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DATE: 01 August 2016
TO: David Mickunas, U.S. EPA/ERT Work Assignment Manager
THROUGH: Kevin Taylor, SERAS Program Manager *KT*
FROM: Brian Kanupp, SERAS Task Leader *BK*
SUBJECT: Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim) in Grenada, Mississippi
WA # SERAS-293 - Trip Report -01 May 2016 through 05 May 2016 Mobilization

BACKGROUND

The environmental study in the Eastern Heights neighborhood grew out of ongoing work by the United States Environmental Protection Agency (USEPA) and the Mississippi Department of Environmental Quality (MDEQ) to oversee the cleanup of the Grenada Manufacturing, LLC facility. Remedial activities at the Grenada facility began in 1990 when waste from the former on-site landfill was evacuated for off-site disposal under the direction of MDEQ. Since 1995 EPA has overseen the cleanup of the facility under the Resource Conservation and Recovery Act (RCRA) corrective action program.

The original 1998 RCRA permit with the facility was the roadmap for the facility to address legacy contamination and waste. The permit was renewed in 2010.

Under the RCRA permits the facility has conducted numerous investigations and response actions including the closure of a former sludge lagoon. Approximately 239 gallons of trichloroethene (TCE) and 2,200 gallons of toluene were removed from groundwater. Institutional controls were put in place to prevent potential exposures. Lastly, a permeable reactive barrier (PRB) was installed for groundwater migration control and treatment.

Between September and October of 2015, EPA oversaw sampling of indoor air at six residences, outdoor air, and groundwater in the Eastern Heights neighborhood. USEPA determined that there was no immediate concern for public health, but that additional investigations would be needed.

TCE was detected in residential indoor air above regional screening levels, but below levels that require a response action. TCE was also detected at similar levels in the outdoor air near the six residences. USEPA conducted additional air sampling in January 2016 and efforts are underway to develop groundwater remediation plans on the Grenada Manufacturing, LLC property and in the neighborhood.

OBSERVATIONS AND ACTIVITIES

On 04 April 2016, the USEPA/Environmental Response Team (USEPA/ERT) issued Work Assignment (WA) SERAS-293 to Lockheed Martin under the Scientific, Engineering, Response and Analytical Services (SERAS) contract. The purpose of this WA was to assist EPA Region 4 to perform a vapor intrusion (VI) study on and adjacent to the Grenada Manufacturing Facility (a.k.a. Rockwell International Wheel and Trim) (Site) in Grenada, Mississippi (MS). Additional data from the analysis of soil-gas and sub-slab samples as well as indoor and ambient air monitoring will be utilized to better characterize the volatile organic compound (VOC) contamination in the subsurface, indoor air and ambient air at locations on and near the Site in Grenada, MS. Data will also be used to assist in determining if vapor intrusion may be occurring.

Air Monitoring for Trichloroethene, Dichloroethene, Tetrachloroethene, Benzene, Toluene, Xylenes and Vinyl Chloride

Between 3 May 2016 and 05 May 2016, seventeen residential units were surveyed, two residential unit indoor air investigations, five potential outdoor source investigations, and three mobile monitoring events were conducted using an ECA Trace Atmospheric Gas Analyzer (TAGA) mass spectrometer/mass spectrometer (MS/MS) located in the EPA's mobile laboratory. Monitoring, screening in nature, was conducted in accordance with SERAS standard operating procedure (SOP) #1711, *Trace Atmospheric Gas Analyzer (TAGA) I/II Operation*.

Sub-Slab Soil Gas Probe Installation

On 02 May 2016 and 03 May 2016, sub-slab soil gas probes were installed by SERAS personnel in all residential units to be monitored at locations designated by the EPA Work Assignment Manager (WAM). The probes were installed in accordance with SERAS SOP #2082, *Construction and Installation of Permanent Sub-Slab Soil Gas Vapor Probes*. Each sub-slab soil gas probe was installed flush with the slab and capped with a Teflon[®] coated plug that was removed prior to sampling operations. After installation, the sub-slab soil gas probes were allowed to set for approximately 24 hours prior to sampling.

Sub-Slab and Soil Gas Sampling

On 03 May 2016 nine sub-slab soil gas samples were collected by SERAS personnel and three soil-gas samples were collected by Superfund Technical Assessment and Response Team (START) personnel into 1-liter (L) Tedlar[®] bags. On 04 May 2016, eight sub-slab soil gas samples were collected by SERAS personnel and four soil gas samples were collected by START personnel into 1-L Tedlar[®] bags. Sub-slab soil gas sampling by SERAS personnel was conducted in accordance with SERAS SOP #2102, *Tedlar[®] Bag Sampling*. All samples were delivered under chain of custody (COC) to the EPA's mobile laboratory for on-site volatile organic compound (VOC) analysis. A summary of the COC records is included in Table 1 and complete sample collection information and COC records are included in Appendix A.

On-Site VOC Analysis

On-site VOC analysis was performed by SERAS personnel using an Agilent[®] gas chromatograph/mass spectrometer (GC/MS) located in the EPA's mobile laboratory. All samples were analyzed in accordance with SERAS SOP # 1741, *Field Analysis of VOCs in Gaseous Phase Samples by GC/MS Loop Injection*. The GC/MS field report indicates that the data (i.e., Tedlar[®] bag data) are definitive in nature. Verification of definitive data is performed by confirming the quantitation and identification of each compound, verifying that all required standards are analyzed and meet the criteria stated in the SOP, verifying that replicate analyses have been performed, and all SOP criteria have been met and verified. All sub-slab and soil gas samples collected using Tedlar[®] bag were analyzed for vinyl chloride (VCL), 1,1-dichloroethene (1,1-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), benzene, TCE, toluene, tetrachloroethene (PCE), ethylbenzene, m&p-xylenes and o-xylene.

Global Positioning System (GPS) and Tracking

The mobile laboratory is equipped with a Trimble Pro 6T GPS receiver that streams geographical coordinates to a personal computer. The coordinates represent position of the TAGA mobile laboratory in real-time. The instrument data is synchronized with the GPS coordinates, so the monitoring data can be directly associated with the position of the mobile laboratory as indicated by the GPS system at any time during any monitoring period. The synchronized information and mobile monitoring data are recorded into the data repository (database) and uploaded to the USEPA/ERT VIPER data management system in real-time to be archived on a USEPA/ERT server.

Meteorological Monitoring

The United States Department of Commerce, National Oceanic and Atmospheric Administration, National Climatic Data Center provided the meteorological data for 01 May 2015 to 06 May 2016. Data were collected from the Greenwood-Leflore Regional Airport in Greenwood, MS. The airport is located approximately 27 miles southeast of the Site. Data were collected to cover periods before, during, and after the May 2016 monitoring events. The

compiled meteorological data are presented in Appendix B.

RESULTS

All TAGA monitoring results and GC/MS Tedlar[®] bag results in this report are reported in parts per billion by volume (ppbv) and micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and to two significant figures.

A complete summary of GC/MS results in ppbv and $\mu\text{g}/\text{m}^3$ are included in Tables 2 and 3, respectively. The TAGA Target Compound Summaries in ppbv and $\mu\text{g}/\text{m}^3$ are included in Tables 4 and 5, respectively. Mobile Monitoring Paths and graphical representations of concentration in ppbv and $\mu\text{g}/\text{m}^3$ (Figures 1a to 1h, Figures 2a to 2h, and Figures 3a to 3i) are taken from the Final TAGA Analytical Report and presented following Table 5.

GC/MS Results Summary

The VOC samples collected in Tedlar[®] bags were analyzed on site in the mobile laboratory by GC/MS. Eleven compounds comprised the GC/MS target compound list and are the only compounds addressed in this report. Tables 2 and 3 include results for additional compounds present in the Primary and Secondary GC/MS standards cylinders, but are not discussed as part of this Report.

Of the nine sub-slab soil gas samples analyzed on 03 May 2016, sample number 51079 (Unit 20) detected the highest concentration for toluene at 4.0 ppbv ($15 \mu\text{g}/\text{m}^3$). There were no concentrations detected above the RL for TCE, PCE, 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, benzene, ethylbenzene, m&p-xylenes, o-xylene, and VCL in the remaining sub-slab soil gas samples. Of the three soil gas samples analyzed on 03 May 2016, sample number GM-SG-09 (GMEH09) detected the highest concentrations for cis-1,2-DCE at 0.59 ppbv ($2.3 \mu\text{g}/\text{m}^3$), benzene at 2.8 ppbv ($9.0 \mu\text{g}/\text{m}^3$), TCE at 14 ppbv ($75 \mu\text{g}/\text{m}^3$), toluene at 3.6 ppbv ($14 \mu\text{g}/\text{m}^3$), ethylbenzene at 10 ppbv ($44 \mu\text{g}/\text{m}^3$), m&p-xylenes at 40 ppbv ($170 \mu\text{g}/\text{m}^3$), and o-xylene at 11 ppbv ($48 \mu\text{g}/\text{m}^3$).

