710	1.05	ug/L	93
94) n-Propylbenzene	10.984	91	6508	0.88	ug/L	95
95) 2-Chlorotoluene	11.033	91	4180	0.95	ug/L	94
96) 3-Chlorotoluene	11.093	91	4280	0.93	ug/L	94
97) 4-Chlorotoluene	11.136	91	5055	0.97	ug/L	94
98) 1,3,5-Trimethylbenzene	11.142	105	4490	0.84	ug/L	91
99) tert-Butylbenzene	11.423	119	4305	0.89	ug/L	95
100) 1,2,4-Trimethylbenzene	11.459	105	4185	0.77	ug/L	97
101) 3,4-Dichlorobenzotrifl...	11.532	214	1724	0.97	ug/L	79
102) sec-Butylbenzene	11.612	105	5552	0.79	ug/L	99
103) p-Isopropyltoluene	11.740	119	4631	0.80	ug/L	88

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1918.D
 Acq On : 5 Oct 2017 1:27 pm
 Operator : F. NAEGLER
 Sample : 1.0 PPB
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:43:58 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

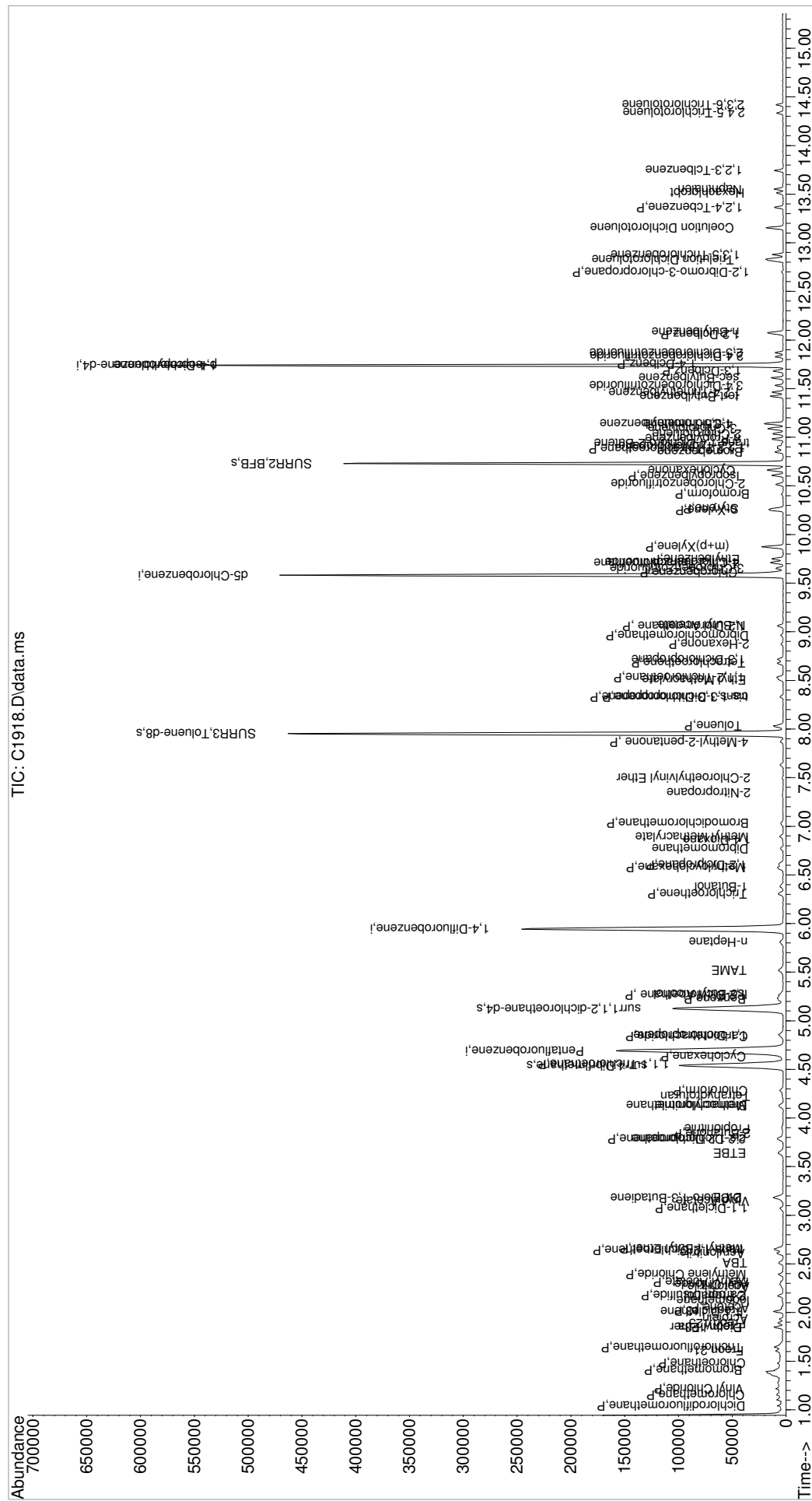
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	2996	0.90	ug/L	92
105) 1,4-Dclbenz	11.758	146	2864	0.82	ug/L	85
106) 2,4-Dichlorobenzotrifl...	11.831	214	1389	0.84	ug/L #	75
107) 2,5-Dichlorobenzotrifl...	11.868	214	1592	0.87	ug/L	88
108) n-Butylbenzene	12.081	91	4267	0.82	ug/L	92
109) 1,2-Dclbenz	12.063	146	2999	0.92	ug/L	96
110) 1,2-Dibromo-3-chloropr...	12.697	157	237	0.49	ug/L #	66
111) Trielution Dichlorotol...	12.831	125	6944	2.43	ug/L	89
112) 1,3,5-Trichlorobenzene	12.880	180	2217	0.87	ug/L	97
113) Coelution Dichlorotoluene	13.154	125	4954	1.59	ug/L	88
114) 1,2,4-Tcbenzene	13.361	180	1960	0.81	ug/L	92
115) Hexachlorobt	13.514	225	946	0.89	ug/L	92
116) Naphthalen	13.550	128	4701	0.67	ug/L	99
117) 1,2,3-Tclbenzene	13.745	180	1791	0.71	ug/L	89
118) 2,4,5-Trichlorotoluene	14.337	159	1194	0.73	ug/L	93
119) 2,3,6-Trichlorotoluene	14.422	159	1198	0.77	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1918.D
Acq On : 5 Oct 2017 1:27 pm
Operator : F. NAEGLER
Sample : 1.0 PPB
Misc :
ALS Vial : 6 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:43:58 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



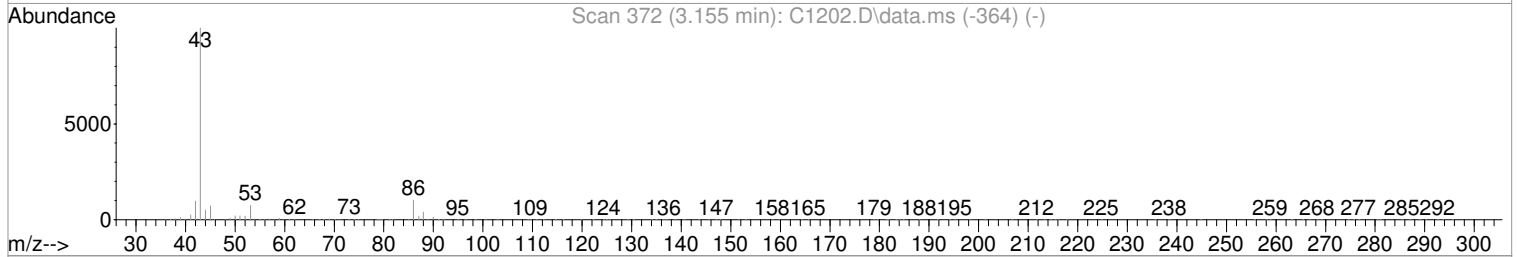
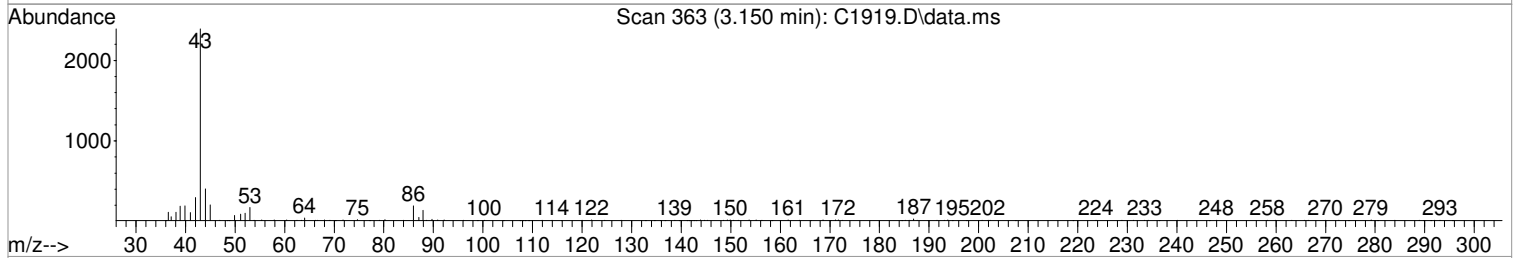
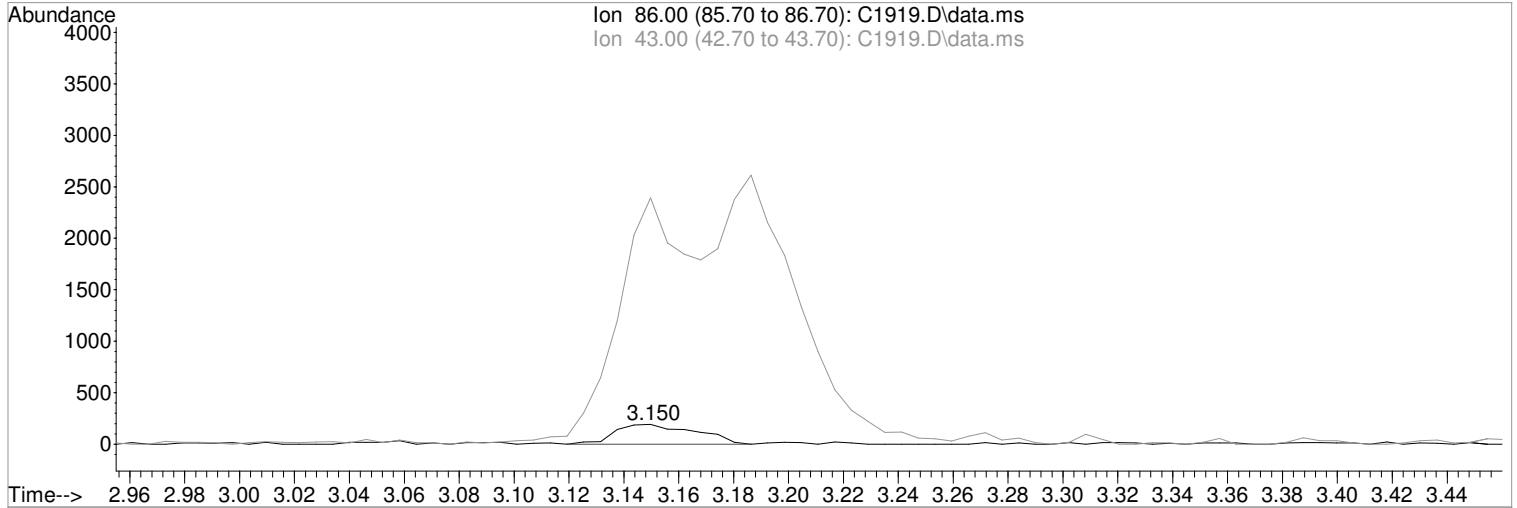
Quantitation Report (Qedit)

1st *BA* 10/09/17
2nd *FJ* 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1919.D
Acq On : 5 Oct 2017 1:49 pm
Operator : F. NAEGLER
Sample : 2.0PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:43 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1919.D\data.ms

(28) Vinyl Acetate

3.150min (-0.004) 1.31 ug/L m

response 398

Ion	Exp%	Act%
86.00	100	100
43.00	980.10	1245.83#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

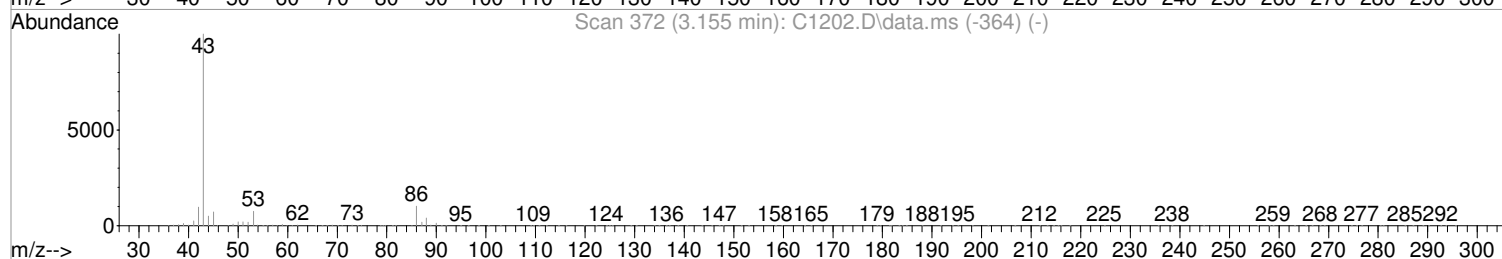
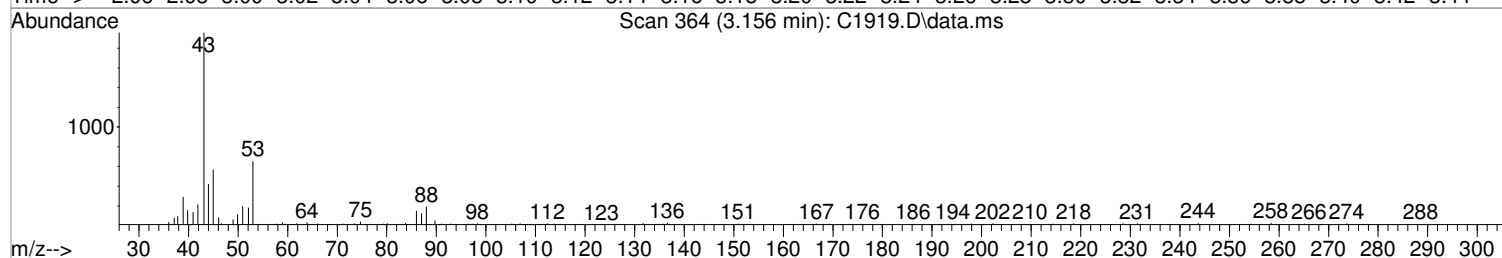
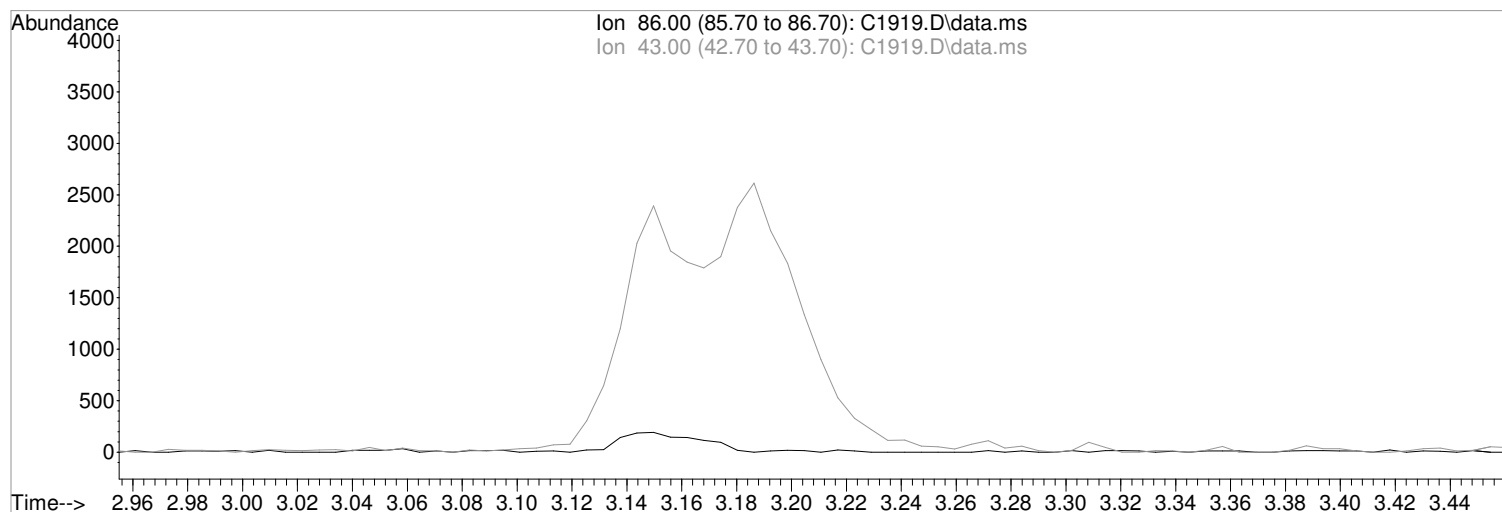
Poor integration.

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1919.D
Acq On : 5 Oct 2017 1:49 pm
Operator : F. NAEGLER
Sample : 2.0PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:43 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1919.D\data.ms

(28) Vinyl Acetate

Manual Integration:

3.154min (-3.154) 0.00 ug/L

Before

response 0

Ion	Exp%	Act%
86.00	100	0.00
43.00	980.10	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

10/05/17

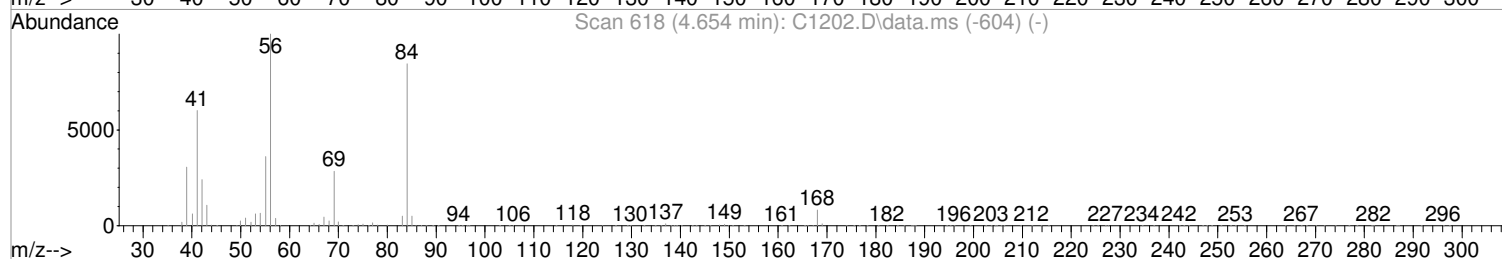
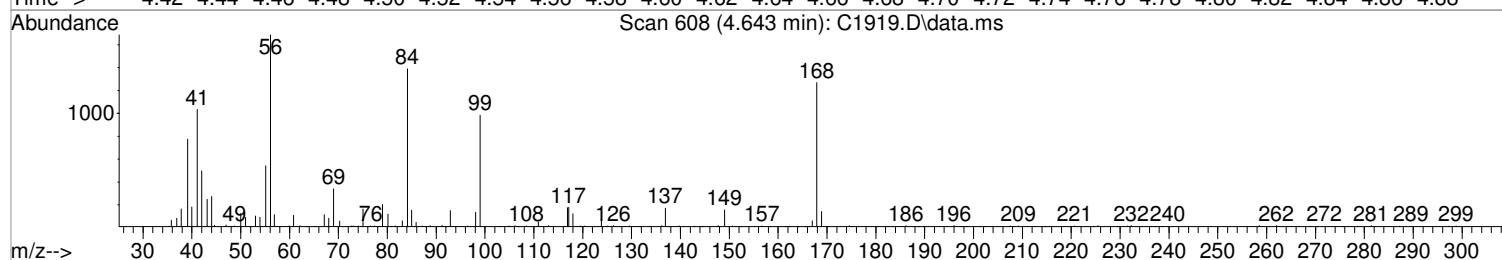
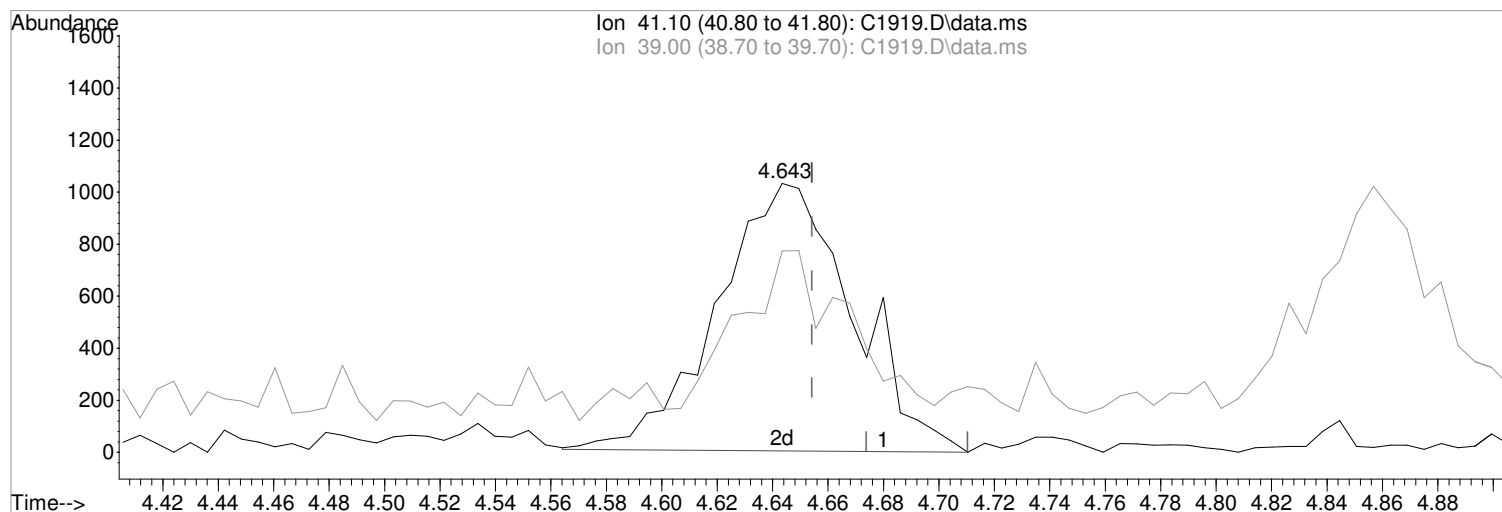
Quantitation Report (Qedit)

1st *BA* 10/09/17
2nd *FJ* 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1919.D
Acq On : 5 Oct 2017 1:49 pm
Operator : F. NAEGLER
Sample : 2.0PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:43 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1919.D\data.ms

(43) Cyclohexane (P)

4.643min (-0.011) 2.25 ug/L m

response 3493

Ion Exp% Act%

41.10 100 100

39.00 51.10 74.85#

0.00 0.00 0.00

0.00 0.00 0.00

Manual Integration:

After

Poor integration.

10/05/17

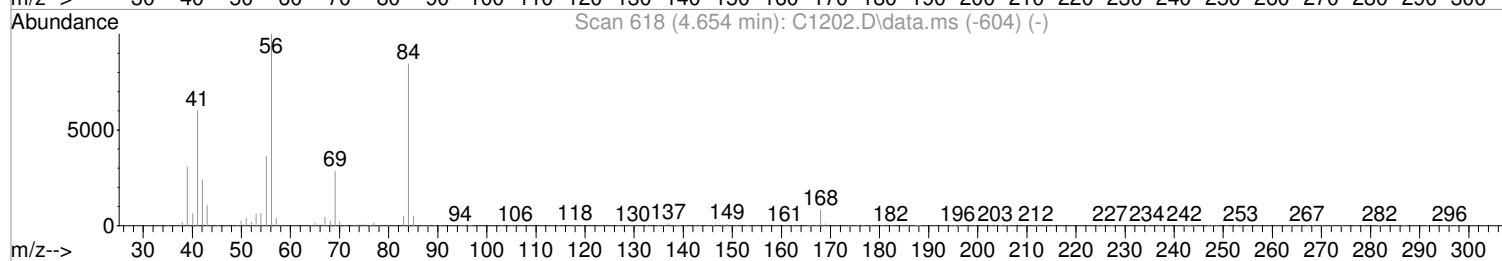
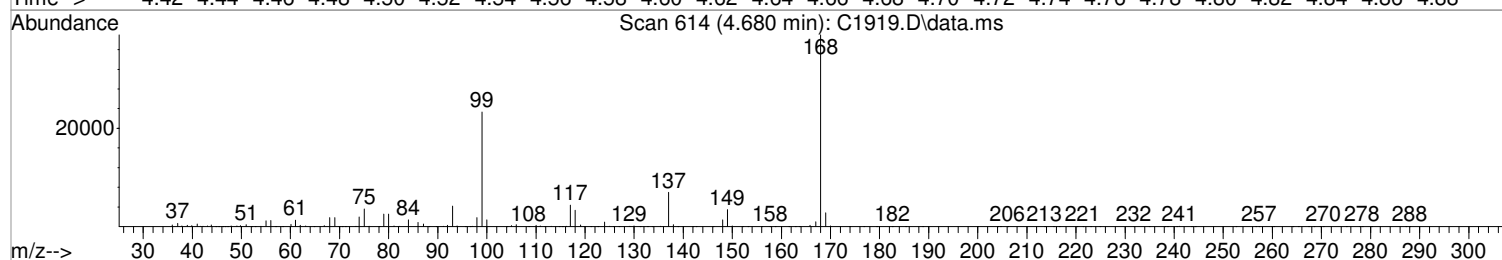
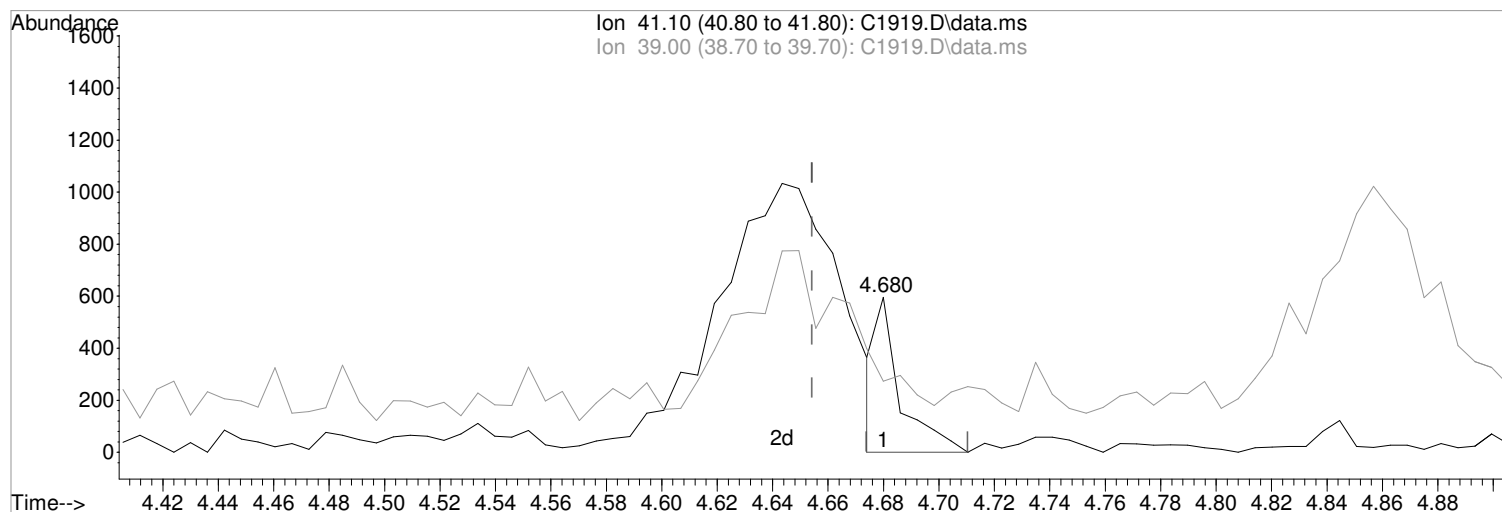
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1919.D
Acq On : 5 Oct 2017 1:49 pm
Operator : F. NAEGLER
Sample : 2.0PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:43 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1919.D\data.ms

(43) Cyclohexane (P)

Manual Integration:

4.680min (+0.026) 0.24 ug/L

Before

response 366

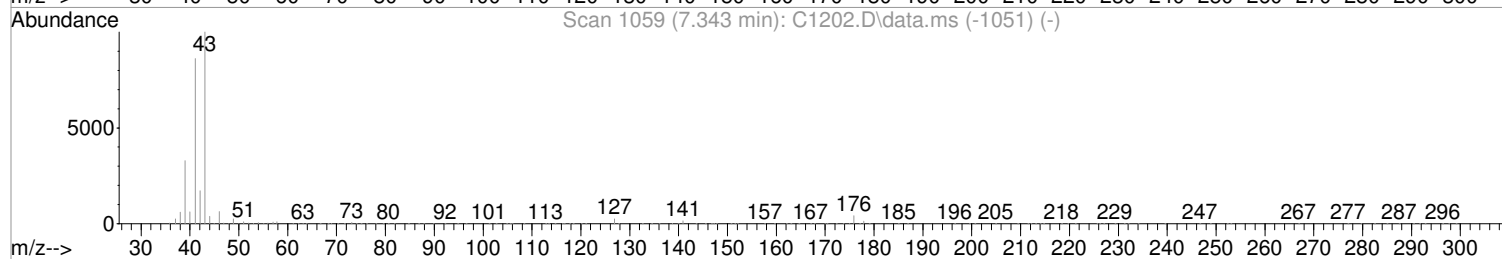
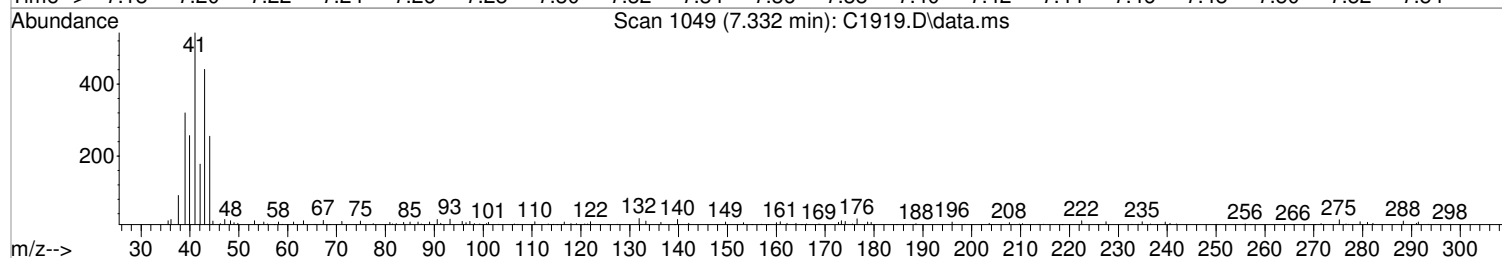
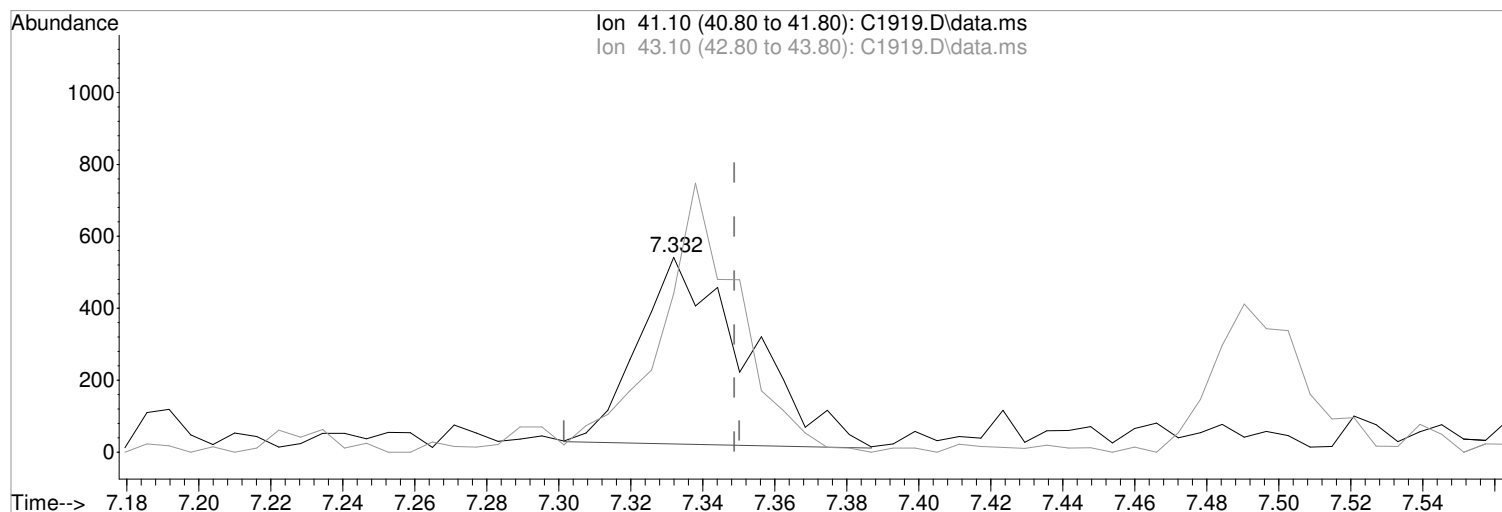
Ion	Exp%	Act%
41.10	100	100
39.00	51.10	45.97
0.00	0.00	0.00
0.00	0.00	0.00

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1919.D
Acq On : 5 Oct 2017 1:49 pm
Operator : F. NAEGLER
Sample : 2.0PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:43 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1919.D\data.ms

(60) 2-Nitropropane

7.332min (-0.017) 2.44 ug/L m

response 1074

Ion	Exp%	Act%
41.10	100	100
43.10	115.90	81.37#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

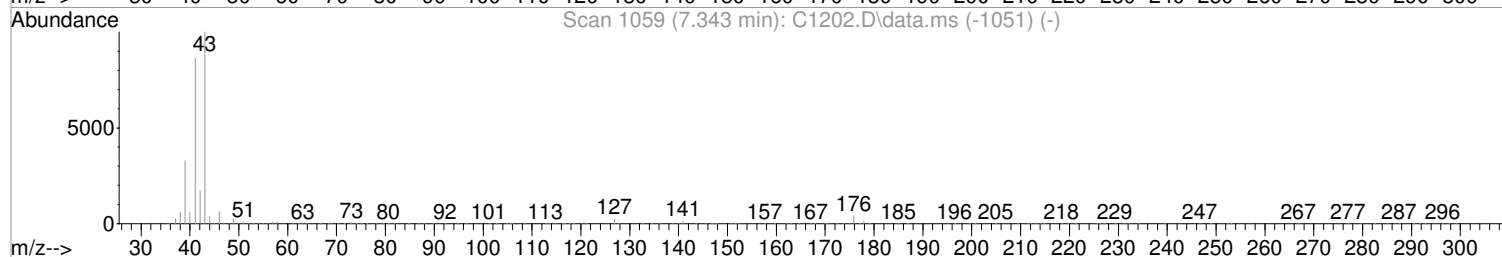
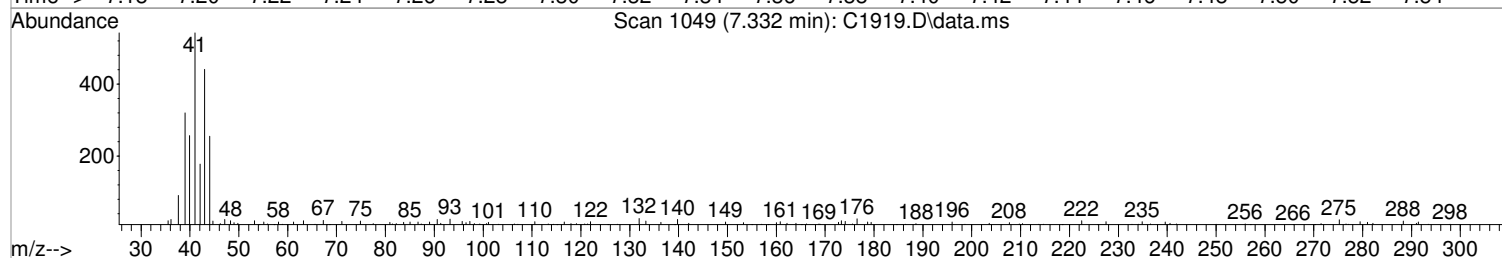
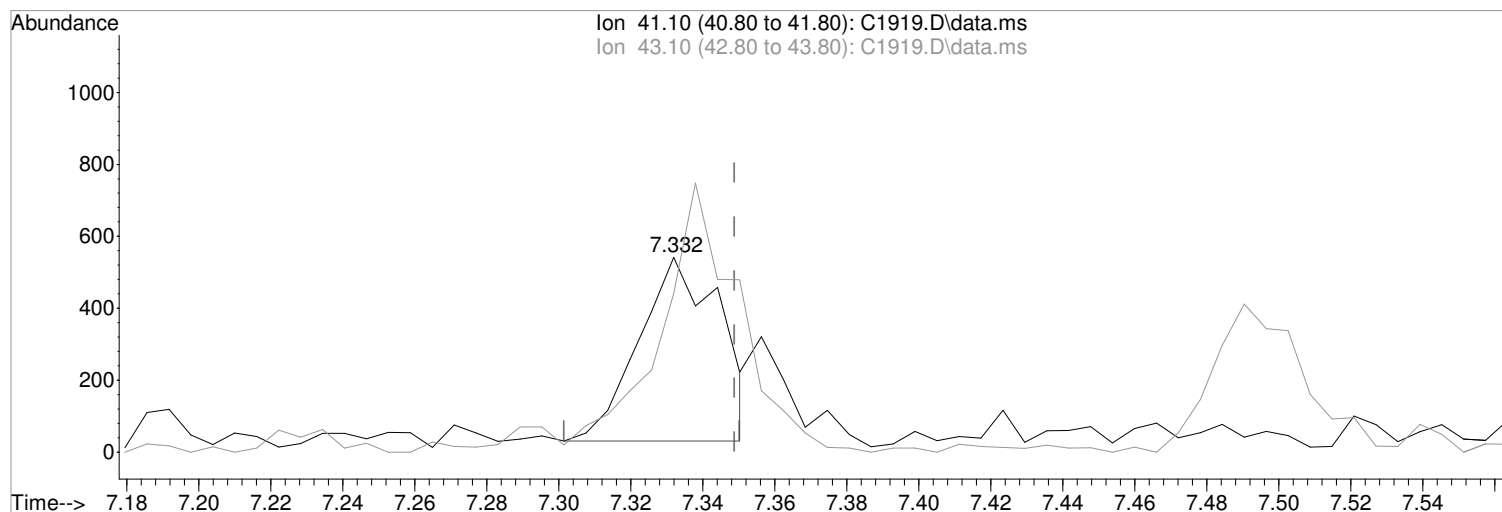
Poor integration.