Of the eight sub-slab soil gas samples analyzed on 04 May 2016, sample number 51060 (Unit 13) detected the highest concentration for benzene at 0.51 ppbv ($1.6 \mu\text{g}/\text{m}^3$) and toluene at 0.91 ppbv ($3.4 \mu\text{g}/\text{m}^3$). There were no concentrations detected above the RL for TCE, PCE, 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, ethylbenzene, m&p-xylenes, o-xylene, and VCL in the remaining sub-slab soil gas samples. Of the four soil gas samples analyzed on 04 May 2016, sample number GM-SG-10 (GMEH10) detected the highest concentrations for TCE at 1.6 ppbv ($8.4 \mu\text{g}/\text{m}^3$), ethylbenzene at 12 ppbv ($54 \mu\text{g}/\text{m}^3$), m&p-xylenes at 41 ppbv ($180 \mu\text{g}/\text{m}^3$), and o-xylene at 11 ppbv ($48 \mu\text{g}/\text{m}^3$). Sample number GM-SG-08 (GMEH08) detected the highest concentrations for cis-1,2-DCE at 1.1 ppbv ($4.4 \mu\text{g}/\text{m}^3$) and benzene at 37 ppbv ($120 \mu\text{g}/\text{m}^3$) and toluene at 28 ppbv ($100 \mu\text{g}/\text{m}^3$).

TAGA MS/MS Results Summary

The TAGA MS/MS system was used to survey the indoor air of residential units in the Eastern Heights neighborhood adjacent the Site, to conduct residential indoor air and outdoor ambient air investigations, and to conduct three mobile monitoring in the Eastern Heights neighborhood and elsewhere in the vicinity of the Site.

During each residential unit indoor air survey and investigation, a one-minute average was measured for each location. For each potential outdoor source investigation, results are averaged for the monitoring duration of each location or event. For each mobile monitoring event, the mobile monitoring path is included on an area map with locations flagged along the path. Location descriptions are listed in the summaries of TAGA results in Tables 4 and 5. Mobile monitoring results are given separately as graphical representations where target compound concentration is plotted on the vertical axis and acquisition time in minutes on the horizontal axis.

Unit Surveys and Investigations

Of the residential units surveyed and investigated, the highest average concentration of TCE was detected at 0.24 ppbv ($1.3 \mu\text{g}/\text{m}^3$) in the dining room of Unit 13, File 64MSMS00073. The highest average concentration of benzene was detected at 16 ppbv ($52 \mu\text{g}/\text{m}^3$) in the living room and bedroom three during the second survey of Unit 23, File 64MSMS00095. The highest average concentration of toluene was detected at 8.9 ppbv ($34 \mu\text{g}/\text{m}^3$) in bedroom two of Unit 19, File 64MSMS00085. The highest average concentration of xylenes was detected at 4.7 ppbv ($21 \mu\text{g}/\text{m}^3$).

in the bedroom two of Unit 10, File 64MSMS00056. 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE and VCL were not detected above the quantitation limit (QL) at any of the monitoring locations.

Potential Outdoor Source Investigations

During potential outdoor source investigations, the highest average concentration of TCE was detected at 0.78 ppbv ($4.2 \mu\text{g}/\text{m}^3$) in the purge well water during the investigation of the West End of Railroad Ditch by Quarry Road, File 64MSMS00097. The highest instantaneous maximum concentration of trichloroethene was detected at 3.8 ppbv ($21 \mu\text{g}/\text{m}^3$) at 21.462 minutes into the West End of Railroad Ditch by Quarry Road Investigation, File 64MSMS00097. The highest average concentration of DCE was detected at 3.1 ppbv ($12 \mu\text{g}/\text{m}^3$) at storm drain three near the Equalization Basin, during Equalization Basin Monitoring on Facility, File 64MSMS00094. The highest instantaneous maximum concentration of DCE was detected at 8.4 ppbv ($33 \mu\text{g}/\text{m}^3$) at 27.401 minutes into the monitoring run of Equalization Basin Monitoring on Facility, File 64MSMS00094. The highest instantaneous maximum concentration of benzene was detected at 3.8 ppbv ($12 \mu\text{g}/\text{m}^3$) at 24.039 minutes into the West End of Railroad Ditch by Quarry Road Investigation, File 64MSMS00097. The highest average concentration of toluene was detected at 0.81 ppbv ($3.0 \mu\text{g}/\text{m}^3$) in the pre-run ambient monitoring of West End of Railroad Ditch by Quarry Road Investigation, File 64MSMS00097. The highest instantaneous maximum concentration of toluene was detected at 4.6 ppbv ($17 \mu\text{g}/\text{m}^3$) at 21.350 minutes into the Equalization Basin Monitoring on Facility run, File 64MSMS00094. The highest average concentration of xylenes was detected at 0.50 ppbv ($2.2 \mu\text{g}/\text{m}^3$) at storm drain two at the east end of the EQ basin between flags M and N, File 64MSMS00094. The highest instantaneous maximum concentration of xylenes was detected at 2.4 ppbv ($10 \mu\text{g}/\text{m}^3$) at 19.949 minutes into the West End of Railroad Ditch by Quarry Road Investigation, File 64MSMS00097. PCE and VCL were not detected above the QL at any of the monitoring locations.

Mobile Monitoring

During the three mobile monitoring operations performed in the vicinity of the Site, the highest instantaneous maximum concentration of DCE was detected at 0.37 ppbv ($1.5 \mu\text{g}/\text{m}^3$) at 100.016 minutes into Mobile Monitoring Three, File 64MSMS00092. The highest instantaneous maximum concentration of benzene was detected at 12.3 ppbv ($39.4 \mu\text{g}/\text{m}^3$) at 4.793 minutes into Mobile Monitoring Three, File 64MSMS00092. The highest instantaneous maximum concentration of toluene was detected at 3.7 ppbv ($13.9 \mu\text{g}/\text{m}^3$) at 22.638 minutes into Mobile Monitoring Three, File 64MSMS00092. The highest instantaneous maximum concentration of xylenes was detected at 3.3 ppbv ($14.4 \mu\text{g}/\text{m}^3$) at 4.821 minutes into Mobile Monitoring Three, File 64MSMS00092. PCE, TCE, and VCL were not detected above the QL during any of the mobile monitoring events.

FUTURE ACTIVITIES

No future site mobilizations are scheduled at this time.

cc: Central File WA SERAS-293 (with attachment)
Electronic File - I:\Archive\SERAS\293\D\TRR2\080116
Kevin Taylor, SERAS Program Manager (cover page only)

TABLE 1
Summary of Chain of Custody Records
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

COC #	Number of Samples	Date Sampled	Date Received	Matrix	Analysis
15703	9	5/3/2016	5/3/2016	Sub-slab soil gas	VOC/Loop Method
15705	2	5/3/2016	5/3/2016	Soil gas	VOC/Loop Method
15706	1	5/3/2016	5/3/2016	Soil gas	VOC/Loop Method
15704	8	5/4/2016	5/4/2016	Sub-slab soil gas	VOC/Loop Method
15707	1	5/4/2016	5/4/2016	Soil gas	VOC/Loop Method
15712	1	5/4/2016	5/4/2016	Soil gas	VOC/Loop Method
15713	1	5/4/2016	5/4/2016	Soil gas	VOC/Loop Method
15720	1	5/4/2016	5/4/2016	Soil gas	VOC/Loop Method

TABLE 2
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00182	64GCMS00184	64GCMS00185	64GCMS00186
Sample Number:	20160503-MB	4430	4431	4432
Sample Location:	Method Blank	Unit 10	Unit 14	Unit 15
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	U	0.51	U	0.51	U	0.51
Trichloroethene	U	0.50	U	0.50	U	0.50	U	0.50
Toluene	U	0.51	U	0.51	U	0.51	U	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	U	0.54	U	0.54	U	0.54
m,p-Xylene	U	0.51	U	0.51	U	0.51	U	0.51
o-Xylene	U	0.51	U	0.51	U	0.51	U	0.51

Results are in parts per billion by volume (ppbv)

U = None detected at or above the Reporting Limit (RL)

TABLE 2 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00187	64GCMS00188	64GCMS00189	64GCMS00190
Sample Number:	4433	GM-SG-05	GM-SG-01	4434
Sample Location:	Unit 7	GMEH05	GMEH01	Unit 9
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	2.4	0.51	2.1	0.51	U	0.51
Trichloroethene	U	0.50	U	0.50	U	0.50	U	0.50
Toluene	U	0.51	3.2	0.51	2.5	0.51	U	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	2.5	0.54	1.8	0.54	U	0.54
m,p-Xylene	U	0.51	8.0	0.51	5.6	0.51	U	0.51
o-Xylene	U	0.51	3.0	0.51	2.5	0.51	U	0.51

Results are in parts per billion by volume (ppbv)

U = None detected at or above the Reporting Limit (RL)

TABLE 2 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00191	64GCMS00193	64GCMS00194	64GCMS00195
Sample Number:	51077	51078	51079	GM-SG-09
Sample Location:	Unit 12	Unit 17	Unit 20	GMEH09
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	0.59	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	U	0.51	U	0.51	2.8	0.51
Trichloroethene	U	0.50	U	0.50	U	0.50	14	0.50
Toluene	U	0.51	U	0.51	4.0	0.51	3.6	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	U	0.54	U	0.54	10	0.54
m,p-Xylene	U	0.51	U	0.51	U	0.51	40	0.51
o-Xylene	U	0.51	U	0.51	U	0.51	11	0.51

Results are in parts per billion by volume (ppbv)

U = None detected at or above the Reporting Limit (RL)

TABLE 2 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00196	64GCMS00201	64GCMS00203	64GCMS00204
Sample Number:	51080	20160504-MB	51060	GM-SG-10
Sample Location:	Unit 21	Method Blank	Unit 13	GMEH10
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	3 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	0.78	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	U	0.51	0.51	0.51	20	0.51
Trichloroethene	U	0.50	U	0.50	U	0.50	1.6	0.50
Toluene	U	0.51	U	0.51	0.91	0.51	18	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	U	0.54	U	0.54	12	0.54
m,p-Xylene	U	0.51	U	0.51	U	0.51	41	0.51
o-Xylene	U	0.51	U	0.51	U	0.51	11	0.51

Results are in parts per billion by volume (ppbv)

U = None detected at or above the Reporting Limit (RL)

TABLE 2 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00205	64GCMS00207	64GCMS00210	64GCMS00211
Sample Number:	51061	51062	GM-SG-08	51063
Sample Location:	Unit 11	Unit 18	GMEH08	Unit 22
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	4 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	1.1	0.52	U	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	U	0.51	37	0.51	U	0.51
Trichloroethene	U	0.50	U	0.50	0.87	0.50	U	0.50
Toluene	U	0.51	U	0.51	28	0.51	U	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	U	0.54	7.8	0.54	U	0.54
m,p-Xylene	U	0.51	U	0.51	23	0.51	U	0.51
o-Xylene	U	0.51	U	0.51	9.7	0.51	U	0.51

Results are in parts per billion by volume (ppbv)

U = None detected at or above the Reporting Limit (RL)

TABLE 2 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00212	64GCMS00213	64GCMS00214	64GCMS00215
Sample Number:	51064	GM-SG-07	GM-SG-06	51065
Sample Location:	Unit 23	GMEH07	GMEH06	Unit 8
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	4 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	3.4	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	5.2	0.51	4.4	0.51	U	0.51
Trichloroethene	U	0.50	U	0.50	U	0.50	U	0.50
Toluene	U	0.51	7.2	0.51	5.9	0.51	U	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	2.6	0.54	4.5	0.54	U	0.54
m,p-Xylene	U	0.51	6.9	0.51	15	0.51	U	0.51
o-Xylene	U	0.51	3.5	0.51	6.7	0.51	U	0.51

Results are in parts per billion by volume (ppbv)

U = None detected at or above the Reporting Limit (RL)

TABLE 2 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00216	64GCMS00217
Sample Number:	51066	51067
Sample Location:	Unit 19	Unit 16
Sample Volume (ml):	5	5
Dilution multiplier:	1	1
Date Sampled:	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50
Benzene	U	0.51	U	0.51
Trichloroethene	U	0.50	U	0.50
Toluene	U	0.51	U	0.51
Tetrachloroethene	U	0.51	U	0.51
Ethyl Benzene	U	0.54	U	0.54
m,p-Xylene	U	0.51	U	0.51
o-Xylene	U	0.51	U	0.51

Results are in parts per billion by volume (ppbv)

U = None detected at or above the Reporting Limit (RL)

TABLE 3
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00182	64GCMS00184	64GCMS00185	64GCMS00186
Sample Number:	20160503-MB	4430	4431	4432
Sample Location:	Method Blank	Unit 10	Unit 14	Unit 15
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	U	1.6	U	1.6	U	1.6
Trichloroethene	U	2.7	U	2.7	U	2.7	U	2.7
Toluene	U	1.9	U	1.9	U	1.9	U	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	U	2.3	U	2.3	U	2.3
m,p-Xylene	U	2.2	U	2.2	U	2.2	U	2.2
o-Xylene	U	2.2	U	2.2	U	2.2	U	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 3 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00187	64GCMS00188	64GCMS00189	64GCMS00190
Sample Number:	4433	GM-SG-05	GM-SG-01	4434
Sample Location:	Unit 7	GMEH05	GMEH01	Unit 9
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	7.8	1.6	6.6	1.6	U	1.6
Trichloroethene	U	2.7	U	2.7	U	2.7	U	2.7
Toluene	U	1.9	12	1.9	9.5	1.9	U	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	11	2.3	7.6	2.3	U	2.3
m,p-Xylene	U	2.2	35	2.2	24	2.2	U	2.2
o-Xylene	U	2.2	13	2.2	11	2.2	U	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 3 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00191	64GCMS00193	64GCMS00194	64GCMS00195
Sample Number:	51077	51078	51079	GM-SG-09
Sample Location:	Unit 12	Unit 17	Unit 20	GMEH09
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	2.3	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	U	1.6	U	1.6	9.0	1.6
Trichloroethene	U	2.7	U	2.7	U	2.7	75	2.7
Toluene	U	1.9	U	1.9	15	1.9	14	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	U	2.3	U	2.3	44	2.3
m,p-Xylene	U	2.2	U	2.2	U	2.2	170	2.2
o-Xylene	U	2.2	U	2.2	U	2.2	48	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 3 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00196	64GCMS00201	64GCMS00203	64GCMS00204
Sample Number:	51080	20160504-MB	51060	GM-SG-10
Sample Location:	Unit 21	Method Blank	Unit 13	GMEH10
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	3 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	3.1	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	U	1.6	1.6	1.6	63	1.6
Trichloroethene	U	2.7	U	2.7	U	2.7	8.4	2.7
Toluene	U	1.9	U	1.9	3.4	1.9	68	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	U	2.3	U	2.3	54	2.3
m,p-Xylene	U	2.2	U	2.2	U	2.2	180	2.2
o-Xylene	U	2.2	U	2.2	U	2.2	48	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 3 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00205	64GCMS00207	64GCMS00210	64GCMS00211
Sample Number:	51061	51062	GM-SG-08	51063
Sample Location:	Unit 11	Unit 18	GMEH08	Unit 22
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	4 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	4.4	2.1	U	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	U	1.6	120	1.6	U	1.6
Trichloroethene	U	2.7	U	2.7	4.7	2.7	U	2.7
Toluene	U	1.9	U	1.9	100	1.9	U	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	U	2.3	34	2.3	U	2.3
m,p-Xylene	U	2.2	U	2.2	99	2.2	U	2.2
o-Xylene	U	2.2	U	2.2	42	2.2	U	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 3 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00212	64GCMS00213	64GCMS00214	64GCMS00215
Sample Number:	51064	GM-SG-07	GM-SG-06	51065
Sample Location:	Unit 23	GMEH07	GMEH06	Unit 8
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	4 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	12	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	17	1.6	16	1.6	U	1.6
Trichloroethene	U	2.7	U	2.7	U	2.7	U	2.7
Toluene	U	1.9	27	1.9	22	1.9	U	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	11	2.3	20	2.3	U	2.3
m,p-Xylene	U	2.2	30	2.2	66	2.2	U	2.2
o-Xylene	U	2.2	15	2.2	29	2.2	U	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 3 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Data File:	64GCMS00216	64GCMS00217
Sample Number:	51066	51067
Sample Location:	Unit 19	Unit 16
Sample Volume (ml):	5	5
Dilution multiplier:	1	1
Date Sampled:	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7
Benzene	U	1.6	U	1.6
Trichloroethene	U	2.7	U	2.7
Toluene	U	1.9	U	1.9
Tetrachloroethene	U	3.5	U	3.5
Ethyl Benzene	U	2.3	U	2.3
m,p-Xylene	U	2.2	U	2.2
o-Xylene	U	2.2	U	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 4
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 10 Survey File: 64MSMS00056 Acquired on 03 May 2016 at 08:04:45							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.081	0.032	0.086	0.48	0.19	0.15	8.8
Quantitation Limits - QL:	0.27	0.11	0.29	1.6	0.64	0.49	29
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
Kitchen	DL=0.081	DL=0.032	0.11J	0.90J	2.2	4.4	DL=8.8
Living room	DL=0.081	DL=0.032	0.10J	0.96J	2.3	4.7	DL=8.8
Bedroom one	DL=0.081	DL=0.032	0.13J	0.92J	3.2	4.5	DL=8.8
Bathroom	DL=0.081	DL=0.032	0.11J	0.90J	2.3	4.7	DL=8.8
Bedroom two	DL=0.081	DL=0.032	0.089J	0.98J	2.4	4.6	DL=8.8
Sub-slab port	DL=0.081	DL=0.032	0.099J	0.84J	2.3	4.6	DL=8.8
Post-exit ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	0.25J	DL=8.8
30 mL/min spike	6.2	6.6	5.8	6.2	6.2	8.9	DL=8.8

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 14 Survey File: 64MSMS00057 Acquired on 03 May 2016 at 09:35:02							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.081	0.032	0.086	0.48	0.19	0.15	8.8
Quantitation Limits - QL:	0.27	0.11	0.29	1.6	0.64	0.49	29
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
Kitchen / dining room	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.91	0.33J	DL=8.8
Bathroom	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.98	0.32J	DL=8.8
Bedroom three	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.81	0.30J	DL=8.8
Sub-slab port	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.77	0.32J	DL=8.8
Bedroom two	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.94	0.36J	DL=8.8
Bedroom one	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.2	0.38J	DL=8.8
Living room	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.95	0.36J	DL=8.8
Post-exit ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
30 mL/min spike	5.6	6.2	5.3	6.2	6.2	9.1	DL=8.8

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 15 Survey File: 64MSMS00058 Acquired on 03 May 2016 at 10:24:31							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.081	0.032	0.086	0.48	0.19	0.15	8.8
Quantitation Limits - QL:	0.27	0.11	0.29	1.6	0.64	0.49	29
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
Kitchen	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.85	0.25J	DL=8.8
Bathroom	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.96	0.28J	DL=8.8
Bedroom three	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.91	0.27J	DL=8.8
Bedroom two	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.91	0.28J	DL=8.8
Sub-slab port	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.88	0.30J	DL=8.8
Bedroom one	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.87	0.28J	DL=8.8
Living room	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.89	0.27J	DL=8.8
Post-exit ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
30 mL/min spike	5.3	5.9	4.8	5.8	5.6	8.1	DL=8.8