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1919.D
Acq On : 5 Oct 2017 1:49 pm
Operator : F. NAEGLER
Sample : 2.0PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:43 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1919.D\data.ms

(60) 2-Nitropropane

Manual Integration:

7.332min (-0.017) 1.82 ug/L

Before

response 804

Ion	Exp%	Act%

10/05/17

41.10	100	100

43.10	115.90	81.37#

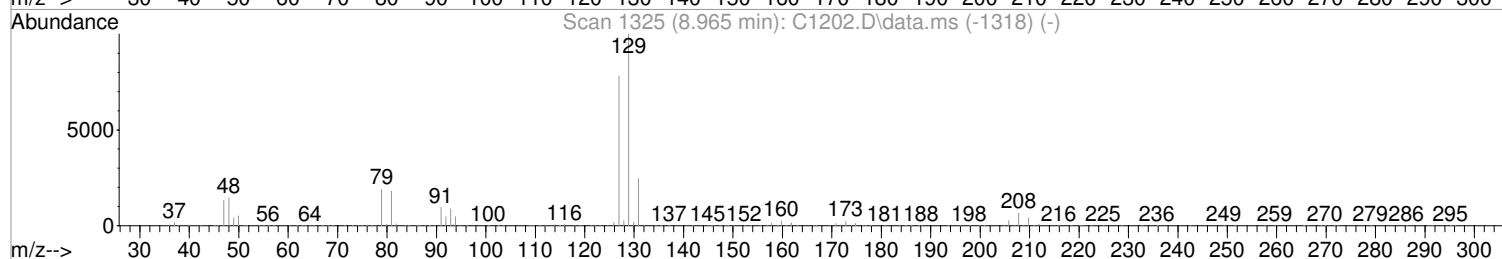
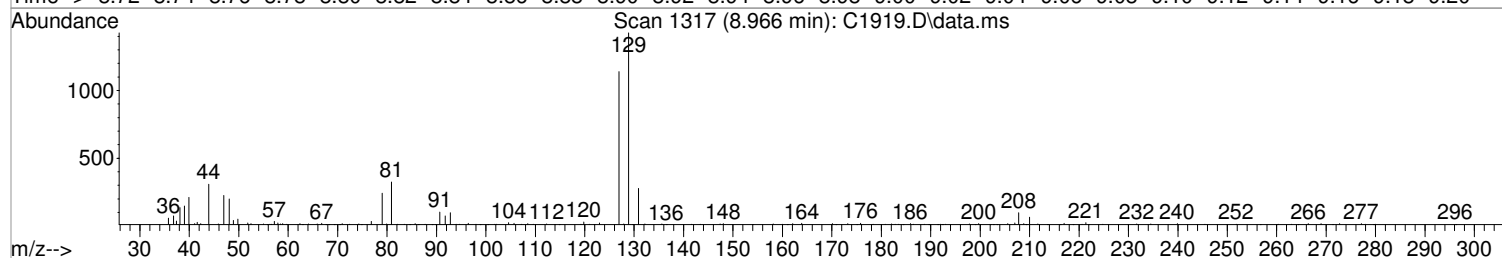
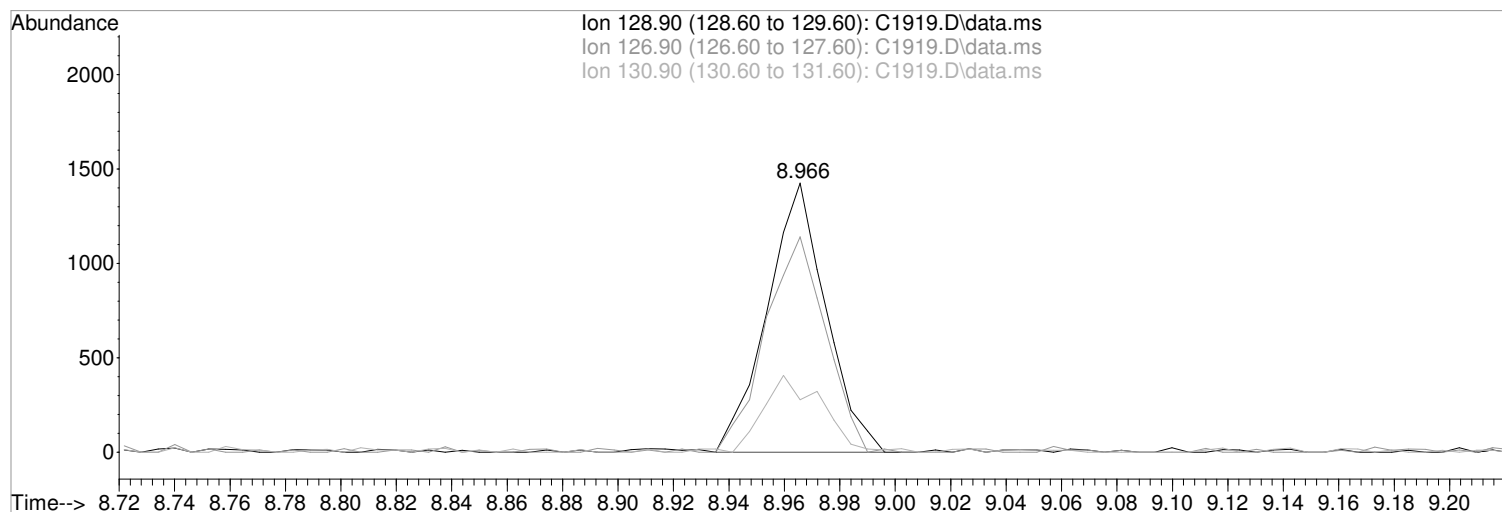
0.00	0.00	0.00

0.00	0.00	0.00

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1919.D
Acq On : 5 Oct 2017 1:49 pm
Operator : F. NAEGLER
Sample : 2.0PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:43 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1919.D\data.ms

(74) Dibromochloromethane (P)

8.966min (-0.004) 1.44 ug/L m

response 2099

Ion	Exp%	Act%
128.90	100	100
126.90	78.10	80.00
130.90	24.60	19.51
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

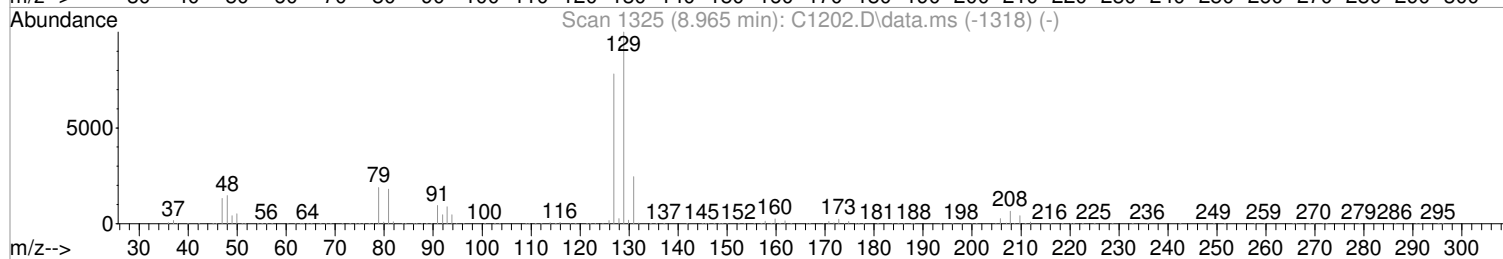
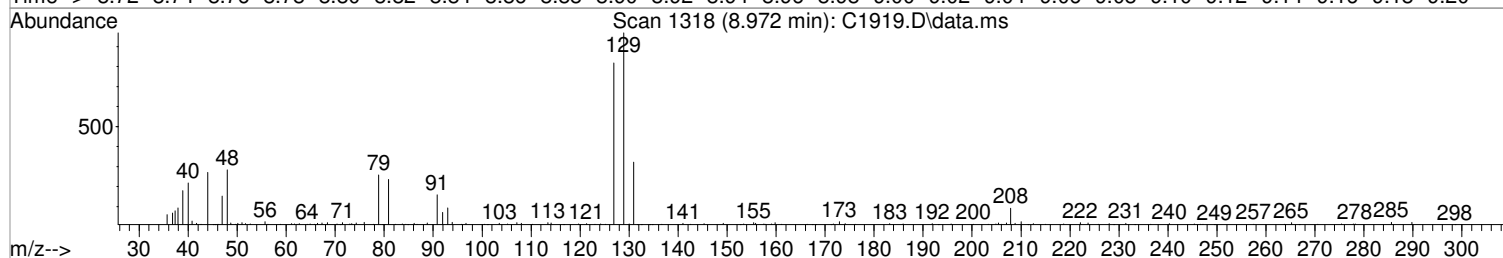
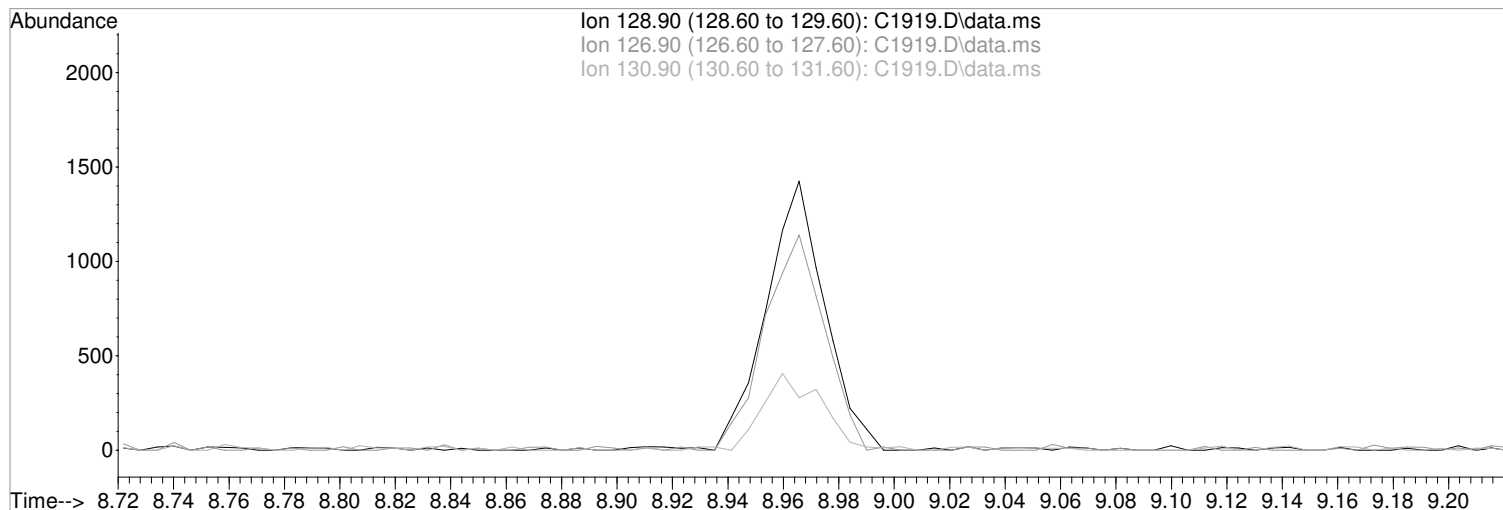
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1919.D
Acq On : 5 Oct 2017 1:49 pm
Operator : F. NAEGLER
Sample : 2.0PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:43 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1919.D\data.ms

(74) Dibromochloromethane (P)

Manual Integration:

8.970min (-8.970) 0.00 ug/L

Before

response 0

Ion Exp% Act%

10/05/17

128.90 100 0.00

126.90 78.10 0.00#

130.90 24.60 0.00#

0.00 0.00 0.00

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1919.D
 Acq On : 5 Oct 2017 1:49 pm
 Operator : F. NAEGLER
 Sample : 2.0PPB
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:46:20 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.698	168	144654	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.948	114	211779	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	192323	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	100880	50.00	ug/L	0.00
System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	70098	49.43	ug/L	0.00
Spiked Amount	50.000	Range 89 - 119	Recovery	=	98.86%	
47) surr1,1,2-dichloroetha...	5.125	65	97295	57.47	ug/L	-0.01
Spiked Amount	50.000	Range 73 - 125	Recovery	=	114.94%	
64) SURR3,Toluene-d8	7.954	98	275306	50.52	ug/L	0.00
Spiked Amount	50.000	Range 87 - 121	Recovery	=	101.04%	
69) SURR2,BFB	10.728	95	101058	47.96	ug/L	0.00
Spiked Amount	50.000	Range 85 - 122	Recovery	=	95.92%	
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	1.040	85	2557	1.36	ug/L	96
3) Chloromethane	1.150	50	3812	1.64	ug/L	94
4) Vinyl Chloride	1.217	62	3274	1.67	ug/L	97
5) Bromomethane	1.406	94	2317	1.66	ug/L #	78
6) Chloroethane	1.473	64	2317	1.84	ug/L	95
7) Freon 21	1.601	67	6026	1.86	ug/L	99
8) Trichlorofluoromethane	1.644	101	4327	1.78	ug/L	90
9) Diethyl Ether	1.851	59	2817	2.22	ug/L	97
10) Freon 123a	1.845	67	3215	1.88	ug/L	88
11) Freon 123	1.894	83	3610	1.84	ug/L	87
12) Acrolein	1.931	56	3869	9.82	ug/L	86
13) 1,1-Dicethene	2.010	96	2377	1.84	ug/L	97
14) Freon 113	2.016	101	2626	2.06	ug/L	81
15) Acetone	2.046	43	2405	2.56	ug/L	87
16) 2-Propanol	2.168	45	5141	32.41	ug/L	82
17) Iodomethane	2.126	142	1099	0.89	ug/L	90
18) Carbon Disulfide	2.174	76	6039	1.71	ug/L	100
19) Acetonitrile	2.260	40	1617	10.44	ug/L #	80
20) Allyl Chloride	2.296	76	977	1.72	ug/L #	71
21) Methyl Acetate	2.321	43	3914	1.76	ug/L	91
22) Methylene Chloride	2.394	84	2936	1.94	ug/L	91
23) TBA	2.510	59	7777	31.23	ug/L	81
24) Acrylonitrile	2.607	53	8320	10.36	ug/L	97
25) Methyl-t-Butyl Ether	2.656	73	8172	1.77	ug/L	91
26) trans-1,2-Dichloroethene	2.644	96	2583	1.86	ug/L	92
27) 1,1-Dicethane	3.071	63	5007	1.98	ug/L	99
28) Vinyl Acetate	3.150	86	398m	1.31	ug/L	
29) DIPE	3.192	45	10347	2.11	ug/L	98
30) 2-Chloro-1,3-Butadiene	3.174	53	3924	1.85	ug/L	95
31) ETBE	3.644	59	8636	1.93	ug/L	88
32) 2,2-Dichloropropane	3.778	77	2726	1.35	ug/L	92
33) cis-1,2-Dichloroethene	3.790	96	2906	1.83	ug/L	97
34) 2-Butanone	3.845	43	2872	2.43	ug/L	92
35) Propionitrile	3.894	54	3324	10.17	ug/L	76
36) Bromochloromethane	4.119	130	2094	2.01	ug/L #	78
37) Methacrylonitrile	4.125	67	1665	2.08	ug/L #	77
38) Tetrahydrofuran	4.229	42	1595	2.30	ug/L	92
39) Chloroform	4.290	83	5061	1.91	ug/L	90
40) 1,1,1-Trichloroethane	4.558	97	3766	1.72	ug/L	94

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1919.D
 Acq On : 5 Oct 2017 1:49 pm
 Operator : F. NAEGLER
 Sample : 2.0PPB
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:46:20 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.515	73	7712	1.78	ug/L	88
43) Cyclohexane	4.643	41	3493m	2.25	ug/L	
45) Carbontetrachloride	4.845	117	2109	1.29	ug/L	83
46) 1,1-Dichloropropene	4.863	75	3789	1.91	ug/L	89
48) Benzene	5.223	78	10795	1.89	ug/L	93
49) 1,2-Dichloroethane	5.259	62	4600	2.10	ug/L	86
50) Iso-Butyl Alcohol	5.259	43	3190	27.35	ug/L	93
51) n-Heptane	5.814	43	3465	1.93	ug/L	88
52) 1-Butanol	6.381	56	3971	58.19	ug/L #	66
53) Trichloroethene	6.302	130	3342	1.98	ug/L #	79
54) Methylcyclohexane	6.576	55	3619	1.91	ug/L	90
55) 1,2-Dicloropropane	6.612	63	3052	1.93	ug/L	96
56) Dibromomethane	6.771	93	1951	1.92	ug/L	88
57) 1,4-Dioxane	6.856	88	1296	40.04	ug/L	87
58) Methyl Methacrylate	6.899	69	2390	1.86	ug/L	92
59) Bromodichloromethane	7.033	83	3164	1.78	ug/L	92
60) 2-Nitropropane	7.332	41	1074m	2.44	ug/L	
61) 2-Chloroethylvinyl Ether	7.490	63	774	2.18	ug/L	87
62) cis-1,3-Dichloropropene	8.332	75	2509	1.19	ug/L	95
63) 4-Methyl-2-pentanone	7.868	43	3944	1.97	ug/L	87
65) Toluene	8.027	91	11318	1.80	ug/L	96
66) trans-1,3-Dichloropropene	8.332	75	2509	1.24	ug/L	98
67) Ethyl Methacrylate	8.508	69	3478	1.62	ug/L	87
68) 1,1,2-Trichloroethane	8.533	97	2774	1.95	ug/L	91
71) Tetrachloroethene	8.673	164	2274	1.75	ug/L #	84
72) 2-Hexanone	8.874	43	2883	1.84	ug/L	84
73) 1,3-Dichloropropane	8.716	76	5041	1.95	ug/L	84
74) Dibromochloromethane	8.966	129	2099m	1.44	ug/L	
75) N-Butyl Acetate	9.063	43	5427	1.72	ug/L	83
76) 1,2-Dibromoethane	9.063	107	2387	1.60	ug/L	97
77) 3-Chlorobenzotrifluoride	9.655	180	4155	1.70	ug/L	97
78) Chlorobenzene	9.612	112	7738	1.87	ug/L	98
79) 4-Chlorobenzotrifluoride	9.716	180	3797	1.79	ug/L	93
80) 1,1,1,2-Tetrachloroethane	9.709	131	2084	1.47	ug/L #	90
81) Ethylbenzene	9.752	106	3580	1.65	ug/L #	86
82) (m+p)Xylene	9.874	106	8843	3.28	ug/L	90
83) o-Xylene	10.252	106	4623	1.76	ug/L	97
84) Styrene	10.264	104	7244	1.69	ug/L	96
85) Bromoform	10.417	173	1231	1.26	ug/L	93
86) 2-Chlorobenzotrifluoride	10.514	180	3886	1.64	ug/L	96
87) Isopropylbenzene	10.606	105	11177	1.64	ug/L	96
88) Cyclohexanone	10.661	55	12307	31.48	ug/L	96
89) trans-1,4-Dichloro-2-B...	10.935	53	908	1.87	ug/L #	49
91) 1,1,2,2-Tetrachloroethane	10.880	83	3506	1.85	ug/L	90
92) Bromobenzene	10.849	156	3236	1.82	ug/L #	81
93) 1,2,3-Trichloropropane	10.904	110	1442	2.15	ug/L	94
94) n-Propylbenzene	10.984	91	13367	1.82	ug/L	97
95) 2-Chlorotoluene	11.038	91	8270	1.90	ug/L	98
96) 3-Chlorotoluene	11.093	91	8523	1.87	ug/L	97
97) 4-Chlorotoluene	11.136	91	9807	1.89	ug/L	95
98) 1,3,5-Trimethylbenzene	11.142	105	9624	1.81	ug/L	91
99) tert-Butylbenzene	11.423	119	8411	1.75	ug/L	98
100) 1,2,4-Trimethylbenzene	11.465	105	9147	1.70	ug/L	99
101) 3,4-Dichlorobenzotrifl...	11.532	214	2964	1.68	ug/L	96
102) sec-Butylbenzene	11.612	105	12013	1.73	ug/L	98
103) p-Isopropyltoluene	11.740	119	9844	1.71	ug/L	87

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1919.D
 Acq On : 5 Oct 2017 1:49 pm
 Operator : F. NAEGLER
 Sample : 2.0PPB
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:46:20 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.679	146	5811	1.77	ug/L	92
105) 1,4-Dclbenz	11.758	146	6287	1.82	ug/L	95
106) 2,4-Dichlorobenzotrifl...	11.831	214	2692	1.63	ug/L	98
107) 2,5-Dichlorobenzotrifl...	11.874	214	3105	1.71	ug/L	90
108) n-Butylbenzene	12.081	91	8874	1.73	ug/L	99
109) 1,2-Dclbenz	12.069	146	6164	1.91	ug/L	92
110) 1,2-Dibromo-3-chloropr...	12.703	157	677	1.41	ug/L #	78
111) Trielution Dichlorotol...	12.819	125	14296	5.06	ug/L	91
112) 1,3,5-Trichlorobenzene	12.880	180	4785	1.89	ug/L	98
113) Coelution Dichlorotoluene	13.154	125	10473	3.39	ug/L	94
114) 1,2,4-Tcbenzene	13.367	180	4091	1.70	ug/L	88
115) Hexachlorobt	13.508	225	1751	1.66	ug/L #	78
116) Naphthalen	13.550	128	10701	1.54	ug/L	97
117) 1,2,3-Tclbenzene	13.745	180	4239	1.70	ug/L	96
118) 2,4,5-Trichlorotoluene	14.337	159	2560	1.57	ug/L	90
119) 2,3,6-Trichlorotoluene	14.422	159	2644	1.72	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

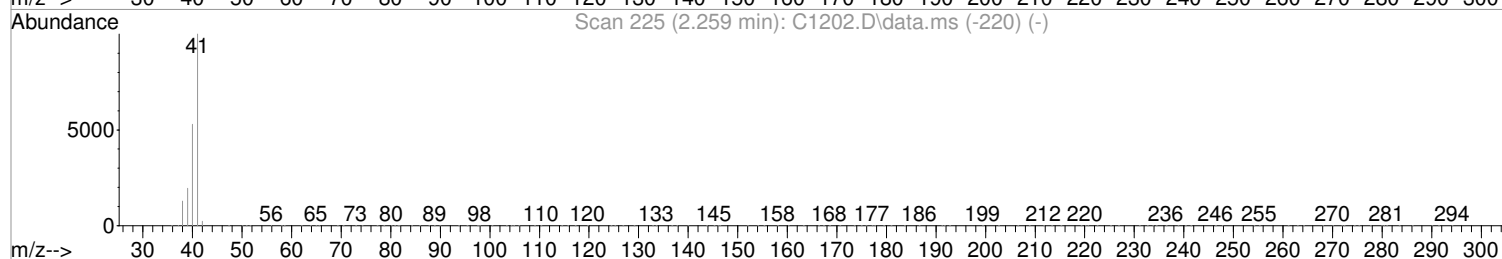
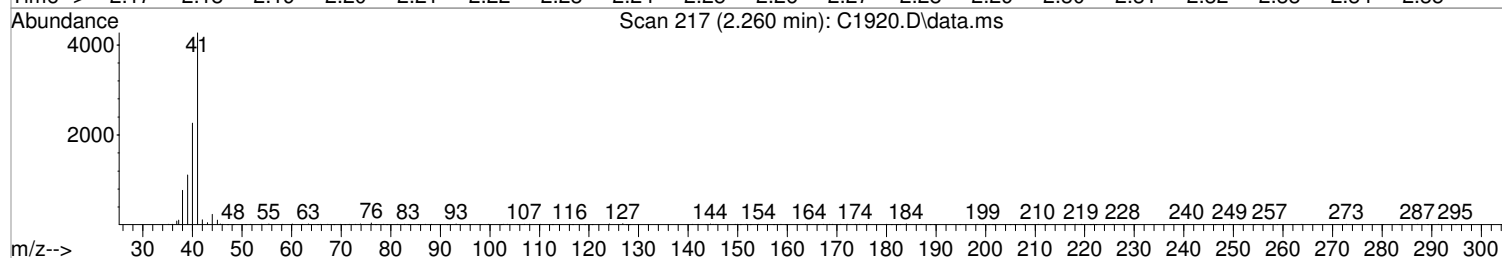
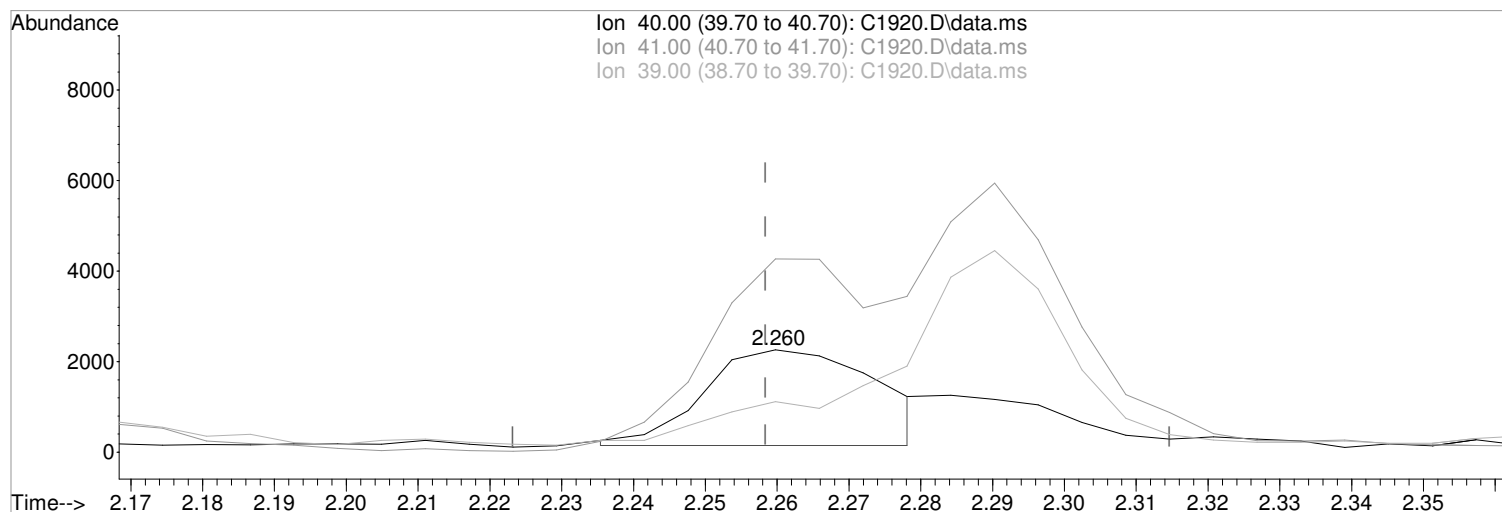
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1920.D
Acq On : 5 Oct 2017 2:11 pm
Operator : F. NAEGLER
Sample : 5.0 PPB
Misc :
ALS Vial : 8 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:47 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(19) Acetonitrile

2.260min (+0.001) 22.28 ug/L m

response 3532

Ion	Exp%	Act%
40.00	100	100
41.00	188.10	188.72
39.00	37.70	49.31
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

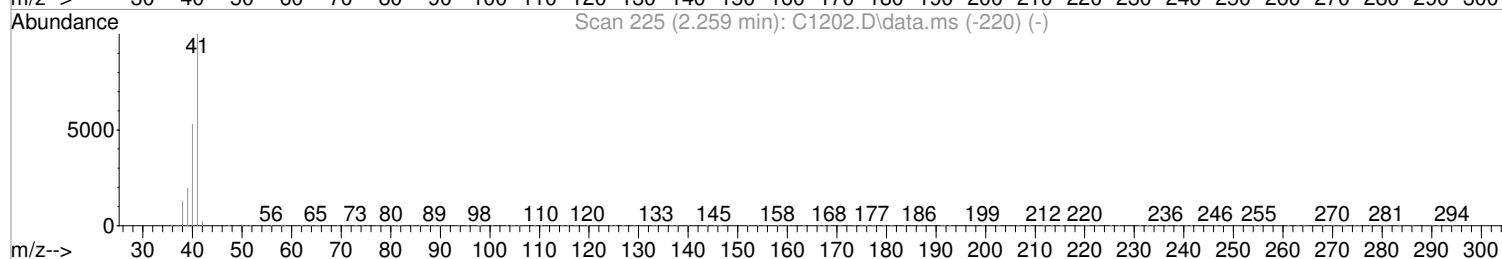
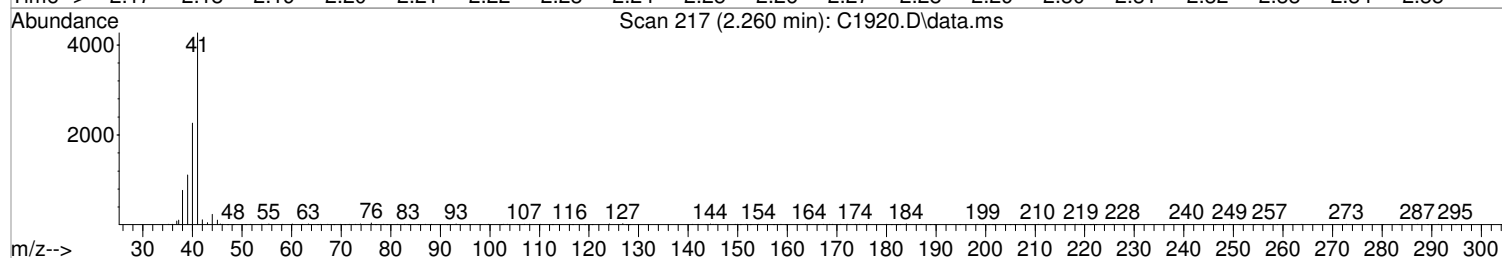
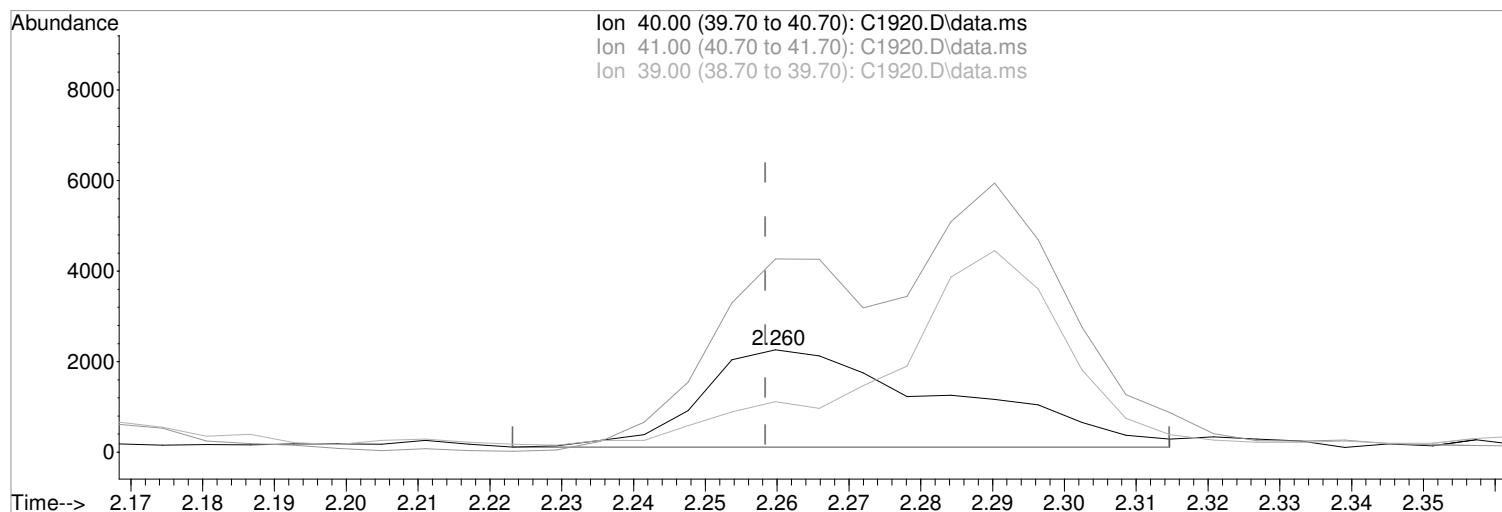
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1920.D
Acq On : 5 Oct 2017 2:11 pm
Operator : F. NAEGLER
Sample : 5.0 PPB
Misc :
ALS Vial : 8 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:47 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(19) Acetonitrile

Manual Integration:

2.260min (+0.001) 32.93 ug/L

Before

response 5219

Ion	Exp%	Act%
40.00	100	100
41.00	188.10	188.72
39.00	37.70	49.31
0.00	0.00	0.00

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1920.D
 Acq On : 5 Oct 2017 2:11 pm
 Operator : F. NAEGLER
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 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	4.692	168	148043	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	217086	50.00	ug/L	-0.01
70) d5-Chlorobenzene	9.582	117	186006	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	99132	50.00	ug/L	0.00

System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	15522	10.68	ug/L	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	21.36%#
47) surr1,1,2-dichloroetha...	5.125	65	21528	12.41	ug/L	-0.01
Spiked Amount	50.000	Range	73 - 125	Recovery	=	24.82%#
64) SURR3,Toluene-d8	7.954	98	62074	11.11	ug/L	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	22.22%#
69) SURR2,BFB	10.728	95	21084	9.76	ug/L	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	19.52%#

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.041	85	6439	3.35	ug/L	91
3) Chloromethane	1.150	50	8685	3.66	ug/L	91
4) Vinyl Chloride	1.217	62	7856	3.91	ug/L	99
5) Bromomethane	1.406	94	5206	3.64	ug/L	96
6) Chloroethane	1.473	64	5350	4.15	ug/L	93
7) Freon 21	1.607	67	15414	4.65	ug/L	100
8) Trichlorofluoromethane	1.644	101	10290	4.14	ug/L	97
9) Diethyl Ether	1.851	59	6932	5.33	ug/L	93
10) Freon 123a	1.845	67	8235	4.71	ug/L	80
11) Freon 123	1.894	83	8875	4.41	ug/L	97
12) Acrolein	1.931	56	10219	25.34	ug/L	98
13) 1,1-Dicethene	2.010	96	5817	4.39	ug/L	94
14) Freon 113	2.016	101	5448	4.17	ug/L	92
15) Acetone	2.053	43	5247	5.45	ug/L	95
16) 2-Propanol	2.162	45	10983	67.66	ug/L	83
17) Iodomethane	2.120	142	3040	2.41	ug/L	97
18) Carbon Disulfide	2.174	76	13823	3.81	ug/L	96
19) Acetonitrile	2.260	40	3532m	22.28	ug/L	
20) Allyl Chloride	2.290	76	2366	4.06	ug/L	# 71
21) Methyl Acetate	2.315	43	8051	3.54	ug/L	94
22) Methylene Chloride	2.394	84	7252	4.69	ug/L	93
23) TBA	2.510	59	18298	71.80	ug/L	82
24) Acrylonitrile	2.607	53	19540	23.77	ug/L	91
25) Methyl-t-Butyl Ether	2.656	73	21540	4.56	ug/L	97
26) trans-1,2-Dichloroethene	2.644	96	6514	4.59	ug/L	96
27) 1,1-Dicethane	3.071	63	12453	4.82	ug/L	97
28) Vinyl Acetate	3.156	86	936	3.01	ug/L	# 73
29) DIPE	3.186	45	25011	4.98	ug/L	98
30) 2-Chloro-1,3-Butadiene	3.180	53	9849	4.54	ug/L	85
31) ETBE	3.644	59	21364	4.67	ug/L	96
32) 2,2-Dichloropropane	3.784	77	6816	3.29	ug/L	89
33) cis-1,2-Dichloroethene	3.784	96	7613	4.67	ug/L	97
34) 2-Butanone	3.833	43	6341	5.24	ug/L	92
35) Propionitrile	3.894	54	7900	23.63	ug/L	98
36) Bromochloromethane	4.119	130	4997	4.69	ug/L	85
37) Methacrylonitrile	4.125	67	4189	5.11	ug/L	91
38) Tetrahydrofuran	4.217	42	3465	4.87	ug/L	99
39) Chloroform	4.278	83	12391	4.57	ug/L	93
40) 1,1,1-Trichloroethane	4.552	97	8629	3.85	ug/L	88

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1920.D
 Acq On : 5 Oct 2017 2:11 pm
 Operator : F. NAEGLER
 Sample : 5.0 PPB
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:47:20 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.521	73	19993	4.51	ug/L	94
43) Cyclohexane	4.643	41	6805	4.28	ug/L	93
45) Carbontetrachloride	4.851	117	6031	3.60	ug/L	97
46) 1,1-Dichloropropene	4.857	75	8688	4.27	ug/L	95
48) Benzene	5.229	78	26033	4.46	ug/L	98
49) 1,2-Dichloroethane	5.259	62	11485	5.12	ug/L	98
50) Iso-Butyl Alcohol	5.265	43	7622	63.75	ug/L	92
51) n-Heptane	5.808	43	7528	4.10	ug/L	94
52) 1-Butanol	6.381	56	9714	138.87	ug/L	96
53) Trichloroethene	6.308	130	7364	4.25	ug/L	96
54) Methylcyclohexane	6.576	55	8148	4.19	ug/L #	82
55) 1,2-Dicloropropane	6.613	63	7050	4.35	ug/L	98
56) Dibromomethane	6.765	93	4813	4.62	ug/L	84
57) 1,4-Dioxane	6.856	88	2537	76.46	ug/L	86
58) Methyl Methacrylate	6.899	69	6083	4.62	ug/L	95
59) Bromodichloromethane	7.033	83	8237	4.52	ug/L	97
60) 2-Nitropropane	7.338	41	2430	5.38	ug/L	83
61) 2-Chloroethylvinyl Ether	7.490	63	1761	4.83	ug/L	89
62) cis-1,3-Dichloropropene	8.332	75	6915	3.19	ug/L	96
63) 4-Methyl-2-pentanone	7.868	43	9887	4.82	ug/L	96
65) Toluene	8.027	91	28098	4.35	ug/L	96
66) trans-1,3-Dichloropropene	8.332	75	6915	3.34	ug/L	93
67) Ethyl Methacrylate	8.509	69	8605	3.91	ug/L	85
68) 1,1,2-Trichloroethane	8.533	97	6875	4.70	ug/L	94
71) Tetrachloroethene	8.673	164	4981	3.96	ug/L	97
72) 2-Hexanone	8.874	43	7035	4.64	ug/L	96
73) 1,3-Dichloropropane	8.716	76	12249	4.90	ug/L	93
74) Dibromochloromethane	8.966	129	5356	3.79	ug/L	99
75) N-Butyl Acetate	9.063	43	13463	4.41	ug/L	99
76) 1,2-Dibromoethane	9.057	107	6327	4.39	ug/L	94
77) 3-Chlorobenzotrifluoride	9.655	180	9123	3.87	ug/L #	83
78) Chlorobenzene	9.612	112	18164	4.54	ug/L	94
79) 4-Chlorobenzotrifluoride	9.716	180	8086	3.95	ug/L	91
80) 1,1,1,2-Tetrachloroethane	9.710	131	5176	3.78	ug/L	95
81) Ethylbenzene	9.752	106	9400	4.48	ug/L	96
82) (m+p)Xylene	9.874	106	21646	8.30	ug/L	92
83) o-Xylene	10.252	106	11079	4.36	ug/L	95
84) Styrene	10.264	104	17598	4.25	ug/L	89
85) Bromoform	10.417	173	3517	3.72	ug/L	91
86) 2-Chlorobenzotrifluoride	10.514	180	9258	4.03	ug/L	98
87) Isopropylbenzene	10.612	105	28693	4.35	ug/L	98
88) Cyclohexanone	10.661	55	28571	75.57	ug/L	93
89) trans-1,4-Dichloro-2-B...	10.935	53	1938	4.13	ug/L #	53
91) 1,1,2,2-Tetrachloroethane	10.886	83	9457	5.08	ug/L	96
92) Bromobenzene	10.850	156	8104	4.63	ug/L	92
93) 1,2,3-Trichloropropane	10.904	110	3272	4.96	ug/L	96
94) n-Propylbenzene	10.984	91	33334	4.62	ug/L	99
95) 2-Chlorotoluene	11.039	91	20208	4.73	ug/L	99
96) 3-Chlorotoluene	11.093	91	21547	4.80	ug/L	98
97) 4-Chlorotoluene	11.136	91	23793	4.67	ug/L	97
98) 1,3,5-Trimethylbenzene	11.142	105	22996	4.41	ug/L	98
99) tert-Butylbenzene	11.423	119	19838	4.19	ug/L	95
100) 1,2,4-Trimethylbenzene	11.465	105	23749	4.49	ug/L	98
101) 3,4-Dichlorobenzotrifl...	11.532	214	6959	4.00	ug/L	96
102) sec-Butylbenzene	11.612	105	30420	4.46	ug/L	98
103) p-Isopropyltoluene	11.740	119	24425	4.31	ug/L	98

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1920.D
 Acq On : 5 Oct 2017 2:11 pm
 Operator : F. NAEGLER
 Sample : 5.0 PPB
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:47:20 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	14427	4.46	ug/L	99
105) 1,4-Dclbenz	11.758	146	15938	4.71	ug/L	96
106) 2,4-Dichlorobenzotrifl...	11.831	214	6569	4.05	ug/L	96
107) 2,5-Dichlorobenzotrifl...	11.874	214	7572	4.25	ug/L	98
108) n-Butylbenzene	12.081	91	21150	4.19	ug/L	95
109) 1,2-Dclbenz	12.063	146	14457	4.57	ug/L	97
110) 1,2-Dibromo-3-chloropr...	12.703	157	1620	3.44	ug/L	89
111) Trielution Dichlorotol...	12.831	125	35026	12.61	ug/L	93
112) 1,3,5-Trichlorobenzene	12.880	180	10662	4.30	ug/L	97
113) Coelution Dichlorotoluene	13.154	125	26534	8.74	ug/L	93
114) 1,2,4-Tcbenzene	13.367	180	9712	4.10	ug/L	94
115) Hexachlorobt	13.514	225	3472	3.36	ug/L	93
116) Naphthalen	13.550	128	28250	4.15	ug/L	98
117) 1,2,3-Tclbenzene	13.745	180	10120	4.13	ug/L	90
118) 2,4,5-Trichlorotoluene	14.337	159	5747	3.59	ug/L	94
119) 2,3,6-Trichlorotoluene	14.422	159	5784	3.84	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

```

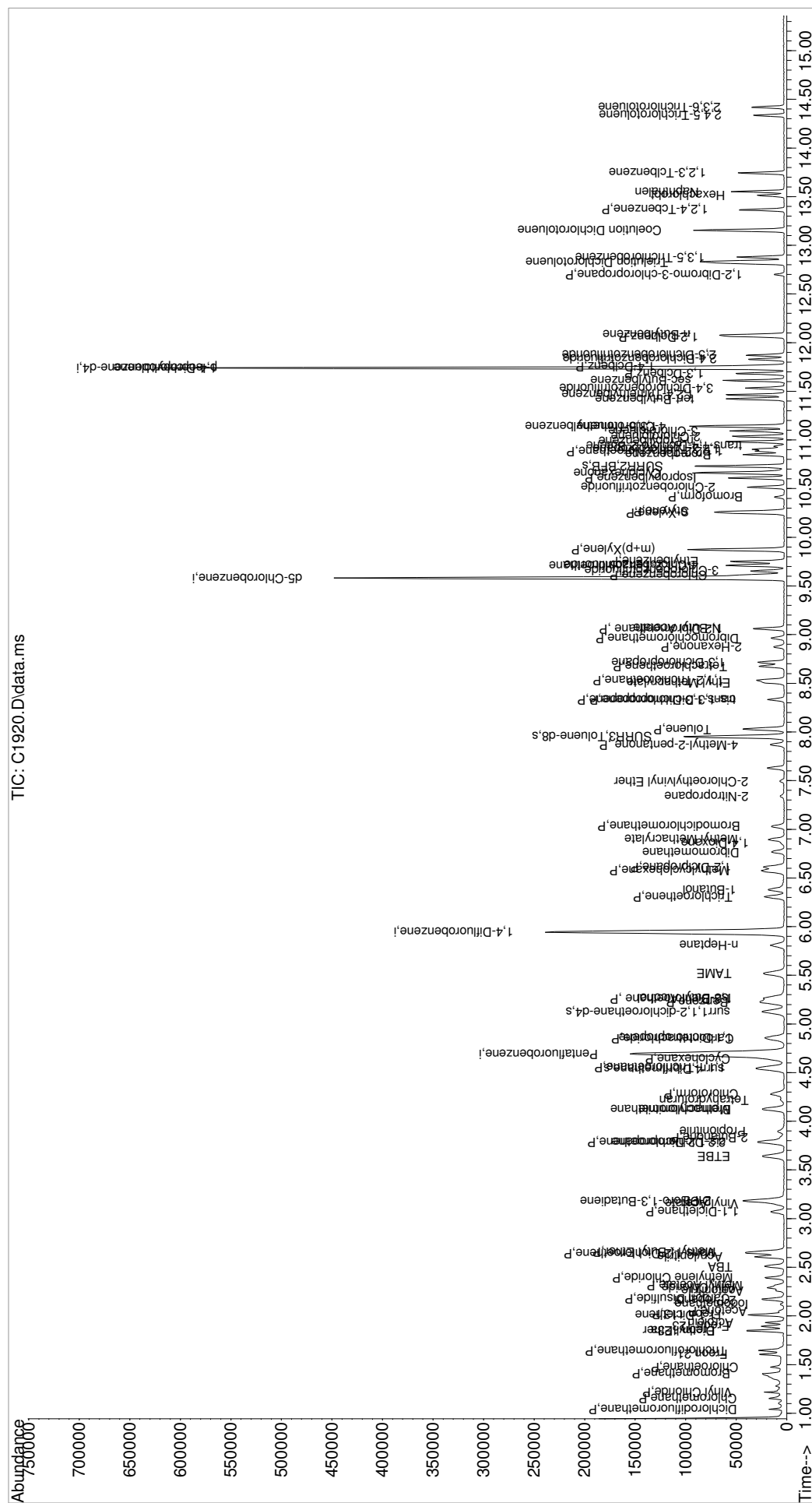
Data Path      : I:\ACQUDATA\MSVOA14\Data\100517\
Data File     : C1920.D
Acq On        : 5 Oct 2017  2:11 pm
Operator      : F. NAEGLER
Sample        : 5.0 PPB
Misc          :
ALS Vial      : 8 Sample Multiplier: 1

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Inst : MSV0A14

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 05 16:47:20 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



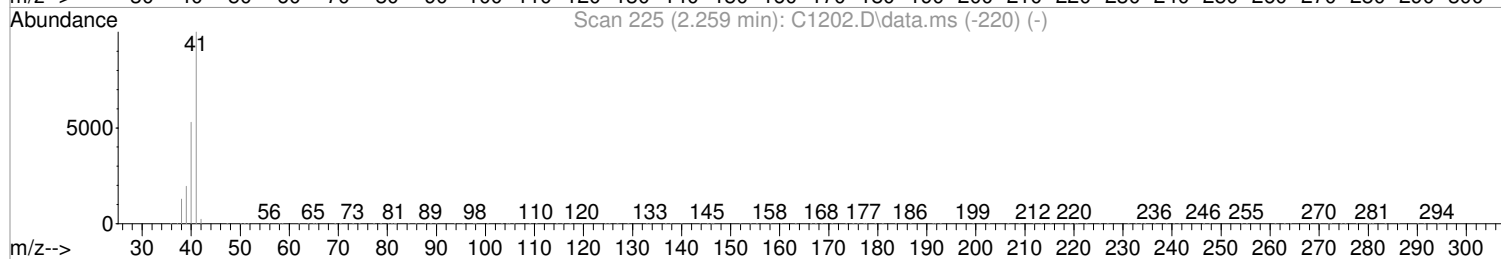
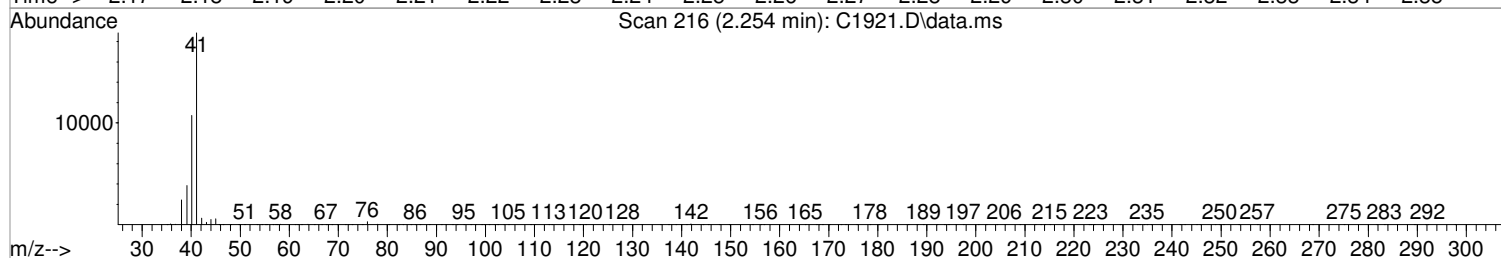
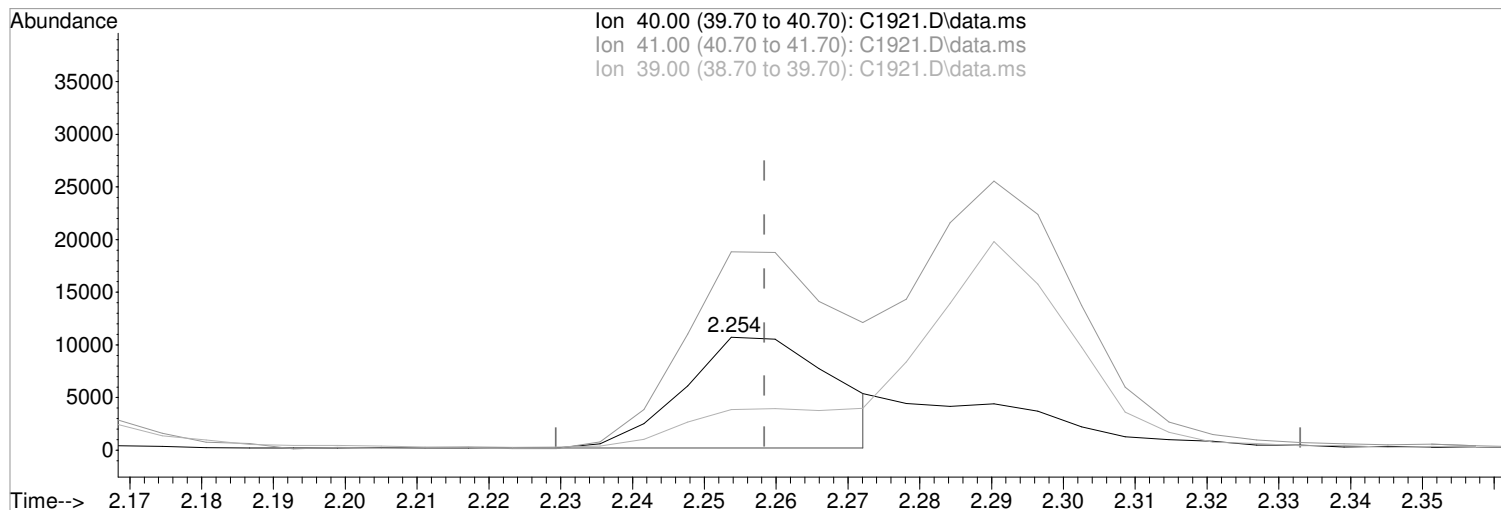
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1921.D
Acq On : 5 Oct 2017 2:33 pm
Operator : F. NAEGLER
Sample : 20 PPB
Misc :
ALS Vial : 9 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:51 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(19) Acetonitrile

2.254min (-0.005) 99.04 ug/L m

response 15457

Ion	Exp%	Act%
40.00	100	100
41.00	188.10	175.58
39.00	37.70	35.99
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

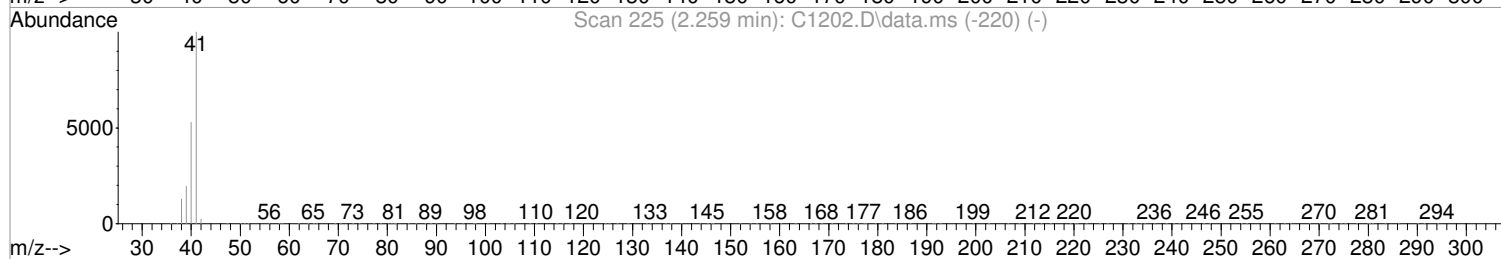
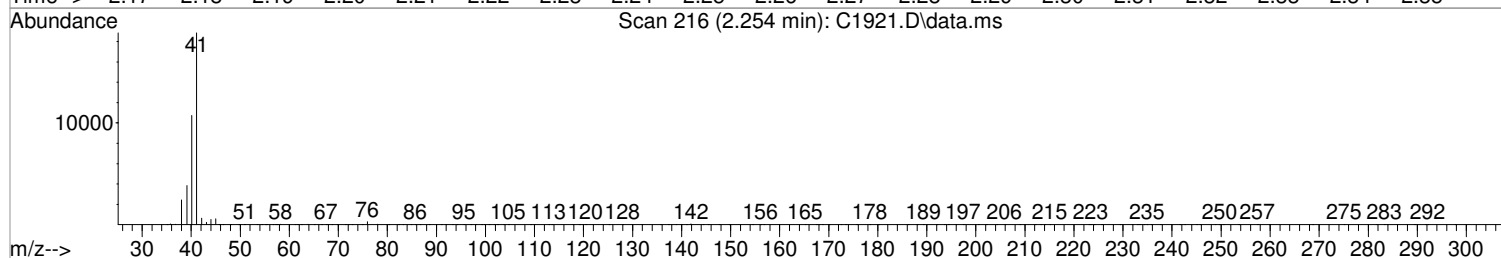
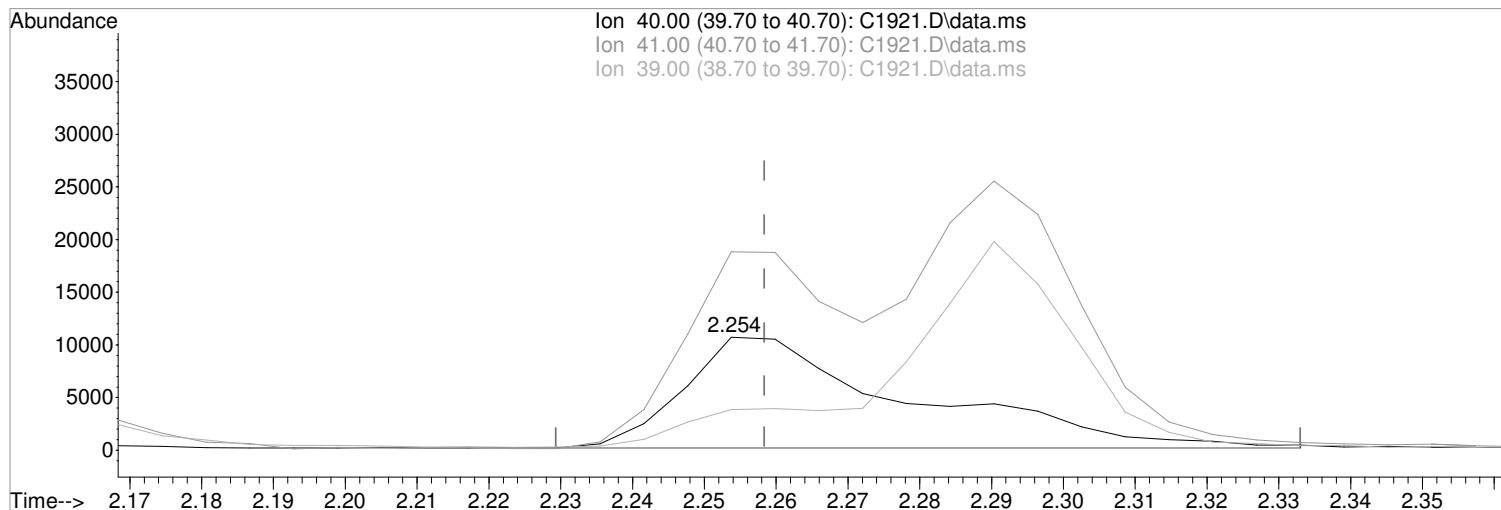
Quantitation Report (Qedit)

1st *BA* 10/09/17
2nd *FJ* 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1921.D
Acq On : 5 Oct 2017 2:33 pm
Operator : F. NAEGLER
Sample : 20 PPB
Misc :
ALS Vial : 9 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:51 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1921.D\data.ms

(19) Acetonitrile

Manual Integration:

2.254min (-0.005) 147.69 ug/L

Before

response 23050

Ion	Exp%	Act%
40.00	100	100
41.00	188.10	175.58
39.00	37.70	35.99
0.00	0.00	0.00

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1921.D
 Acq On : 5 Oct 2017 2:33 pm
 Operator : F. NAEGLER
 Sample : 20 PPB
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:48:40 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	4.692	168	145765	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	211994	50.00	ug/L	-0.01
70) d5-Chlorobenzene	9.582	117	190159	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	99526	50.00	ug/L	0.00

System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	27135	19.12	ug/L	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	38.24%#
47) surr1,1,2-dichloroetha...	5.131	65	37771	22.29	ug/L	0.00
Spiked Amount	50.000	Range	73 - 125	Recovery	=	44.58%#
64) SURR3,Toluene-d8	7.954	98	109070	19.99	ug/L	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	39.98%#
69) SURR2,BFB	10.728	95	41936	19.88	ug/L	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	39.76%#

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.041	85	37714	19.94	ug/L	94
3) Chloromethane	1.150	50	41580	17.79	ug/L	98
4) Vinyl Chloride	1.217	62	38856	19.66	ug/L	95
5) Bromomethane	1.412	94	24445	17.34	ug/L	96
6) Chloroethane	1.480	64	24319	19.17	ug/L	98
7) Freon 21	1.608	67	72226	22.11	ug/L	96
8) Trichlorofluoromethane	1.650	101	46314	18.91	ug/L	97
9) Diethyl Ether	1.851	59	28530	22.29	ug/L	96
10) Freon 123a	1.845	67	40199	23.37	ug/L	90
11) Freon 123	1.894	83	42879	21.64	ug/L	98
12) Acrolein	1.931	56	45513	114.60	ug/L	100
13) 1,1-Dicethene	2.010	96	24511	18.78	ug/L	99
14) Freon 113	2.016	101	23247	18.07	ug/L	95
15) Acetone	2.046	43	21726	22.92	ug/L	98
16) 2-Propanol	2.162	45	58038	363.12	ug/L	94
17) Iodomethane	2.120	142	17554	14.12	ug/L	90
18) Carbon Disulfide	2.175	76	71404	20.01	ug/L	99
19) Acetonitrile	2.254	40	15457m	99.04	ug/L	
20) Allyl Chloride	2.290	76	11514	20.07	ug/L	# 77
21) Methyl Acetate	2.315	43	35769	15.96	ug/L	97
22) Methylene Chloride	2.394	84	29820	19.57	ug/L	93
23) TBA	2.504	59	87918	350.35	ug/L	81
24) Acrylonitrile	2.607	53	88576	109.43	ug/L	99
25) Methyl-t-Butyl Ether	2.656	73	95071	20.46	ug/L	98
26) trans-1,2-Dichloroethene	2.644	96	26931	19.25	ug/L	94
27) 1,1-Dicethane	3.071	63	53820	21.15	ug/L	98
28) Vinyl Acetate	3.150	86	5841	19.10	ug/L	# 48
29) DIPE	3.187	45	104766	21.19	ug/L	96
30) 2-Chloro-1,3-Butadiene	3.180	53	46735	21.87	ug/L	91
31) ETBE	3.638	59	88988	19.75	ug/L	97
32) 2,2-Dichloropropane	3.784	77	32155	15.77	ug/L	96
33) cis-1,2-Dichloroethene	3.784	96	31958	19.93	ug/L	96
34) 2-Butanone	3.833	43	25507	21.40	ug/L	97
35) Propionitrile	3.894	54	37307	113.33	ug/L	99
36) Bromochloromethane	4.125	130	20296	19.35	ug/L	# 86
37) Methacrylonitrile	4.125	67	17196	21.29	ug/L	100
38) Tetrahydrofuran	4.223	42	14992	21.42	ug/L	93
39) Chloroform	4.284	83	51888	19.45	ug/L	97
40) 1,1,1-Trichloroethane	4.552	97	39189	17.75	ug/L	95

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1921.D
 Acq On : 5 Oct 2017 2:33 pm
 Operator : F. NAEGLER
 Sample : 20 PPB
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:48:40 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.521	73	84197	19.30	ug/L	99
43) Cyclohexane	4.644	41	36748	23.66	ug/L	95
45) Carbontetrachloride	4.851	117	29342	17.93	ug/L	97
46) 1,1-Dichloropropene	4.857	75	39635	19.97	ug/L	95
48) Benzene	5.223	78	114057	19.99	ug/L	96
49) 1,2-Dichloroethane	5.265	62	49550	22.62	ug/L	97
50) Iso-Butyl Alcohol	5.271	43	40412	346.15	ug/L	100
51) n-Heptane	5.814	43	36790	20.50	ug/L	93
52) 1-Butanol	6.375	56	59857	876.24	ug/L	94
53) Trichloroethene	6.308	130	28509	16.84	ug/L	95
54) Methylcyclohexane	6.570	55	43651	22.99	ug/L #	83
55) 1,2-Dicloropropane	6.613	63	33526	21.20	ug/L	91
56) Dibromomethane	6.771	93	21325	20.97	ug/L	89
57) 1,4-Dioxane	6.857	88	12294	379.40	ug/L	90
58) Methyl Methacrylate	6.893	69	26380	20.51	ug/L #	86
59) Bromodichloromethane	7.027	83	38027	21.37	ug/L	96
60) 2-Nitropropane	7.344	41	12807	29.01	ug/L	92
61) 2-Chloroethylvinyl Ether	7.491	63	8768	24.62	ug/L	94
62) cis-1,3-Dichloropropene	8.332	75	37057	17.53	ug/L	96
63) 4-Methyl-2-pentanone	7.869	43	43569	21.76	ug/L	96
65) Toluene	8.033	91	123571	19.61	ug/L	96
66) trans-1,3-Dichloropropene	8.332	75	37057	18.33	ug/L	95
67) Ethyl Methacrylate	8.509	69	42537	19.77	ug/L	92
68) 1,1,2-Trichloroethane	8.533	97	30436	21.32	ug/L	96
71) Tetrachloroethene	8.673	164	22067	17.18	ug/L	95
72) 2-Hexanone	8.874	43	34423	22.23	ug/L	97
73) 1,3-Dichloropropane	8.716	76	54929	21.51	ug/L	91
74) Dibromochloromethane	8.966	129	27805	19.27	ug/L	97
75) N-Butyl Acetate	9.057	43	66660	21.36	ug/L	96
76) 1,2-Dibromoethane	9.063	107	29340	19.93	ug/L	97
77) 3-Chlorobenzotrifluoride	9.655	180	36445	15.12	ug/L	99
78) Chlorobenzene	9.612	112	78684	19.25	ug/L	92
79) 4-Chlorobenzotrifluoride	9.716	180	32073	15.33	ug/L	100
80) 1,1,1,2-Tetrachloroethane	9.710	131	24741	17.66	ug/L	94
81) Ethylbenzene	9.752	106	40899	19.08	ug/L	94
82) (m+p)Xylene	9.874	106	101822	38.19	ug/L	95
83) o-Xylene	10.252	106	51425	19.78	ug/L	94
84) Styrene	10.264	104	85525	20.22	ug/L	94
85) Bromoform	10.417	173	16752	17.32	ug/L	95
86) 2-Chlorobenzotrifluoride	10.514	180	35805	15.24	ug/L	99
87) Isopropylbenzene	10.612	105	130830	19.42	ug/L	97
88) Cyclohexanone	10.661	55	152790	395.29	ug/L	91
89) trans-1,4-Dichloro-2-B...	10.935	53	9075	18.90	ug/L #	76
91) 1,1,2,2-Tetrachloroethane	10.886	83	43781	23.41	ug/L	97
92) Bromobenzene	10.850	156	34923	19.87	ug/L #	85
93) 1,2,3-Trichloropropane	10.905	110	14264	21.56	ug/L #	87
94) n-Propylbenzene	10.984	91	153472	21.20	ug/L	98
95) 2-Chlorotoluene	11.039	91	93139	21.72	ug/L	98
96) 3-Chlorotoluene	11.094	91	89098	19.77	ug/L	96
97) 4-Chlorotoluene	11.136	91	110709	21.65	ug/L	95
98) 1,3,5-Trimethylbenzene	11.142	105	108452	20.70	ug/L	95
99) tert-Butylbenzene	11.423	119	93854	19.76	ug/L	99
100) 1,2,4-Trimethylbenzene	11.465	105	108560	20.44	ug/L	98
101) 3,4-Dichlorobenzotrifl...	11.532	214	30198	17.31	ug/L	97
102) sec-Butylbenzene	11.612	105	137930	20.15	ug/L	97
103) p-Isopropyltoluene	11.740	119	113350	19.93	ug/L	97

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1921.D
Acq On : 5 Oct 2017 2:33 pm
Operator : F. NAEGLER
Sample : 20 PPB
Misc :
ALS Vial : 9 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:48:40 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	64450	19.85	ug/L	97
105) 1,4-Dclbenz	11.758	146	65708	19.32	ug/L	97
106) 2,4-Dichlorobenzotrifl...	11.831	214	27591	16.96	ug/L	97
107) 2,5-Dichlorobenzotrifl...	11.874	214	30820	17.25	ug/L	95
108) n-Butylbenzene	12.081	91	108666	21.42	ug/L	98
109) 1,2-Dclbenz	12.069	146	63714	20.04	ug/L	96
110) 1,2-Dibromo-3-chloropr...	12.703	157	7865	16.62	ug/L	93
111) Trielution Dichlorotol...	12.831	125	156847	56.23	ug/L	96
112) 1,3,5-Trichlorobenzene	12.880	180	46256	18.57	ug/L	97
113) Coelution Dichlorotoluene	13.154	125	119129	39.06	ug/L	93
114) 1,2,4-Tcbenzene	13.367	180	46848	19.72	ug/L	96
115) Hexachlorobt	13.514	225	19947	19.21	ug/L	97
116) Naphthalen	13.550	128	138875	20.32	ug/L	97
117) 1,2,3-Tclbenzene	13.745	180	46564	18.93	ug/L	94
118) 2,4,5-Trichlorotoluene	14.337	159	30398	18.93	ug/L	97
119) 2,3,6-Trichlorotoluene	14.422	159	28485	18.83	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

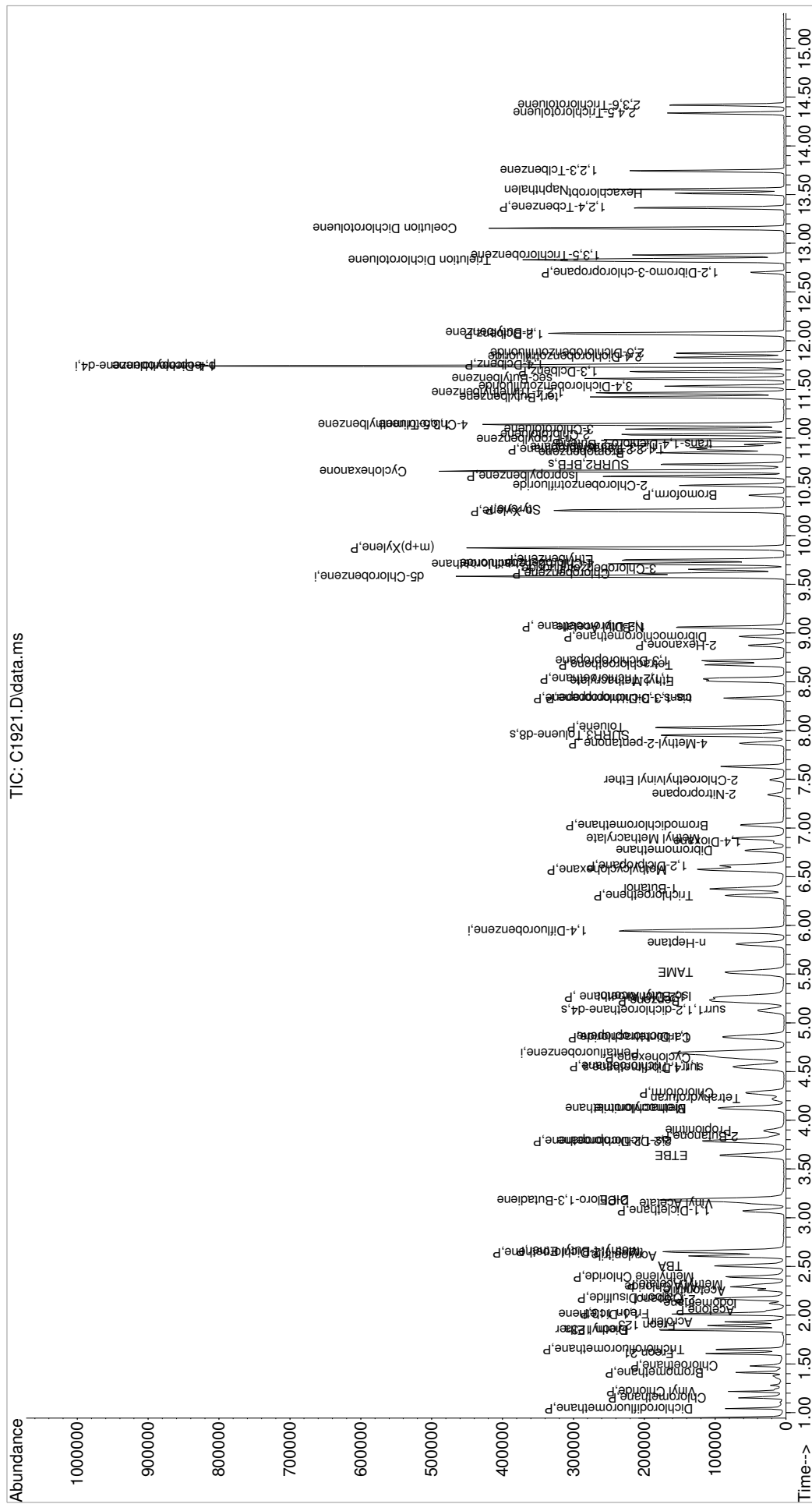
Quantitation Report (QT Reviewed)

Data Path	:	I:\ACQUDATA\MSV0A14\Data\100517\
Data File	:	C1921.D
Acq On	:	5 Oct 2017 2:33 pm
Operator	:	F. NAEGLER
Sample	:	20 PPB
Misc	:	
ALS Vial	:	9 Sample Multiplier: 1

Inst : MSV0A14

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 05 16:48:40 2017
Quant Method : I:\ACQDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1922.D
 Acq On : 5 Oct 2017 2:55 pm
 Operator : F. NAEGLER
 Sample : 50 PPB
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:55 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.698	168	143177	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	214398	50.00	ug/L	-0.01
70) d5-Chlorobenzene	9.582	117	197215	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	109184	50.00	ug/L	0.00

System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	72847	50.75	ug/L	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	101.50%
47) surr1,1,2-dichloroetha...	5.125	65	96828	56.50	ug/L	-0.01
Spiked Amount	50.000	Range	73 - 125	Recovery	=	113.00%
64) SURR3,Toluene-d8	7.954	98	281468	51.02	ug/L	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	102.04%
69) SURR2,BFB	10.728	95	105983	49.69	ug/L	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	99.38%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.041	85	105286	56.68	ug/L	98
3) Chloromethane	1.150	50	112578	49.03	ug/L	100
4) Vinyl Chloride	1.217	62	105745	54.46	ug/L	98
5) Bromomethane	1.406	94	63108	45.57	ug/L	97
6) Chloroethane	1.473	64	57719	46.31	ug/L	100
7) Freon 21	1.608	67	169420	52.80	ug/L	100
8) Trichlorofluoromethane	1.644	101	128346	53.35	ug/L	96
9) Diethyl Ether	1.851	59	72698	57.82	ug/L	96
10) Freon 123a	1.845	67	92407	54.70	ug/L	89
11) Freon 123	1.894	83	101876	52.34	ug/L	98
12) Acrolein	1.931	56	111903	286.87	ug/L	97
13) 1,1-Dicethene	2.010	96	67216	52.43	ug/L	91
14) Freon 113	2.016	101	66192	52.38	ug/L	95
15) Acetone	2.046	43	46708	50.16	ug/L	96
16) 2-Propanol	2.162	45	149491	952.21	ug/L	91
17) Iodomethane	2.120	142	54928	44.97	ug/L	99
18) Carbon Disulfide	2.175	76	181714	51.85	ug/L	99
19) Acetonitrile	2.260	40	46995	306.55	ug/L	96
20) Allyl Chloride	2.290	76	31654	56.16	ug/L	# 75
21) Methyl Acetate	2.315	43	85576	38.88	ug/L	99
22) Methylene Chloride	2.394	84	75228	50.27	ug/L	94
23) TBA	2.510	59	235095	953.79	ug/L	85
24) Acrylonitrile	2.607	53	217084	273.04	ug/L	96
25) Methyl-t-Butyl Ether	2.656	73	243288	53.30	ug/L	99
26) trans-1,2-Dichloroethene	2.644	96	73074	53.19	ug/L	91
27) 1,1-Dicethane	3.071	63	143300	57.32	ug/L	99
28) Vinyl Acetate	3.150	86	16140	53.73	ug/L	# 53
29) DIPE	3.186	45	281134	57.89	ug/L	96
30) 2-Chloro-1,3-Butadiene	3.180	53	116675	55.60	ug/L	92
31) ETBE	3.644	59	232121	52.44	ug/L	98
32) 2,2-Dichloropropane	3.784	77	91520	45.69	ug/L	97
33) cis-1,2-Dichloroethene	3.790	96	83707	53.14	ug/L	97
34) 2-Butanone	3.827	43	64537	55.12	ug/L	96
35) Propionitrile	3.894	54	90198	278.94	ug/L	97
36) Bromochloromethane	4.125	130	50443	48.95	ug/L	# 82
37) Methacrylonitrile	4.125	67	42404	53.44	ug/L	# 81
38) Tetrahydrofuran	4.211	42	39114	56.90	ug/L	93
39) Chloroform	4.278	83	137933	52.65	ug/L	96
40) 1,1,1-Trichloroethane	4.558	97	113532	52.36	ug/L	95

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1922.D
 Acq On : 5 Oct 2017 2:55 pm
 Operator : F. NAEGLER
 Sample : 50 PPB
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:55 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.521	73	219781	51.30	ug/L	97
43) Cyclohexane	4.650	41	85462	54.41	ug/L	99
45) Carbontetrachloride	4.845	117	85583	51.72	ug/L	95
46) 1,1-Dichloropropene	4.857	75	105919	52.77	ug/L	94
48) Benzene	5.223	78	302594	52.44	ug/L	97
49) 1,2-Dichloroethane	5.265	62	124002	55.97	ug/L	96
50) Iso-Butyl Alcohol	5.271	43	113987	965.40	ug/L	97
51) n-Heptane	5.808	43	104696	57.68	ug/L	98
52) 1-Butanol	6.381	56	165307	2392.78	ug/L	98
53) Trichloroethene	6.308	130	78324	45.75	ug/L	94
54) Methylcyclohexane	6.570	55	101303	52.76	ug/L #	85
55) 1,2-Dicloropropane	6.613	63	84191	52.65	ug/L	99
56) Dibromomethane	6.771	93	54491	52.99	ug/L	90
57) 1,4-Dioxane	6.850	88	30206	921.72	ug/L	91
58) Methyl Methacrylate	6.893	69	68456	52.62	ug/L #	86
59) Bromodichloromethane	7.027	83	101451	56.38	ug/L	96
60) 2-Nitropropane	7.344	41	41370	92.67	ug/L	99
61) 2-Chloroethylvinyl Ether	7.491	63	23309	64.73	ug/L	98
62) cis-1,3-Dichloropropene	8.332	75	106729	49.93	ug/L	97
63) 4-Methyl-2-pentanone	7.869	43	113019	55.82	ug/L	98
65) Toluene	8.033	91	329746	51.73	ug/L	98
66) trans-1,3-Dichloropropene	8.332	75	106729	52.20	ug/L	95
67) Ethyl Methacrylate	8.509	69	117423	53.97	ug/L	94
68) 1,1,2-Trichloroethane	8.533	97	75355	52.20	ug/L	96
71) Tetrachloroethene	8.673	164	61006	45.79	ug/L	95
72) 2-Hexanone	8.874	43	86565	53.90	ug/L	98
73) 1,3-Dichloropropane	8.716	76	136833	51.66	ug/L	90
74) Dibromochloromethane	8.966	129	75528	50.47	ug/L	96
75) N-Butyl Acetate	9.057	43	172623	53.32	ug/L	97
76) 1,2-Dibromoethane	9.063	107	75699	49.58	ug/L	96
77) 3-Chlorobenzotrifluoride	9.655	180	109814	43.92	ug/L	99
78) Chlorobenzene	9.612	112	206913	48.80	ug/L	99
79) 4-Chlorobenzotrifluoride	9.716	180	99574	45.90	ug/L	98
80) 1,1,1,2-Tetrachloroethane	9.710	131	68354	47.05	ug/L	98
81) Ethylbenzene	9.752	106	111972	50.36	ug/L	96
82) (m+p)Xylene	9.874	106	279338	101.01	ug/L	93
83) o-Xylene	10.252	106	137103	50.84	ug/L	95
84) Styrene	10.264	104	234125	53.38	ug/L	98
85) Bromoform	10.417	173	49559	49.39	ug/L	95
86) 2-Chlorobenzotrifluoride	10.520	180	107467	44.11	ug/L	97
87) Isopropylbenzene	10.612	105	363591	52.03	ug/L	98
88) Cyclohexanone	10.661	55	409246	1020.90	ug/L	89
89) trans-1,4-Dichloro-2-B...	10.935	53	27227	54.68	ug/L	82
91) 1,1,2,2-Tetrachloroethane	10.886	83	117095	57.08	ug/L	95
92) Bromobenzene	10.850	156	90621	47.00	ug/L #	86
93) 1,2,3-Trichloropropane	10.905	110	37180	51.22	ug/L #	83
94) n-Propylbenzene	10.984	91	427820	53.88	ug/L	98
95) 2-Chlorotoluene	11.039	91	252408	53.66	ug/L	96
96) 3-Chlorotoluene	11.093	91	261124	52.82	ug/L	98
97) 4-Chlorotoluene	11.136	91	295180	52.63	ug/L	96
98) 1,3,5-Trimethylbenzene	11.142	105	299036	52.04	ug/L	95
99) tert-Butylbenzene	11.423	119	254002	48.75	ug/L	97
100) 1,2,4-Trimethylbenzene	11.465	105	303151	52.03	ug/L	100
101) 3,4-Dichlorobenzotrifl...	11.532	214	87131	45.52	ug/L	96
102) sec-Butylbenzene	11.612	105	389802	51.91	ug/L	98
103) p-Isopropyltoluene	11.740	119	322303	51.66	ug/L	96

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1922.D
Acq On : 5 Oct 2017 2:55 pm
Operator : F. NAEGLER
Sample : 50 PPB
Misc :
ALS Vial : 10 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:55 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	169350	47.55	ug/L	99
105) 1,4-Dclbenz	11.758	146	174771	46.85	ug/L	97
106) 2,4-Dichlorobenzotrifl...	11.831	214	78871	44.20	ug/L	98
107) 2,5-Dichlorobenzotrifl...	11.874	214	89762	45.79	ug/L	95
108) n-Butylbenzene	12.081	91	307509	55.25	ug/L	98
109) 1,2-Dclbenz	12.069	146	169925	48.73	ug/L	100
110) 1,2-Dibromo-3-chloropr...	12.703	157	22984	44.27	ug/L	96
111) Trielution Dichlorotol...	12.831	125	442633	144.65	ug/L	94
112) 1,3,5-Trichlorobenzene	12.880	180	124894	45.69	ug/L	97
113) Coelution Dichlorotoluene	13.154	125	324031	96.86	ug/L	94
114) 1,2,4-Tcbenzene	13.367	180	122699	47.08	ug/L	97
115) Hexachlorobt	13.514	225	53777	47.21	ug/L	99
116) Naphthalen	13.550	128	362812	48.39	ug/L	97
117) 1,2,3-Tclbenzene	13.745	180	121153	44.89	ug/L	98
118) 2,4,5-Trichlorotoluene	14.337	159	84539	47.98	ug/L	98
119) 2,3,6-Trichlorotoluene	14.422	159	78094	47.06	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

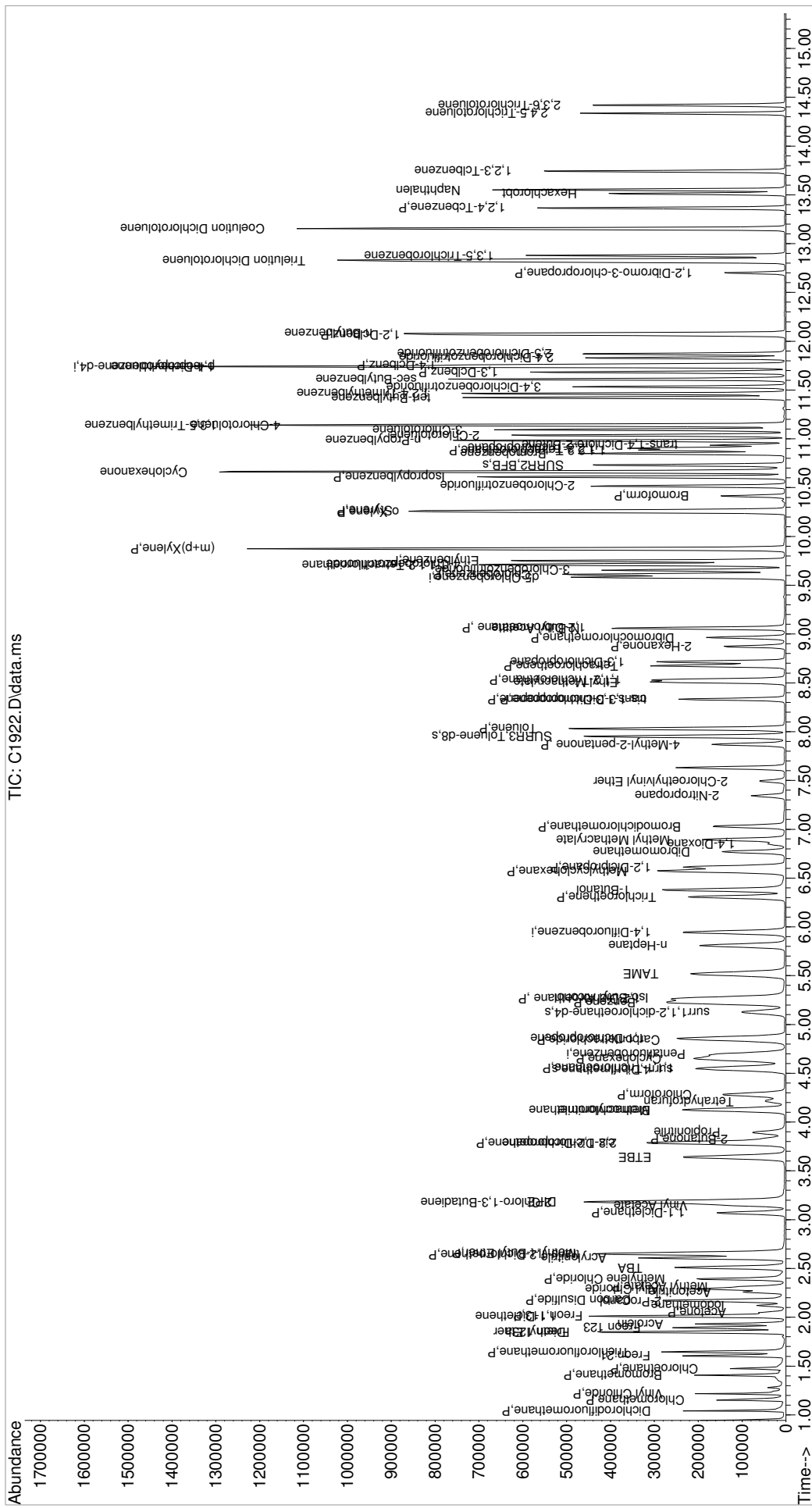
Quantitation Report (QT Reviewed)

Data Path	:	I:\ACQUDATA\MSV0A14\Data\100517\
Data File	:	C1922.D
Acq On	:	5 Oct 2017 2:55 pm
Operator	:	F. NAEGLER