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 7 Survey File: 64MSMS00059 Acquired on 03 May 2016 at 11:24:52							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.081	0.032	0.086	0.48	0.19	0.15	8.8
Quantitation Limits - QL:	0.27	0.11	0.29	1.6	0.64	0.49	29
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
Kitchen / dining area	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.78	0.31J	DL=8.8
Living room	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.1	0.46J	DL=8.8
Bedroom one	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.63J	0.35J	DL=8.8
Bedroom two	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.4	0.49	DL=8.8
Sub-slab port	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.5	0.57	DL=8.8
Bedroom three	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.3	0.49	DL=8.8
Bathroom	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.2	0.43J	DL=8.8
Post-exit ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
30 mL/min spike	5.0	5.5	4.4	5.6	5.4	7.8	DL=8.8

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 9 Survey File: 64MSMS00062 Acquired on 03 May 2016 at 13:57:08							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:	0.36	0.20	0.45	2.3	0.63	0.88	76
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
Living room	0.12J	DL=0.061	DL=0.13	2.0J	3.4	1.8	DL=23.
Kitchen / dining area	0.15J	DL=0.061	DL=0.13	2.3	4.0	2.2	DL=23.
Bathroom	0.21J	DL=0.061	DL=0.13	2.4	4.6	2.5	DL=23.
Bedroom three	0.17J	DL=0.061	DL=0.13	2.0J	3.9	2.0	DL=23.
Bedroom two	0.21J	DL=0.061	DL=0.13	2.0J	4.1	2.2	DL=23.
Sub-slab port	0.15J	DL=0.061	DL=0.13	1.4J	3.0	1.6	DL=23.
Bedroom one	0.18J	DL=0.061	DL=0.13	2.2J	4.4	2.3	DL=23.
Post-exit ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.30J	DL=0.26	DL=23.
30 mL/min spike	6.5	6.9	6.4	6.8	7.0	11	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 12 Survey File: 64MSMS00063 Acquired on 03 May 2016 at 14:33:32							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:	0.36	0.20	0.45	2.3	0.63	0.88	76
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.20J	DL=0.26	DL=23.
Kitchen / dining area	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.63J	0.29J	DL=23.
Living room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.70	0.27J	DL=23.
Bathroom one	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.69	0.30J	DL=23.
Bedroom one	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.71	0.29J	DL=23.
Sitting room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.73	0.30J	DL=23.
Bedroom two	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.74	0.30J	DL=23.
Bathroom two	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.78	0.32J	DL=23.
Bathroom three	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.81	0.34J	DL=23.
Bedroom three	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.84	0.36J	DL=23.
Sub-slab port	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.78	0.35J	DL=23.
Post-exit ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.22J	DL=0.26	DL=23.
30 mL/min spike	6.9	7.3	6.4	7.6	7.3	11	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 17 Survey File: 64MSMS00064 Acquired on 03 May 2016 at 15:25:13							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:	0.36	0.20	0.45	2.3	0.63	0.88	76
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
Kitchen	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.4	0.70J	DL=23.
Dining room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.8	0.82J	DL=23.
Play room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.2	0.65J	DL=23.
Bathroom two	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.3	0.81J	DL=23.
Bedroom three	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.2	0.82J	DL=23.
Living room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.6	0.78J	DL=23.
Bedroom one	DL=0.11	DL=0.061	0.18J	DL=0.68	2.6	0.74J	DL=23.
Bedroom two	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.8	0.92	DL=23.
Sub-slab port	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.8	0.96	DL=23.
Bedroom four	DL=0.11	DL=0.061	DL=0.13	DL=0.68	3.1	1.2	DL=23.
Bathroom three	DL=0.11	DL=0.061	DL=0.13	DL=0.68	3.6	1.7	DL=23.
Bathroom one	DL=0.11	DL=0.061	DL=0.13	DL=0.68	3.0	0.99	DL=23.
Post-exit ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.23J	DL=0.26	DL=23.
30 mL/min spike	5.9	6.4	5.4	6.6	7.0	9.8	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 20 Survey File: 64MSMS00065 Acquired on 03 May 2016 at 16:24:31							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:	0.36	0.20	0.45	2.3	0.63	0.88	76
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
Living room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	1.3	0.33J	DL=23.
Kitchen	DL=0.11	DL=0.061	DL=0.13	DL=0.68	1.4	0.37J	DL=23.
Bathroom	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.0	0.49J	DL=23.
Bedroom one	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.1	0.47J	DL=23.
Bedroom two	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.2	0.48J	DL=23.
Sub-slab port	DL=0.11	DL=0.061	DL=0.13	DL=0.68	5.3	0.68J	DL=23.
Bedroom three	DL=0.11	DL=0.061	DL=0.13	DL=0.68	1.8	0.43J	DL=23.
Post-exit ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
30 mL/spike	5.8	6.3	5.3	6.7	6.4	9.2	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 21 Survey File: 64MSMS00066 Acquired on 03 May 2016 at 17:27:15							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:	0.36	0.20	0.45	2.3	0.63	0.88	76
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
Kitchen / dining area	DL=0.11	0.069J	DL=0.13	DL=0.68	1.5	0.36J	DL=23.
Family room	DL=0.11	0.087J	DL=0.13	DL=0.68	1.6	0.42J	DL=23.
Bathroom	DL=0.11	0.088J	DL=0.13	DL=0.68	2.2	0.53J	DL=23.
Bedroom one	DL=0.11	0.088J	DL=0.13	DL=0.68	2.2	0.55J	DL=23.
Bedroom two	DL=0.11	0.11J	DL=0.13	DL=0.68	2.6	0.50J	DL=23.
Sub-slab port	DL=0.11	0.068J	DL=0.13	DL=0.68	2.1	0.48J	DL=23.
Room one	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.53J	DL=0.26	DL=23.
Living room	DL=0.11	0.064J	DL=0.13	DL=0.68	1.5	0.39J	DL=23.
Post-exit ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
30 mL/min spike	5.7	6.3	5.1	6.8	6.4	9.1	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Drainage Ditch Investigation File: 64MSMS00067 Acquired on 03 May 2016 at 18:15:11							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:	0.36	0.20	0.45	2.3	0.63	0.88	76
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-run ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.27J	DL=0.26	DL=23.
South to north move along the drainage ditch	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.21J	DL=0.26	DL=23.
Post-run ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
30 mL/min spike	5.5	6.2	4.4	6.3	5.8	7.5	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 13 Survey File: 64MSMS00073 Acquired on 04 May 2016 at 08:05:53							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:	0.13	0.21	0.27	2.0	0.65	0.50	58
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
Kitchen	0.13	DL=0.063	DL=0.080	DL=0.60	1.8	0.52	DL=17.
Laundry room	0.23	DL=0.063	DL=0.080	DL=0.60	1.7	0.55	DL=17.
Dining room	0.24	DL=0.063	DL=0.080	DL=0.60	1.6	0.56	DL=17.
Family room	0.11J	DL=0.063	DL=0.080	DL=0.60	2.3	0.57	DL=17.
Bathroom	0.13	DL=0.063	DL=0.080	DL=0.60	2.1	0.65	DL=17.
Bedroom three	0.15	DL=0.063	DL=0.080	DL=0.60	2.1	0.64	DL=17.
Sub-slab port	0.12J	DL=0.063	DL=0.080	DL=0.60	1.9	0.61	DL=17.
Bedroom two	0.15	DL=0.063	DL=0.080	DL=0.60	2.1	0.66	DL=17.
Bedroom one	0.12J	DL=0.063	DL=0.080	DL=0.60	2.0	0.66	DL=17.
Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
30 mL/min spike	6.3	6.9	5.2	6.7	6.0	8.4	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 11 Survey File: 64MSMS00074 Acquired on 04 May 2016 at 08:53:35							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:	0.13	0.21	0.27	2.0	0.65	0.50	58
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
Kitchen	0.055J	DL=0.063	DL=0.080	0.61J	1.3	0.85	DL=17.
Living room	0.060J	DL=0.063	DL=0.080	0.70J	1.5	0.88	DL=17.
Dining room	0.068J	DL=0.063	DL=0.080	0.81J	1.7	0.98	DL=17.
Bathroom	0.063J	DL=0.063	DL=0.080	DL=0.60	1.6	0.84	DL=17.
Bedroom three	0.068J	DL=0.063	DL=0.080	0.63J	1.7	0.92	DL=17.
Sub-slab port	0.099J	DL=0.063	DL=0.080	DL=0.60	4.8	1.0	DL=17.
Bedroom two	0.064J	DL=0.063	DL=0.080	DL=0.60	1.6	0.91	DL=17.
Bedroom one	0.064J	DL=0.063	DL=0.080	DL=0.60	1.2	0.68	DL=17.
Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
30 mL/min spike	6.2	6.7	5.4	7.0	7.1	11	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 18 Survey File: 64MSMS00076 Acquired on 04 May 2016 at 10:24:54							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:	0.13	0.21	0.27	2.0	0.65	0.50	58
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	0.29J	DL=0.15	DL=17.
Family room	0.052J	DL=0.063	DL=0.080	0.61J	1.7	1.1	DL=17.
Kitchen	0.050J	DL=0.063	DL=0.080	DL=0.60	1.9	1.2	DL=17.
Dining room	0.041J	DL=0.063	DL=0.080	DL=0.60	1.9	1.2	DL=17.
Bedroom two	0.050J	DL=0.063	DL=0.080	DL=0.60	2.1	1.3	DL=17.
Bedroom one	0.053J	DL=0.063	DL=0.080	DL=0.60	2.0	1.2	DL=17.
Bathroom	0.058J	DL=0.063	DL=0.080	DL=0.60	2.2	2.4	DL=17.
Sub-slab port	0.061J	DL=0.063	DL=0.080	DL=0.60	2.1	1.3	DL=17.
Living room	0.050J	DL=0.063	DL=0.080	DL=0.60	1.7	1.1	DL=17.
Storm drain	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	0.31J	0.19J	DL=17.
30 mL/min spike	5.7	6.2	4.9	6.2	6.7	9.1	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 22 Survey File: 64MSMS00077 Acquired on 04 May 2016 at 11:19:28							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:	0.13	0.21	0.27	2.0	0.65	0.50	58
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
Kitchen / dining area	0.042J	DL=0.063	DL=0.080	DL=0.60	0.73	0.33J	DL=17.
Bathroom	0.042J	DL=0.063	DL=0.080	DL=0.60	0.74	0.30J	DL=17.
Bedroom three	0.062J	DL=0.063	DL=0.080	DL=0.60	0.80	0.35J	DL=17.
Sub-slab port	0.054J	DL=0.063	DL=0.080	DL=0.60	0.86	0.36J	DL=17.
Bedroom two	0.042J	DL=0.063	DL=0.080	DL=0.60	0.75	0.30J	DL=17.
Bedroom one	0.048J	DL=0.063	DL=0.080	DL=0.60	0.71	0.30J	DL=17.
Living room	0.039J	DL=0.063	DL=0.080	DL=0.60	0.83	0.35J	DL=17.
Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
30 mL/min spike	5.5	6.1	4.7	6.4	6.1	8.4	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 23 Survey One File: 64MSMS00078 Acquired on 04 May 2016 at 11:58:55							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:	0.13	0.21	0.27	2.0	0.65	0.50	58
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
Kitchen / dining area	DL=0.038	DL=0.063	DL=0.080	15	3.4	2.0	40.JI
Living room	0.044J	DL=0.063	DL=0.080	14	3.1	1.9	31.JI
Bedroom three	0.042J	DL=0.063	DL=0.080	14	3.3	2.1	38.JI
Bedroom two	DL=0.038	DL=0.063	DL=0.080	14	3.2	2.0	30.JI
Sub-slab port	DL=0.038	DL=0.063	DL=0.080	13	3.3	2.1	33.JI
Bedroom one	DL=0.038	DL=0.063	DL=0.080	14	3.7	2.5	32.JI
Bathroom	DL=0.038	DL=0.063	DL=0.080	13	3.6	2.3	27.JI
Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
30 mL/min spike	4.9	5.2	4.4	5.9	5.4	7.8	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