Sample	:	50 PPB
Misc	:	
ALS Vial	:	10 Sample Multiplier: 1

Inst : MSVOA14

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 05 16:33:55 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Quant Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



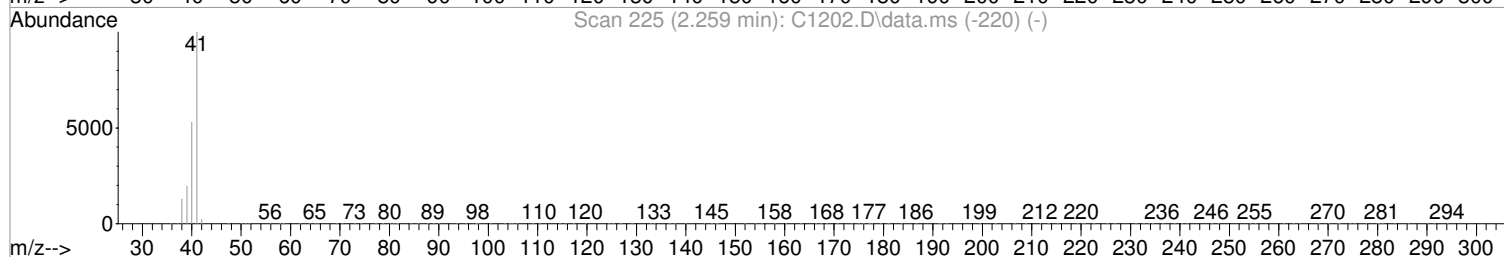
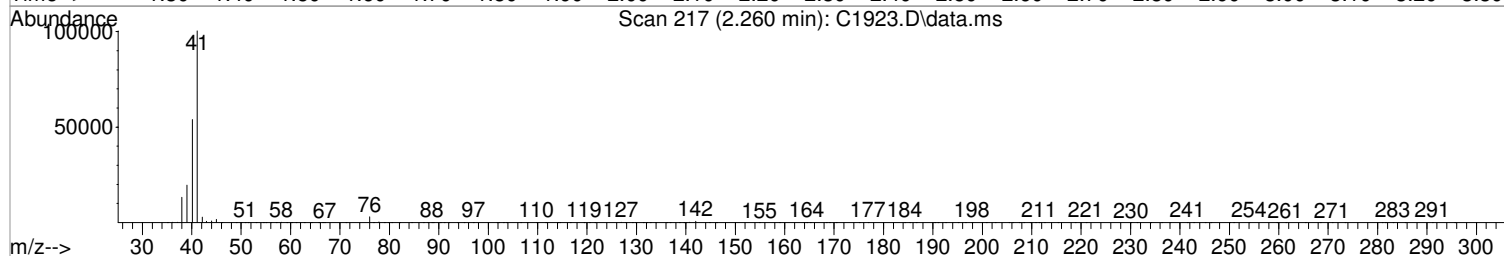
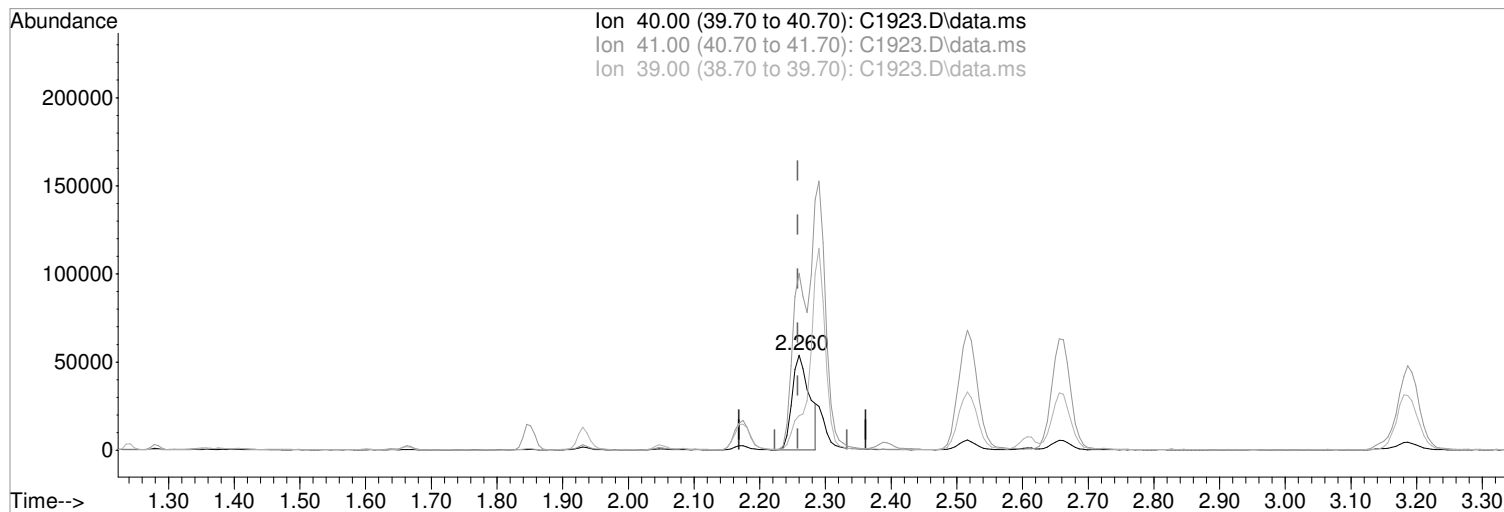
Quantitation Report (Qedit)

1st *BA* 10/09/17
2nd *FJ* 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1923.D
Acq On : 5 Oct 2017 3:18 pm
Operator : F. NAEGLER
Sample : 100 PPB
Misc :
ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:59 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(19) Acetonitrile

2.260min (+0.001) 641.07 ug/L m

response 98518

Ion	Exp%	Act%
40.00	100	100
41.00	188.10	186.11
39.00	37.70	36.42
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/06/17

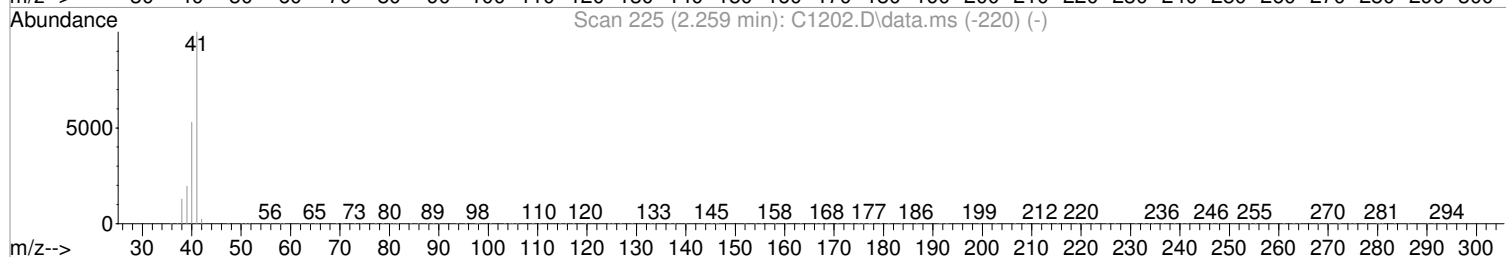
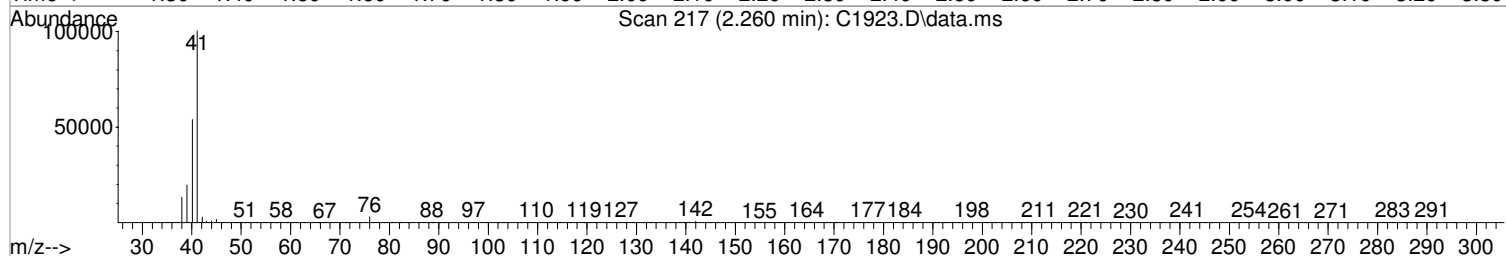
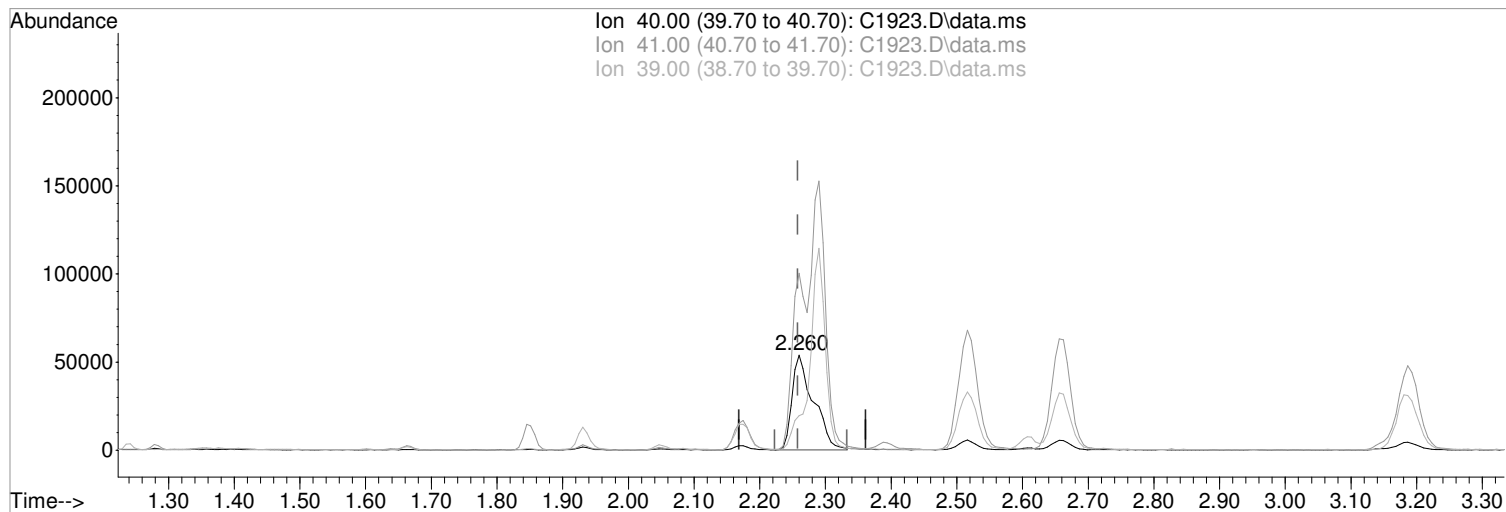
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1923.D
Acq On : 5 Oct 2017 3:18 pm
Operator : F. NAEGLER
Sample : 100 PPB
Misc :
ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:33:59 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1923.D\data.ms

(19) Acetonitrile

Manual Integration:

2.260min (+0.001) 790.86 ug/L

Before

response 121536

Ion Exp% Act%

10/06/17

40.00 100 100

41.00 188.10 186.11

39.00 37.70 36.42

0.00 0.00 0.00

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1923.D
 Acq On : 5 Oct 2017 3:18 pm
 Operator : F. NAEGLER
 Sample : 100 PPB
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 09:18:02 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	4.692	168	143528	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	219210	50.00	ug/L	-0.01
70) d5-Chlorobenzene	9.582	117	202641	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	116779	50.00	ug/L	0.00

System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	148723	101.33	ug/L	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	202.66%#
47) surr1,1,2-dichloroetha...	5.125	65	198517	113.29	ug/L	-0.01
Spiked Amount	50.000	Range	73 - 125	Recovery	=	226.58%#
64) SURR3,Toluene-d8	7.954	98	574673	101.88	ug/L	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	203.76%#
69) SURR2,BFB	10.734	95	228420	104.73	ug/L	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	209.46%#

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.041	85	205672	110.45	ug/L	97
3) Chloromethane	1.150	50	225138	97.81	ug/L	98
4) Vinyl Chloride	1.217	62	217932	111.96	ug/L	98
5) Bromomethane	1.406	94	129849	93.53	ug/L	98
6) Chloroethane	1.467	64	121177	96.99	ug/L	98
7) Freon 21	1.601	67	351486	109.28	ug/L	98
8) Trichlorofluoromethane	1.644	101	249146	103.31	ug/L	98
9) Diethyl Ether	1.851	59	146041	115.86	ug/L	98
10) Freon 123a	1.845	67	195381	115.38	ug/L	87
11) Freon 123	1.894	83	210246	107.75	ug/L	98
12) Acrolein	1.931	56	223908	572.59	ug/L	97
13) 1,1-Dicethene	2.010	96	136607	106.29	ug/L	98
14) Freon 113	2.016	101	128822	101.70	ug/L	97
15) Acetone	2.046	43	93192	99.84	ug/L	96
16) 2-Propanol	2.174	45	339695	2158.46	ug/L	98
17) Iodomethane	2.120	142	127890	104.46	ug/L	97
18) Carbon Disulfide	2.174	76	382355	108.83	ug/L	99
19) Acetonitrile	2.260	40	98518m	641.07	ug/L	
20) Allyl Chloride	2.290	76	69736	123.43	ug/L	# 85
21) Methyl Acetate	2.315	43	175600	79.59	ug/L	98
22) Methylene Chloride	2.394	84	155432	103.61	ug/L	91
23) TBA	2.516	59	508531	2058.09	ug/L	88
24) Acrylonitrile	2.607	53	447884	561.95	ug/L	96
25) Methyl-t-Butyl Ether	2.656	73	509078	111.26	ug/L	99
26) trans-1,2-Dichloroethene	2.644	96	147434	107.05	ug/L	91
27) 1,1-Dicethane	3.071	63	294501	117.52	ug/L	98
28) Vinyl Acetate	3.150	86	33656	111.77	ug/L	# 47
29) DIPE	3.186	45	579818	119.10	ug/L	98
30) 2-Chloro-1,3-Butadiene	3.180	53	245875	116.88	ug/L	90
31) ETBE	3.644	59	491682	110.81	ug/L	98
32) 2,2-Dichloropropane	3.784	77	199286	99.24	ug/L	99
33) cis-1,2-Dichloroethene	3.790	96	170758	108.13	ug/L	88
34) 2-Butanone	3.833	43	127778	108.86	ug/L	97
35) Propionitrile	3.894	54	181699	560.54	ug/L	100
36) Bromochloromethane	4.131	130	100378	97.17	ug/L	88
37) Methacrylonitrile	4.125	67	87664	110.22	ug/L	89
38) Tetrahydrofuran	4.217	42	77201	112.03	ug/L	93
39) Chloroform	4.284	83	284124	108.18	ug/L	98
40) 1,1,1-Trichloroethane	4.558	97	234322	107.80	ug/L	97

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1923.D
 Acq On : 5 Oct 2017 3:18 pm
 Operator : F. NAEGLER
 Sample : 100 PPB
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 09:18:02 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.521	73	469177	109.24	ug/L	95
43) Cyclohexane	4.643	41	179123	111.54	ug/L	99
45) Carbontetrachloride	4.845	117	181797	107.46	ug/L	100
46) 1,1-Dichloropropene	4.857	75	218098	106.27	ug/L	96
48) Benzene	5.229	78	613921	104.07	ug/L	97
49) 1,2-Dichloroethane	5.265	62	255355	112.72	ug/L	98
50) Iso-Butyl Alcohol	5.278	43	251716	2085.09	ug/L	100
51) n-Heptane	5.808	43	205651	110.81	ug/L	98
52) 1-Butanol	6.387	56	383240	5425.53	ug/L	97
53) Trichloroethene	6.308	130	158583	90.60	ug/L	94
54) Methylcyclohexane	6.570	55	212418	108.19	ug/L	87
55) 1,2-Dicloropropane	6.613	63	176320	107.84	ug/L	99
56) Dibromomethane	6.765	93	112569	107.07	ug/L #	83
57) 1,4-Dioxane	6.856	88	63124	1883.91	ug/L	93
58) Methyl Methacrylate	6.893	69	145700	109.54	ug/L #	84
59) Bromodichloromethane	7.027	83	217323	118.12	ug/L	95
60) 2-Nitropropane	7.344	41	99418	217.81	ug/L	98
61) 2-Chloroethylvinyl Ether	7.490	63	50436	136.98	ug/L	97
62) cis-1,3-Dichloropropene	8.332	75	240759	110.15	ug/L	99
63) 4-Methyl-2-pentanone	7.868	43	233486	112.78	ug/L	98
65) Toluene	8.033	91	672956	103.26	ug/L	100
66) trans-1,3-Dichloropropene	8.332	75	240759	115.17	ug/L	96
67) Ethyl Methacrylate	8.509	69	254657	114.47	ug/L	90
68) 1,1,2-Trichloroethane	8.533	97	156656	106.13	ug/L	99
71) Tetrachloroethene	8.673	164	124274	90.78	ug/L	96
72) 2-Hexanone	8.874	43	184847	112.01	ug/L	98
73) 1,3-Dichloropropane	8.716	76	285418	104.88	ug/L	90
74) Dibromochloromethane	8.966	129	166293	108.15	ug/L	98
75) N-Butyl Acetate	9.057	43	368612	110.82	ug/L	97
76) 1,2-Dibromoethane	9.063	107	162967	103.88	ug/L	99
77) 3-Chlorobenzotrifluoride	9.655	180	220809	85.95	ug/L	98
78) Chlorobenzene	9.612	112	432164	99.19	ug/L	97
79) 4-Chlorobenzotrifluoride	9.716	180	197405	88.55	ug/L	99
80) 1,1,1,2-Tetrachloroethane	9.710	131	149860	100.39	ug/L	97
81) Ethylbenzene	9.752	106	232778	101.89	ug/L	94
82) (m+p)Xylene	9.874	106	585728	206.14	ug/L	93
83) o-Xylene	10.252	106	289418	104.45	ug/L	95
84) Styrene	10.264	104	507374	112.58	ug/L	95
85) Bromoform	10.417	173	112711	109.32	ug/L	99
86) 2-Chlorobenzotrifluoride	10.520	180	218993	87.49	ug/L	99
87) Isopropylbenzene	10.612	105	765145	106.56	ug/L	97
88) Cyclohexanone	10.667	55	886313	2151.78	ug/L	90
89) trans-1,4-Dichloro-2-B...	10.935	53	61984	121.16	ug/L	85
91) 1,1,2,2-Tetrachloroethane	10.886	83	248246	113.14	ug/L	99
92) Bromobenzene	10.850	156	190879	92.57	ug/L #	80
93) 1,2,3-Trichloropropane	10.904	110	77257	99.51	ug/L #	77
94) n-Propylbenzene	10.984	91	929743	109.47	ug/L	97
95) 2-Chlorotoluene	11.039	91	532810	105.90	ug/L	97
96) 3-Chlorotoluene	11.093	91	555491	105.06	ug/L	96
97) 4-Chlorotoluene	11.136	91	650239	108.39	ug/L	95
98) 1,3,5-Trimethylbenzene	11.142	105	654729	106.53	ug/L	95
99) tert-Butylbenzene	11.423	119	550625	98.80	ug/L	98
100) 1,2,4-Trimethylbenzene	11.465	105	655545	105.19	ug/L	98
101) 3,4-Dichlorobenzotrifl...	11.538	214	183378	89.57	ug/L	99
102) sec-Butylbenzene	11.612	105	833014	103.73	ug/L	99
103) p-Isopropyltoluene	11.740	119	701492	105.12	ug/L	95

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1923.D
 Acq On : 5 Oct 2017 3:18 pm
 Operator : F. NAEGLER
 Sample : 100 PPB
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 09:18:02 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

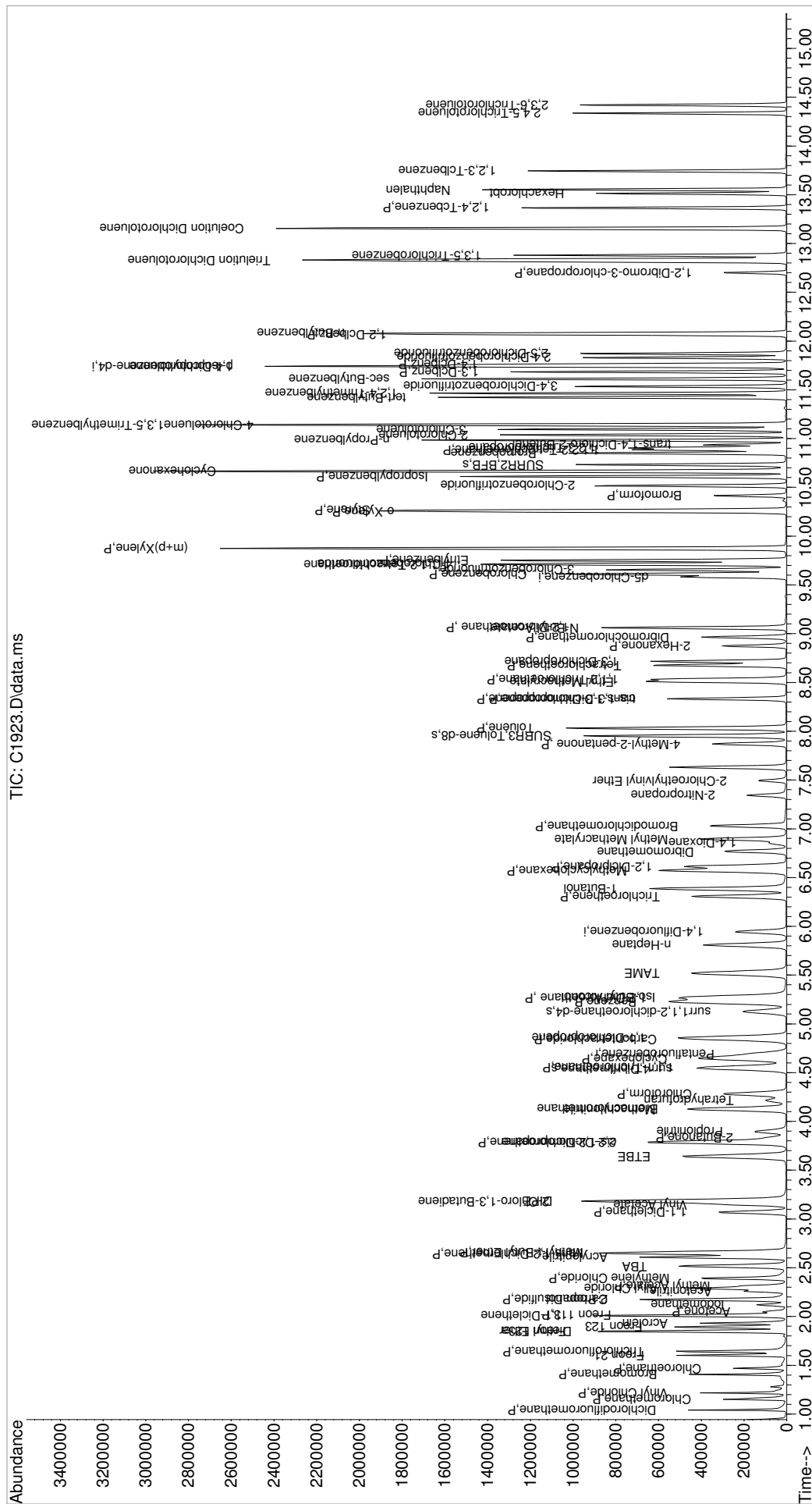
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	366794	96.29	ug/L	99
105) 1,4-Dclbenz	11.764	146	377879	94.70	ug/L	99
106) 2,4-Dichlorobenzotrifl...	11.831	214	165588	86.76	ug/L	97
107) 2,5-Dichlorobenzotrifl...	11.874	214	186124	88.76	ug/L	97
108) n-Butylbenzene	12.081	91	672634	112.99	ug/L	97
109) 1,2-Dclbenz	12.069	146	360036	96.53	ug/L	99
110) 1,2-Dibromo-3-chloropr...	12.703	157	50799	91.48	ug/L	92
111) Trielution Dichlorotol...	12.831	125	941750	287.74	ug/L	94
112) 1,3,5-Trichlorobenzene	12.880	180	263307	90.07	ug/L	98
113) Coelution Dichlorotoluene	13.154	125	696268	194.59	ug/L	92
114) 1,2,4-Tcbenzene	13.367	180	258330	92.67	ug/L	99
115) Hexachlorobt	13.514	225	113045	92.79	ug/L	98
116) Naphthalen	13.550	128	779060	97.14	ug/L	97
117) 1,2,3-Tclbenzene	13.745	180	253292	87.76	ug/L	99
118) 2,4,5-Trichlorotoluene	14.337	159	180549	95.80	ug/L	98
119) 2,3,6-Trichlorotoluene	14.422	159	163087	91.90	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQDATA\MSVOA14\Data\100517\
Data File : C1923.D
Acq On : 5 Oct 2017 3:18 pm
Operator : F. NAEGLER
Sample : 100 PPB
Misc :
ALS Vial : 11 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 09:18:02 2017
Quant Method : I:\ACQDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



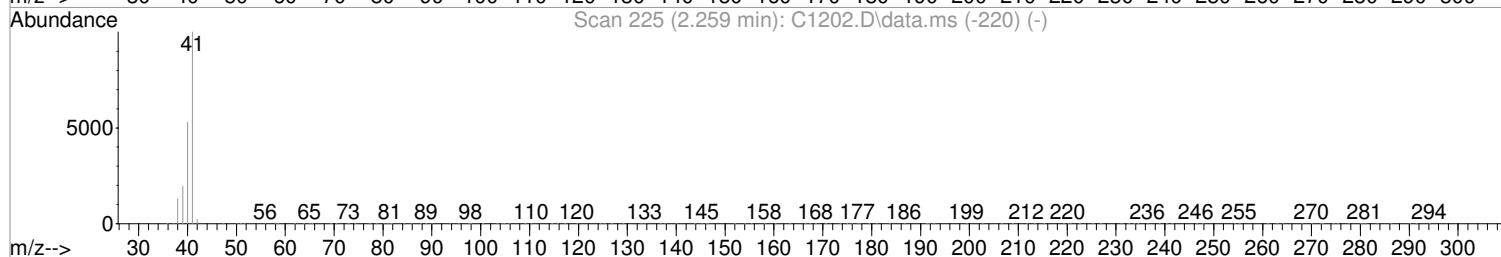
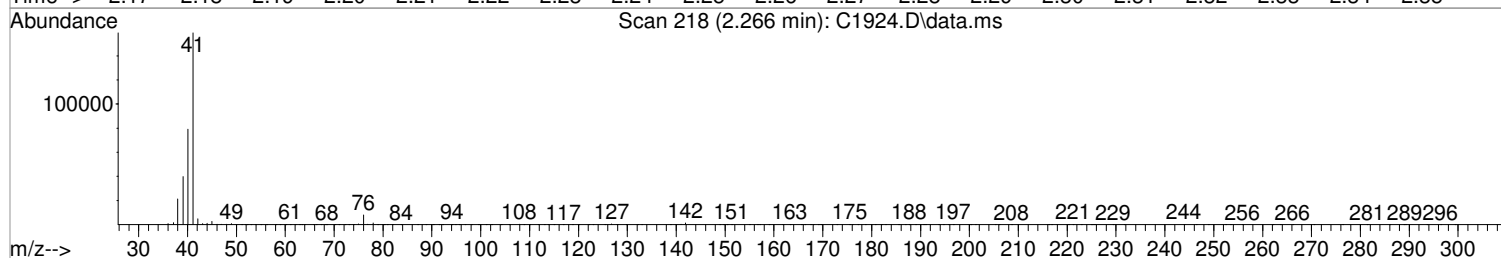
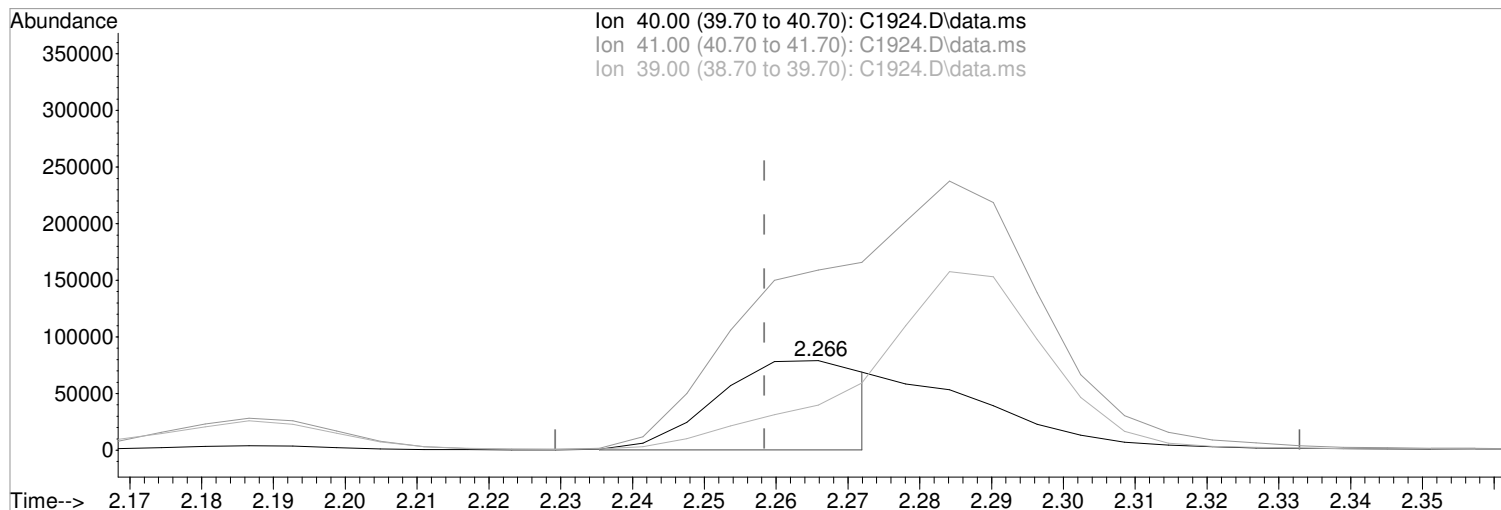
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1924.D
Acq On : 5 Oct 2017 3:40 pm
Operator : F. NAEGLER
Sample : 150PPB
Misc :
ALS Vial : 12 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:34:03 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(19) Acetonitrile

2.266min (+0.007) 700.04 ug/L m

response 114297

Ion	Exp%	Act%
40.00	100	100
41.00	188.10	200.75
39.00	37.70	50.31
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

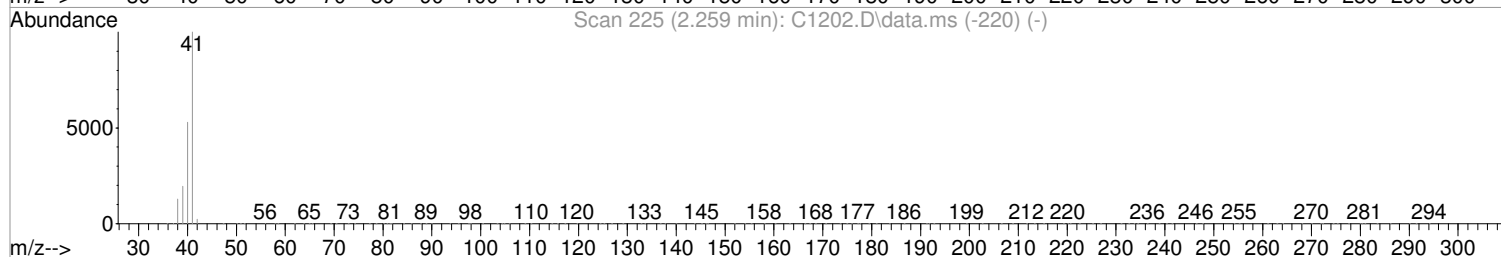
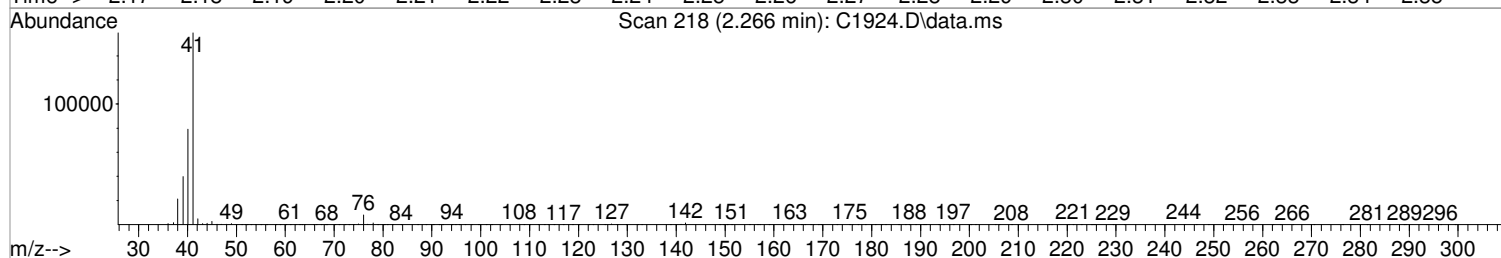
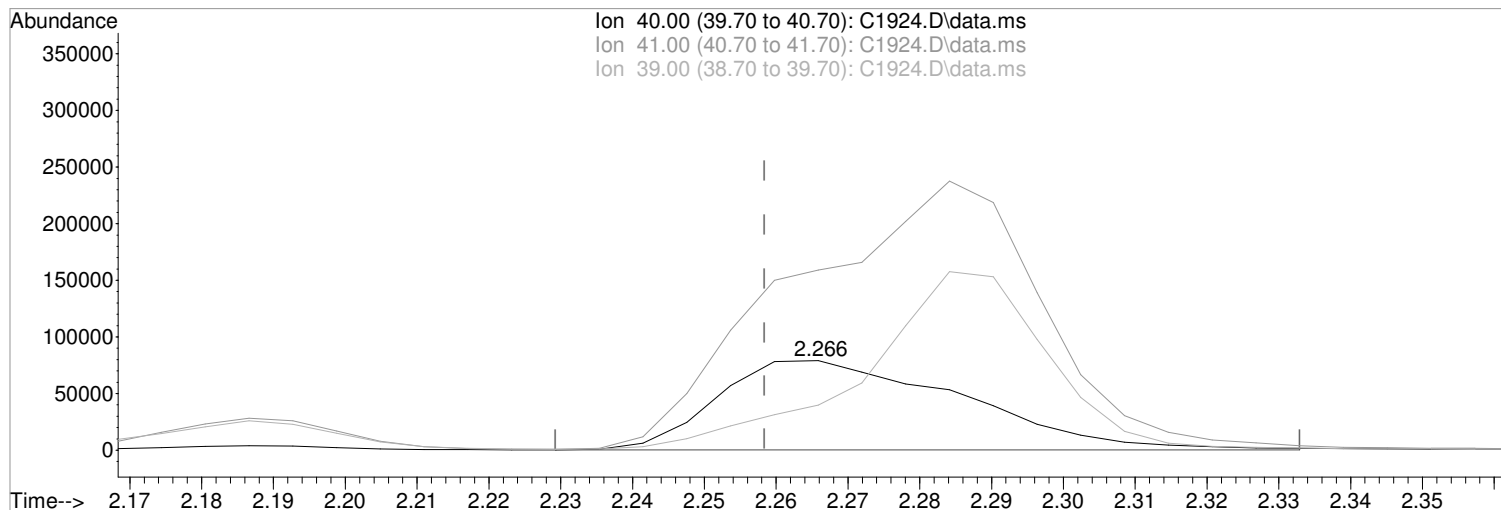
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1924.D
Acq On : 5 Oct 2017 3:40 pm
Operator : F. NAEGLER
Sample : 150PPB
Misc :
ALS Vial : 12 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:34:03 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



TIC: C1924.D\data.ms

(19) Acetonitrile

Manual Integration:

2.266min (+0.007) 1151.78 ug/L

Before

response 188054

Ion	Exp%	Act%
40.00	100	100
41.00	188.10	200.75
39.00	37.70	50.31
0.00	0.00	0.00

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1924.D
 Acq On : 5 Oct 2017 3:40 pm
 Operator : F. NAEGLER
 Sample : 150PPB
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:52:22 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	152490	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.942	114	230119	50.00	ug/L	-0.01
70) d5-Chlorobenzene	9.582	117	218608	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.740	152	130242	50.00	ug/L	0.00

System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	296701	192.56	ug/L	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	385.12%#
47) surr1,1,2-dichloroetha...	5.125	65	402333	218.72	ug/L	-0.01
Spiked Amount	50.000	Range	73 - 125	Recovery	=	437.44%#
64) SURR3,Toluene-d8	7.954	98	1171858	197.91	ug/L	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	395.82%#
69) SURR2,BFB	10.734	95	487648	212.99	ug/L	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	425.98%#

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.040	85	295951	149.58	ug/L	98
3) Chloromethane	1.150	50	335144	137.04	ug/L	100
4) Vinyl Chloride	1.217	62	310186	149.99	ug/L	99
5) Bromomethane	1.400	94	192105	130.24	ug/L	97
6) Chloroethane	1.461	64	186109	140.21	ug/L	97
7) Freon 21	1.595	67	513969	150.40	ug/L	100
8) Trichlorofluoromethane	1.632	101	335774	131.05	ug/L	99
9) Diethyl Ether	1.851	59	228315	170.49	ug/L	98
10) Freon 123a	1.845	67	267934	148.93	ug/L	91
11) Freon 123	1.888	83	293535	141.59	ug/L	97
12) Acrolein	1.931	56	351793	846.76	ug/L	99
13) 1,1-Dicethene	2.004	96	198131	145.10	ug/L	95
14) Freon 113	2.010	101	184230	136.89	ug/L	95
15) Acetone	2.052	43	151365	152.63	ug/L	97
16) 2-Propanol	2.187	45	599141	3583.27	ug/L	97
17) Iodomethane	2.113	142	196728	151.24	ug/L	93
18) Carbon Disulfide	2.168	76	586580	157.15	ug/L	100
19) Acetonitrile	2.266	40	114297m	700.04	ug/L	
20) Allyl Chloride	2.290	76	98073	163.39	ug/L	# 79
21) Methyl Acetate	2.315	43	285442	121.78	ug/L	98
22) Methylene Chloride	2.388	84	241323	151.41	ug/L	93
23) TBA	2.534	59	901119	3432.61	ug/L	92
24) Acrylonitrile	2.607	53	718819	848.89	ug/L	98
25) Methyl-t-Butyl Ether	2.662	73	795726	163.69	ug/L	99
26) trans-1,2-Dichloroethene	2.644	96	219550	150.04	ug/L	91
27) 1,1-Dicethane	3.064	63	431095	161.91	ug/L	100
28) Vinyl Acetate	3.150	86	54303	169.75	ug/L	# 67
29) DIPE	3.186	45	923697	178.59	ug/L	97
30) 2-Chloro-1,3-Butadiene	3.174	53	382299	171.05	ug/L	89
31) ETBE	3.644	59	788785	167.31	ug/L	98
32) 2,2-Dichloropropane	3.784	77	298906	140.11	ug/L	99
33) cis-1,2-Dichloroethene	3.790	96	256520	152.89	ug/L	93
34) 2-Butanone	3.833	43	203504	163.19	ug/L	97
35) Propionitrile	3.900	54	301554	875.62	ug/L	100
36) Bromochloromethane	4.125	130	151625	138.16	ug/L	# 84
37) Methacrylonitrile	4.131	67	139121	164.63	ug/L	89
38) Tetrahydrofuran	4.217	42	124750	170.39	ug/L	95
39) Chloroform	4.284	83	425840	152.62	ug/L	96
40) 1,1,1-Trichloroethane	4.558	97	346657	150.10	ug/L	96

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1924.D
 Acq On : 5 Oct 2017 3:40 pm
 Operator : F. NAEGLER
 Sample : 150PPB
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:52:22 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.521	73	751730	164.74	ug/L	96
43) Cyclohexane	4.643	41	251971	149.47	ug/L	99
45) Carbontetrachloride	4.845	117	268168	150.99	ug/L	97
46) 1,1-Dichloropropene	4.857	75	314303	145.89	ug/L	95
48) Benzene	5.223	78	905193	146.17	ug/L	97
49) 1,2-Dichloroethane	5.265	62	392828	165.19	ug/L	99
50) Iso-Butyl Alcohol	5.296	43	428347	3380.00	ug/L	98
51) n-Heptane	5.808	43	295837	151.84	ug/L	99
52) 1-Butanol	6.399	56	675966	9115.99	ug/L	95
53) Trichloroethene	6.308	130	230155	125.25	ug/L	95
54) Methylcyclohexane	6.570	55	301173	146.13	ug/L	89
55) 1,2-Dicloropropane	6.613	63	265148	154.49	ug/L	97
56) Dibromomethane	6.771	93	174914	158.48	ug/L	86
57) 1,4-Dioxane	6.856	88	105437	2997.55	ug/L	97
58) Methyl Methacrylate	6.893	69	234391	167.87	ug/L	86
59) Bromodichloromethane	7.033	83	330486	171.11	ug/L	97
60) 2-Nitropropane	7.344	41	173071	361.20	ug/L	100
61) 2-Chloroethylvinyl Ether	7.497	63	88122	227.99	ug/L	98
62) cis-1,3-Dichloropropene	8.332	75	388931	169.51	ug/L	98
63) 4-Methyl-2-pentanone	7.875	43	382745	176.12	ug/L	98
65) Toluene	8.033	91	1012886	148.06	ug/L	100
66) trans-1,3-Dichloropropene	8.332	75	388931	177.23	ug/L	96
67) Ethyl Methacrylate	8.509	69	411611	176.26	ug/L	88
68) 1,1,2-Trichloroethane	8.533	97	246483	159.07	ug/L	99
71) Tetrachloroethene	8.679	164	179939	121.84	ug/L	98
72) 2-Hexanone	8.874	43	306238	172.02	ug/L	98
73) 1,3-Dichloropropane	8.716	76	439684	149.76	ug/L	89
74) Dibromochloromethane	8.966	129	261755	157.80	ug/L	98
75) N-Butyl Acetate	9.063	43	615396	171.49	ug/L	99
76) 1,2-Dibromoethane	9.063	107	259554	153.36	ug/L	100
77) 3-Chlorobenzotrifluoride	9.655	180	352903	127.33	ug/L	96
78) Chlorobenzene	9.612	112	651499	138.62	ug/L	97
79) 4-Chlorobenzotrifluoride	9.716	180	321567	133.71	ug/L	97
80) 1,1,1,2-Tetrachloroethane	9.710	131	233675	145.10	ug/L	98
81) Ethylbenzene	9.752	106	345455	140.17	ug/L	94
82) (m+p)Xylene	9.874	106	878408	286.56	ug/L	91
83) o-Xylene	10.252	106	436526	146.03	ug/L	94
84) Styrene	10.264	104	786939	161.85	ug/L	94
85) Bromoform	10.417	173	188581	169.55	ug/L	99
86) 2-Chlorobenzotrifluoride	10.520	180	361539	133.88	ug/L	98
87) Isopropylbenzene	10.612	105	1135328	146.57	ug/L	98
88) Cyclohexanone	10.667	55	1565118	3522.25	ug/L	91
89) trans-1,4-Dichloro-2-B...	10.935	53	104478	189.30	ug/L	87
91) 1,1,2,2-Tetrachloroethane	10.886	83	401791	164.19	ug/L	98
92) Bromobenzene	10.850	156	301782	131.22	ug/L	# 78
93) 1,2,3-Trichloropropane	10.911	110	125837	145.33	ug/L	90
94) n-Propylbenzene	10.984	91	1368427	144.47	ug/L	97
95) 2-Chlorotoluene	11.039	91	812416	144.78	ug/L	97
96) 3-Chlorotoluene	11.093	91	900636	152.72	ug/L	97
97) 4-Chlorotoluene	11.136	91	1007323	150.55	ug/L	94
98) 1,3,5-Trimethylbenzene	11.148	105	999925	145.87	ug/L	97
99) tert-Butylbenzene	11.423	119	828001	133.21	ug/L	99
100) 1,2,4-Trimethylbenzene	11.465	105	1004305	144.49	ug/L	97
101) 3,4-Dichlorobenzotrifl...	11.538	214	301144	131.89	ug/L	97
102) sec-Butylbenzene	11.612	105	1250473	139.61	ug/L	98
103) p-Isopropyltoluene	11.740	119	1053475	141.55	ug/L	95

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1924.D
 Acq On : 5 Oct 2017 3:40 pm
 Operator : F. NAEGLER
 Sample : 150PPB
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:52:22 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	565473	133.11	ug/L	98
105) 1,4-Dclbenz	11.764	146	590979	132.80	ug/L	99
106) 2,4-Dichlorobenzotrifl...	11.831	214	273726	128.60	ug/L	99
107) 2,5-Dichlorobenzotrifl...	11.874	214	310455	132.75	ug/L	97
108) n-Butylbenzene	12.081	91	1017898	153.31	ug/L	97
109) 1,2-Dclbenz	12.069	146	566418	136.17	ug/L	98
110) 1,2-Dibromo-3-chloropr...	12.703	157	88567	143.00	ug/L	94
111) Trielution Dichlorotol...	12.831	125	1565212	428.80	ug/L	94
112) 1,3,5-Trichlorobenzene	12.880	180	428296	131.36	ug/L	97
113) Coelution Dichlorotoluene	13.154	125	1157859	290.14	ug/L	90
114) 1,2,4-Tcbenzene	13.367	180	402017	129.31	ug/L	99
115) Hexachlorobt	13.514	225	168882	124.29	ug/L	98
116) Naphthalen	13.550	128	1246890	139.40	ug/L	97
117) 1,2,3-Tclbenzene	13.745	180	398000	123.64	ug/L	97
118) 2,4,5-Trichlorotoluene	14.337	159	295854	140.76	ug/L	99
119) 2,3,6-Trichlorotoluene	14.422	159	267897	135.35	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

```

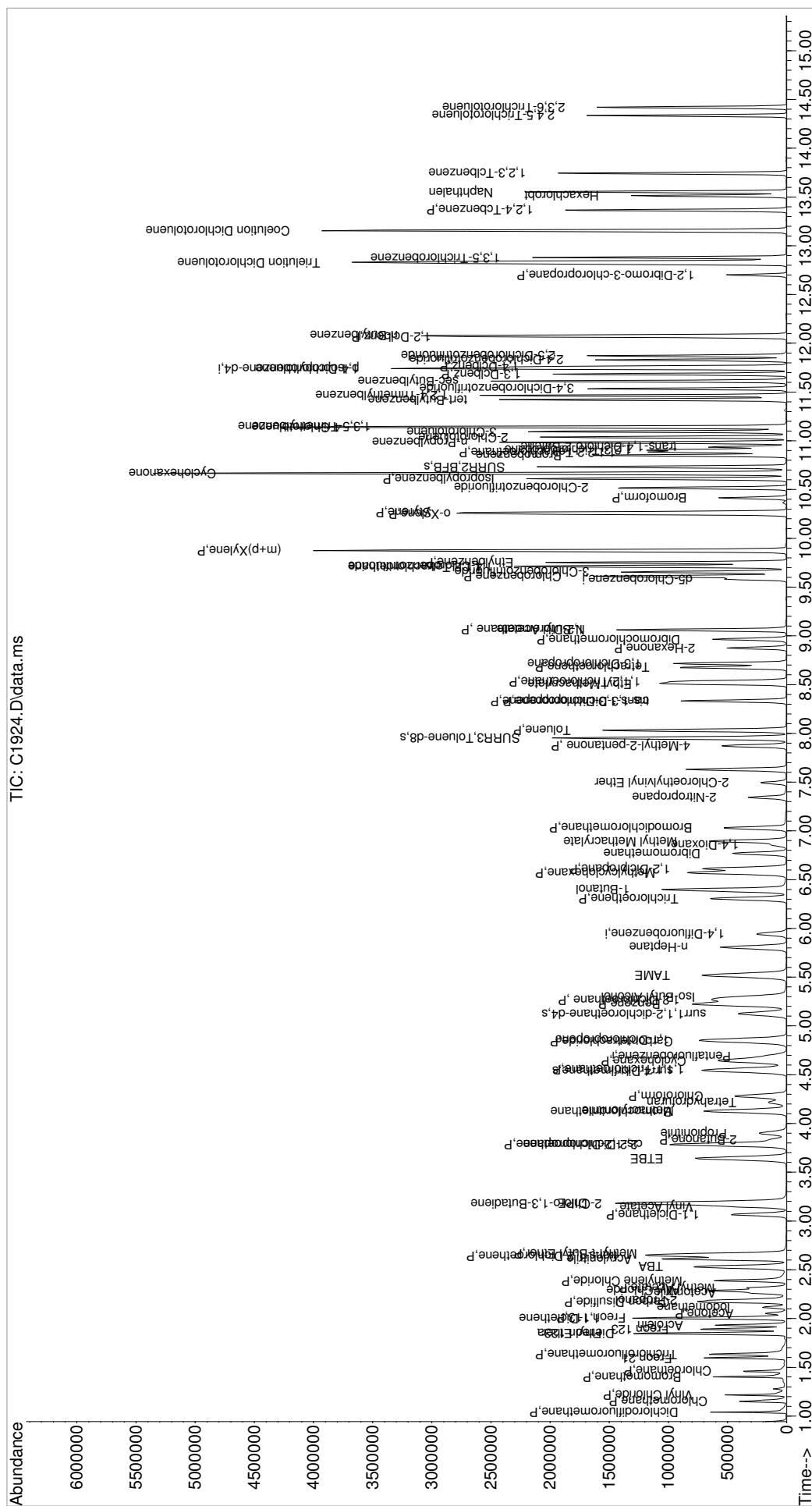
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Data File     : C1924.D
Acq On       : 5 Oct 2017 3:40 pm
Operator      : F. NAEGLER
Sample       : 150PPB
Misc         :
ALS Vial     : 12 Sample Multiplier: 1

```

Inst : MSV0A14

ALS vial : 12 Sample Multiplier: 1

Quant Time: Oct 05 16:52:22 2017
Quant Method : I:\ACQDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



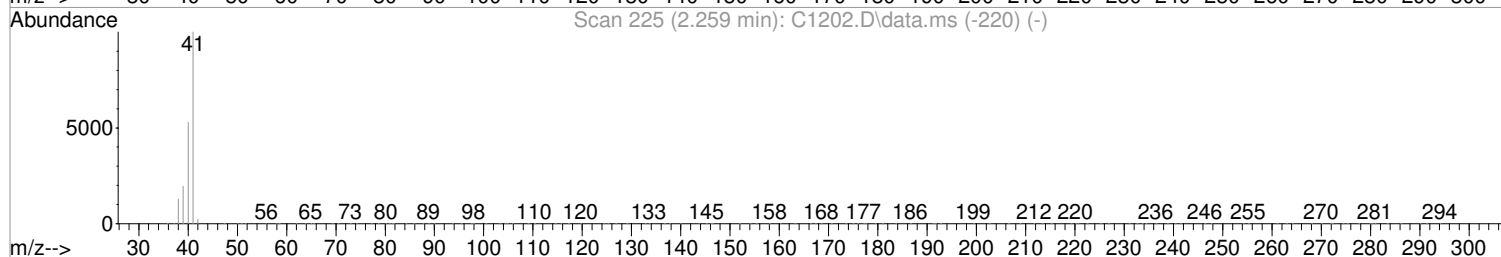
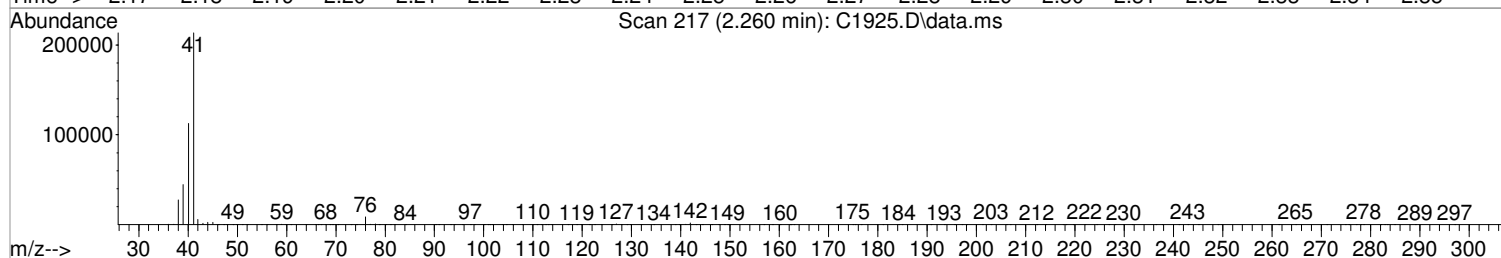
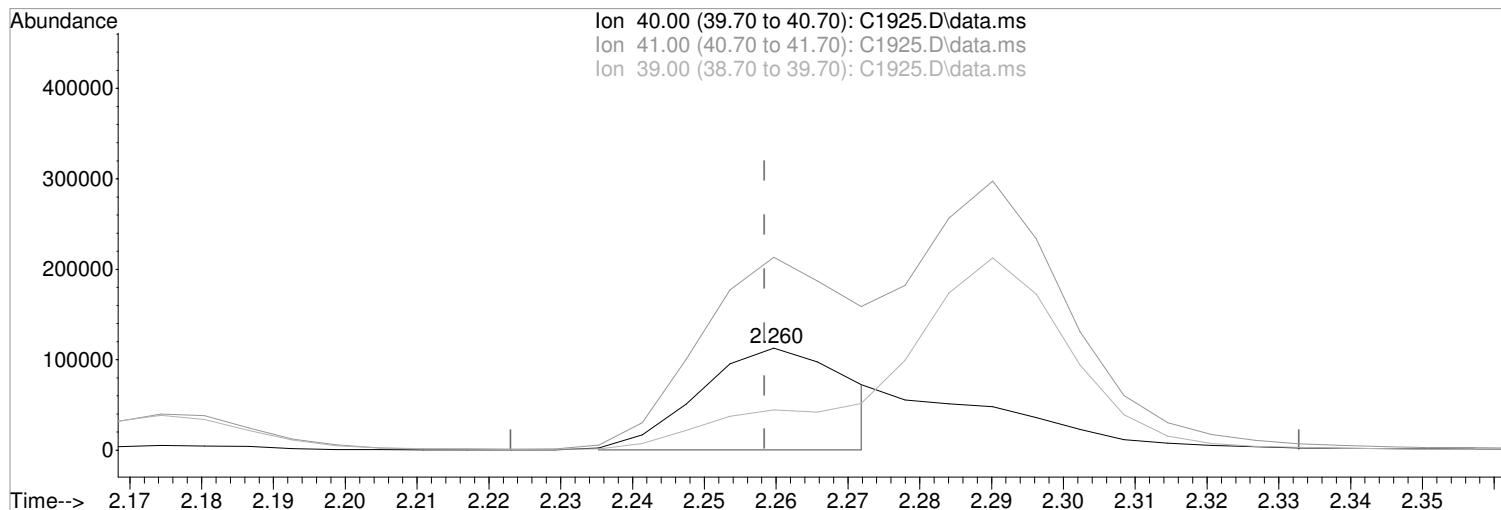
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1925.D
Acq On : 5 Oct 2017 4:02 pm
Operator : F. NAEGLER
Sample : 200 PPB
Misc :
ALS Vial : 13 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:34:07 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(19) Acetonitrile

2.260min (+0.001) 984.85 ug/L m

response 162643

Ion	Exp%	Act%
40.00	100	100
41.00	188.10	189.32
39.00	37.70	39.42
0.00	0.00	0.00

Manual Integration:

After

Poor integration.

10/05/17

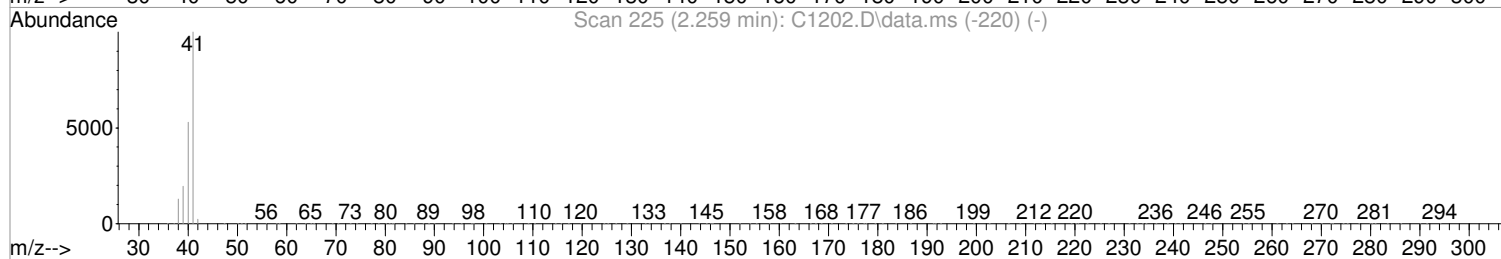
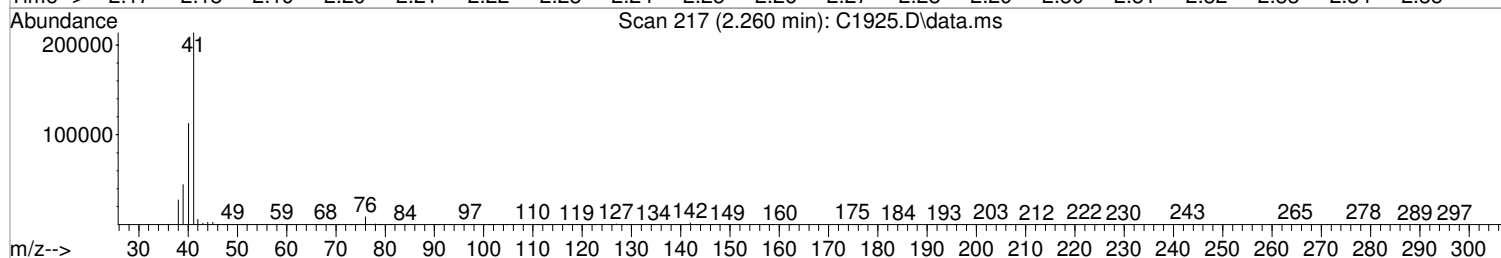
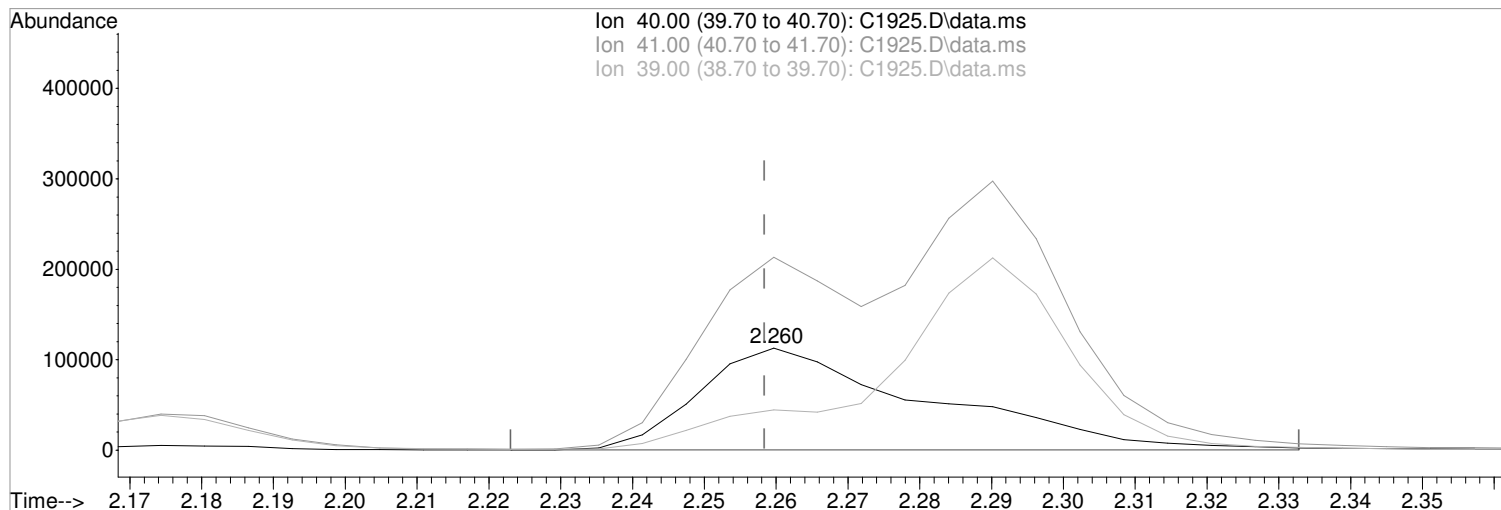
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1925.D
Acq On : 5 Oct 2017 4:02 pm
Operator : F. NAEGLER
Sample : 200 PPB
Misc :
ALS Vial : 13 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:34:07 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



(19) Acetonitrile

Manual Integration:

2.260min (+0.001) 1525.99 ug/L

Before

response 252009

Ion	Exp%	Act%
40.00	100	100
41.00	188.10	189.32
39.00	37.70	39.42
0.00	0.00	0.00

10/05/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1925.D
 Acq On : 5 Oct 2017 4:02 pm
 Operator : F. NAEGLER
 Sample : 200 PPB
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:53:47 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	4.692	168	154239	50.00	ug/L	0.00
42) 1,4-Difluorobenzene	5.948	114	237250	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.581	117	223922	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.746	152	128671	50.00	ug/L	0.00

System Monitoring Compounds						
44) surr4,Dibrflmethane	4.540	113	82833	52.14	ug/L	0.00
Spiked Amount	50.000	Range	89 - 119	Recovery	=	104.28%
47) surr1,1,2-dichloroetha...	5.125	65	110909	58.48	ug/L	-0.01
Spiked Amount	50.000	Range	73 - 125	Recovery	=	116.96%
64) SURR3,Toluene-d8	7.954	98	317158	51.95	ug/L	0.00
Spiked Amount	50.000	Range	87 - 121	Recovery	=	103.90%
69) SURR2,BFB	10.734	95	131556	55.73	ug/L	0.00
Spiked Amount	50.000	Range	85 - 122	Recovery	=	111.46%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.040	85	397858	198.81	ug/L	95
3) Chloromethane	1.150	50	456342	184.49	ug/L	96
4) Vinyl Chloride	1.217	62	423360	202.40	ug/L	97
5) Bromomethane	1.406	94	259195	173.73	ug/L	99
6) Chloroethane	1.467	64	240402	179.05	ug/L	100
7) Freon 21	1.601	67	728119	210.65	ug/L	99
8) Trichlorofluoromethane	1.644	101	471229	181.84	ug/L	98
9) Diethyl Ether	1.851	59	310877	229.51	ug/L	98
10) Freon 123a	1.845	67	390005	214.32	ug/L	88
11) Freon 123	1.894	83	421270	200.90	ug/L	99
12) Acrolein	1.930	56	494674	1177.17	ug/L	99
13) 1,1-Dicethene	2.010	96	264632	191.61	ug/L	94
14) Freon 113	2.010	101	248236	182.36	ug/L	91
15) Acetone	2.046	43	212664	212.01	ug/L	95
16) 2-Propanol	2.174	45	822046	4860.64	ug/L	98
17) Iodomethane	2.119	142	291743	221.75	ug/L	94
18) Carbon Disulfide	2.174	76	850370	225.23	ug/L	99
19) Acetonitrile	2.260	40	162643m	984.85	ug/L	
20) Allyl Chloride	2.290	76	141637	233.29	ug/L	# 76
21) Methyl Acetate	2.315	43	393103	165.81	ug/L	97
22) Methylene Chloride	2.394	84	320692	198.93	ug/L	94
23) TBA	2.522	59	1259532	4743.49	ug/L	92
24) Acrylonitrile	2.613	53	978560	1142.53	ug/L	96
25) Methyl-t-Butyl Ether	2.662	73	1108022	225.34	ug/L	100
26) trans-1,2-Dichloroethene	2.644	96	296623	200.42	ug/L	90
27) 1,1-Dicethane	3.070	63	591033	219.47	ug/L	98
28) Vinyl Acetate	3.150	86	76884	237.61	ug/L	# 55
29) DIPE	3.186	45	1269807	242.72	ug/L	97
30) 2-Chloro-1,3-Butadiene	3.180	53	550157	243.36	ug/L	88
31) ETBE	3.644	59	1108665	232.50	ug/L	97
32) 2,2-Dichloropropane	3.784	77	415067	192.35	ug/L	99
33) cis-1,2-Dichloroethene	3.790	96	347421	204.73	ug/L	89
34) 2-Butanone	3.833	43	291312	230.96	ug/L	98
35) Propionitrile	3.900	54	409757	1176.31	ug/L	99
36) Bromochloromethane	4.131	130	204484	184.21	ug/L	# 87
37) Methacrylonitrile	4.131	67	191364	223.88	ug/L	93
38) Tetrahydrofuran	4.217	42	171616	231.74	ug/L	91
39) Chloroform	4.284	83	577701	204.69	ug/L	97
40) 1,1,1-Trichloroethane	4.552	97	472747	202.38	ug/L	97

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1925.D
 Acq On : 5 Oct 2017 4:02 pm
 Operator : F. NAEGLER
 Sample : 200 PPB
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:53:47 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) TAME	5.521	73	1062571	230.21	ug/L	96
43) Cyclohexane	4.649	41	359221	206.68	ug/L	99
45) Carbontetrachloride	4.845	117	373759	204.12	ug/L	99
46) 1,1-Dichloropropene	4.857	75	424796	191.25	ug/L	95
48) Benzene	5.229	78	1228301	192.38	ug/L	98
49) 1,2-Dichloroethane	5.265	62	541100	220.70	ug/L	98
50) Iso-Butyl Alcohol	5.283	43	600536	4596.28	ug/L	97
51) n-Heptane	5.808	43	400287	199.28	ug/L	98
52) 1-Butanol	6.393	56	944555	12355.28	ug/L	97
53) Trichloroethene	6.308	130	313862	165.67	ug/L	95
54) Methylcyclohexane	6.576	55	439712	206.93	ug/L	88
55) 1,2-Dichloropropane	6.612	63	362088	204.63	ug/L	100
56) Dibromomethane	6.771	93	237199	208.45	ug/L	88
57) 1,4-Dioxane	6.856	88	140812	3882.92	ug/L	95
58) Methyl Methacrylate	6.899	69	322305	223.89	ug/L #	86
59) Bromodichloromethane	7.033	83	458216	230.12	ug/L	97
60) 2-Nitropropane	7.344	41	258123	522.51	ug/L	99
61) 2-Chloroethylvinyl Ether	7.496	63	123905	310.94	ug/L	96
62) cis-1,3-Dichloropropene	8.332	75	544580	230.21	ug/L	99
63) 4-Methyl-2-pentanone	7.868	43	545164	243.31	ug/L	98
65) Toluene	8.033	91	1371017	194.38	ug/L	99
66) trans-1,3-Dichloropropene	8.332	75	544580	240.69	ug/L	96
67) Ethyl Methacrylate	8.508	69	575336	238.96	ug/L	90
68) 1,1,2-Trichloroethane	8.533	97	333716	208.90	ug/L	97
71) Tetrachloroethene	8.679	164	244530	161.64	ug/L	97
72) 2-Hexanone	8.874	43	436324	239.28	ug/L	97
73) 1,3-Dichloropropane	8.716	76	592233	196.94	ug/L	87
74) Dibromochloromethane	8.966	129	365808	215.29	ug/L	99
75) N-Butyl Acetate	9.063	43	858120	233.46	ug/L	99
76) 1,2-Dibromoethane	9.063	107	363350	209.59	ug/L	98
77) 3-Chlorobenzotrifluoride	9.655	180	475448	167.47	ug/L	96
78) Chlorobenzene	9.612	112	884926	183.81	ug/L	96
79) 4-Chlorobenzotrifluoride	9.716	180	429736	174.45	ug/L	99
80) 1,1,1,2-Tetrachloroethane	9.709	131	325365	197.24	ug/L	97
81) Ethylbenzene	9.752	106	468134	185.44	ug/L #	89
82) (m+p)Xylene	9.874	106	1206586	384.28	ug/L	90
83) o-Xylene	10.252	106	594615	194.20	ug/L	93
84) Styrene	10.270	104	1076546	216.16	ug/L	97
85) Bromoform	10.417	173	264278	231.97	ug/L	99
86) 2-Chlorobenzotrifluoride	10.520	180	482004	174.26	ug/L	98
87) Isopropylbenzene	10.612	105	1539293	194.00	ug/L	97
88) Cyclohexanone	10.667	55	2093851	4600.32	ug/L	89
89) trans-1,4-Dichloro-2-B...	10.935	53	146272	258.74	ug/L	87
91) 1,1,2,2-Tetrachloroethane	10.886	83	542126	224.25	ug/L	98
92) Bromobenzene	10.849	156	404511	178.04	ug/L #	78
93) 1,2,3-Trichloropropane	10.910	110	172005	201.08	ug/L	91
94) n-Propylbenzene	10.984	91	1851596	197.87	ug/L	96
95) 2-Chlorotoluene	11.038	91	1099396	198.32	ug/L	95
96) 3-Chlorotoluene	11.099	91	1211379	207.93	ug/L	98
97) 4-Chlorotoluene	11.136	91	1363168	206.22	ug/L	94
98) 1,3,5-Trimethylbenzene	11.148	105	1338078	197.59	ug/L	97
99) tert-Butylbenzene	11.423	119	1109598	180.69	ug/L	99
100) 1,2,4-Trimethylbenzene	11.465	105	1356976	197.62	ug/L	96
101) 3,4-Dichlorobenzotrifl...	11.538	214	396133	175.61	ug/L	96
102) sec-Butylbenzene	11.611	105	1666912	188.38	ug/L	98
103) p-Isopropyltoluene	11.740	119	1406060	191.23	ug/L	94

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1925.D
 Acq On : 5 Oct 2017 4:02 pm
 Operator : F. NAEGLER
 Sample : 200 PPB
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 05 16:53:47 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 QLast Update : Fri Jul 14 09:47:18 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
104) 1,3-Dclbenz	11.685	146	758957	180.83	ug/L	99
105) 1,4-Dclbenz	11.764	146	787910	179.22	ug/L	99
106) 2,4-Dichlorobenzotrifl...	11.831	214	359127	170.78	ug/L	98
107) 2,5-Dichlorobenzotrifl...	11.874	214	407681	176.45	ug/L	97
108) n-Butylbenzene	12.081	91	1358817	207.16	ug/L	96
109) 1,2-Dclbenz	12.069	146	753105	183.26	ug/L	99
110) 1,2-Dibromo-3-chloropr...	12.703	157	122480	200.18	ug/L	95
111) Trielution Dichlorotol...	12.831	125	2099619	582.23	ug/L	93
112) 1,3,5-Trichlorobenzene	12.880	180	573601	178.07	ug/L	97
113) Coelution Dichlorotoluene	13.154	125	1547106	392.41	ug/L	89
114) 1,2,4-Tcbenzene	13.367	180	542511	176.63	ug/L	99
115) Hexachlorobt	13.514	225	219274	163.35	ug/L	99
116) Naphthalen	13.550	128	1676590	189.73	ug/L	97
117) 1,2,3-Tclbenzene	13.745	180	528967	166.33	ug/L	99
118) 2,4,5-Trichlorotoluene	14.337	159	382900	184.40	ug/L	98
119) 2,3,6-Trichlorotoluene	14.422	159	348167	178.05	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

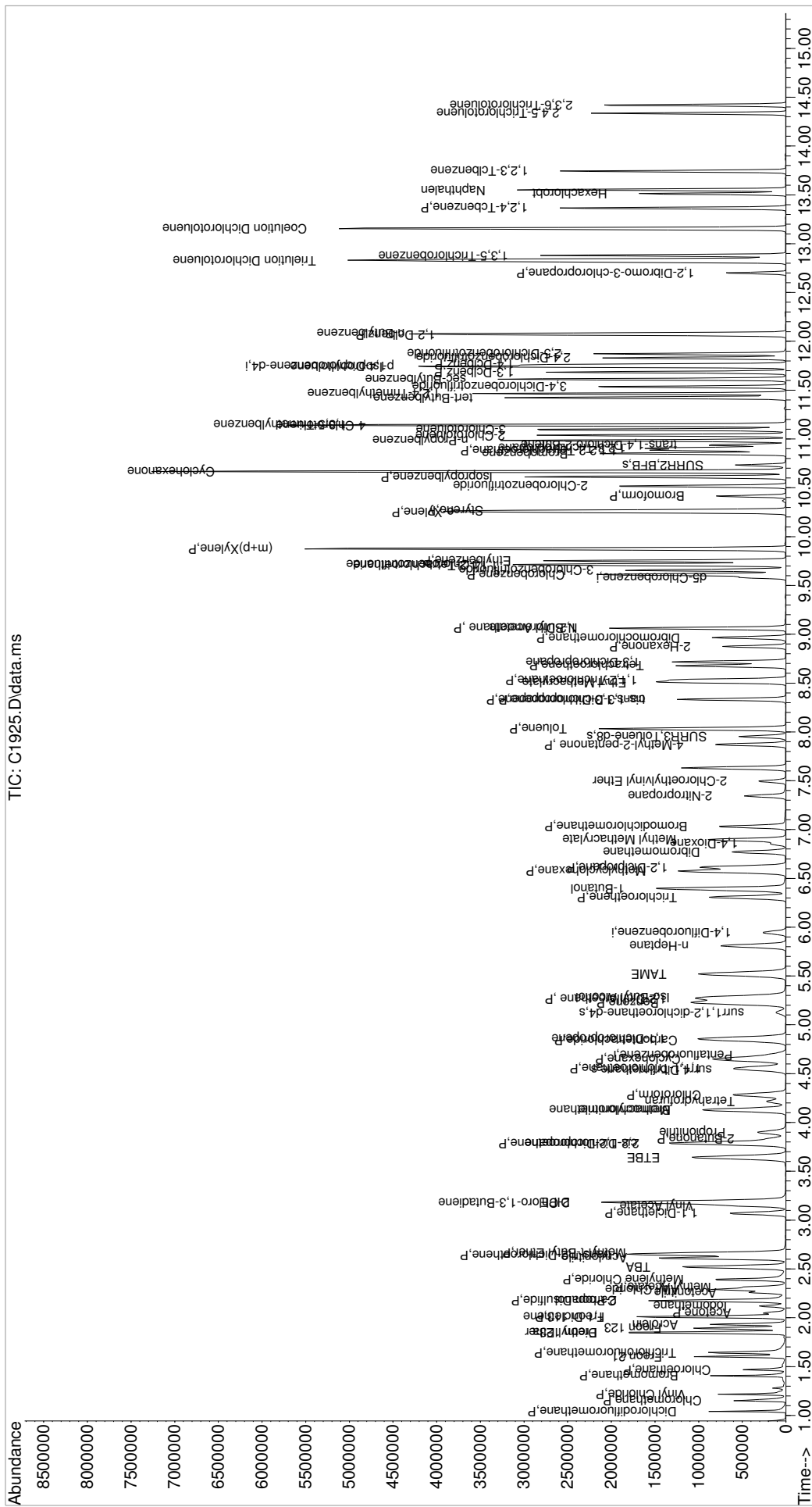
Quantitation Report (QT Reviewed)

Data Path	:	I:\ACQUDATA\MSV0A14\Data\100517\
Data File	:	C1925.D
Acq On	:	5 Oct 2017 4:02 pm
Operator	:	F. NAEGLER
Sample	:	200 PPB
Misc	:	
ALS Vial	:	13 Sample Multiplier: 1

Inst : MSV0A14

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 05 16:53:47 2017
Quant Method : I:\ACQDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Jul 14 09:47:18 2017
Response via : Initial Calibration



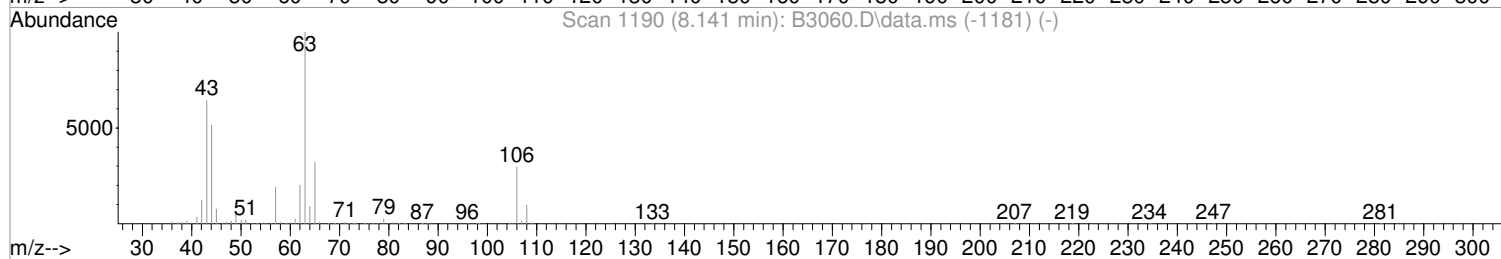
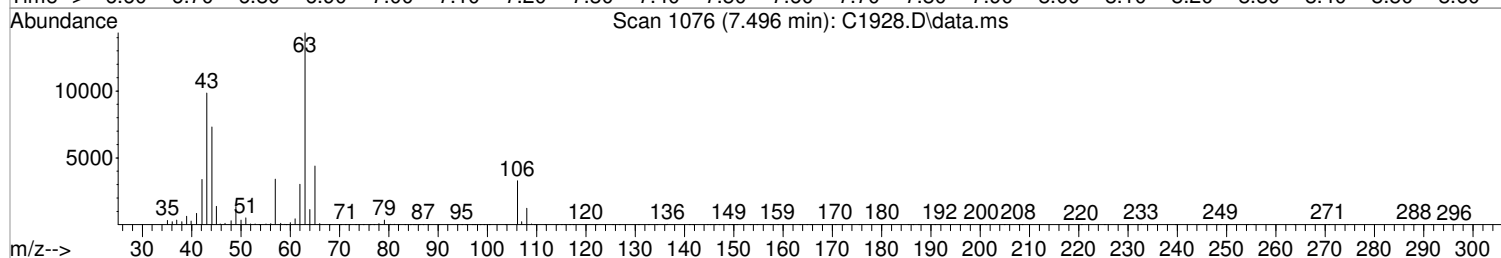
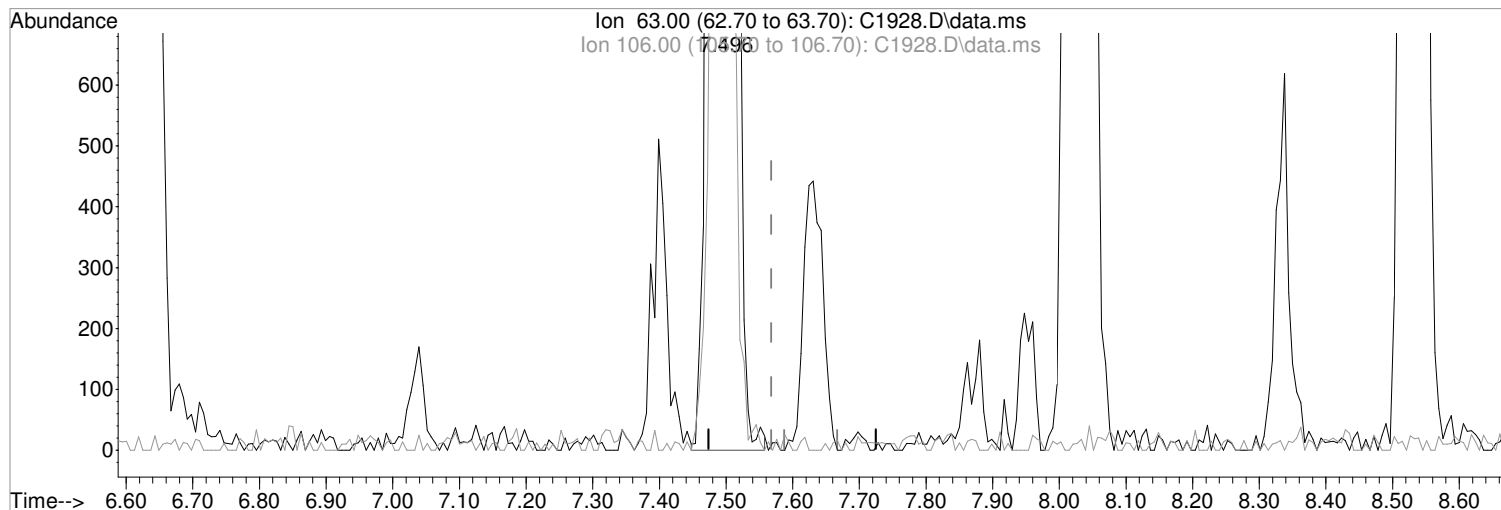
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1928.D
Acq On : 5 Oct 2017 5:08 pm
Operator : F. NAEGLER
Sample : ICV
Misc :
ALS Vial : 16 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 13:45:17 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



TIC: C1928.D\data.ms

(61) 2-Chloroethylvinyl Ether

7.496min (-0.072) 50.72 ug/L m

response 23811

Ion	Exp%	Act%
63.00	100	100
106.00	30.10	22.85
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Peak not found.

10/06/17

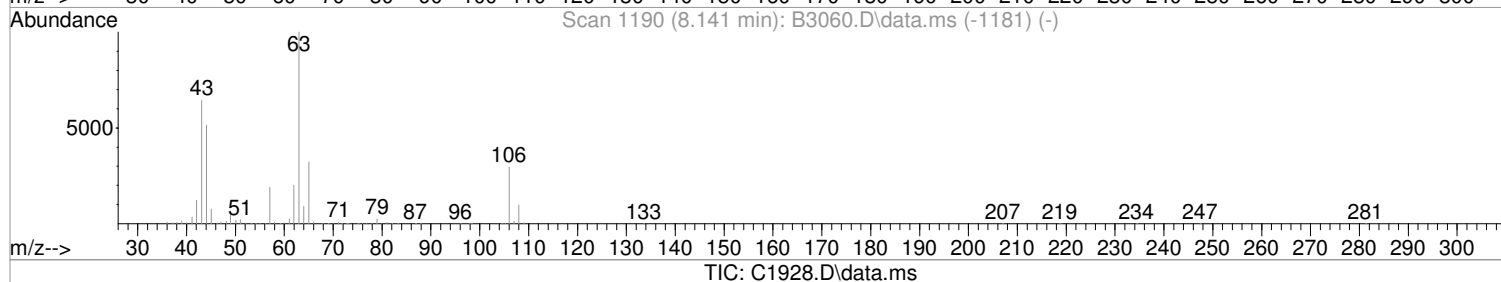
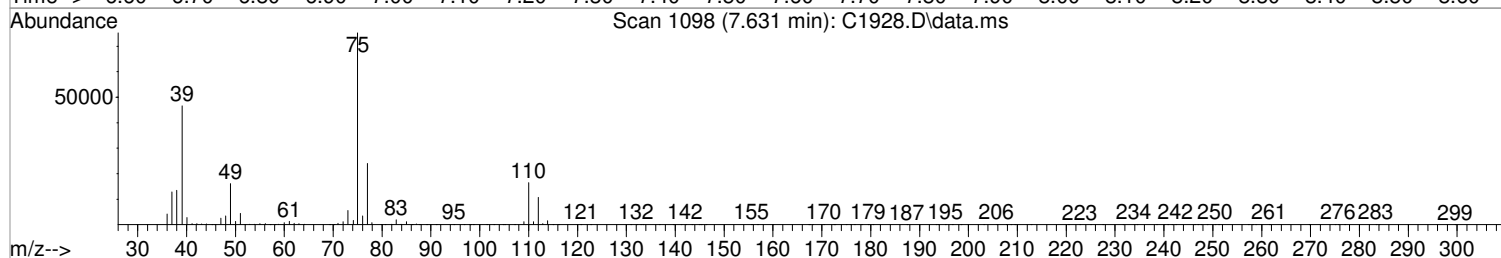
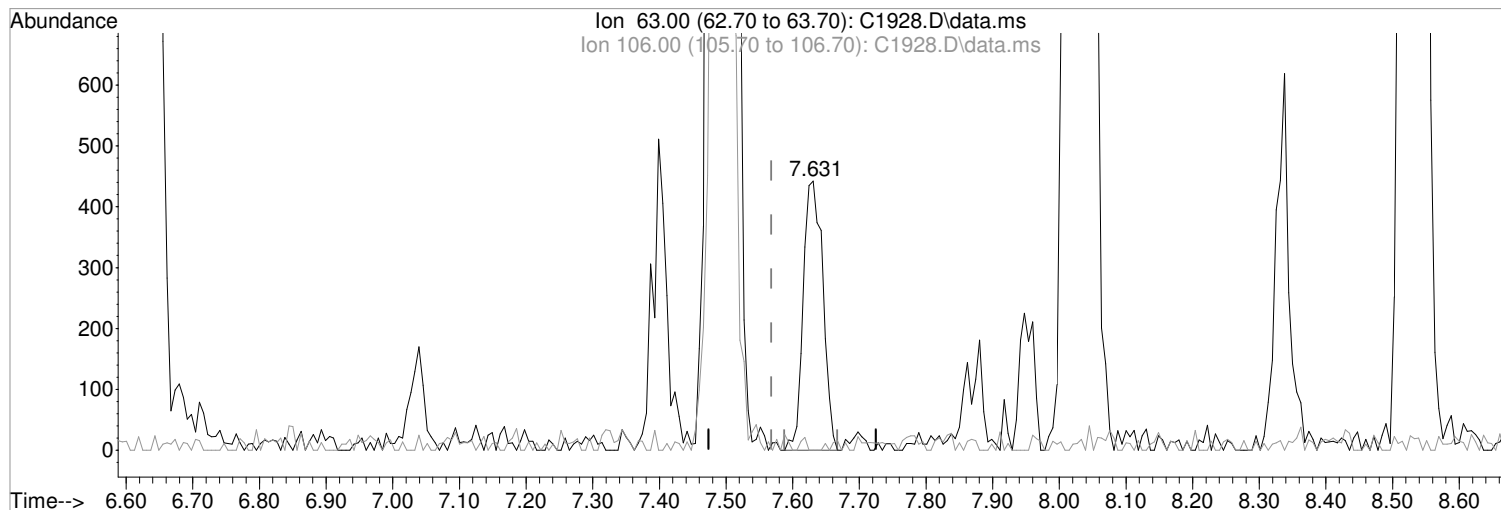
Quantitation Report (Qedit)

1st BA 10/09/17
2nd FU 10/09/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1928.D
Acq On : 5 Oct 2017 5:08 pm
Operator : F. NAEGLER
Sample : ICV
Misc :
ALS Vial : 16 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 13:45:17 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\W100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 11:46:22 2017
Response via : Initial Calibration



(61) 2-Chloroethylvinyl Ether

Manual Integration:

7.631min (+0.063) 1.92 ug/L

Before

response 903

Ion	Exp%	Act%

10/06/17

63.00	100	100

106.00	30.10	0.00#

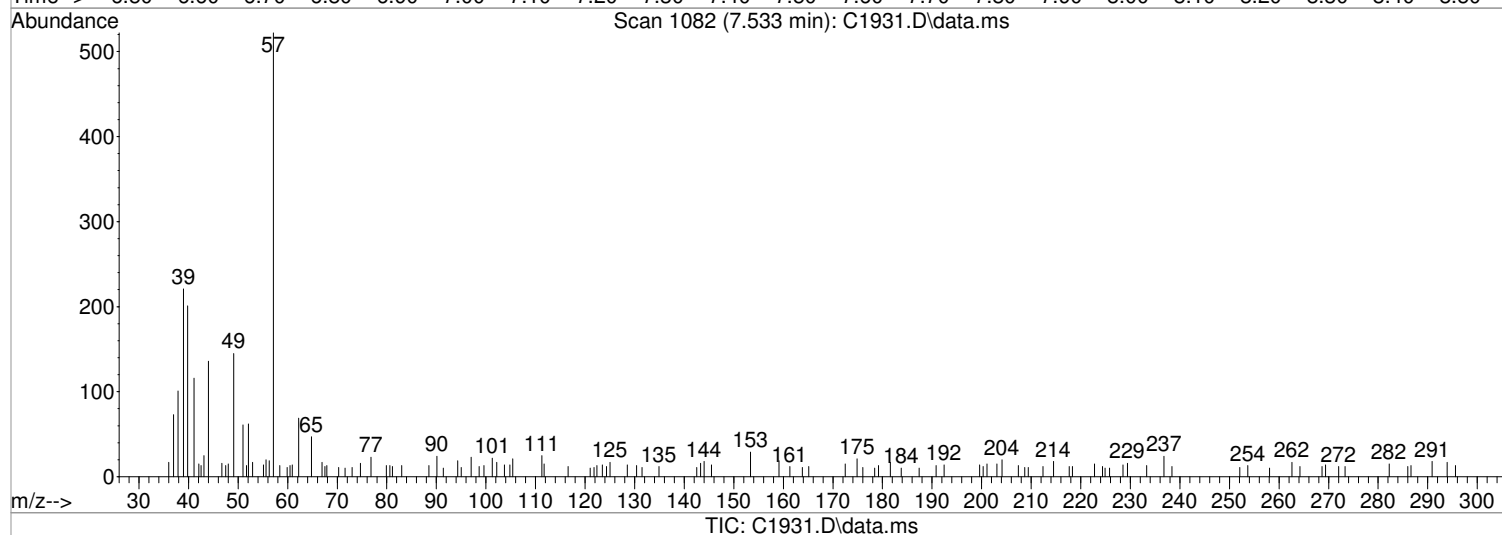
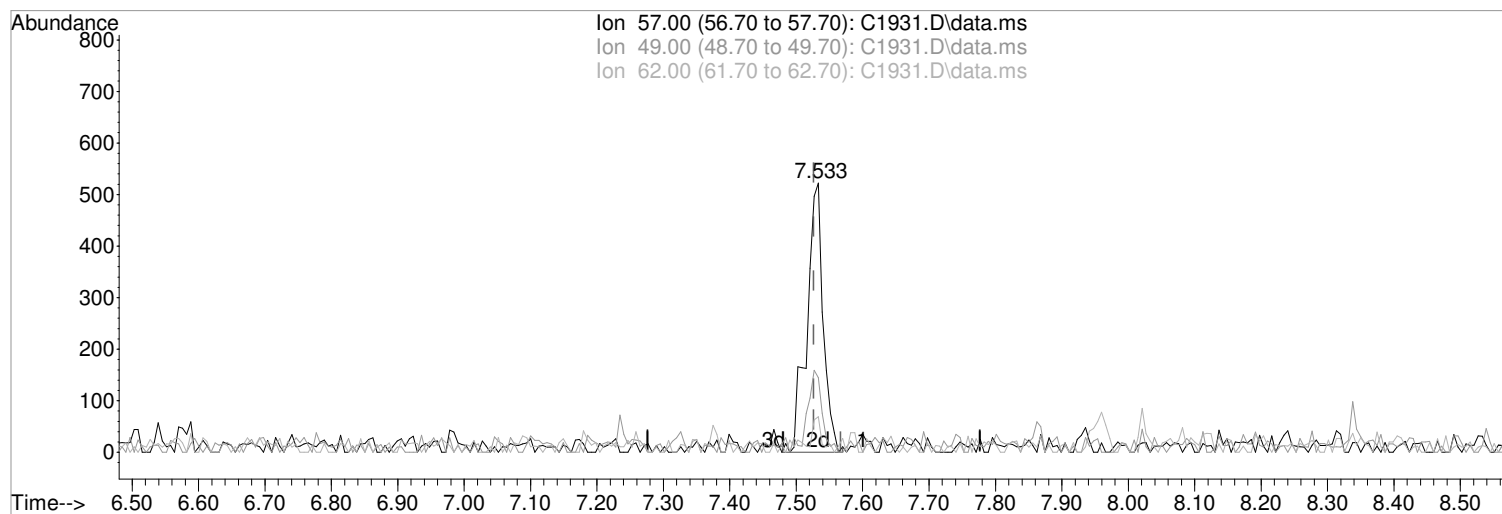
0.00	0.00	0.00

0.00	0.00	0.00

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1931.D
Acq On : 5 Oct 2017 6:15 pm
Operator : F. NAEGLER
Sample : 1PPB
Misc : EK
ALS Vial : 19 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 13:57:55 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration



(6) Epichlorohydrin

7.533min (+0.006) 4.62 ug/L m

response 897

Ion	Exp%	Act%
57.00	100	100
49.00	0.00	27.78#
62.00	0.00	13.22#
0.00	0.00	0.00

Manual Integration:

After

Peak not found.

10/06/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1931.D
Acq On : 5 Oct 2017 6:15 pm
Operator : F. NAEGLER
Sample : 1PPB
Misc : EK
ALS Vial : 19 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 13:58:38 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration

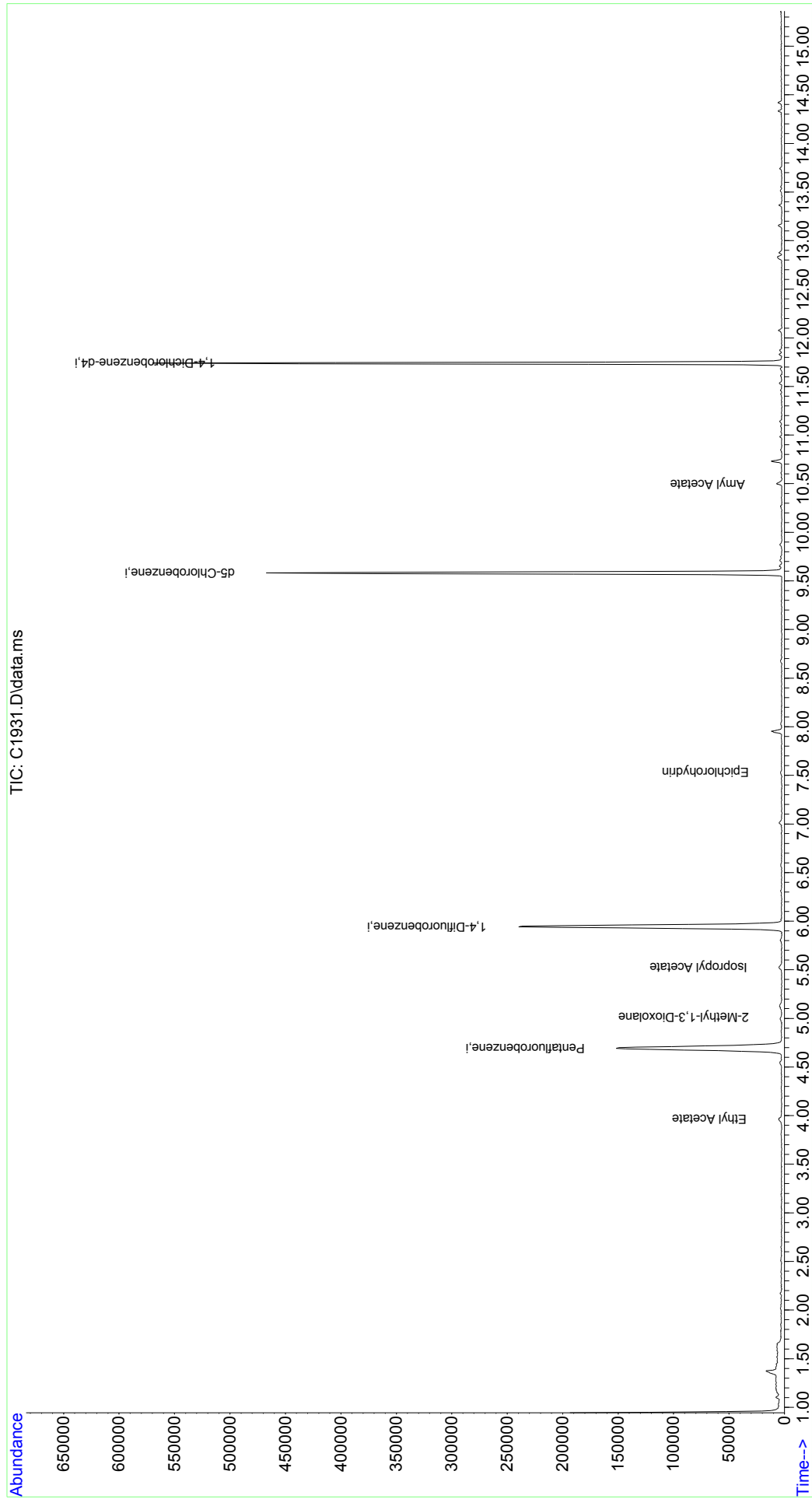
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	4.692	168	145558	50.00	ug/L	0.00
3) 1,4-Difluorobenzene	5.942	114	219457	50.00	ug/L	0.00
7) d5-Chlorobenzene	9.582	117	193886	50.00	ug/L	0.00
9) 1,4-Dichlorobenzene-d4	11.740	152	99480	50.00	ug/L	0.00
Target Compounds						Qvalue
2) Ethyl Acetate	3.961	43	4222	2.03	ug/L	100
4) 2-Methyl-1,3-Dioxolane	5.009	73	1278	4.87	ug/L #	100
5) Isopropyl Acetate	5.521	43	3293	0.93	ug/L	100
6) Epichlorohydrin	7.533	57	897m	4.62	ug/L	
8) Amyl Acetate	10.496	43	2241	0.80	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1931.D
Acq On : 5 Oct 2017 6:15 pm
Operator : F. NAEGLER
Sample : 1PPB
Misc : EK
ALS Vial : 19 Sample Multiplier: 1
Inst : MSVOA14

Quant Time: Oct 06 13:58:38 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration



Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1932.D
Acq On : 5 Oct 2017 6:37 pm
Operator : F. NAEGLER
Sample : 2PPB
Misc : EK
ALS Vial : 20 Sample Multiplier: 1

Inst : MSVOA14

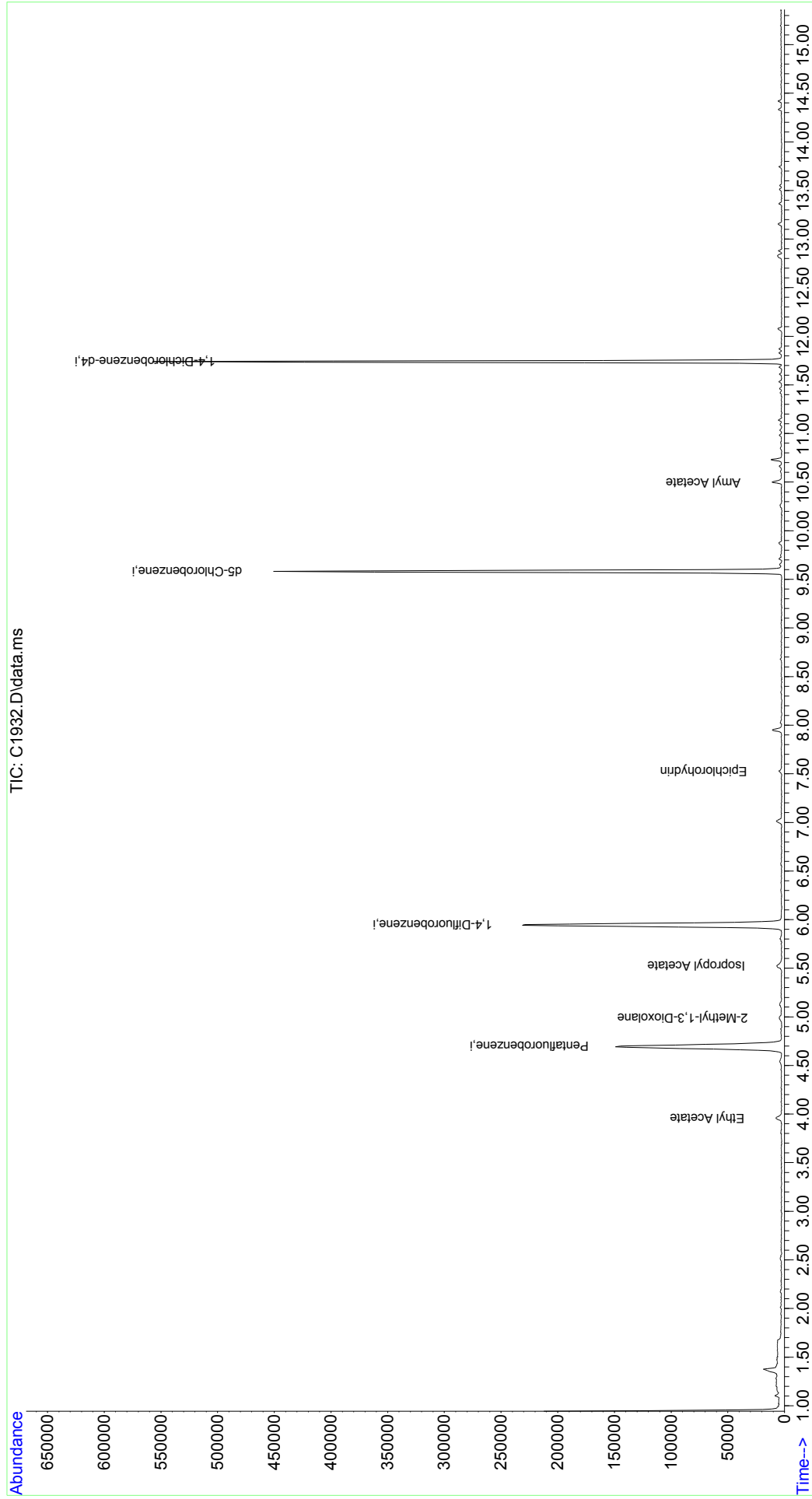
Quant Time: Oct 06 13:57:58 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.698	168	143876	50.00	ug/L	0.00
3) 1,4-Difluorobenzene	5.948	114	213089	50.00	ug/L	0.00
7) d5-Chlorobenzene	9.582	117	191156	50.00	ug/L	0.00
9) 1,4-Dichlorobenzene-d4	11.740	152	97192	50.00	ug/L	0.00
Target Compounds						
2) Ethyl Acetate	3.955	43	7559	3.67	ug/L	Qvalue 100
4) 2-Methyl-1,3-Dioxolane	4.985	73	2378	9.33	ug/L #	100
5) Isopropyl Acetate	5.527	43	6213	1.80	ug/L	100
6) Epichlorohydrin	7.527	57	1577	8.36	ug/L #	100
8) Amyl Acetate	10.496	43	4262	1.55	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1932.D
 Acq On : 5 Oct 2017 6:37 pm
 Operator : F. NAEGLER
 Sample : 2PPB
 Misc : EK
 ALS Vial : 20 Sample Multiplier: 1
 Inst : MSVOA14

Quant Time: Oct 06 13:57:58 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 Qlast Update : Fri Oct 06 10:30:25 2017
 Response via : Initial Calibration



Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1933.D
Acq On : 5 Oct 2017 6:59 pm
Operator : F. NAEGLER
Sample : 5PPB
Misc : EK
ALS Vial : 21 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 13:58:00 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration

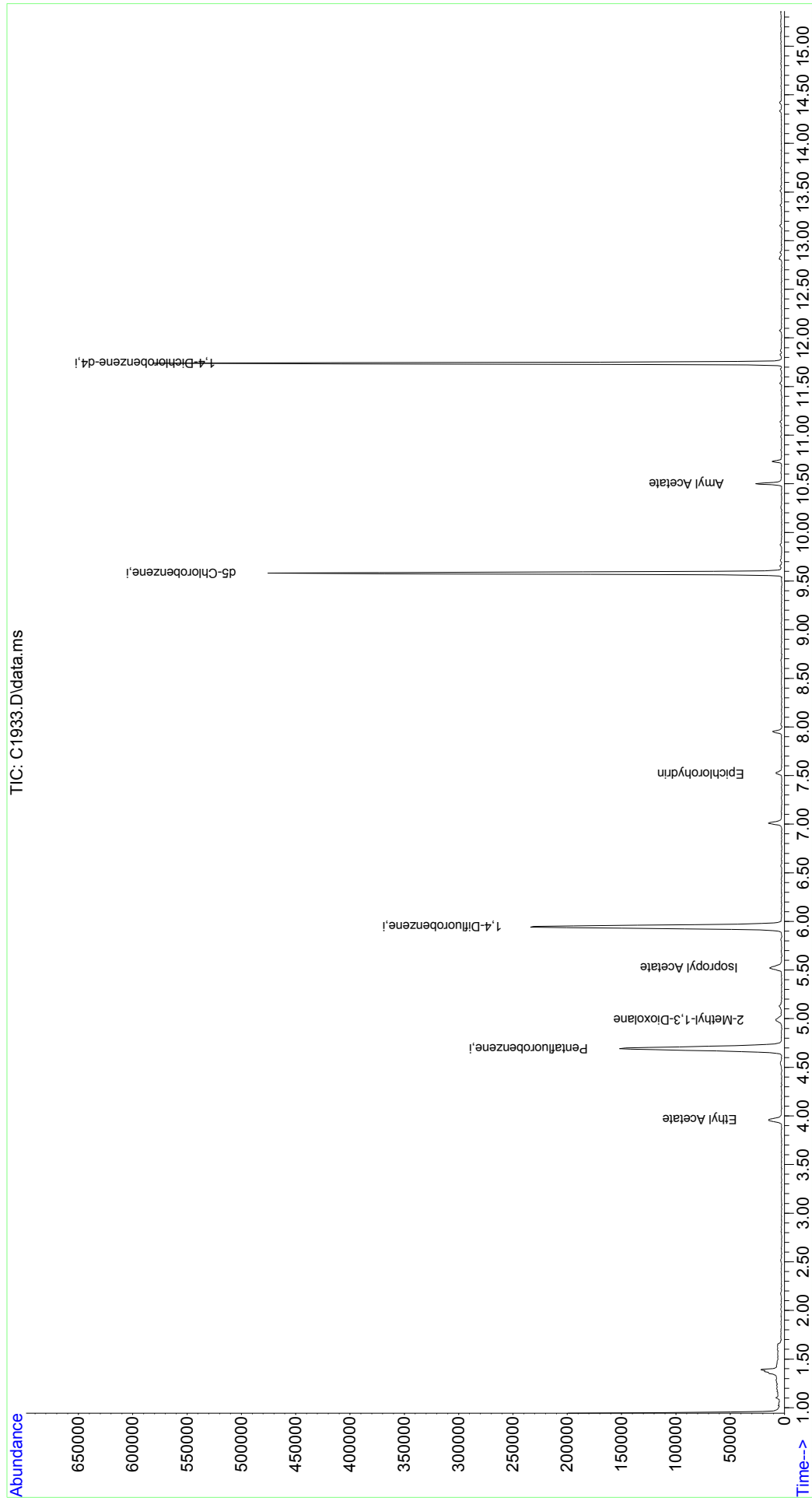
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	4.692	168	144443	50.00	ug/L	0.00
3) 1,4-Difluorobenzene	5.948	114	216534	50.00	ug/L	0.00
7) d5-Chlorobenzene	9.581	117	187658	50.00	ug/L	0.00
9) 1,4-Dichlorobenzene-d4	11.740	152	97971	50.00	ug/L	0.00
Target Compounds						Qvalue
2) Ethyl Acetate	3.961	43	19115	9.25	ug/L	100
4) 2-Methyl-1,3-Dioxolane	4.991	73	6300	24.33	ug/L #	100
5) Isopropyl Acetate	5.521	43	15308	4.36	ug/L #	100
6) Epichlorohydrin	7.521	57	4178	21.80	ug/L #	100
8) Amyl Acetate	10.502	43	10965	4.06	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1933.D
Acq On : 5 Oct 2017 6:59 pm
Operator : F. NAEGLER
Sample : 5PPB
Misc : EK
ALS Vial : 21 Sample Multiplier: 1
Inst : MSVOA14

Quant Time: Oct 06 13:58:00 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration



Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1934.D
Acq On : 5 Oct 2017 7:21 pm
Operator : F. NAEGLER
Sample : 20PPB
Misc : EK
ALS Vial : 22 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 13:58:02 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

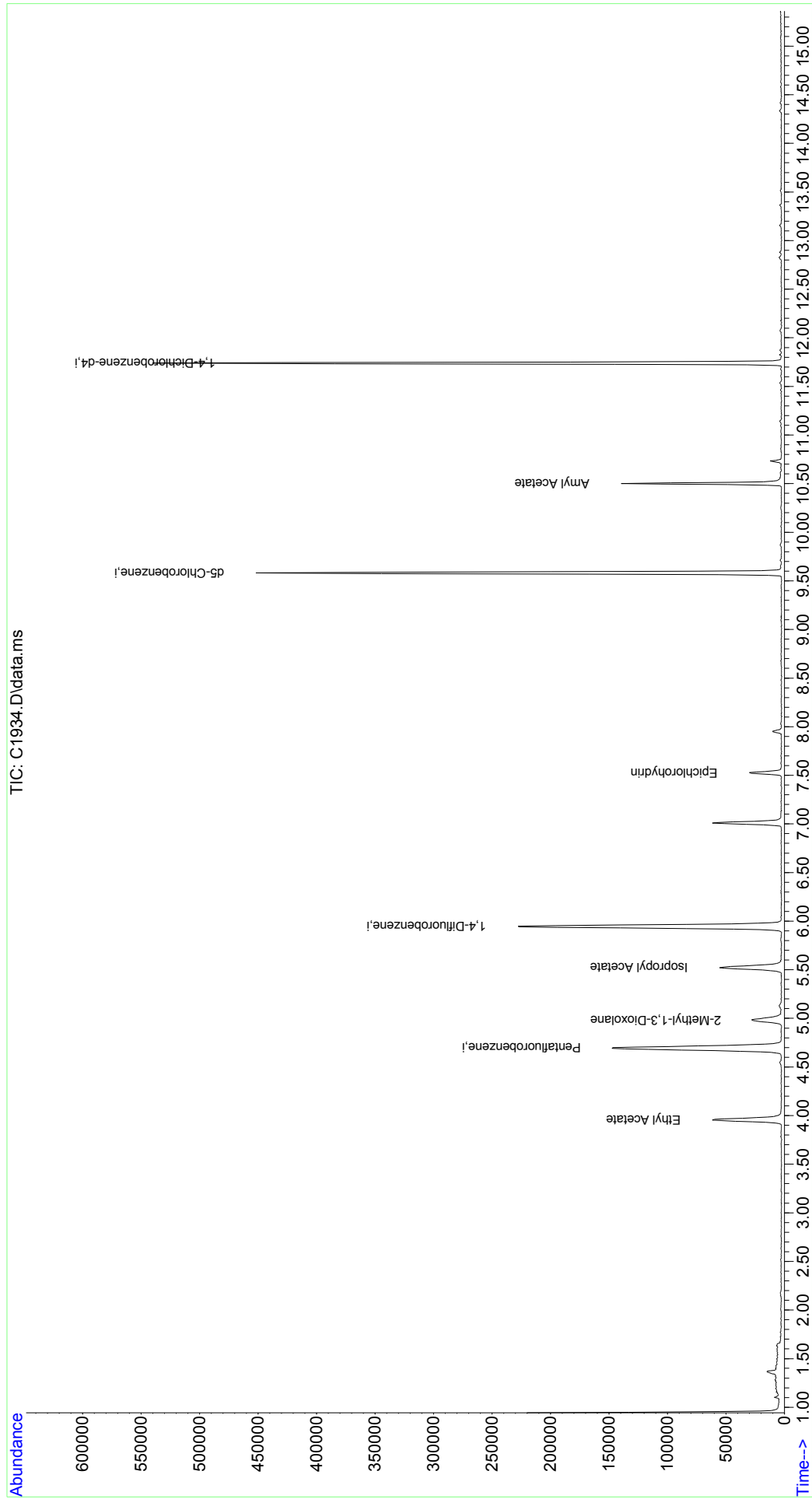
Internal Standards						
1) Pentafluorobenzene	4.698	168	144837	50.00	ug/L	0.00
3) 1,4-Difluorobenzene	5.948	114	211587	50.00	ug/L	0.00
7) d5-Chlorobenzene	9.581	117	186268	50.00	ug/L	0.00
9) 1,4-Dichlorobenzene-d4	11.740	152	96014	50.00	ug/L	0.00

Target Compounds						Qvalue
2) Ethyl Acetate	3.954	43	88414	42.66	ug/L	100
4) 2-Methyl-1,3-Dioxolane	4.979	73	27371	108.20	ug/L #	100
5) Isopropyl Acetate	5.521	43	73632	21.48	ug/L	100
6) Epichlorohydrin	7.527	57	20397	108.91	ug/L #	100
8) Amyl Acetate	10.502	43	59907	22.32	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1934.D
Acq On : 5 Oct 2017 7:21 pm
Operator : F. NAEGLER
Sample : 20PPB
Misc : EK
ALS Vial : 22 Sample Multiplier: 1
Inst : MSVOA14

Quant Time: Oct 06 13:58:02 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration



Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1935.D
Acq On : 5 Oct 2017 7:43 pm
Operator : F. NAEGLER
Sample : 50PPB
Misc : EK
ALS Vial : 23 Sample Multiplier: 1

Inst : MSVOA14

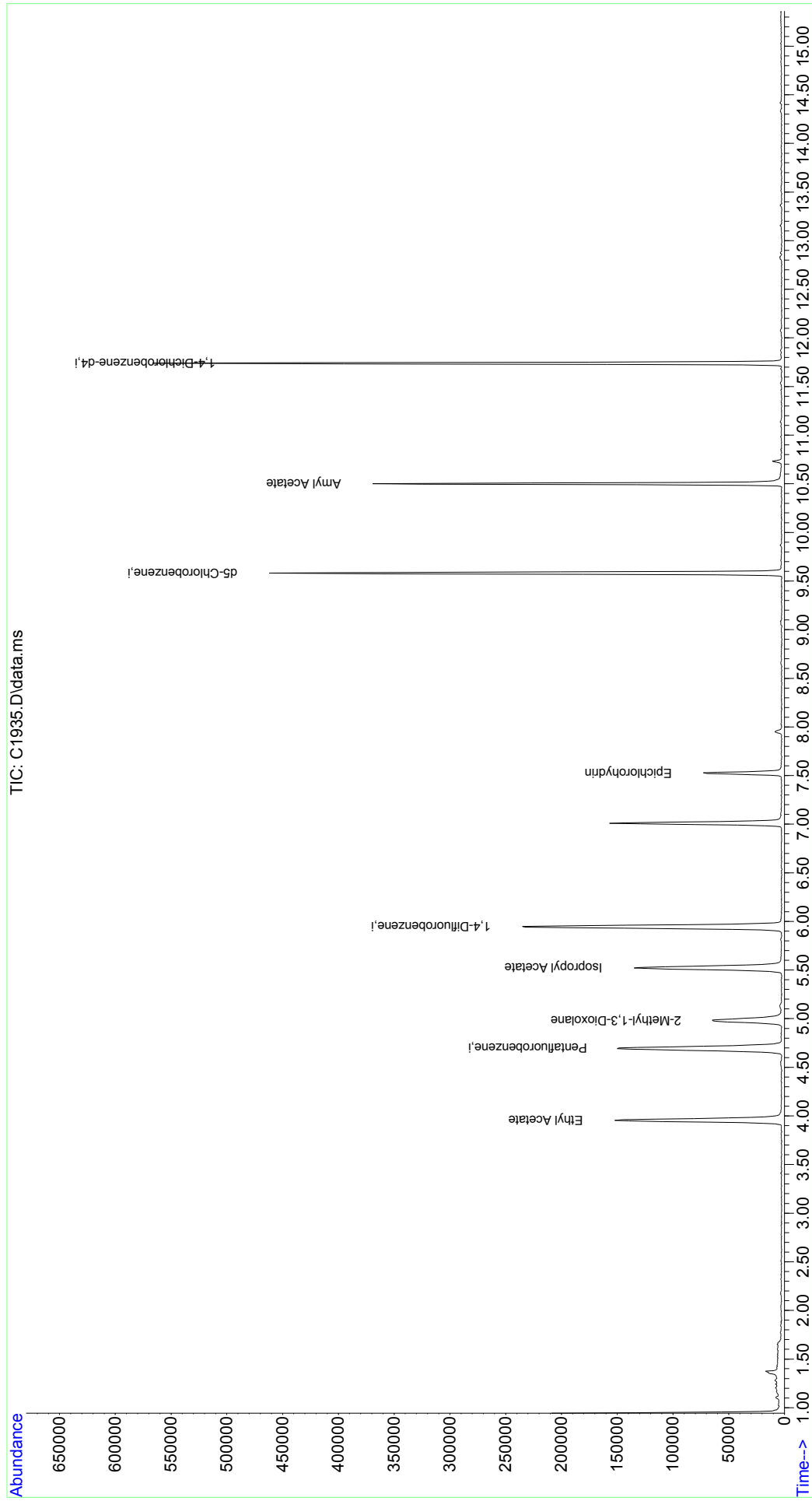
Quant Time: Oct 06 13:58:04 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.698	168	146097	50.00	ug/L	0.00
3) 1,4-Difluorobenzene	5.948	114	217367	50.00	ug/L	0.00
7) d5-Chlorobenzene	9.581	117	188282	50.00	ug/L	0.00
9) 1,4-Dichlorobenzene-d4	11.740	152	97529	50.00	ug/L	0.00
Target Compounds						
2) Ethyl Acetate	3.955	43	223340	106.83	ug/L	Qvalue 100
4) 2-Methyl-1,3-Dioxolane	4.979	73	69042	265.66	ug/L #	100
5) Isopropyl Acetate	5.521	43	183339	52.07	ug/L	100
6) Epichlorohydrin	7.527	57	52370	272.19	ug/L #	100
8) Amyl Acetate	10.502	43	161439	59.51	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
 Data File : C1935.D
 Acq On : 5 Oct 2017 7:43 pm
 Operator : F. NAEGLER
 Sample : 50PPB
 Misc : EK
 ALS Vial : 23 Sample Multiplier: 1
 Inst : MSVOA14

Quant Time: Oct 06 13:58:04 2017
 Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
 Quant Title : MS#14 - 8260 WATERS 5mL Purge
 Qlast Update : Fri Oct 06 10:30:25 2017
 Response via : Initial Calibration



Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1936.D
Acq On : 5 Oct 2017 8:06 pm
Operator : F. NAEGLER
Sample : 100PPB
Misc : EK
ALS Vial : 24 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 13:58:06 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration

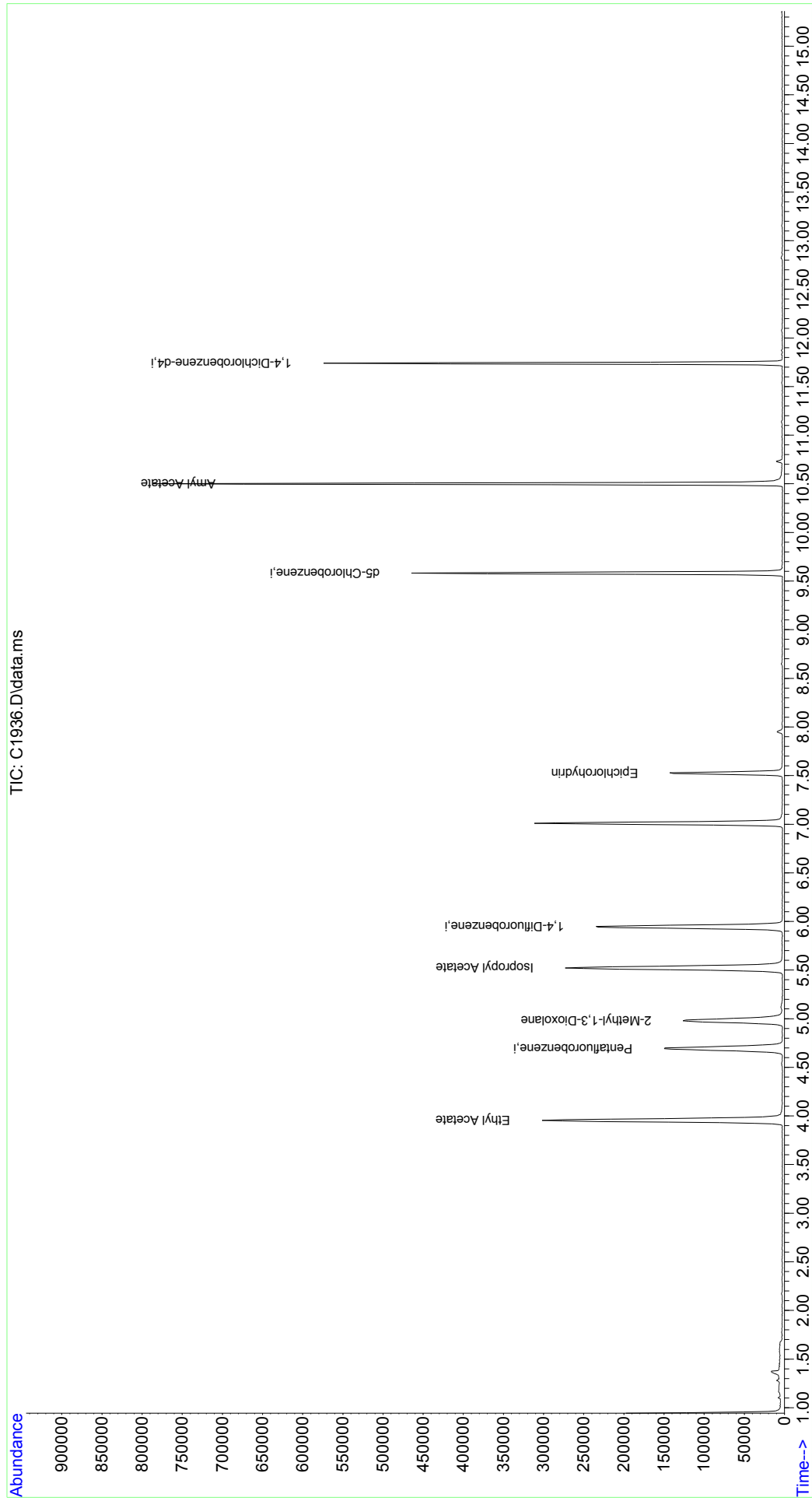
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	4.692	168	143177	50.00	ug/L	0.00
3) 1,4-Difluorobenzene	5.948	114	217480	50.00	ug/L	0.00
7) d5-Chlorobenzene	9.582	117	191472	50.00	ug/L	0.00
9) 1,4-Dichlorobenzene-d4	11.740	152	99346	50.00	ug/L	0.00
Target Compounds						Qvalue
2) Ethyl Acetate	3.955	43	437705	213.63	ug/L	100
4) 2-Methyl-1,3-Dioxolane	4.979	73	135182	519.88	ug/L #	100
5) Isopropyl Acetate	5.521	43	375047	106.45	ug/L	100
6) Epichlorohydrin	7.527	57	105195	546.46	ug/L #	100
8) Amyl Acetate	10.502	43	337715	122.42	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1936.D
Acq On : 5 Oct 2017 8:06 pm
Operator : F. NAEGLER
Sample : 100PPB
Misc : EK
ALS Vial : 24 Sample Multiplier: 1
Inst : MSVOA14

Quant Time: Oct 06 13:58:06 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration



Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1937.D
Acq On : 5 Oct 2017 8:28 pm
Operator : F. NAEGLER
Sample : 150PPB
Misc : EK
ALS Vial : 25 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 06 13:58:08 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

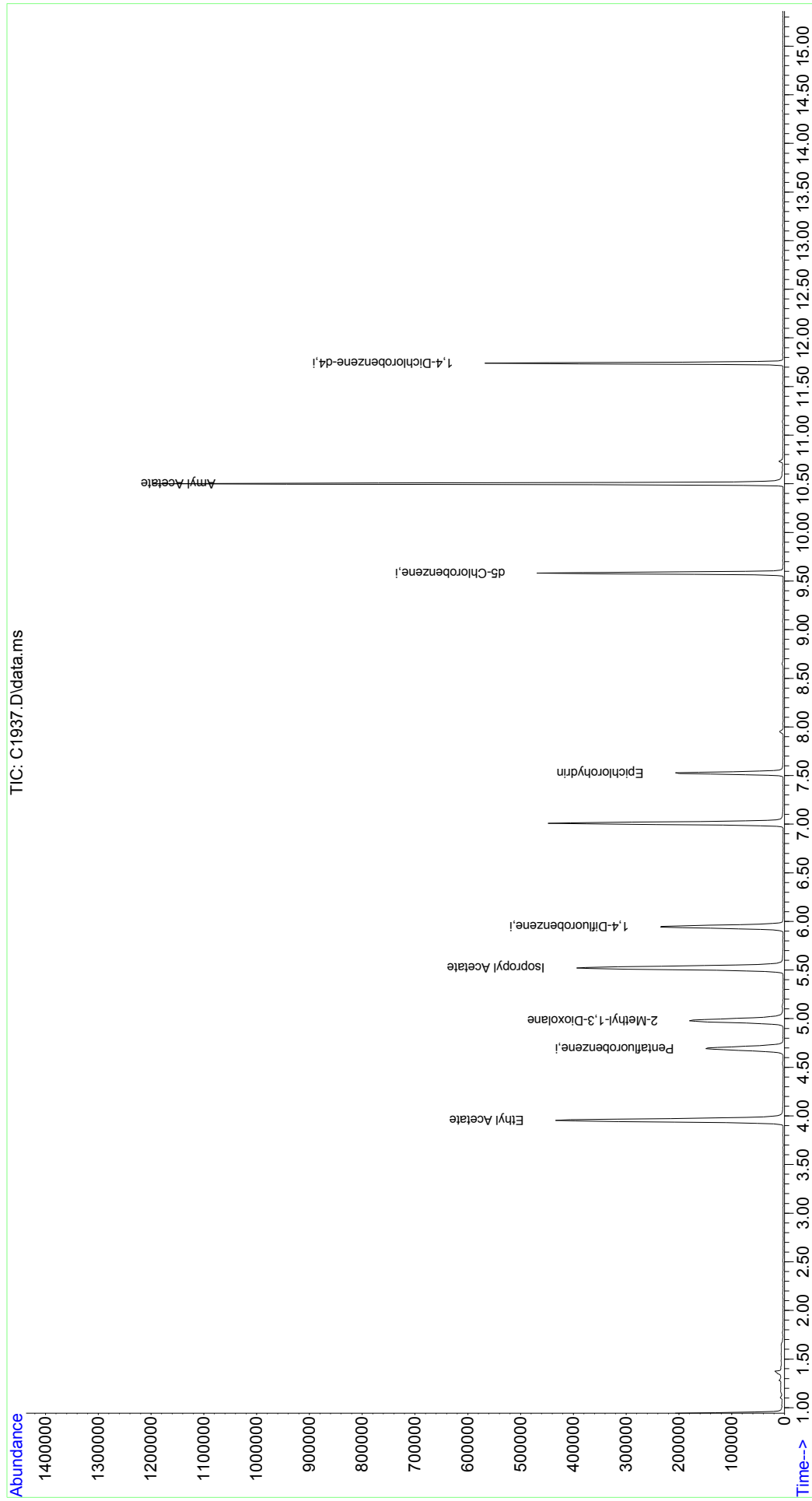
Internal Standards						
1) Pentafluorobenzene	4.692	168	144096	50.00	ug/L	0.00
3) 1,4-Difluorobenzene	5.948	114	214879	50.00	ug/L	0.00
7) d5-Chlorobenzene	9.581	117	188776	50.00	ug/L	0.00
9) 1,4-Dichlorobenzene-d4	11.740	152	97741	50.00	ug/L	0.00

Target Compounds						Qvalue
2) Ethyl Acetate	3.955	43	634518	307.71	ug/L	100
4) 2-Methyl-1,3-Dioxolane	4.979	73	193644	753.73	ug/L #	100
5) Isopropyl Acetate	5.521	43	552928	158.84	ug/L	100
6) Epichlorohydrin	7.527	57	155621	818.19	ug/L #	100
8) Amyl Acetate	10.502	43	507275	186.51	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1937.D
Acq On : 5 Oct 2017 8:28 pm
Operator : F. NAEGLER
Sample : 150PPB
Misc : EK
ALS Vial : 25 Sample Multiplier: 1
Inst : MSVOA14

Quant Time: Oct 06 13:58:08 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration



Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1938.D
Acq On : 5 Oct 2017 8:50 pm
Operator : F. NAEGLER
Sample : 200PPB
Misc : EK
ALS Vial : 26 Sample Multiplier: 1

Inst : MSVOA14

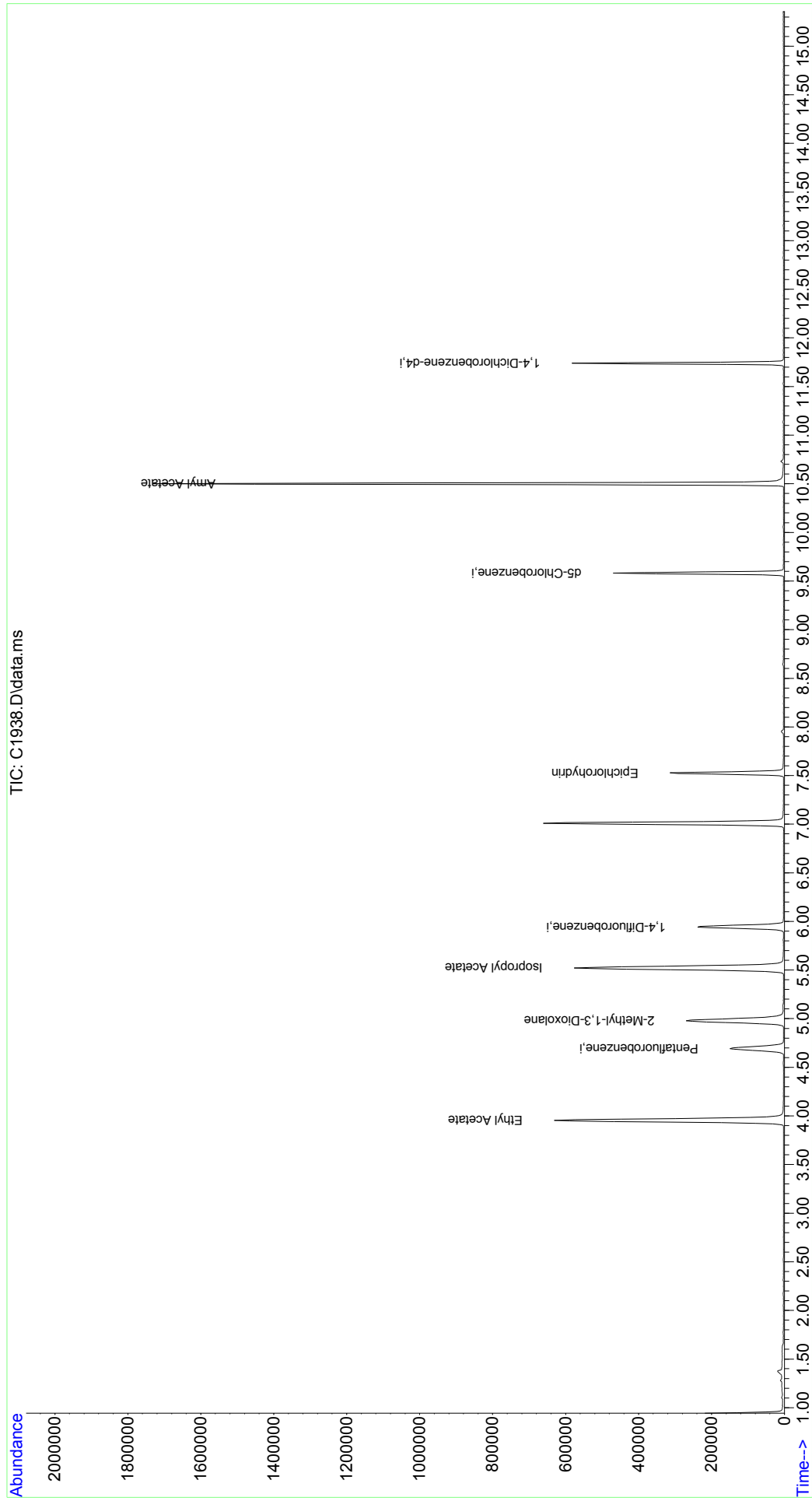
Quant Time: Oct 06 13:58:10 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.692	168	144514	50.00	ug/L	0.00
3) 1,4-Difluorobenzene	5.942	114	218733	50.00	ug/L	0.00
7) d5-Chlorobenzene	9.581	117	193890	50.00	ug/L	0.00
9) 1,4-Dichlorobenzene-d4	11.740	152	100983	50.00	ug/L	0.00
Target Compounds						
2) Ethyl Acetate	3.954	43	917965	443.88	ug/L	Qvalue 100
4) 2-Methyl-1,3-Dioxolane	4.979	73	287674	1100.00	ug/L #	100
5) Isopropyl Acetate	5.521	43	808061	228.05	ug/L	100
6) Epichlorohydrin	7.527	57	232460	1200.65	ug/L #	100
8) Amyl Acetate	10.502	43	746298	267.15	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1938.D
Acq On : 5 Oct 2017 8:50 pm
Operator : F. NAEGLER
Sample : 200PPB
Misc : EK
ALS Vial : 26 Sample Multiplier: 1
Inst : MSVOA14

Quant Time: Oct 06 13:58:10 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
Qlast Update : Fri Oct 06 10:30:25 2017
Response via : Initial Calibration



Evaluate Continuing Calibration Report

1st *BA* 10/12/17
2nd *mmw* 10/12/17

Data Path : I:\ACQUDATA\MSVOA14\Data\100517\
Data File : C1941.D
Acq On : 5 Oct 2017 9:56 pm
Operator : F. NAEGLER
Sample : ICV
Misc : EK
ALS Vial : 29 Sample Multiplier: 1

Inst : MSVOA14

Quant Time: Oct 12 09:27:50 2017
Quant Method : I:\ACQUDATA\MSVOA14\Methods\E100517.M
Quant Title : MS#14 - 8260 WATERS 5mL Purge
QLast Update : Fri Oct 06 14:05:06 2017