I = Positive interference by the 64/27 parent/daughter ion pair

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 23 Investigation One File: 64MSMS00079 Acquired on 04 May 2016 at 12:29:21							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:	0.13	0.21	0.27	2.0	0.65	0.50	58
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
Laundry room storage closet	DL=0.038	DL=0.063	DL=0.080	3.3	0.87	0.43J	DL=17.
Laundry room	DL=0.038	DL=0.063	DL=0.080	6.0	1.3	0.73	DL=17.
Kitchen cabinets and sink	DL=0.038	DL=0.063	DL=0.080	11	2.7	1.4	27.JI
Space under the kitchen sink	DL=0.038	DL=0.063	DL=0.080	8.8	2.3	1.3	25.JI
Wood filler can	DL=0.038	DL=0.063	DL=0.080	10	2.4	1.4	30.JI
Cabinet one under the kitchen sink	DL=0.038	DL=0.063	DL=0.080	6.3	1.7	0.83	DL=17.
Cabinet two under the kitchen sink	0.038J	DL=0.063	DL=0.080	9.9	2.5	1.5	25.JI
Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
30 mL/min spike	4.9	4.9	4.4	5.5	5.4	7.7	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

- J = Concentration detected below the quantitation limit
- I = Positive interference by the 64/27 parent/daughter ion pair

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 8 Summary File: 64MSMS00081 Acquired on 04 May 2016 at 15:04:56							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.11	0.094	0.080	0.76	0.19	0.17	12
Quantitation Limits - QL:	0.38	0.31	0.27	2.5	0.65	0.56	41
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	DL=0.19	DL=0.17	DL=12.
Kitchen	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.3	0.23J	DL=12.
Living room	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.5	0.25J	DL=12.
Bedroom one	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.7	0.26J	DL=12.
Bathroom one	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.5	0.26J	DL=12.
Bedroom two	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.6	0.28J	DL=12.
Bathroom two	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.6	0.28J	DL=12.
Sub-slab port	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.8	0.33J	DL=12.
Bedroom three	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.4	0.26J	DL=12.
Bedroom four	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.0	0.21J	DL=12.
Storm drain	DL=0.11	DL=0.094	DL=0.080	DL=0.76	0.27J	DL=0.17	DL=12.
Post-exit ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	DL=0.19	DL=0.17	DL=12.
30 mL/min spike	5.9	6.3	4.9	5.8	5.9	7.9	DL=12.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 19 Survey File: 64MSMS00085 Acquired on 04 May 2016 at 16:25:45							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylene	Vinyl Chloride
Detection Limits - DL:	0.11	0.094	0.080	0.76	0.19	0.17	12
Quantitation Limits - QL:	0.38	0.31	0.27	2.5	0.65	0.56	41
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylene	Vinyl Chloride
Pre-entry ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	DL=0.19	DL=0.17	DL=12.
Kitchen / dining area	DL=0.11	DL=0.094	DL=0.080	DL=0.76	6.3	2.8	DL=12.
Living room	DL=0.11	DL=0.094	DL=0.080	DL=0.76	6.0	2.8	DL=12.
Bedroom two	DL=0.11	DL=0.094	DL=0.080	DL=0.76	8.9	4.3	DL=12.
Bathroom two	DL=0.11	DL=0.094	DL=0.080	DL=0.76	8.3	4.0	DL=12.
Bathroom one	DL=0.11	DL=0.094	DL=0.080	DL=0.76	6.0	2.9	DL=12.
Bedroom one	DL=0.11	DL=0.094	DL=0.080	DL=0.76	5.8	2.8	DL=12.
Sub-slab port	DL=0.11	DL=0.094	DL=0.080	DL=0.76	7.3	3.5	DL=12.
Bedroom three	DL=0.11	DL=0.094	DL=0.080	0.84J	8.2	3.8	DL=12.
Post-exit ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	DL=0.19	DL=0.17	DL=12.
30 mL/min spike	5.7	5.9	4.8	6.3	5.6	7.2	DL=12.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 16 Survey File: 64MSMS00086 Acquired on 04 May 2016 at 17:25:15							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.11	0.094	0.080	0.76	0.19	0.17	12
Quantitation Limits - QL:	0.38	0.31	0.27	2.5	0.65	0.56	41
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	0.27J	DL=0.17	DL=12.
Kitchen / dining area	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.4	0.89	DL=12.
Living room	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.3	0.83	DL=12.
Bathroom	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.4	0.87	DL=12.
Bedroom one	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.0	0.86	DL=12.
Sub-slab port	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.4	0.96	DL=12.
Bedroom two	DL=0.11	DL=0.094	DL=0.080	DL=0.76	3.0	1.3	DL=12.
Bedroom three	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.9	0.94	DL=12.
Post-exit ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	0.37J	DL=0.17	DL=12.
30 mL/min spike	5.1	5.2	4.4	5.6	5.3	7.3	DL=12.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Equalization Basin Monitoring on Facility File: 64MSMS00094 Acquired on 05 May 2016 at 12:33:02							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.073	0.062	0.22	0.56	0.15	0.095	13
Quantitation Limits - QL:	0.24	0.21	0.73	1.9	0.48	0.32	43
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Equalization (EQ) basin outflow	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
West to east traverse of the EQ basin	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Storm drain one at east end of the EQ basin	DL=0.073	DL=0.062	DL=0.22	DL=0.56	0.40J	0.27J	DL=13.
Sewer drain at east end of the EQ basin	DL=0.073	DL=0.062	DL=0.22	DL=0.56	0.26J	0.10J	DL=13.
Abandoned pipe near the EQ basin	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Storm drain two at east end of the EQ basin	DL=0.073	DL=0.062	DL=0.22	DL=0.56	0.74	0.50	DL=13.
Storm drain three at east end of the EQ basin	0.32	3.1	DL=0.22	DL=0.56	0.46J	0.39	DL=13.
Post-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
30 mL/min spike	4.8	6.5	4.1	6.7	5.4	5.9	DL=13.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 23 Survey Two File: 64MSMS00095 Acquired on 05 May 2016 at 13:34:46							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.073	0.062	0.22	0.56	0.15	0.095	13
Quantitation Limits - QL:	0.24	0.21	0.73	1.9	0.48	0.32	43
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Kitchen / dining area	DL=0.073	DL=0.062	DL=0.22	16	3.5	1.8	44I
Living room	DL=0.073	DL=0.062	DL=0.22	16	3.4	1.8	32.JI
Bedroom three	DL=0.073	DL=0.062	DL=0.22	16	3.5	2.0	43.JI
Bedroom two	DL=0.073	DL=0.062	DL=0.22	13	3.3	1.8	26.JI
Sub-slab port	DL=0.073	DL=0.062	DL=0.22	14	3.9	2.2	37.JI
Bedroom one	DL=0.073	DL=0.062	DL=0.22	16	3.9	1.9	33.JI
Bathroom	DL=0.073	DL=0.062	DL=0.22	16	3.5	1.9	32.JI
Screening of floor	DL=0.073	DL=0.062	DL=0.22	15	3.7	2.3	31.JI
Post-exit ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
30 mL/min spike	5.0	5.9	4.1	6.4	6.0	7.7	DL=13.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

I = Positive interference by the 64/27 parent/daughter ion pair

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Unit 23 Investigation Two File: 64MSMS00096 Acquired on 05 May 2016 at 14:00:59							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.073	0.062	0.22	0.56	0.15	0.095	13
Quantitation Limits - QL:	0.24	0.21	0.73	1.9	0.48	0.32	43
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Attic through car port roof	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Post-exit ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
30 mL/min spike	5.0	5.7	3.8	6.0	5.5	6.7	DL=13.

Concentrations are given in parts per billion by volume (ppbv)

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for West End of Railroad Ditch by Quarry Road Investigation File: 64MSMS00097 Acquired on 05 May 2016 at 14:43:41							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.073	0.062	0.22	0.56	0.15	0.095	13
Quantitation Limits - QL:	0.24	0.21	0.73	1.9	0.48	0.32	43
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	0.81	0.42	DL=13.
West to east traverse of railroad ditch south of tracks	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Well purge water	0.78	1.7	DL=0.22	DL=0.56	0.45J	0.32	DL=13.
Post-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
30 mL/min spike	4.9	5.9	4.0	6.8	5.2	5.9	DL=13.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

TABLE 4 (continued)
Summary of TAGA MS/MS Results in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in ppbv for Outfall Ditch on North Side of Access Road Investigation File: 64MSMS00099 Acquired on 05 May 2016 at 16:10:42							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.073	0.062	0.22	0.56	0.15	0.095	13
Quantitation Limits - QL:	0.24	0.21	0.73	1.9	0.48	0.32	43
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Location one on outfall ditch	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Location two on outfall ditch	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Location three on outfall ditch	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Pipe at location three on outfall ditch	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Location four on outfall ditch	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
Post-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
30 mL/min spike	4.6	5.4	3.5	5.5	4.6	5.6	DL=13.

Concentrations are given in parts per billion by volume (ppbv)