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 i	Pentafluorobenzene	50.000	50.000	0.0	98	0.00
2	Ethyl Acetate	~~40.000~~ 20	19.389	3.1	~~51.5#~~ 46	0.00
3 i	1,4-Difluorobenzene	50.000	50.000	0.0	100	0.00
4	2-Methyl-1,3-Dioxolane	100.000	107.714	-7.7	102	0.00
5	Isopropyl Acetate	20.000	19.860	0.7	95	0.00
6	Epichlorohydrin	100.000	97.400	2.6	92	0.00
7 i	d5-Chlorobenzene	50.000	50.000	0.0	103	0.00
8	Amyl Acetate	20.000	18.225	8.9	92	0.00
9 i	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	102	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 8/31/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700087
Instrument ID: R-MS-12

Signal ID: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
10	RC1700087-10	0.5ppb	I:\ACQUDATA\msvoa12\Data\083117\P11690.D	08/31/2017 16:58
09	RC1700087-09	1.0ppb	I:\ACQUDATA\msvoa12\Data\083117\P11691.D	08/31/2017 17:20
08	RC1700087-08	2.0ppb	I:\ACQUDATA\msvoa12\Data\083117\P11692.D	08/31/2017 17:42
07	RC1700087-07	5.0ppb	I:\ACQUDATA\msvoa12\Data\083117\P11693.D	08/31/2017 18:04
06	RC1700087-06	20.0ppb	I:\ACQUDATA\msvoa12\Data\083117\P11694.D	08/31/2017 18:26
05	RC1700087-05	50.0ppb	I:\ACQUDATA\msvoa12\Data\083117\P11695.D	08/31/2017 18:48
04	RC1700087-04	100.0ppb	I:\ACQUDATA\msvoa12\Data\083117\P11696.D	08/31/2017 19:09
03	RC1700087-03	150.0ppb	I:\ACQUDATA\msvoa12\Data\083117\P11697.D	08/31/2017 19:31
02	RC1700087-02	200.0ppb	I:\ACQUDATA\msvoa12\Data\083117\P11698.D	08/31/2017 19:53

Analyte

1,1,1-Trichloroethane (TCA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.787	09	1.000	0.8104	08	2.000	0.8487	07	5.000	0.8537
06	20.000	0.8804	05	50.000	0.8501	04	100.000	0.8844	03	150.000	0.8569
02	200.000	0.8985									

1,1,2,2-Tetrachloroethane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	1.347	09	1.000	1.04	08	2.000	1.059	07	5.000	1.053
06	20.000	1.14	05	50.000	1.16	04	100.000	0.9995	03	150.000	1.044
02	200.000	1.046									

1,1,2-Trichloroethane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.3636	09	1.000	0.3889	08	2.000	0.4093	07	5.000	0.3432
06	20.000	0.352	05	50.000	0.3459	04	100.000	0.3361	03	150.000	0.3237
02	200.000	0.3377									

1,1-Dichloroethane (1,1-DCA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	1.39	09	1.000	1.258	08	2.000	1.149	07	5.000	1.287
06	20.000	1.27	05	50.000	1.235	04	100.000	1.25	03	150.000	1.228
02	200.000	1.269									

1,1-Dichloroethene (1,1-DCE)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.6764	09	1.000	0.6132	08	2.000	0.5625	07	5.000	0.5005
06	20.000	0.5219	05	50.000	0.4931	04	100.000	0.516	03	150.000	0.4999
02	200.000	0.525									

1,2-Dichlorobenzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	1.618	09	1.000	1.706	08	2.000	1.755	07	5.000	1.771
06	20.000	1.765	05	50.000	1.703	04	100.000	1.598	03	150.000	1.63
02	200.000	1.662									

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 8/31/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700087
Instrument ID: R-MS-12

Signal ID: 1

Analyte

1,2-Dichloroethane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.7108	09	1.000	0.6808	08	2.000	0.6497	07	5.000	0.6858
06	20.000	0.6231	05	50.000	0.6295	04	100.000	0.6171	03	150.000	0.5869
02	200.000	0.6057									

1,2-Dichloropropane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.5457	09	1.000	0.4744	08	2.000	0.4377	07	5.000	0.4585
06	20.000	0.4931	05	50.000	0.4644	04	100.000	0.4636	03	150.000	0.4456
02	200.000	0.4672									

1,3-Dichlorobenzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	1.954	09	1.000	1.764	08	2.000	1.862	07	5.000	1.743
06	20.000	1.856	05	50.000	1.708	04	100.000	1.581	03	150.000	1.56
02	200.000	1.638									

1,4-Dichlorobenzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	2.016	09	1.000	1.772	08	2.000	1.722	07	5.000	1.796
06	20.000	1.86	05	50.000	1.728	04	100.000	1.602	03	150.000	1.616
02	200.000	1.673									

2-Chloroethyl Vinyl Ether

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
09	1.000	0.2225	08	2.000	0.2307	07	5.000	0.242	06	20.000	0.2724
05	50.000	0.2991	04	100.000	0.301	03	150.000	0.3031	02	200.000	0.3165

Acetone

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	5.000	0.6648	06	20.000	0.6245	05	50.000	0.6125	04	100.000	0.5887
03	150.000	0.5754	02	200.000	0.5894						

Benzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	1.702	09	1.000	1.379	08	2.000	1.569	07	5.000	1.507
06	20.000	1.557	05	50.000	1.455	04	100.000	1.426	03	150.000	1.357
02	200.000	1.447									

Bromodichloromethane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.4173	09	1.000	0.4051	08	2.000	0.362	07	5.000	0.3889
06	20.000	0.4184	05	50.000	0.4438	04	100.000	0.4365	03	150.000	0.4235
02	200.000	0.4507									

Bromoform

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
09	1.000	0.3127	08	2.000	0.4113	07	5.000	0.376	06	20.000	0.436

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 8/31/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700087
Instrument ID: R-MS-12

Signal ID: 1

Analyte

Bromoform											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
05	50.000	0.4488	04	100.000	0.4376	03	150.000	0.4505	02	200.000	0.4784
Bromomethane											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
09	1.000	0.5515	08	2.000	0.5467	07	5.000	0.4424	06	20.000	0.4166
05	50.000	0.3274	04	100.000	0.2329						
Carbon Tetrachloride											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.4015	09	1.000	0.4444	08	2.000	0.4027	07	5.000	0.3799
06	20.000	0.4336	05	50.000	0.4088	04	100.000	0.4327	03	150.000	0.4025
02	200.000	0.4531									
Chlorobenzene											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	1.161	09	1.000	1.135	08	2.000	1.096	07	5.000	1.134
06	20.000	1.177	05	50.000	1.109	04	100.000	1.074	03	150.000	1.03
02	200.000	1.076									
Chloroethane											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.8593	09	1.000	0.6921	08	2.000	0.4893	07	5.000	0.4484
06	20.000	0.4696	05	50.000	0.4681	04	100.000	0.4634	03	150.000	0.4234
02	200.000	0.471									
Chloroform											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	1.344	09	1.000	0.8332	08	2.000	1.011	07	5.000	1.005
06	20.000	1.007	05	50.000	0.9843	04	100.000	0.9665	03	150.000	0.9544
02	200.000	0.9806									
Chloromethane											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	1.641	09	1.000	1.422	08	2.000	1.167	07	5.000	1.152
06	20.000	1.279	05	50.000	1.265	04	100.000	1.278	03	150.000	1.249
02	200.000	1.349									
Dibromochloromethane											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.384	09	1.000	0.3491	08	2.000	0.3143	07	5.000	0.3061
06	20.000	0.366	05	50.000	0.3705	04	100.000	0.3718	03	150.000	0.3785
02	200.000	0.4026									
Methylene Chloride											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.6138	09	1.000	0.6083	08	2.000	0.6863	07	5.000	0.5663
06	20.000	0.5923	05	50.000	0.558	04	100.000	0.5609	03	150.000	0.5577

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 8/31/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700087
Instrument ID: R-MS-12

Signal ID: 1

Analyte

Methylene Chloride

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	200.000	0.5757									

Ethylbenzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.5754	09	1.000	0.6464	08	2.000	0.6176	07	5.000	0.6051
06	20.000	0.6335	05	50.000	0.5955	04	100.000	0.5921	03	150.000	0.5734
02	200.000	0.6019									

Tetrachloroethene (PCE)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.3156	09	1.000	0.4098	08	2.000	0.304	07	5.000	0.2871
06	20.000	0.314	05	50.000	0.292	04	100.000	0.283	03	150.000	0.2727
02	200.000	0.2904									

Toluene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	1.607	09	1.000	1.608	08	2.000	1.661	07	5.000	1.621
06	20.000	1.681	05	50.000	1.582	04	100.000	1.577	03	150.000	1.479
02	200.000	1.567									

Trichloroethene (TCE)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.3878	09	1.000	0.3591	08	2.000	0.4165	07	5.000	0.385
06	20.000	0.3944	05	50.000	0.3726	04	100.000	0.3773	03	150.000	0.3537
02	200.000	0.3779									

Trichlorofluoromethane (CFC 11)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	1.023	09	1.000	1.038	08	2.000	0.7943	07	5.000	0.832
06	20.000	0.9033	05	50.000	0.8086	04	100.000	0.8492	03	150.000	0.8005
02	200.000	0.8473									

Vinyl Chloride

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.876	09	1.000	0.8987	08	2.000	0.8419	07	5.000	0.7968
06	20.000	0.8786	05	50.000	0.8453	04	100.000	0.8551	03	150.000	0.8286
02	200.000	0.8751									

cis-1,2-Dichloroethene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.6451	09	1.000	0.7433	08	2.000	0.6506	07	5.000	0.682
06	20.000	0.6704	05	50.000	0.6343	04	100.000	0.6382	03	150.000	0.6238
02	200.000	0.6385									

cis-1,3-Dichloropropene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.5623	09	1.000	0.5583	08	2.000	0.5431	07	5.000	0.5689

ALS Group USA, Corp.
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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 8/31/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700087
Instrument ID: R-MS-12

Signal ID: 1

Analyte

cis-1,3-Dichloropropene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
06	20.000	0.6066	05	50.000	0.6126	04	100.000	0.6065	03	150.000	0.5851
02	200.000	0.626									

m,p-Xylenes

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	1.000	0.8446	09	2.000	0.8019	08	4.000	0.645	07	10.000	0.7246
06	40.000	0.7866	05	100.000	0.7373	04	200.000	0.7212	03	300.000	0.6937
02	400.000	0.7319									

o-Xylene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.885	09	1.000	0.6653	08	2.000	0.7052	07	5.000	0.7106
06	20.000	0.763	05	50.000	0.7288	04	100.000	0.7331	03	150.000	0.7015
02	200.000	0.7396									

trans-1,2-Dichloroethene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.6275	09	1.000	0.556	08	2.000	0.5179	07	5.000	0.5553
06	20.000	0.5802	05	50.000	0.5475	04	100.000	0.5574	03	150.000	0.5449
02	200.000	0.5707									

trans-1,3-Dichloropropene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
10	0.500	0.4894	09	1.000	0.5452	08	2.000	0.4841	07	5.000	0.503
06	20.000	0.5587	05	50.000	0.5569	04	100.000	0.5604	03	150.000	0.5376
02	200.000	0.5696									

1,2-Dichloroethane-d4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	10.000	0.4772	06	20.000	0.4228	05	50.000	0.4518	04	100.000	0.4559
03	200.000	0.4145									

4-Bromofluorobenzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	10.000	0.5289	06	20.000	0.4575	05	50.000	0.5265	04	100.000	0.5217
03	200.000	0.4982									

Toluene-d8

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	10.000	1.384	06	20.000	1.215	05	50.000	1.327	04	100.000	1.326
03	200.000	1.191									

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 8/31/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700087
Instrument ID: R-MS-12

Signal ID: 1

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
1,1,1-Trichloroethane (TCA)	TRG	Average RF	% RSD	4.1	≤35	0.8523	
1,1,2,2-Tetrachloroethane	TRG	Average RF	% RSD	9.7	≤35	1.099	
1,1,2-Trichloroethane	TRG	Average RF	% RSD	7.7	≤35	0.3556	
1,1-Dichloroethane (1,1-DCA)	TRG	Average RF	% RSD	5.0	≤35	1.26	
1,1-Dichloroethene (1,1-DCE)	TRG	Average RF	% RSD	11.4	≤35	0.5454	
1,2-Dichlorobenzene	TRG	Average RF	% RSD	3.9	≤35	1.69	
1,2-Dichloroethane	TRG	Average RF	% RSD	6.4	≤35	0.6433	
1,2-Dichloropropane	TRG	Average RF	% RSD	6.7	≤35	0.4722	
1,3-Dichlorobenzene	TRG	Average RF	% RSD	7.7	≤35	1.741	
1,4-Dichlorobenzene	TRG	Average RF	% RSD	7.3	≤35	1.754	
2-Chloroethyl Vinyl Ether	TRG	Average RF	% RSD	13.5	≤35	0.2734	
Acetone	TRG	Average RF	% RSD	5.3	≤35	0.6092	
Benzene	TRG	Average RF	% RSD	7.3	≤35	1.489	
Bromodichloromethane	TRG	Average RF	% RSD	6.7	≤35	0.4163	
Bromoform	TRG	Average RF	% RSD	12.5	≤35	0.4189	
Bromomethane	TRG	Quadratic	COD	0.9975	≥0.99	0.4196	
Carbon Tetrachloride	TRG	Average RF	% RSD	5.8	≤35	0.4177	
Chlorobenzene	TRG	Average RF	% RSD	4.2	≤35	1.11	
Chloroethane	TRG	Quadratic	COD	0.9961	≥0.99	0.5316	
Chloroform	TRG	Average RF	% RSD	13.5	≤35	1.01	
Chloromethane	TRG	Average RF	% RSD	11.3	≤35	1.311	
Dibromochloromethane	TRG	Average RF	% RSD	8.8	≤35	0.3603	
Methylene Chloride	TRG	Average RF	% RSD	7.0	≤35	0.591	
Ethylbenzene	TRG	Average RF	% RSD	4.1	≤35	0.6045	
Tetrachloroethene (PCE)	TRG	Average RF	% RSD	13.3	≤35	0.3076	
Toluene	TRG	Average RF	% RSD	3.7	≤35	1.598	
Trichloroethene (TCE)	TRG	Average RF	% RSD	4.9	≤35	0.3805	
Trichlorofluoromethane (CFC 11)	TRG	Average RF	% RSD	10.6	≤35	0.8774	
Vinyl Chloride	TRG	Average RF	% RSD	3.6	≤35	0.8551	
cis-1,2-Dichloroethene	TRG	Average RF	% RSD	5.6	≤35	0.6585	
cis-1,3-Dichloropropene	TRG	Average RF	% RSD	4.9	≤35	0.5855	
m,p-Xylenes	TRG	Average RF	% RSD	8.1	≤35	0.743	
o-Xylene	TRG	Average RF	% RSD	8.4	≤35	0.7369	
trans-1,2-Dichloroethene	TRG	Average RF	% RSD	5.4	≤35	0.5619	

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 8/31/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700087

Signal ID: 1

Instrument ID: R-MS-12

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
trans-1,3-Dichloropropene	TRG	Average RF	% RSD	6.2	≤35	0.5339	
1,2-Dichloroethane-d4	SURR	Average RF	% RSD	5.8	≤35	0.4445	
4-Bromofluorobenzene	SURR	Average RF	% RSD	5.9	≤35	0.5066	
Toluene-d8	SURR	Average RF	% RSD	6.4	≤35	1.288	

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 10/5/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700102
Instrument ID: R-MS-14

Signal ID: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	RC1700102-01	0.5 PPB	I:\ACQUDATA\MSVOA14\Data\100517\C1917.D	10/05/2017 13:05
02	RC1700102-02	1.0 PPB	I:\ACQUDATA\MSVOA14\Data\100517\C1918.D	10/05/2017 13:27
03	RC1700102-03	2.0PPB	I:\ACQUDATA\MSVOA14\Data\100517\C1919.D	10/05/2017 13:49
04	RC1700102-04	5.0 PPB	I:\ACQUDATA\MSVOA14\Data\100517\C1920.D	10/05/2017 14:11
05	RC1700102-05	20 PPB	I:\ACQUDATA\MSVOA14\Data\100517\C1921.D	10/05/2017 14:33
06	RC1700102-06	50 PPB	I:\ACQUDATA\MSVOA14\Data\100517\C1922.D	10/05/2017 14:55
07	RC1700102-07	100 PPB	I:\ACQUDATA\MSVOA14\Data\100517\C1923.D	10/05/2017 15:18
08	RC1700102-08	150PPB	I:\ACQUDATA\MSVOA14\Data\100517\C1924.D	10/05/2017 15:40
09	RC1700102-09	200 PPB	I:\ACQUDATA\MSVOA14\Data\100517\C1925.D	10/05/2017 16:02

Analyte

1,1,1-Trichloroethane (TCA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.5965	02	1.000	0.6356	03	2.000	0.6509	04	5.000	0.5829
05	20.000	0.6721	06	50.000	0.7929	07	100.000	0.8163	08	150.000	0.7578
09	200.000	0.7663									

1,1,2,2-Tetrachloroethane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.7597	02	1.000	0.8393	03	2.000	0.8689	04	5.000	0.954
05	20.000	1.1	06	50.000	1.072	07	100.000	1.063	08	150.000	1.028
09	200.000	1.053									

1,1,2-Trichloroethane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2757	02	1.000	0.3339	03	2.000	0.3275	04	5.000	0.3167
05	20.000	0.3589	06	50.000	0.3515	07	100.000	0.3573	08	150.000	0.357
09	200.000	0.3517									

1,1-Dichloroethane (1,1-DCA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.868	02	1.000	0.8003	03	2.000	0.8653	04	5.000	0.8412
05	20.000	0.9231	06	50.000	1.001	07	100.000	1.026	08	150.000	0.9423
09	200.000	0.958									

1,1-Dichloroethene (1,1-DCE)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3932	02	1.000	0.4418	03	2.000	0.4108	04	5.000	0.3929
05	20.000	0.4204	06	50.000	0.4695	07	100.000	0.4759	08	150.000	0.4331
09	200.000	0.4289									

1,2-Dichlorobenzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.45	02	1.000	1.474	03	2.000	1.528	04	5.000	1.458
05	20.000	1.6	06	50.000	1.556	07	100.000	1.542	08	150.000	1.45
09	200.000	1.463									

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 10/5/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700102
Instrument ID: R-MS-14

Signal ID: 1

Analyte

1,2-Dichloroethane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.526	02	1.000	0.5844	03	2.000	0.543	04	5.000	0.5291
05	20.000	0.5843	06	50.000	0.5784	07	100.000	0.5824	08	150.000	0.569
09	200.000	0.5702									

1,2-Dichloropropane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3701	02	1.000	0.357	03	2.000	0.3603	04	5.000	0.3248
05	20.000	0.3954	06	50.000	0.3927	07	100.000	0.4022	08	150.000	0.3841
09	200.000	0.3815									

1,3-Dichlorobenzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.437	02	1.000	1.472	03	2.000	1.44	04	5.000	1.455
05	20.000	1.619	06	50.000	1.551	07	100.000	1.57	08	150.000	1.447
09	200.000	1.475									

1,4-Dichlorobenzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.472	02	1.000	1.407	03	2.000	1.558	04	5.000	1.608
05	20.000	1.651	06	50.000	1.601	07	100.000	1.618	08	150.000	1.513
09	200.000	1.531									

2-Chloroethyl Vinyl Ether

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	1.000	0.08986	03	2.000	0.09137	04	5.000	0.08112	05	20.000	0.1034
06	50.000	0.1087	07	100.000	0.115	08	150.000	0.1276	09	200.000	0.1306

Acetone

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	5.000	0.3544	05	20.000	0.3726	06	50.000	0.3262	07	100.000	0.3246
08	150.000	0.3309	09	200.000	0.3447						

Benzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.213	02	1.000	1.233	03	2.000	1.274	04	5.000	1.199
05	20.000	1.345	06	50.000	1.411	07	100.000	1.4	08	150.000	1.311
09	200.000	1.294									

Bromodichloromethane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.343	02	1.000	0.3341	03	2.000	0.3735	04	5.000	0.3794
05	20.000	0.4484	06	50.000	0.4732	07	100.000	0.4957	08	150.000	0.4787
09	200.000	0.4828									

Bromoform

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	1.000	0.1545	03	2.000	0.16	04	5.000	0.1891	05	20.000	0.2202

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 10/5/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700102
Instrument ID: R-MS-14

Signal ID: 1

Analyte

Bromoform											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
06	50.000	0.2513	07	100.000	0.2781	08	150.000	0.2875	09	200.000	0.2951
Bromomethane											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3269	02	1.000	0.3989	03	2.000	0.4004	04	5.000	0.3517
05	20.000	0.4193	06	50.000	0.4408	07	100.000	0.4523			
Carbon Tetrachloride											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	1.000	0.2172	03	2.000	0.249	04	5.000	0.2778	05	20.000	0.346
06	50.000	0.3992	07	100.000	0.4147	08	150.000	0.3884	09	200.000	0.3938
Chlorobenzene											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.9271	02	1.000	1.064	03	2.000	1.006	04	5.000	0.9765
05	20.000	1.034	06	50.000	1.049	07	100.000	1.066	08	150.000	0.9934
09	200.000	0.988									
Chloroethane											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4487	02	1.000	0.3634	03	2.000	0.4004	04	5.000	0.3614
05	20.000	0.4171	06	50.000	0.4031	07	100.000	0.4221	08	150.000	0.4068
09	200.000	0.3897									
Chloroform											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.7877	02	1.000	0.8996	03	2.000	0.8747	04	5.000	0.837
05	20.000	0.8899	06	50.000	0.9634	07	100.000	0.9898	08	150.000	0.9309
09	200.000	0.9364									
Chloromethane											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.6417	02	1.000	0.6811	03	2.000	0.6588	04	5.000	0.5867
05	20.000	0.7131	06	50.000	0.7863	07	100.000	0.7843	08	150.000	0.7326
09	200.000	0.7397									
Dibromochloromethane											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2335	02	1.000	0.2551	03	2.000	0.2728	04	5.000	0.2879
05	20.000	0.3655	06	50.000	0.383	07	100.000	0.4103	08	150.000	0.3991
09	200.000	0.4084									
Methylene Chloride											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4984	02	1.000	0.493	03	2.000	0.5074	04	5.000	0.4899
05	20.000	0.5114	06	50.000	0.5254	07	100.000	0.5415	08	150.000	0.5275
09	200.000	0.5198									

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 10/5/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700102
Instrument ID: R-MS-14

Signal ID: 1

Analyte

Ethylbenzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4601	02	1.000	0.4946	03	2.000	0.4654	04	5.000	0.5054
05	20.000	0.5377	06	50.000	0.5678	07	100.000	0.5744	08	150.000	0.5267
09	200.000	0.5227									

Tetrachloroethene (PCE)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3235	02	1.000	0.2896	03	2.000	0.2956	04	5.000	0.2678
05	20.000	0.2901	06	50.000	0.3093	07	100.000	0.3066	08	150.000	0.2744
09	200.000	0.273									

Toluene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.196	02	1.000	1.295	03	2.000	1.336	04	5.000	1.294
05	20.000	1.457	06	50.000	1.538	07	100.000	1.535	08	150.000	1.467
09	200.000	1.445									

Trichloroethene (TCE)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.407	02	1.000	0.3769	03	2.000	0.3945	04	5.000	0.3392
05	20.000	0.3362	06	50.000	0.3653	07	100.000	0.3617	08	150.000	0.3334
09	200.000	0.3307									

Trichlorofluoromethane (CFC 11)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.8361	02	1.000	0.8163	03	2.000	0.7478	04	5.000	0.6951
05	20.000	0.7943	06	50.000	0.8964	07	100.000	0.8679	08	150.000	0.734
09	200.000	0.7638									

Vinyl Chloride

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.5022	02	1.000	0.6173	03	2.000	0.5658	04	5.000	0.5307
05	20.000	0.6664	06	50.000	0.7386	07	100.000	0.7592	08	150.000	0.678
09	200.000	0.6862									