TABLE 5
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 10 Survey File: 64MSMS00056 Acquired on 03 May 2016 at 08:04:45							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.44	0.13	0.58	1.5	0.72	0.64	22
Quantitation Limits - QL:	1.5	0.42	1.9	5.1	2.4	2.1	75
Pre-entry ambient	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Kitchen	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
Living room	DL=0.44	DL=0.13	0.74J	2.9J	8.4	19	DL=22.
Bedroom one	DL=0.44	DL=0.13	0.70J	3.1J	8.6	20	DL=22.
Bathroom	DL=0.44	DL=0.13	0.85J	2.9J	12	19	DL=22.
Bedroom two	DL=0.44	DL=0.13	0.76J	2.9J	8.8	21	DL=22.
Sub-slab port	DL=0.44	DL=0.13	0.60J	3.1J	8.9	20	DL=22.
Post-exit ambient	DL=0.44	DL=0.13	0.67J	2.7J	8.7	20	DL=22.
30 mL/min spike	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	1.1J	DL=22.
Pre-entry ambient	33	26	39	20	23	39	DL=22.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 14 Survey File: 64MSMS00057 Acquired on 03 May 2016 at 09:35:02							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.44	0.13	0.58	1.5	0.72	0.64	22
Quantitation Limits - QL:	1.5	0.42	1.9	5.1	2.4	2.1	75
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
Kitchen / dining room	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.4	1.4J	DL=22.
Bathroom	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.7	1.4J	DL=22.
Bedroom three	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.0	1.3J	DL=22.
Sub-slab port	DL=0.44	DL=0.13	DL=0.58	DL=1.5	2.9	1.4J	DL=22.
Bedroom two	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.6	1.5J	DL=22.
Bedroom one	DL=0.44	DL=0.13	DL=0.58	DL=1.5	4.7	1.7J	DL=22.
Living room	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.6	1.6J	DL=22.
Post-exit ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
30 mL/min spike	30	25	36	20	23	40	DL=22.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 15 Survey File: 64MSMS00058 Acquired on 03 May 2016 at 10:24:31							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.44	0.13	0.58	1.5	0.72	0.64	22
Quantitation Limits - QL:	1.5	0.42	1.9	5.1	2.4	2.1	75
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
Kitchen	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.2	1.1J	DL=22.
Bathroom	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.6	1.2J	DL=22.
Bedroom three	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.4	1.2J	DL=22.
Bedroom two	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.4	1.2J	DL=22.
Sub-slab port	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.3	1.3J	DL=22.
Bedroom one	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.3	1.2J	DL=22.
Living room	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.3	1.2J	DL=22.
Post-exit ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
30 mL/min spike	29	24	32	19	21	35	DL=22.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 7 Survey File: 64MSMS00059 Acquired on 03 May 2016 at 11:24:52							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.44	0.13	0.58	1.5	0.72	0.64	22
Quantitation Limits - QL:	1.5	0.42	1.9	5.1	2.4	2.1	75
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
Kitchen / dining area	DL=0.44	DL=0.13	DL=0.58	DL=1.5	2.9	1.4J	DL=22.
Living room	DL=0.44	DL=0.13	DL=0.58	DL=1.5	4.1	2.0J	DL=22.
Bedroom one	DL=0.44	DL=0.13	DL=0.58	DL=1.5	2.4J	1.5J	DL=22.
Bedroom two	DL=0.44	DL=0.13	DL=0.58	DL=1.5	5.3	2.1	DL=22.
Sub-slab port	DL=0.44	DL=0.13	DL=0.58	DL=1.5	5.6	2.5	DL=22.
Bedroom three	DL=0.44	DL=0.13	DL=0.58	DL=1.5	4.8	2.1	DL=22.
Bathroom	DL=0.44	DL=0.13	DL=0.58	DL=1.5	4.6	1.9J	DL=22.
Post-exit ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
30 mL/min spike	27	22	30	18	20	34	DL=22.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 9 Survey File: 64MSMS00062 Acquired on 03 May 2016 at 13:57:08							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylene	Vinyl Chloride
Detection Limits - DL:	0.57	0.24	0.91	2.2	0.72	1.1	58
Quantitation Limits - QL:	1.9	0.80	3.0	7.2	2.4	3.8	190
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylene	Vinyl Chloride
Pre-entry ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
Living room	0.62J	DL=0.24	DL=0.91	6.5J	13	7.7	DL=58.
Kitchen / dining area	0.79J	DL=0.24	DL=0.91	7.3	15	9.4	DL=58.
Bathroom	1.1J	DL=0.24	DL=0.91	7.7	17	11	DL=58.
Bedroom three	0.92J	DL=0.24	DL=0.91	6.3J	15	8.5	DL=58.
Bedroom two	1.1J	DL=0.24	DL=0.91	6.3J	15	9.4	DL=58.
Sub-slab port	0.81J	DL=0.24	DL=0.91	4.6J	11	7.0	DL=58.
Bedroom one	0.94J	DL=0.24	DL=0.91	7.2J	16	10	DL=58.
Post-exit ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	1.1J	DL=1.1	DL=58.
30 mL/min spike	35	27	43	22	26	47	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 12 Survey File: 64MSMS00063 Acquired on 03 May 2016 at 14:33:32							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.57	0.24	0.91	2.2	0.72	1.1	58
Quantitation Limits - QL:	1.9	0.80	3.0	7.2	2.4	3.8	190
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	0.74J	DL=1.1	DL=58.
Kitchen / dining area	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.4J	1.2J	DL=58.
Living room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.7	1.2J	DL=58.
Bathroom one	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.6	1.3J	DL=58.
Bedroom one	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.7	1.3J	DL=58.
Sitting room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.8	1.3J	DL=58.
Bedroom two	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.8	1.3J	DL=58.
Bathroom two	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.9	1.4J	DL=58.
Bathroom three	DL=0.57	DL=0.24	DL=0.91	DL=2.2	3.0	1.5J	DL=58.
Bedroom three	DL=0.57	DL=0.24	DL=0.91	DL=2.2	3.2	1.5J	DL=58.
Sub-slab port	DL=0.57	DL=0.24	DL=0.91	DL=2.2	3.0	1.5J	DL=58.
Post-exit ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	0.84J	DL=1.1	DL=58.
30 mL/min spike	37	29	44	24	27	47	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 17 Survey File: 64MSMS00064 Acquired on 03 May 2016 at 15:25:13							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits – DL:	0.57	0.24	0.91	2.2	0.72	1.1	58
Quantitation Limits – QL:	1.9	0.80	3.0	7.2	2.4	3.8	190
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
Kitchen	DL=0.57	DL=0.24	DL=0.91	DL=2.2	9.1	3.0J	DL=58.
Dining room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	10	3.6J	DL=58.
Play room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	8.1	2.8J	DL=58.
Bathroom two	DL=0.57	DL=0.24	DL=0.91	DL=2.2	8.6	3.5J	DL=58.
Bedroom three	DL=0.57	DL=0.24	DL=0.91	DL=2.2	8.2	3.6J	DL=58.
Living room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	9.8	3.4J	DL=58.
Bedroom one	DL=0.57	DL=0.24	1.2J	DL=2.2	9.9	3.2J	DL=58.
Bedroom two	DL=0.57	DL=0.24	DL=0.91	DL=2.2	11	4.0	DL=58.
Sub-slab port	DL=0.57	DL=0.24	DL=0.91	DL=2.2	10	4.2	DL=58.
Bedroom four	DL=0.57	DL=0.24	DL=0.91	DL=2.2	12	5.4	DL=58.
Bathroom three	DL=0.57	DL=0.24	DL=0.91	DL=2.2	14	7.4	DL=58.
Bathroom one	DL=0.57	DL=0.24	DL=0.91	DL=2.2	11	4.3	DL=58.
Post-exit ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	0.88J	DL=1.1	DL=58.
30 mL/min spike	32	25	37	21	27	43	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 20 Survey File: 64MSMS00065 Acquired on 03 May 2016 at 16:24:31							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.57	0.24	0.91	2.2	0.72	1.1	58
Quantitation Limits - QL:	1.9	0.80	3.0	7.2	2.4	3.8	190
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
Living room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	5.1	1.4J	DL=58.
Kitchen	DL=0.57	DL=0.24	DL=0.91	DL=2.2	5.4	1.6J	DL=58.
Bathroom	DL=0.57	DL=0.24	DL=0.91	DL=2.2	7.6	2.1J	DL=58.
Bedroom one	DL=0.57	DL=0.24	DL=0.91	DL=2.2	7.7	2.0J	DL=58.
Bedroom two	DL=0.57	DL=0.24	DL=0.91	DL=2.2	8.4	2.1J	DL=58.
Sub-slab port	DL=0.57	DL=0.24	DL=0.91	DL=2.2	20	2.9J	DL=58.
Bedroom three	DL=0.57	DL=0.24	DL=0.91	DL=2.2	6.7	1.9J	DL=58.
Post-exit ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
30 mL/spike	31	25	36	21	24	40	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 21 Survey File: 64MSMS00066 Acquired on 03 May 2016 at 17:27:15							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.57	0.24	0.91	2.2	0.72	1.1	58
Quantitation Limits - QL:	1.9	0.80	3.0	7.2	2.4	3.8	190
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
Kitchen / dining area	DL=0.57	0.27J	DL=0.91	DL=2.2	5.5	1.6J	DL=58.
Family room	DL=0.57	0.34J	DL=0.91	DL=2.2	6.0	1.8J	DL=58.
Bathroom	DL=0.57	0.35J	DL=0.91	DL=2.2	8.4	2.3J	DL=58.
Bedroom one	DL=0.57	0.35J	DL=0.91	DL=2.2	8.3	2.4J	DL=58.
Bedroom two	DL=0.57	0.43J	DL=0.91	DL=2.2	9.7	2.2J	DL=58.
Sub-slab port	DL=0.57	0.27J	DL=0.91	DL=2.2	8.1	2.1J	DL=58.
Room one	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.0J	DL=1.1	DL=58.
Living room	DL=0.57	0.25J	DL=0.91	DL=2.2	5.5	1.7J	DL=58.
Post-exit ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
30 mL/min spike	31	25	35	22	24	39	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Drainage Ditch Investigation File: 64MSMS00067 Acquired on 03 May 2016 at 18:15:11							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.57	0.24	0.91	2.2	0.72	1.1	58
Quantitation Limits - QL:	1.9	0.80	3.0	7.2	2.4	3.8	190
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-run ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	1.0J	DL=1.1	DL=58.
South to north move along the drainage ditch	DL=0.57	DL=0.24	DL=0.91	DL=2.2	0.80J	DL=1.1	DL=58.
Post-run ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
30 mL/min spike	29	25	30	20	22	33	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 13 Survey File: 64MSMS00073 Acquired on 04 May 2016 at 08:05:53							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:	0.68	0.83	1.8	6.4	2.5	2.2	150
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
Kitchen	0.71	DL=0.25	DL=0.54	DL=1.9	6.9	2.3	DL=44.
Laundry room	1.2	DL=0.25	DL=0.54	DL=1.9	6.2	2.4	DL=44.
Dining room	1.3	DL=0.25	DL=0.54	DL=1.9	6.0	2.4	DL=44.
Family room	0.62J	DL=0.25	DL=0.54	DL=1.9	8.5	2.5	DL=44.
Bathroom	0.69	DL=0.25	DL=0.54	DL=1.9	7.9	2.8	DL=44.
Bedroom three	0.78	DL=0.25	DL=0.54	DL=1.9	7.7	2.8	DL=44.
Sub-slab port	0.67J	DL=0.25	DL=0.54	DL=1.9	7.1	2.7	DL=44.
Bedroom two	0.81	DL=0.25	DL=0.54	DL=1.9	7.8	2.9	DL=44.
Bedroom one	0.66J	DL=0.25	DL=0.54	DL=1.9	7.4	2.9	DL=44.
Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
30 mL/min spike	34	28	35	21	23	36	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 11 Survey File: 64MSMS00074 Acquired on 04 May 2016 at 08:53:35							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:	0.68	0.83	1.8	6.4	2.5	2.2	150
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
Kitchen	0.29J	DL=0.25	DL=0.54	1.9J	5.0	3.7	DL=44.
Living room	0.32J	DL=0.25	DL=0.54	2.2J	5.7	3.8	DL=44.
Dining room	0.36J	DL=0.25	DL=0.54	2.6J	6.4	4.3	DL=44.
Bathroom	0.34J	DL=0.25	DL=0.54	DL=1.9	6.1	3.6	DL=44.
Bedroom three	0.37J	DL=0.25	DL=0.54	2.0J	6.5	4.0	DL=44.
Sub-slab port	0.53J	DL=0.25	DL=0.54	DL=1.9	18	4.5	DL=44.
Bedroom two	0.35J	DL=0.25	DL=0.54	DL=1.9	6.1	4.0	DL=44.
Bedroom one	0.35J	DL=0.25	DL=0.54	DL=1.9	4.7	2.9	DL=44.
Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
30 mL/min spike	33	27	37	22	27	46	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 18 Survey File: 64MSMS00076 Acquired on 04 May 2016 at 10:24:54							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:	0.68	0.83	1.8	6.4	2.5	2.2	150
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	1.1J	DL=0.66	DL=44.
Family room	0.28J	DL=0.25	DL=0.54	2.0J	6.6	4.6	DL=44.
Kitchen	0.27J	DL=0.25	DL=0.54	DL=1.9	7.0	5.0	DL=44.
Dining room	0.22J	DL=0.25	DL=0.54	DL=1.9	7.2	5.1	DL=44.
Bedroom two	0.27J	DL=0.25	DL=0.54	DL=1.9	7.9	5.5	DL=44.
Bedroom one	0.29J	DL=0.25	DL=0.54	DL=1.9	7.7	5.2	DL=44.
Bathroom	0.31J	DL=0.25	DL=0.54	DL=1.9	8.2	11	DL=44.
Sub-slab port	0.33J	DL=0.25	DL=0.54	DL=1.9	8.0	5.7	DL=44.
Living room	0.27J	DL=0.25	DL=0.54	DL=1.9	6.5	4.8	DL=44.
Storm drain	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	1.2J	0.82J	DL=44.
30 mL/min spike	31	24	33	20	25	39	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 22 Survey File: 64MSMS00077 Acquired on 04 May 2016 at 11:19:28							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:	0.68	0.83	1.8	6.4	2.5	2.2	150
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
Kitchen / dining area	0.23J	DL=0.25	DL=0.54	DL=1.9	2.7	1.4J	DL=44.
Bathroom	0.23J	DL=0.25	DL=0.54	DL=1.9	2.8	1.3J	DL=44.
Bedroom three	0.33J	DL=0.25	DL=0.54	DL=1.9	3.0	1.5J	DL=44.
Sub-slab port	0.29J	DL=0.25	DL=0.54	DL=1.9	3.2	1.6J	DL=44.
Bedroom two	0.22J	DL=0.25	DL=0.54	DL=1.9	2.8	1.3J	DL=44.
Bedroom one	0.26J	DL=0.25	DL=0.54	DL=1.9	2.7	1.3J	DL=44.
Living room	0.21J	DL=0.25	DL=0.54	DL=1.9	3.1	1.5J	DL=44.
Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
30 mL/min spike	30	24	32	21	23	36	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 23 Survey One File: 64MSMS00078 Acquired on 04 May 2016 at 11:58:55							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:	0.68	0.83	1.8	6.4	2.5	2.2	150
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.I
Kitchen / dining area	DL=0.20	DL=0.25	DL=0.54	47	13	8.5	100JI
Living room	0.24J	DL=0.25	DL=0.54	43	12	8.4	78.JI
Bedroom three	0.23J	DL=0.25	DL=0.54	45	13	9.1	98.JI
Bedroom two	DL=0.20	DL=0.25	DL=0.54	43	12	8.8	76.JI
Sub-slab port	DL=0.20	DL=0.25	DL=0.54	42	12	9.0	84.JI
Bedroom one	DL=0.20	DL=0.25	DL=0.54	43	14	11	83.JI
Bathroom	DL=0.20	DL=0.25	DL=0.54	41	14	9.9	68.JI
Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
30 mL/min spike	26	21	30	19	20	34	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