cis-1,2-Dichloroethene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.5232	02	1.000	0.533	03	2.000	0.5022	04	5.000	0.5142
05	20.000	0.5481	06	50.000	0.5846	07	100.000	0.5949	08	150.000	0.5607
09	200.000	0.5631									

cis-1,3-Dichloropropene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	1.000	0.2858	03	2.000	0.2962	04	5.000	0.3185	05	20.000	0.437
06	50.000	0.4978	07	100.000	0.5492	08	150.000	0.5634	09	200.000	0.5738

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 10/5/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700102
Instrument ID: R-MS-14

Signal ID: 1

Analyte

m,p-Xylenes

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	0.5954	02	2.000	0.5639	03	4.000	0.5747	04	10.000	0.5819
05	40.000	0.6693	06	100.000	0.7082	07	200.000	0.7226	08	300.000	0.6697
09	400.000	0.6736									

o-Xylene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.514	02	1.000	0.6215	03	2.000	0.6009	04	5.000	0.5956
05	20.000	0.6761	06	50.000	0.6952	07	100.000	0.7141	08	150.000	0.6656
09	200.000	0.6639									

trans-1,2-Dichloroethene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3384	02	1.000	0.4887	03	2.000	0.4464	04	5.000	0.44
05	20.000	0.4619	06	50.000	0.5104	07	100.000	0.5136	08	150.000	0.4799
09	200.000	0.4808									

trans-1,3-Dichloropropene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	1.000	0.2858	03	2.000	0.2962	04	5.000	0.3185	05	20.000	0.437
06	50.000	0.4978	07	100.000	0.5492	08	150.000	0.5634	09	200.000	0.5738

1,2-Dichloroethane-d4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	10.000	0.4958	05	20.000	0.4454	06	50.000	0.4516	07	100.000	0.4528
08	200.000	0.4371									

4-Bromofluorobenzene

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	10.000	0.4856	05	20.000	0.4945	06	50.000	0.4943	07	100.000	0.521
08	200.000	0.5298									

Toluene-d8

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	10.000	1.43	05	20.000	1.286	06	50.000	1.313	07	100.000	1.311
08	200.000	1.273									

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 10/5/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700102

Signal ID: 1

Instrument ID: R-MS-14

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
1,1,1-Trichloroethane (TCA)	TRG	Average RF	% RSD	12.6	≤35	0.6968	
1,1,2,2-Tetrachloroethane	TRG	Average RF	% RSD	12.5	≤35	0.9709	
1,1,2-Trichloroethane	TRG	Average RF	% RSD	8.1	≤35	0.3367	
1,1-Dichloroethane (1,1-DCA)	TRG	Average RF	% RSD	8.3	≤35	0.9139	
1,1-Dichloroethene (1,1-DCE)	TRG	Average RF	% RSD	6.9	≤35	0.4296	
1,2-Dichlorobenzene	TRG	Average RF	% RSD	3.7	≤35	1.502	
1,2-Dichloroethane	TRG	Average RF	% RSD	4.2	≤35	0.563	
1,2-Dichloropropane	TRG	Average RF	% RSD	6.5	≤35	0.3742	
1,3-Dichlorobenzene	TRG	Average RF	% RSD	4.4	≤35	1.496	
1,4-Dichlorobenzene	TRG	Average RF	% RSD	5.0	≤35	1.551	
2-Chloroethyl Vinyl Ether	TRG	Average RF	% RSD	17.0	≤35	0.106	
Acetone	TRG	Average RF	% RSD	5.5	≤35	0.3422	
Benzene	TRG	Average RF	% RSD	5.9	≤35	1.298	
Bromodichloromethane	TRG	Average RF	% RSD	15.4	≤35	0.4232	
Bromoform	TRG	Quadratic	COD	0.9963	≥0.99	0.2295	
Bromomethane	TRG	Average RF	% RSD	11.4	≤35	0.3986	
Carbon Tetrachloride	TRG	Quadratic	COD	0.9938	≥0.99	0.3358	
Chlorobenzene	TRG	Average RF	% RSD	4.6	≤35	1.012	
Chloroethane	TRG	Average RF	% RSD	6.9	≤35	0.4014	
Chloroform	TRG	Average RF	% RSD	7.0	≤35	0.901	
Chloromethane	TRG	Average RF	% RSD	9.5	≤35	0.7027	
Dibromochloromethane	TRG	Quadratic	COD	0.9954	≥0.99	0.3351	
Methylene Chloride	TRG	Average RF	% RSD	3.4	≤35	0.5127	
Ethylbenzene	TRG	Average RF	% RSD	7.8	≤35	0.5172	
Tetrachloroethene (PCE)	TRG	Average RF	% RSD	6.4	≤35	0.2922	
Toluene	TRG	Average RF	% RSD	8.6	≤35	1.396	
Trichloroethene (TCE)	TRG	Average RF	% RSD	7.8	≤35	0.3606	
Trichlorofluoromethane (CFC 11)	TRG	Average RF	% RSD	8.3	≤35	0.7946	
Vinyl Chloride	TRG	Average RF	% RSD	14.1	≤35	0.6383	
cis-1,2-Dichloroethene	TRG	Average RF	% RSD	5.8	≤35	0.5471	
cis-1,3-Dichloropropene	TRG	Quadratic	COD	0.9937	≥0.99	0.4402	
m,p-Xylenes	TRG	Average RF	% RSD	9.5	≤35	0.6399	
o-Xylene	TRG	Average RF	% RSD	9.7	≤35	0.6385	
trans-1,2-Dichloroethene	TRG	Average RF	% RSD	11.4	≤35	0.4622	

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 10/5/2017

Initial Calibration Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700102

Signal ID: 1

Instrument ID: R-MS-14

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
trans-1,3-Dichloropropene	TRG	Quadratic	COD	0.9937	≥0.99	0.4402	
1,2-Dichloroethane-d4	SURR	Average RF	% RSD	5.0	≤35	0.4566	
4-Bromofluorobenzene	SURR	Average RF	% RSD	3.8	≤35	0.5051	
Toluene-d8	SURR	Average RF	% RSD	4.7	≤35	1.323	

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 8/31/2017

Initial Calibration Verification Summary Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700087
Instrument ID: R-MS-12

Signal ID: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	RC1700087-01	icv	I:\ACQUDATA\msvoa12\Data\083117\P11701.D	08/31/2017 20:59

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
1,1,1-Trichloroethane (TCA)	50.0	50.3	8.523E-1	8.58E-1	0.680	±30	Average RF
1,1,2,2-Tetrachloroethane	50.0	50.7	1.099E0	1.115E0	1.44	±30	Average RF
1,1,2-Trichloroethane	50.0	49.8	3.556E-1	3.544E-1	-0.352	±30	Average RF
1,1-Dichloroethane (1,1-DCA)	50.0	48.7	1.26E0	1.228E0	-2.551	±30	Average RF
1,1-Dichloroethene (1,1-DCE)	50.0	43.2	5.454E-1	4.713E-1	-13.579	±30	Average RF
1,2-Dichlorobenzene	50.0	49.0	1.69E0	1.656E0	-2.022	±30	Average RF
1,2-Dichloroethane	50.0	48.4	6.433E-1	6.228E-1	-3.185	±30	Average RF
1,2-Dichloropropane	50.0	46.3	4.722E-1	4.373E-1	-7.389	±30	Average RF
1,3-Dichlorobenzene	50.0	47.0	1.741E0	1.637E0	-5.961	±30	Average RF
1,4-Dichlorobenzene	50.0	47.5	1.754E0	1.665E0	-5.071	±30	Average RF
2-Chloroethyl Vinyl Ether	50.0	56.7	2.734E-1	3.101E-1	13.43	±30	Average RF
Acetone	50.0	49.9	6.092E-1	6.078E-1	-0.239	±30	Average RF
Benzene	50.0	45.6	1.489E0	1.358E0	-8.751	±30	Average RF
Bromodichloromethane	50.0	52.9	4.163E-1	4.401E-1	5.72	±30	Average RF
Bromoform	50.0	60.6	4.189E-1	5.08E-1	21.27	±30	Average RF
Bromomethane	50.0	47.1	4.196E-1	3.273E-1	-5.876	±30	Quadratic
Carbon Tetrachloride	50.0	47.2	4.177E-1	3.946E-1	-5.532	±30	Average RF
Chlorobenzene	50.0	46.9	1.11E0	1.042E0	-6.119	±30	Average RF
Chloroethane	50.0	47.5	5.316E-1	4.293E-1	-4.981	±30	Quadratic
Chloroform	50.0	48.5	1.01E0	9.783E-1	-3.098	±30	Average RF
Chloromethane	50.0	45.0	1.311E0	1.181E0	-9.929	±30	Average RF
Dibromochloromethane	50.0	51.4	3.603E-1	3.701E-1	2.72	±30	Average RF
Methylene Chloride	50.0	49.6	5.91E-1	5.868E-1	-0.721	±30	Average RF
Ethylbenzene	50.0	49.4	6.045E-1	5.974E-1	-1.189	±30	Average RF
Tetrachloroethene (PCE)	50.0	44.2	3.076E-1	2.717E-1	-11.686	±30	Average RF
Toluene	50.0	46.8	1.598E0	1.497E0	-6.319	±30	Average RF
Trichloroethene (TCE)	50.0	48.1	3.805E-1	3.657E-1	-3.874	±30	Average RF
Trichlorofluoromethane (CFC 11)	50.0	45.0	8.774E-1	7.899E-1	-9.977	±30	Average RF
Vinyl Chloride	50.0	53.2	8.551E-1	9.101E-1	6.43	±30	Average RF
cis-1,2-Dichloroethene	50.0	45.3	6.585E-1	5.969E-1	-9.353	±30	Average RF
cis-1,3-Dichloropropene	50.0	48.8	5.855E-1	5.716E-1	-2.369	±30	Average RF
m,p-Xylenes	100	94.5	7.43E-1	7.019E-1	-5.524	±30	Average RF
o-Xylene	50.0	47.4	7.369E-1	6.984E-1	-5.230	±30	Average RF
trans-1,2-Dichloroethene	50.0	46.0	5.619E-1	5.175E-1	-7.905	±30	Average RF
trans-1,3-Dichloropropene	50.0	49.4	5.339E-1	5.274E-1	-1.209	±30	Average RF

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 8/31/2017

Initial Calibration Verification Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700087

Signal ID: 1

Instrument ID: R-MS-12

#	Lab Code	Sample Name	File Location	Aquisition Date
01	RC1700087-01	icv	I:\ACQUDATA\msvoa12\Data\083117\P11701.D	08/31/2017 20:59

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
1,2-Dichloroethane-d4	50.0	49.5	4.445E-1	4.399E-1	-1.023	±30	Average RF
4-Bromofluorobenzene	50.0	49.8	5.066E-1	5.045E-1	-0.407	±30	Average RF
Toluene-d8	50.0	50.1	1.288E0	1.292E0	0.235	±30	Average RF

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 10/5/2017

Initial Calibration Verification Summary Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700102
Instrument ID: R-MS-14

Signal ID: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
10	RC1700102-10	icv	I:\ACQDATA\MSVOA14\Data\100617\C1944.D	10/06/2017 14:29

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
1,1,1-Trichloroethane (TCA)	50.0	54.2	6.968E-1	7.548E-1	8.33	±30	Average RF
1,1,2,2-Tetrachloroethane	50.0	59.6	9.709E-1	1.157E0	19.12	±30	Average RF
1,1,2-Trichloroethane	50.0	52.9	3.367E-1	3.563E-1	5.84	±30	Average RF
1,1-Dichloroethane (1,1-DCA)	50.0	51.6	9.139E-1	9.438E-1	3.27	±30	Average RF
1,1-Dichloroethene (1,1-DCE)	50.0	48.1	4.296E-1	4.129E-1	-3.884	±30	Average RF
1,2-Dichlorobenzene	50.0	52.8	1.502E0	1.586E0	5.56	±30	Average RF
1,2-Dichloroethane	50.0	50.6	5.63E-1	5.699E-1	1.23	±30	Average RF
1,2-Dichloropropane	50.0	51.6	3.742E-1	3.862E-1	3.19	±30	Average RF
1,3-Dichlorobenzene	50.0	52.3	1.496E0	1.565E0	4.61	±30	Average RF
1,4-Dichlorobenzene	50.0	51.3	1.551E0	1.59E0	2.51	±30	Average RF
2-Chloroethyl Vinyl Ether	50.0	44.0	1.06E-1	9.318E-2	-12.066	±30	Average RF
Acetone	50.0	52.7	3.422E-1	3.606E-1	5.36	±30	Average RF
Benzene	50.0	50.7	1.298E0	1.316E0	1.36	±30	Average RF
Bromodichloromethane	50.0	55.0	4.232E-1	4.654E-1	9.96	±30	Average RF
Bromoform	50.0	56.7	2.295E-1	2.721E-1	13.38	±30	Quadratic
Bromomethane	50.0	53.5	3.986E-1	4.269E-1	7.10	±30	Average RF
Carbon Tetrachloride	50.0	52.5	3.358E-1	3.798E-1	4.99	±30	Quadratic
Chlorobenzene	50.0	49.3	1.012E0	9.984E-1	-1.312	±30	Average RF
Chloroethane	50.0	52.6	4.014E-1	4.223E-1	5.21	±30	Average RF
Chloroform	50.0	51.6	9.01E-1	9.302E-1	3.23	±30	Average RF
Chloromethane	50.0	53.5	7.027E-1	7.52E-1	7.01	±30	Average RF
Dibromochloromethane	50.0	54.9	3.351E-1	3.912E-1	9.72	±30	Quadratic
Methylene Chloride	50.0	51.6	5.127E-1	5.293E-1	3.23	±30	Average RF
Ethylbenzene	50.0	52.2	5.172E-1	5.397E-1	4.36	±30	Average RF
Tetrachloroethene (PCE)	50.0	48.1	2.922E-1	2.81E-1	-3.852	±30	Average RF
Toluene	50.0	51.8	1.396E0	1.446E0	3.58	±30	Average RF
Trichloroethene (TCE)	50.0	46.6	3.606E-1	3.361E-1	-6.775	±30	Average RF
Trichlorofluoromethane (CFC 11)	50.0	53.5	7.946E-1	8.501E-1	6.98	±30	Average RF
Vinyl Chloride	50.0	62.4	6.383E-1	7.964E-1	24.77	±30	Average RF
cis-1,2-Dichloroethene	50.0	49.6	5.471E-1	5.428E-1	-0.785	±30	Average RF
cis-1,3-Dichloropropene	50.0	54.3	4.402E-1	4.991E-1	8.59	±30	Quadratic
m,p-Xylenes	100	105	6.399E-1	6.697E-1	4.66	±30	Average RF
o-Xylene	50.0	51.7	6.385E-1	6.598E-1	3.33	±30	Average RF
trans-1,2-Dichloroethene	50.0	49.3	4.622E-1	4.556E-1	-1.437	±30	Average RF
trans-1,3-Dichloropropene	50.0	54.3	4.402E-1	4.991E-1	8.59	±30	Quadratic

ALS Group USA, Corp.
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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site

Service Request: R1710784
Calibration Date: 10/5/2017

Initial Calibration Verification Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Calibration ID: RC1700102
Instrument ID: R-MS-14

Signal ID: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
10	RC1700102-10	icv	I:\ACQUDATA\MSVOA14\Data\100617\C1944.D	10/06/2017 14:29

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
1,2-Dichloroethane-d4	50.0	49.5	4.566E-1	4.516E-1	-1.086	±30	Average RF
4-Bromofluorobenzene	50.0	50.7	5.051E-1	5.117E-1	1.31	±30	Average RF
Toluene-d8	50.0	49.6	1.323E0	1.311E0	-0.838	±30	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/17/17 20:54

Continuing Calibration Verification (CCV) Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
File ID: I:\ACQUDATA\msvoa12\Data\111717\P14084.D\

Calibration Date: 8/31/2017
Calibration ID: RC1700087
Analysis Lot: 570532
Units: ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
1,1,1-Trichloroethane (TCA)	20.0	22.8	0.8523	0.9711	13.9	NA	±25	Average RF
1,1,2,2-Tetrachloroethane	20.0	21.1	1.0988	1.1593	5.5	NA	±25	Average RF
1,1,2-Trichloroethane	20.0	22.7	0.3556	0.403	13.3	NA	±25	Average RF
1,1-Dichloroethane (1,1-DCA)	20.0	22.6	1.2596	1.4225	12.9	NA	±25	Average RF
1,1-Dichloroethene (1,1-DCE)	20.0	19.9	0.5454	0.542	-0.6	NA	±25	Average RF
1,2-Dichlorobenzene	20.0	21.8	1.6899	1.8453	9.2	NA	±25	Average RF
1,2-Dichloroethane	20.0	21.8	0.6433	0.7017	9.1	NA	±25	Average RF
1,2-Dichloropropane	20.0	20.4	0.4722	0.4825	2.2	NA	±25	Average RF
1,3-Dichlorobenzene	20.0	20.7	1.7406	1.8023	3.5	NA	±25	Average RF
1,4-Dichlorobenzene	20.0	22.2	1.7539	1.943	10.8	NA	±25	Average RF
2-Chloroethyl Vinyl Ether	20.0	15.8	0.2734	0.2164	-20.9	NA	±25	Average RF
Acetone	20.0	17.2	0.6092	0.523	-14.2	NA	±25	Average RF
Benzene	20.0	20.0	1.4887	1.4882	0.0	NA	±25	Average RF
Bromodichloromethane	20.0	22.6	0.4163	0.4708	13.1	NA	±25	Average RF
Bromoform	20.0	20.6	0.4189	0.432	3.1	NA	±25	Average RF
Bromomethane	20.0	19.0	0.4196	0.3942	NA	-5.0	±25	Quadratic
Carbon Tetrachloride	20.0	20.3	0.4177	0.424	1.5	NA	±25	Average RF
Chlorobenzene	20.0	21.5	1.1102	1.1913	7.3	NA	±25	Average RF
Chloroethane	20.0	23.4	0.5316	0.5321	NA	17.0	±25	Quadratic
Chloroform	20.0	21.3	1.0096	1.0729	6.3	NA	±25	Average RF
Chloromethane	20.0	21.0	1.3115	1.3777	5.1	NA	±25	Average RF
Dibromochloromethane	20.0	20.6	0.3603	0.3702	2.7	NA	±25	Average RF
Methylene Chloride	20.0	21.7	0.591	0.6416	8.5	NA	±25	Average RF
Ethylbenzene	20.0	20.8	0.6045	0.6292	4.1	NA	±25	Average RF
Tetrachloroethene (PCE)	20.0	20.5	0.3076	0.3153	2.5	NA	±25	Average RF
Toluene	20.0	20.6	1.5984	1.6448	2.9	NA	±25	Average RF
Trichloroethene (TCE)	20.0	20.8	0.3805	0.3962	4.1	NA	±25	Average RF
Trichlorofluoromethane (CFC 11)	20.0	21.4	0.8774	0.9405	7.2	NA	±25	Average RF
Vinyl Chloride	20.0	22.2	0.8551	0.9476	10.8	NA	±25	Average RF
cis-1,2-Dichloroethene	20.0	21.2	0.6585	0.6989	6.1	NA	±25	Average RF
cis-1,3-Dichloropropene	20.0	20.8	0.5855	0.6102	4.2	NA	±25	Average RF
m,p-Xylenes	40.0	41.5	0.743	0.7716	3.8	NA	±25	Average RF
o-Xylene	20.0	21.6	0.7369	0.7942	7.8	NA	±25	Average RF
trans-1,2-Dichloroethene	20.0	22.9	0.5619	0.6425	14.3	NA	±25	Average RF
trans-1,3-Dichloropropene	20.0	20.3	0.5339	0.5413	1.4	NA	±25	Average RF
1,2-Dichloroethane-d4	50.0	51.3	0.4445	0.4563	2.7	NA	±25	Average RF
4-Bromofluorobenzene	50.0	50.7	0.5066	0.5135	1.4	NA	±25	Average RF
Toluene-d8	50.0	49.3	1.2885	1.2716	-1.3	NA	±25	Average RF

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/20/17 22:01

Continuing Calibration Verification (CCV) Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
File ID: I:\ACQUDATA\MSVOA14\Data\112017\C3151.D\

Calibration Date: 10/5/2017
Calibration ID: RC1700102
Analysis Lot: 570743
Units: ug/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
1,1,1-Trichloroethane (TCA)	20.0	20.7	0.6968	0.7229	3.7	NA	±25	Average RF
1,1,2,2-Tetrachloroethane	20.0	23.5	0.9709	1.1392	17.3	NA	±25	Average RF
1,1,2-Trichloroethane	20.0	23.1	0.3367	0.3885	15.4	NA	±25	Average RF
1,1-Dichloroethane (1,1-DCA)	20.0	20.7	0.9139	0.9479	3.7	NA	±25	Average RF
1,1-Dichloroethene (1,1-DCE)	20.0	20.5	0.4296	0.4407	2.6	NA	±25	Average RF
1,2-Dichlorobenzene	20.0	22.3	1.5023	1.673	11.4	NA	±25	Average RF
1,2-Dichloroethane	20.0	22.0	0.563	0.6181	9.8	NA	±25	Average RF
1,2-Dichloropropane	20.0	20.7	0.3742	0.3867	3.3	NA	±25	Average RF
1,3-Dichlorobenzene	20.0	21.6	1.4963	1.6164	8.0	NA	±25	Average RF
1,4-Dichlorobenzene	20.0	21.6	1.5508	1.6734	7.9	NA	±25	Average RF
2-Chloroethyl Vinyl Ether	20.0	12.8	0.106	0.0681	-35.8*	NA	±25	Average RF
Acetone	20.0	22.2	0.3422	0.3791	10.8	NA	±25	Average RF
Benzene	20.0	21.3	1.298	1.3852	6.7	NA	±25	Average RF
Bromodichloromethane	20.0	21.7	0.4232	0.4596	8.6	NA	±25	Average RF
Bromoform	20.0	23.3	0.2295	0.259	NA	16.5	±25	Quadratic
Bromomethane	20.0	22.8	0.3986	0.4547	14.1	NA	±25	Average RF
Carbon Tetrachloride	20.0	20.5	0.3358	0.356	NA	2.7	±25	Quadratic
Chlorobenzene	20.0	21.1	1.0117	1.0692	5.7	NA	±25	Average RF
Chloroethane	20.0	18.9	0.4014	0.3798	-5.4	NA	±25	Average RF
Chloroform	20.0	22.0	0.901	0.9903	9.9	NA	±25	Average RF
Chloromethane	20.0	19.8	0.7027	0.6973	-0.8	NA	±25	Average RF
Dibromochloromethane	20.0	21.8	0.3351	0.3699	NA	9.2	±25	Quadratic
Methylene Chloride	20.0	22.2	0.5127	0.5686	10.9	NA	±25	Average RF
Ethylbenzene	20.0	20.2	0.5172	0.5235	1.2	NA	±25	Average RF
Tetrachloroethene (PCE)	20.0	19.4	0.2922	0.283	-3.2	NA	±25	Average RF
Toluene	20.0	21.1	1.3959	1.473	5.5	NA	±25	Average RF
Trichloroethene (TCE)	20.0	21.0	0.3606	0.3789	5.1	NA	±25	Average RF
Trichlorofluoromethane (CFC 11)	20.0	19.2	0.7946	0.7618	-4.1	NA	±25	Average RF
Vinyl Chloride	20.0	19.6	0.6383	0.6246	-2.1	NA	±25	Average RF
cis-1,2-Dichloroethene	20.0	21.8	0.5471	0.595	8.8	NA	±25	Average RF
cis-1,3-Dichloropropene	20.0	21.1	0.4402	0.4443	NA	5.4	±25	Quadratic
m,p-Xylenes	40.0	41.1	0.6399	0.6579	2.8	NA	±25	Average RF
o-Xylene	20.0	20.5	0.6385	0.6551	2.6	NA	±25	Average RF
trans-1,2-Dichloroethene	20.0	21.6	0.4622	0.4985	7.8	NA	±25	Average RF
trans-1,3-Dichloropropene	20.0	21.1	0.4402	0.4443	NA	5.4	±25	Quadratic
1,2-Dichloroethane-d4	50.0	52.0	0.4566	0.4749	4.0	NA	±25	Average RF
4-Bromofluorobenzene	50.0	55.2	0.5051	0.5571	10.3	NA	±25	Average RF
Toluene-d8	50.0	52.2	1.3225	1.3811	4.4	NA	±25	Average RF

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/21/17 10:27

Continuing Calibration Verification (CCV) Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
File ID: I:\ACQUDATA\MSVOA14\Data\112117\C3177.D\

Calibration Date: 10/5/2017
Calibration ID: RC1700102
Analysis Lot: 570946
Units: ug/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
1,1,1-Trichloroethane (TCA)	50.0	44.2	0.6968	0.6166	-11.5	NA	±25	Average RF
1,1,2,2-Tetrachloroethane	50.0	48.3	0.9709	0.9374	-3.5	NA	±25	Average RF
1,1,2-Trichloroethane	50.0	49.6	0.3367	0.3338	-0.9	NA	±25	Average RF
1,1-Dichloroethane (1,1-DCA)	50.0	44.4	0.9139	0.8122	-11.1	NA	±25	Average RF
1,1-Dichloroethene (1,1-DCE)	50.0	45.1	0.4296	0.3872	-9.9	NA	±25	Average RF
1,2-Dichlorobenzene	50.0	43.5	1.5023	1.3064	-13.0	NA	±25	Average RF
1,2-Dichloroethane	50.0	46.9	0.563	0.5279	-6.2	NA	±25	Average RF
1,2-Dichloropropane	50.0	45.3	0.3742	0.3392	-9.4	NA	±25	Average RF
1,3-Dichlorobenzene	50.0	43.0	1.4963	1.2867	-14.0	NA	±25	Average RF
1,4-Dichlorobenzene	50.0	43.3	1.5508	1.3442	-13.3	NA	±25	Average RF
2-Chloroethyl Vinyl Ether	50.0	30.3	0.106	0.0643	-39.3*	NA	±25	Average RF
Acetone	50.0	41.6	0.3422	0.2849	-16.8	NA	±25	Average RF
Benzene	50.0	45.2	1.298	1.1731	-9.6	NA	±25	Average RF
Bromodichloromethane	50.0	49.3	0.4232	0.4176	-1.3	NA	±25	Average RF
Bromoform	50.0	49.8	0.2295	0.2358	NA	-0.3	±25	Quadratic
Bromomethane	50.0	48.9	0.3986	0.39	-2.2	NA	±25	Average RF
Carbon Tetrachloride	50.0	43.8	0.3358	0.3141	NA	-12.3	±25	Quadratic
Chlorobenzene	50.0	43.2	1.0117	0.8745	-13.6	NA	±25	Average RF
Chloroethane	50.0	41.9	0.4014	0.3367	-16.1	NA	±25	Average RF
Chloroform	50.0	46.7	0.901	0.8423	-6.5	NA	±25	Average RF
Chloromethane	50.0	44.9	0.7027	0.6304	-10.3	NA	±25	Average RF
Dibromochloromethane	50.0	49.3	0.3351	0.3485	NA	-1.5	±25	Quadratic
Methylene Chloride	50.0	48.2	0.5127	0.4937	-3.7	NA	±25	Average RF
Ethylbenzene	50.0	42.7	0.5172	0.4418	-14.6	NA	±25	Average RF
Tetrachloroethene (PCE)	50.0	41.4	0.2922	0.2422	-17.1	NA	±25	Average RF
Toluene	50.0	45.1	1.3959	1.2586	-9.8	NA	±25	Average RF
Trichloroethene (TCE)	50.0	40.6	0.3606	0.2924	-18.9	NA	±25	Average RF
Trichlorofluoromethane (CFC 11)	50.0	38.7	0.7946	0.6153	-22.6	NA	±25	Average RF
Vinyl Chloride	50.0	41.7	0.6383	0.5319	-16.7	NA	±25	Average RF
cis-1,2-Dichloroethene	50.0	48.2	0.5471	0.5279	-3.5	NA	±25	Average RF
cis-1,3-Dichloropropene	50.0	49.5	0.4402	0.4495	NA	-1.1	±25	Quadratic
m,p-Xylenes	100	84.7	0.6399	0.5422	-15.3	NA	±25	Average RF
o-Xylene	50.0	43.4	0.6385	0.5537	-13.3	NA	±25	Average RF
trans-1,2-Dichloroethene	50.0	46.9	0.4622	0.4333	-6.3	NA	±25	Average RF
trans-1,3-Dichloropropene	50.0	49.5	0.4402	0.4495	NA	-1.1	±25	Quadratic
1,2-Dichloroethane-d4	50.0	47.7	0.4566	0.4357	-4.6	NA	±25	Average RF
4-Bromofluorobenzene	50.0	53.9	0.5051	0.5443	7.8	NA	±25	Average RF
Toluene-d8	50.0	49.5	1.3225	1.3106	-0.9	NA	±25	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784
Date Analyzed: 11/22/17 11:24

Continuing Calibration Verification (CCV) Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624
File ID: I:\ACQUDATA\MSVOA14\Data\112217\C3239.D\

Calibration Date: 10/5/2017
Calibration ID: RC1700102
Analysis Lot: 571161
Units: ug/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
1,1,1-Trichloroethane (TCA)	50.0	50.1	0.6968	0.6985	0.2	NA	±25	Average RF
1,1,2,2-Tetrachloroethane	50.0	51.2	0.9709	0.9939	2.4	NA	±25	Average RF
1,1,2-Trichloroethane	50.0	50.3	0.3367	0.339	0.7	NA	±25	Average RF
1,1-Dichloroethane (1,1-DCA)	50.0	46.1	0.9139	0.8427	-7.8	NA	±25	Average RF
1,1-Dichloroethene (1,1-DCE)	50.0	48.8	0.4296	0.4191	-2.5	NA	±25	Average RF
1,2-Dichlorobenzene	50.0	51.4	1.5023	1.543	2.7	NA	±25	Average RF
1,2-Dichloroethane	50.0	47.5	0.563	0.5348	-5.0	NA	±25	Average RF
1,2-Dichloropropane	50.0	46.8	0.3742	0.3504	-6.4	NA	±25	Average RF
1,3-Dichlorobenzene	50.0	51.9	1.4963	1.554	3.9	NA	±25	Average RF
1,4-Dichlorobenzene	50.0	51.8	1.5508	1.6071	3.6	NA	±25	Average RF
2-Chloroethyl Vinyl Ether	50.0	27.8	0.106	0.0589	-44.4*	NA	±25	Average RF
Acetone	50.0	38.8	0.3422	0.2655	-22.4	NA	±25	Average RF
Benzene	50.0	49.1	1.298	1.2749	-1.8	NA	±25	Average RF
Bromodichloromethane	50.0	50.2	0.4232	0.4253	0.5	NA	±25	Average RF
Bromoform	50.0	52.0	0.2295	0.2471	NA	4.0	±25	Quadratic
Bromomethane	50.0	53.4	0.3986	0.4255	6.8	NA	±25	Average RF
Carbon Tetrachloride	50.0	51.9	0.3358	0.3749	NA	3.7	±25	Quadratic
Chlorobenzene	50.0	50.4	1.0117	1.0205	0.9	NA	±25	Average RF
Chloroethane	50.0	43.9	0.4014	0.3524	-12.2	NA	±25	Average RF
Chloroform	50.0	48.5	0.901	0.8747	-2.9	NA	±25	Average RF
Chloromethane	50.0	45.3	0.7027	0.6369	-9.4	NA	±25	Average RF
Dibromochloromethane	50.0	51.1	0.3351	0.3627	NA	2.3	±25	Quadratic
Methylene Chloride	50.0	48.1	0.5127	0.4931	-3.8	NA	±25	Average RF
Ethylbenzene	50.0	51.7	0.5172	0.5348	3.4	NA	±25	Average RF
Tetrachloroethene (PCE)	50.0	52.3	0.2922	0.3056	4.6	NA	±25	Average RF
Toluene	50.0	50.8	1.3959	1.4183	1.6	NA	±25	Average RF
Trichloroethene (TCE)	50.0	46.2	0.3606	0.3332	-7.6	NA	±25	Average RF
Trichlorofluoromethane (CFC 11)	50.0	44.2	0.7946	0.7019	-11.7	NA	±25	Average RF
Vinyl Chloride	50.0	44.3	0.6383	0.5652	-11.5	NA	±25	Average RF
cis-1,2-Dichloroethene	50.0	49.0	0.5471	0.5366	-1.9	NA	±25	Average RF
cis-1,3-Dichloropropene	50.0	49.9	0.4402	0.454	NA	-0.2	±25	Quadratic
m,p-Xylenes	100	106	0.6399	0.6788	6.1	NA	±25	Average RF
o-Xylene	50.0	52.5	0.6385	0.6704	5.0	NA	±25	Average RF
trans-1,2-Dichloroethene	50.0	49.8	0.4622	0.4608	-0.3	NA	±25	Average RF
trans-1,3-Dichloropropene	50.0	49.9	0.4402	0.454	NA	-0.2	±25	Quadratic
1,2-Dichloroethane-d4	50.0	49.6	0.4566	0.4531	-0.7	NA	±25	Average RF
4-Bromofluorobenzene	50.0	53.0	0.5051	0.5349	5.9	NA	±25	Average RF
Toluene-d8	50.0	49.7	1.3225	1.3134	-0.7	NA	±25	Average RF

ALS Group USA, Corp.
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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Analysis Run Log
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624

Analysis Lot: 570532
Instrument ID: R-MS-12

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\msvoa12\Data\111717\P14056.D\	ZZZZZZZZ	ZZZZZZZZ	11/17/2017	10:09:00	
I:\ACQUDATA\msvoa12\Data\111717\P14084.D\	Lab Control Sample	RQ1711970-03	11/17/2017	20:54:00	
I:\ACQUDATA\msvoa12\Data\111717\P14084.D\	Continuing Calibration Verification	RQ1711970-02	11/17/2017	20:54:00	
I:\ACQUDATA\msvoa12\Data\111717\P14085.D\	Duplicate Lab Control Sample	RQ1711970-04	11/17/2017	21:16:00	
I:\ACQUDATA\msvoa12\Data\111717\P14087.D\	Method Blank	RQ1711970-05	11/17/2017	21:59:00	
I:\ACQUDATA\msvoa12\Data\111717\P14088.D\	Trip Blank-20171113	R1710784-001	11/17/2017	22:21:00	
I:\ACQUDATA\msvoa12\Data\111717\P14089.D\	Trip Blank-20171114	R1710784-003	11/17/2017	22:43:00	
I:\ACQUDATA\msvoa12\Data\111717\P14090.D\	MW-9S-17NOV	R1710784-002	11/17/2017	23:05:00	
I:\ACQUDATA\msvoa12\Data\111717\P14091.D\	MW-2S-17NOV	R1710784-004	11/17/2017	23:26:00	
I:\ACQUDATA\msvoa12\Data\111717\P14092.D\	MW-2S-17NOV-Q	R1710784-005	11/17/2017	23:48:00	
I:\ACQUDATA\msvoa12\Data\111717\P14093.D\	MW-14S-17NOV	R1710784-006	11/18/2017	00:10:00	
I:\ACQUDATA\msvoa12\Data\111717\P14094.D\	MW-1S-17NOV	R1710784-007	11/18/2017	00:32:00	
I:\ACQUDATA\msvoa12\Data\111717\P14095.D\	ZZZZZZZZ	ZZZZZZZZ	11/18/2017	00:53:00	
I:\ACQUDATA\msvoa12\Data\111717\P14096.D\	ZZZZZZZZ	ZZZZZZZZ	11/18/2017	01:15:00	
I:\ACQUDATA\msvoa12\Data\111717\P14097.D\	ZZZZZZZZ	ZZZZZZZZ	11/18/2017	01:37:00	
I:\ACQUDATA\msvoa12\Data\111717\P14098.D\	ZZZZZZZZ	ZZZZZZZZ	11/18/2017	01:58:00	
I:\ACQUDATA\msvoa12\Data\111717\P14099.D\	ZZZZZZZZ	ZZZZZZZZ	11/18/2017	02:20:00	
I:\ACQUDATA\msvoa12\Data\111717\P14100.D\	ZZZZZZZZ	ZZZZZZZZ	11/18/2017	02:42:00	
I:\ACQUDATA\msvoa12\Data\111717\P14101.D\	ZZZZZZZZ	ZZZZZZZZ	11/18/2017	03:04:00	
I:\ACQUDATA\msvoa12\Data\111717\P14102.D\	ZZZZZZZZ	ZZZZZZZZ	11/18/2017	03:25:00	
I:\ACQUDATA\msvoa12\Data\111717\P14103.D\	ZZZZZZZZ	ZZZZZZZZ	11/18/2017	03:47:00	
I:\ACQUDATA\msvoa12\Data\111717\P14104.D\	MW-1S-17NOV MS	RQ1711970-06	11/18/2017	04:09:00	
I:\ACQUDATA\msvoa12\Data\111717\P14105.D\	MW-1S-17NOV DMS	RQ1711970-07	11/18/2017	04:30:00	

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Analysis Run Log
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624

Analysis Lot: 570532
Instrument ID: R-MS-12

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\MSVOA14\Data\112017\C3121.D\	ZZZZZZZ	ZZZZZZZ	11/20/2017	09:41:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3154.D\	ZZZZZZZ	ZZZZZZZ	11/20/2017	23:08:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3155.D\	ZZZZZZZ	ZZZZZZZ	11/20/2017	23:30:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3167.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	03:57:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3168.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	04:20:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3169.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	04:42:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3170.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	05:04:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3170.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	05:04:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3171.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	05:27:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3176.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	09:47:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3182.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	12:33:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3183.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	12:56:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3184.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	13:18:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3185.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	13:40:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3186.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	14:03:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3193.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	16:38:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3195.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	17:23:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3196.D\	ZZZZZZZ	ZZZZZZZ	11/21/2017	17:45:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3238.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	10:57:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3243.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	13:05:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3244.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	13:27:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3245.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	13:50:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3246.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	14:12:00	

ALS Group USA, Corp.

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request:R1710784

Analysis Run Log
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624

Analysis Lot:570532
Instrument ID:R-MS-12

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\MSVOA14\Data\112217\C3247.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	14:34:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3248.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	14:56:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3253.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	16:47:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3254.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	17:09:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3255.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	17:31:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3257.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	18:16:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3258.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	18:38:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3259.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	19:00:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3260.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	19:22:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3261.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	19:45:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3262.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	20:07:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3263.D\	ZZZZZZZ	ZZZZZZZ	11/22/2017	20:29:00	

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QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Analysis Run Log
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624

Analysis Lot: 570743
Instrument ID: R-MS-14

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\MSVOA14\Data\112017\C3151.D\	Continuing Calibration Verification	RQ1712201-02	11/20/2017	22:01:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3151.D\	Lab Control Sample	RQ1712201-03	11/20/2017	22:01:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3153.D\	Method Blank	RQ1712201-04	11/20/2017	22:46:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3157.D\	Trip Blank-20171115	R1710784-008	11/21/2017	00:15:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3158.D\	Trip Blank-20171117	R1710784-014	11/21/2017	00:37:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3159.D\	MW-14R-17NOV	R1710784-012	11/21/2017	00:59:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3160.D\	PZ-03-17NOV	R1710784-013	11/21/2017	01:22:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3161.D\	PZ-02-17NOV	R1710784-017	11/21/2017	01:44:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3162.D\	MW-5R-17NOV	R1710784-009	11/21/2017	02:06:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3163.D\	MW-8R-17NOV	R1710784-010	11/21/2017	02:28:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3164.D\	MW-2R-17NOV	R1710784-011	11/21/2017	02:50:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3166.D\	PZ-04-17NOV	R1710784-016	11/21/2017	03:35:00	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request: R1710784

Analysis Run Log
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624

Analysis Lot: 570946
Instrument ID: R-MS-14

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\MSVOA14\Data\112017\C3162.D\	MW-5R-17NOV	R1710784-009	11/21/2017	02:06:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3163.D\	MW-8R-17NOV	R1710784-010	11/21/2017	02:28:00	
I:\ACQUDATA\MSVOA14\Data\112017\C3164.D\	MW-2R-17NOV	R1710784-011	11/21/2017	02:50:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3177.D\	Continuing Calibration Verification	RQ1712266-02	11/21/2017	10:27:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3179.D\	Lab Control Sample	RQ1712266-03	11/21/2017	11:27:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3181.D\	Method Blank	RQ1712266-04	11/21/2017	12:11:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3188.D\	MW-5R-17NOV	R1710784-009	11/21/2017	14:47:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3189.D\	MW-8R-17NOV	R1710784-010	11/21/2017	15:09:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3190.D\	MW-2R-17NOV	R1710784-011	11/21/2017	15:32:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3191.D\	MW-16R-17NOV	R1710784-015	11/21/2017	15:54:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3200.D\	P-2-17NOV	R1710784-021	11/21/2017	19:14:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3201.D\	PW-1-17NOV	R1710784-022	11/21/2017	19:36:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3202.D\	PW-2-17NOV	R1710784-024	11/21/2017	19:59:00	
I:\ACQUDATA\MSVOA14\Data\112117\C3203.D\	MW-10R-17NOV	R1710784-019	11/21/2017	20:21:00	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Inc.
Project: Davis Howland Oil Company Site/10C3074.0012.08

Service Request:R1710784

Analysis Run Log
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 624

Analysis Lot:571161
Instrument ID:R-MS-14

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\MSVOA14\Data\112217\C3239.D\	Continuing Calibration Verification	RQ1712279-02	11/22/2017	11:24:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3240.D\	Lab Control Sample	RQ1712279-03	11/22/2017	11:53:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3242.D\	Method Blank	RQ1712279-04	11/22/2017	12:37:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3249.D\	Trip Blank-20172011	R1710784-018	11/22/2017	15:18:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3250.D\	RB-20172011	R1710784-020	11/22/2017	15:40:00	
I:\ACQUDATA\MSVOA14\Data\112217\C3251.D\	P-3-17NOV	R1710784-023	11/22/2017	16:03:00	

Analysis: 624 Wctave Analyst: YBvost pH strips: 206717 Tune Method: W083117
 Date: 11/17/17 - Run#2 Balance ID: N/A ResCl strips: 072017F Run Method: ↓
 Instr: 12 50 mL Class A used for dilution FV Syringes: 17416 LIMS Run#: 570532

Data Path: j:\acudata\msvoa\InstID\Date)

Pos.	Sample	Diln.	Diln. Prep./	RL	Tier	Vial	pH	File#	OK?	Comments
24	LCS		P01711970 - 02/03					P14084	YQ	
25	LCS		04					P14085	YQ	
26	WBL		05					P14086 (N)	YB	not c/c
27	↓							P14087	YB	
28	P1710784 - 001	1.0			2	1	6	P14088	Y	
29		003				1	6	P14089	Y	
30		002				1	6	P14090	Y	
31		004				1	6	P14091	Y	
32		005				1	6	P14092	Y	
33		006				1	6	P14093	Y	
34	↓	007				1	6	P14094	Y	
35	P1710505 - 001	1.0			1	1	6	P14095	Y	
36		004				1	6	P14096	Y	
37	↓	006				1	6	P14097	Y	
38	↓	006				1	6	P14098	Y	
39	P1710340 - 007	1.0			2	1	6	P14099	Y	
40		008				1	6	P14100	Y	
41	↓	014				1	7	P14101	Y	
42	P1710844 - 006	1.0			2	1	6	P14102	Y	
43	↓	003	20/21 mds			1	6	P14103	Y	
44	P1710784 - 007	1.0			2	2	6	P14104	YQ	
45	↓	007	msn			3	6	P14105	YQ	4.30 ✓
46	BK							P14106	-	

All samples = 5 mL + 5 uL combined IS/Sur. 5 mL purged

Combined IS/Sur

Primary
 Primary
 Primary
 Primary
 Primary

Surrogate SD: 185033
 Internal Std SD: 185032
 Reagents:

200 Secondary K+: 184235 - 5 uL
 500 Secondary CC+: 184235
 Secondary T6: 184236
 Secondary H2L: 184242
 Secondary

10844

SPDES Outfall 020 VOC Compositing for MPM Silicones Lab

flow rate weighted

020

Start Time

11/13/17 8:46 AM

End Time

11/14/17 8:00 AM

Sample Volume Required

100 ml

Sample	020	020	020
Period Start Time	Sample No.	Grab period hours	Sample Volume Required (ml)
11/13/17 8:46 AM	1	4.0	18.1
11/13/17 12:02 PM	2	4.0	18.3
11/13/17 4:00 PM	3	4.0	16.1
11/13/17 8:00 PM	4	4.0	15.5
11/14/17 12:00 AM	5	4.0	15.8
11/14/17 4:00 AM	6	4.0	16.2
11/14/17 8:00 AM	End Time		

Total sample size ml

100.00

Analysis: 624 Analyst: F. Naejser pH strips: 206717 Tune Method: W100S17.14
 Date: 11/20/17 #2 Balance ID: --- ResCl strips: --- Run Method: ---
 Instr: MS14 50 mL Class A used for dilution FV Syringes: 181116 / 77958 LIMS Run#: 570743

Data Path: j:\vacuata\msvoa\InstHJ\Date

Pos.	Sample	Diln.	Diln. Prep./	RL	Tier	Vial	pH	File#	OK?	Comments
2	TUNE							C3121	Y	9.41
28	LC5							51	Y	
29	MBLK							52	(N)	
30	MBLK							53	Y	R021712201-04
31	R1711017-002	1.0		neg				54	Y	
32	↓ -001	2.0	25/50mL	neg				55	Y	
33	BLK							56	Y	
34	R1710784-008	1.0		neg				57	Y	
35	↓ -014	1.0		neg				58	Y	
36	↓ -012	1.0		neg				59	Y	
37	↓ -013	1.0		neg				60	Y	
38	↓ -017	1.0		neg				61	Y	
39	↓ -009	2.5	20/50mL	neg				62	(Y)	R04115
40	↓ -010	25.0	2/50mL	neg				63	(Y)	R041150
41	↓ -011	10.0	5/50mL	neg				64	(Y)	R041125
42	↓ -015	5.0	10/50mL	neg				65	(N)	R04111
43	↓ -016	2.0	25/50mL	neg				66	Y	
44	R1710971-002	5.0	10/50mL	neg				67	Y	Dil due to matrix effect.
45	R1711014-001	25.0	2/50mL	neg				68	(Y)	R0411100
46	R1710645-003	1.0		neg				69	Y	
47	R1710954-001	10.0	5/50mL	neg				70	(Y)	R041125
48	R1710869-001	1.0		neg				71	Y	
49	R1710933-001	10.0	5/50mL	neg				72	(N)	R04115
50	↓ -001MS	10.0		neg				73	(N)	
51	↓ -001ASD	10.0	↓	neg				74	(N)	
52	BLK							75	-	
53	↓							76	-	

All samples = 5 mL + 5 uL combined IS/Surr. 5 mL purged

Combined IS/Surr. ---
 Surrogate 50: 185033
 Internal Std 50: 185032

T6 Primary 500: 184951 - 5mL
 H6L Primary 185744 -
 FC Primary 185134 -
 oec Primary 189117 -

T6 Secondary 200: 185555 - 5mL
 H6L Secondary 500: 185276 - 2uL
 oec Secondary 185742 -
 Secondary 189288 -

Surrogate 50: 185033
 Internal Std 50: 185032
 Reagents: ---

FW 11/21/17

Analysis: 624 Analyst: F. Noyes pH strips: 256717 Tune Method: W12517.14
 Date: 11/21/17 Balance ID: — ResCl strips: 072617F Run Method: ↓
 Instr. MS14 50 mL Class A used for dilution FV Syringes: 181116 / 77458 LIMS Run#: 570946

Data Path: j:\acq\data\msv\oa4\InstID\Date\

Pos.	Sample	Diln.	Diln. Prep./	RL	Tier	Vial	pH	File#	OK?	Comments
1	TUNE							C3176	Y	
2	CCV							77	Y	
3	LCS							78	(N)	
3	LCS							79	Y	624 only!
4	MBLK							80	(N)	
5	MBLK							81	Y	
6	R1711039-001	1.0						82	Y	R21712246-04
7	R1711035-003	1.0						83	Y	
8	<u>-002</u>	1.0						84	(Y)	Rpt 112.5
9	<u>-001</u>	5.0	10/Sam					85	Y	
10	<u>-002</u>	2.5	20/Sam					86	Y	
11	BLK							87	Y	
12	R1710784-009	5.0	10/Sam					88	Y	DL
13	<u>-010</u>	50.0	1/Sam					89	Y	DL
14	<u>-011</u>	25.0	2/Sam					90	Y	DL
15	<u>-015</u>	1.0						91	Y	
16	BLK							92	Y	
17	R1711044-001	1.0						93	Y	
18	<u>R17110953-001</u>	5.0	10/Sam					94	(N)	Rpt 112.5
19	R1710954-001	25.0	2/Sam					95	Y	DL
20	R1711014-001	100.0	5/Sam → 5/Sam					96	Y	DL
21	<u>R1711045-001</u>	25.0	2/Sam					97	(N)	Rpt 111
22	<u>R1711043-001</u>	20.0	2.5/Sam					98	(N)	Rpt 110
23	BLK							99	Y	
24	R1710784-024	2.0	25/Sam					C3200	Y	
25	<u>-022</u>	2.0						01	Y	
26	<u>-024</u>	2.0						02	Y	
27	<u>-019</u>	10.0	5/Sam					03	Y	
28	<u>-023</u>	10.0						04	(N)	Rpt 112.5
29	<u>-023MS</u>	15.0						05	(N)	
30	<u>-023MSD</u>	15.0						06	(N)	
31	BLK							07	Y	

All samples = 5 mL + 5 uL combined IS/Surr. 5 mL purged

T/6 Primary 500 :185793 - 5415mL
 H/L Primary :185744 -
 Fr Primary :185134 -
 O/C Primary :184117 -
 Primary
 T/6 Secondary 200 :185555 - 54
 H/L Secondary 500 :185276 - 24
 Fr Secondary :185742 - 1
 O/C Secondary :184268 - 1
 Secondary
 Combined IS/Surr
 Surrogate 50 :185033
 Internal Std 50 :185032
 Reagents:
 (CCV)
 (LCS)
 (SP)

Analysis: 82601624 Analyst: F. N. Neagle
 Date: 11/22/17 Balance ID: — pH strips: 206717
 Instr: MS14 50 mL Class A used for dilution FV ResCl strips: 072617F
 Syringes: 181116 / 77958 LIMS Run#: 571161
 Tune Method: w100517.M
 Run Method: ↓

Data Path: j:\acqu\data\msvoe\insr\ID\ (Date)

Pos.	Sample	Diln.	Diln. Prep./	RL	Tier	Vial	pH	File#	OK?	Comments
1	Blue							C3237	Y	
2	TUNE							38	Y	
1	CCV							39	Y	
2	LC5							40	Y	
3	MBL							41	(N)	
4	MBL							42	Y	
5	R1711062-006	1.0		11868	2	1	(6)	43	Y	R21712279-04
6	R1711111-006	1.0				1	(3)	44	Y	
7	R1711061-006	1.0				1	(6)	45	Y	
8	↓ -003	2.5	20/50mL			1	(5)	46	Y	
9	R1711111-003	2.5				1	(3)	47	Y	
10	R1711062-003	2.5	↓			1	(5)	48	Y	
11	R1710784-018	1.0		16560	2	1	(3)	49	Y	
12	↓ -020	1.0				1	(3)	50	Y	
13	↓ -023	2.5	20/50mL			2	(5)	51	Y	
14	Blue							52	Y	
15	R1711040-001	10.0	5/50mL	9166	2	2	(2)	53	Y	
16	R1711045-001	1.0				2	(3)	54	Y	
17	R1710958-001	2.5	20/50mL			2	(2)	55	Y	
18	Blue							56	Y	
19	R1711022-023	1.0		17025	2	1	(2)	57	Y	
20	↓ -022	5.0	10/50mL			1	(2)	58	Y	
21	↓ -021	5.0				1	(2)	59	Y	
22	↓ -021/AS	5.0	↓			1	(2)	60	Y	
23	↓ -021/MSD	5.0	↓			1	(2)	61	Y	
24	R1711062-003/MS	2.5	20/50mL	11868	2	1	(5)	62	Y	
25	↓ -003/MSD	2.5	↓			1	(5)	63	Y	
26	Blue							64	Y	

All samples = 5 mL + 5 mL combined IS/Surr. 5 mL purged

Combined IS/Surr. —

T/6 Primary 500 : 185793 - 5.4
 H6 Primary : 185794 -
 F6 Primary : 185134 -
 O6 Primary : 184117 -

F6 Secondary 200 : 185555 - 5.4
 T/6 Secondary 500 : 185276 - 2.4
 H6 Secondary : 185742 -
 O6 Secondary : 184288 -

Surrogate 50 : 185839
 Internal Std 50 : 185838
 Reagents:

R-11061

SPDES Outfall 020 VOC Compositing for MPM Silicones Lab flow rate weighted

020

Start Time 11/16/17 8:39 AM

End Time 11/17/17 8:00 AM

Sample Volume Required 100 ml

Sample	020	020	020
Period Start Time	Sample No.	Grab period hours	Sample Volume Required (ml)
11/16/17 8:39 AM	1	4.0	17.3
11/16/17 12:00 PM	2	7.0	8.3
11/16/17 7:00 PM	3	2.5	14.0
11/16/17 9:30 PM	4	2.5	14.7
11/17/17 12:03 AM	5	4.4	24.9
11/17/17 4:24 AM	6	3.6	20.7
11/17/17 8:00 AM	End Time		

Total sample size ml

100.00

R-11062

SPDES Outfall 020 VOC Compositing for MPM Silicones Lab

flow rate weighted

020
 Start Time 11/19/17 8:05 AM
 End Time 11/20/17 8:00 AM
 Sample Volume Required 100 ml

Sample	020	020	020
Period Start Time	Sample No.	Grab period hours	Sample Volume Required (ml)
11/19/17 8:05 AM	1	4.2	17.0
11/19/17 12:10 PM	2	4.1	17.5
11/19/17 4:14 PM	3	4.5	19.0
11/19/17 8:45 PM	4	3.2	13.3
11/20/17 12:00 AM	5	4.0	16.6
11/20/17 4:00 AM	6	4.0	16.6
11/20/17 8:00 AM	End Time		

Total sample size ml

100.00

R-11111

SPDES Outfall 020 VOC Compositing for MPM Silicones Lab

flow rate weighted

020

Start Time

11/20/17 8:40 AM

End Time

11/21/17 8:00 AM

Sample Volume Required

100 ml

Sample	020	020	020
Period Start Time	Sample No.	Grab period hours	Sample Volume Required (ml)
11/20/17 8:40 AM	1	4.0	17.5
11/20/17 12:01 PM	2	4.2	17.3
11/20/17 4:12 PM	3	3.9	16.0
11/20/17 8:06 PM	4	4.0	16.4
11/21/17 12:04 AM	5	3.9	16.4
11/21/17 4:01 AM	6	4.0	16.4
11/21/17 8:00 AM	End Time		

Total sample size ml

100.00