I = Positive interference by the 64/27 parent/daughter ion pair

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 23 Investigation One File: 64MSMS00079 Acquired on 04 May 2016 at 12:29:21							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:	0.68	0.83	1.8	6.4	2.5	2.2	150
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
Laundry room storage closet	DL=0.20	DL=0.25	DL=0.54	10	3.3	1.9J	DL=44.
Laundry room	DL=0.20	DL=0.25	DL=0.54	19	5.0	3.2	DL=44.
Kitchen cabinets and sink	DL=0.20	DL=0.25	DL=0.54	34	10	6.3	68.JI
Space under the kitchen sink	DL=0.20	DL=0.25	DL=0.54	28	8.8	5.5	65.JI
Wood filler can	DL=0.20	DL=0.25	DL=0.54	33	8.9	6.1	77.JI
Cabinet one under the kitchen sink	DL=0.20	DL=0.25	DL=0.54	20	6.3	3.6	DL=44.
Cabinet two under the kitchen sink	0.21J	DL=0.25	DL=0.54	32	9.3	6.4	63.JI
Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
30 mL/min spike	26	19	30	18	20	33	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

I = Positive interference by the 64/27 parent/daughter ion pair

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 8 Survey File: 64MSMS00081 Acquired on 04 May 2016 at 15:04:56							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.61	0.37	0.54	2.4	0.73	0.73	32
Quantitation Limits - QL:	2.0	1.2	1.8	8.1	2.4	2.4	110
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	DL=0.73	DL=0.73	DL=32.
Kitchen	DL=0.61	DL=0.37	DL=0.54	DL=2.4	8.8	0.99J	DL=32.
Living room	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.5	1.1J	DL=32.
Bedroom one	DL=0.61	DL=0.37	DL=0.54	DL=2.4	10	1.1J	DL=32.
Bathroom one	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.2	1.1J	DL=32.
Bedroom two	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.9	1.2J	DL=32.
Bathroom two	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.9	1.2J	DL=32.
Sub-slab port	DL=0.61	DL=0.37	DL=0.54	DL=2.4	11	1.4J	DL=32.
Bedroom three	DL=0.61	DL=0.37	DL=0.54	DL=2.4	8.9	1.1J	DL=32.
Bedroom four	DL=0.61	DL=0.37	DL=0.54	DL=2.4	7.6	0.93J	DL=32.
Storm drain	DL=0.61	DL=0.37	DL=0.54	DL=2.4	1.0J	DL=0.73	DL=32.
Post-exit ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	DL=0.73	DL=0.73	DL=32.
30 mL/min spike	32	25	33	19	22	34	DL=32.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 19 Survey File: 64MSMS00085 Acquired on 04 May 2016 at 16:25:45							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylene	Vinyl Chloride
Detection Limits - DL:	0.61	0.37	0.54	2.4	0.73	0.73	32
Quantitation Limits - QL:	2.0	1.2	1.8	8.1	2.4	2.4	110
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylene	Vinyl Chloride
Pre-entry ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	DL=0.73	DL=0.73	DL=32.
Kitchen / dining area	DL=0.61	DL=0.37	DL=0.54	DL=2.4	24	12	DL=32.
Living room	DL=0.61	DL=0.37	DL=0.54	DL=2.4	23	12	DL=32.
Bedroom two	DL=0.61	DL=0.37	DL=0.54	DL=2.4	34	19	DL=32.
Bathroom two	DL=0.61	DL=0.37	DL=0.54	DL=2.4	31	17	DL=32.
Bathroom one	DL=0.61	DL=0.37	DL=0.54	DL=2.4	23	13	DL=32.
Bedroom one	DL=0.61	DL=0.37	DL=0.54	DL=2.4	22	12	DL=32.
Sub-slab port	DL=0.61	DL=0.37	DL=0.54	DL=2.4	27	15	DL=32.
Bedroom three	DL=0.61	DL=0.37	DL=0.54	2.7J	31	17	DL=32.
Post-exit ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	DL=0.73	DL=0.73	DL=32.
30 mL/min spike	31	23	33	20	21	31	DL=32.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 16 Survey File: 64MSMS00086 Acquired on 04 May 2016 at 17:25:15							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.61	0.37	0.54	2.4	0.73	0.73	32
Quantitation Limits - QL:	2.0	1.2	1.8	8.1	2.4	2.4	110
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	1.0J	DL=0.73	DL=32.
Kitchen / dining area	DL=0.61	DL=0.37	DL=0.54	DL=2.4	8.9	3.9	DL=32.
Living room	DL=0.61	DL=0.37	DL=0.54	DL=2.4	8.6	3.6	DL=32.
Bathroom	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.1	3.8	DL=32.
Bedroom one	DL=0.61	DL=0.37	DL=0.54	DL=2.4	7.7	3.7	DL=32.
Sub-slab port	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.0	4.2	DL=32.
Bedroom two	DL=0.61	DL=0.37	DL=0.54	DL=2.4	11	5.5	DL=32.
Bedroom three	DL=0.61	DL=0.37	DL=0.54	DL=2.4	11	4.1	DL=32.
Post-exit ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	1.4J	DL=0.73	DL=32.
30 mL/min spike	27	21	30	18	20	32	DL=32.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Equalization Basin Monitoring on Facility File: 64MSMS00094 Acquired on 05 May 2016 at 12:33:02							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.39	0.24	1.5	1.8	0.55	0.41	33
Quantitation Limits - QL:	1.3	0.81	4.9	6.0	1.8	1.4	110
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Equalization (EQ) basin outflow	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
West to east traverse of the EQ basin	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Storm drain one at east end of the EQ basin	DL=0.39	DL=0.24	DL=1.5	DL=1.8	1.5J	1.2J	DL=33.
Sewer drain at east end of the EQ basin	DL=0.39	DL=0.24	DL=1.5	DL=1.8	0.98J	0.45J	DL=33.
Abandoned pipe near the EQ basin	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Storm drain two at east end of the EQ basin	DL=0.39	DL=0.24	DL=1.5	DL=1.8	2.8	2.2	DL=33.
Storm drain three at east end of the EQ basin	1.7	12	DL=1.5	DL=1.8	1.7J	1.7	DL=33.
Post-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
30 mL/min spike	26	26	28	21	20	26	DL=33.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 23 Survey Two File: 64MSMS00095 Acquired on 05 May 2016 at 13:34:46							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.39	0.24	1.5	1.8	0.55	0.41	33
Quantitation Limits - QL:	1.3	0.81	4.9	6.0	1.8	1.4	110
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Kitchen / dining area	DL=0.39	DL=0.24	DL=1.5	50	13	7.7	110I
Living room	DL=0.39	DL=0.24	DL=1.5	52	13	7.6	82.JI
Bedroom three	DL=0.39	DL=0.24	DL=1.5	52	13	8.5	110JI
Bedroom two	DL=0.39	DL=0.24	DL=1.5	43	12	7.8	68.JI
Sub-slab port	DL=0.39	DL=0.24	DL=1.5	45	15	9.5	94.JI
Bedroom one	DL=0.39	DL=0.24	DL=1.5	50	15	8.3	84.JI
Bathroom	DL=0.39	DL=0.24	DL=1.5	51	13	8.2	82.JI
Screening of floor	DL=0.39	DL=0.24	DL=1.5	49	14	10	80.JI
Post-exit ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
30 mL/min spike	27	23	28	20	23	33	DL=33.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

I = Positive interference by the 64/27 parent/daughter ion pair

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 23 Investigation Two File: 64MSMS00096 Acquired on 05 May 2016 at 14:00:59							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.39	0.24	1.5	1.8	0.55	0.41	33
Quantitation Limits - QL:	1.3	0.81	4.9	6.0	1.8	1.4	110
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-entry ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Attic through car port roof	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Post-exit ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
30 mL/min spike	27	22	26	19	21	29	DL=33.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for West End of Railroad Ditch by Quarry Road Investigation File: 64MSMS00097 Acquired on 05 May 2016 at 14:43:41							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.39	0.24	1.5	1.8	0.55	0.41	33
Quantitation Limits - QL:	1.3	0.81	4.9	6.0	1.8	1.4	110
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	3.0	1.8	DL=33.
West to east traverse of railroad ditch south of tracks	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Well purge water	4.2	6.6	DL=1.5	DL=1.8	1.7J	1.4	DL=33.
Post-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
30 mL/min spike	26	24	27	22	20	26	DL=33.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

TABLE 5 (continued)
Summary of TAGA MS/MS Results in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Outfall Ditch on North Side of Access Road Investigation File: 64MSMS00099 Acquired on 05 May 2016 at 16:10:42							
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:	0.39	0.24	1.5	1.8	0.55	0.41	33
Quantitation Limits - QL:	1.3	0.81	4.9	6.0	1.8	1.4	110
Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Pre-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Location one on outfall ditch	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Location two on outfall ditch	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Location three on outfall ditch	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Pipe at location three on outfall ditch	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Location four on outfall ditch	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
Post-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
30 mL/min spike	25	21	23	18	17	24	DL=33.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)



Figure 1a Mobile Monitoring One Path, 64MSMS00075

Figure 1b

TAGA File Event Summary			
File: 64MSMS00075 Acquired on 04 May 2016 at 09:51:56			
Title: Mobile Monitoring One			
Flag	Time	Sequence	Description
A	1.1	39	Start of the mobile monitoring
B	15.8	566	End of the mobile monitoring
C	18.5	663	Start of 30 mL/min spike
D	20.5	734	End of 30 mL/min spike

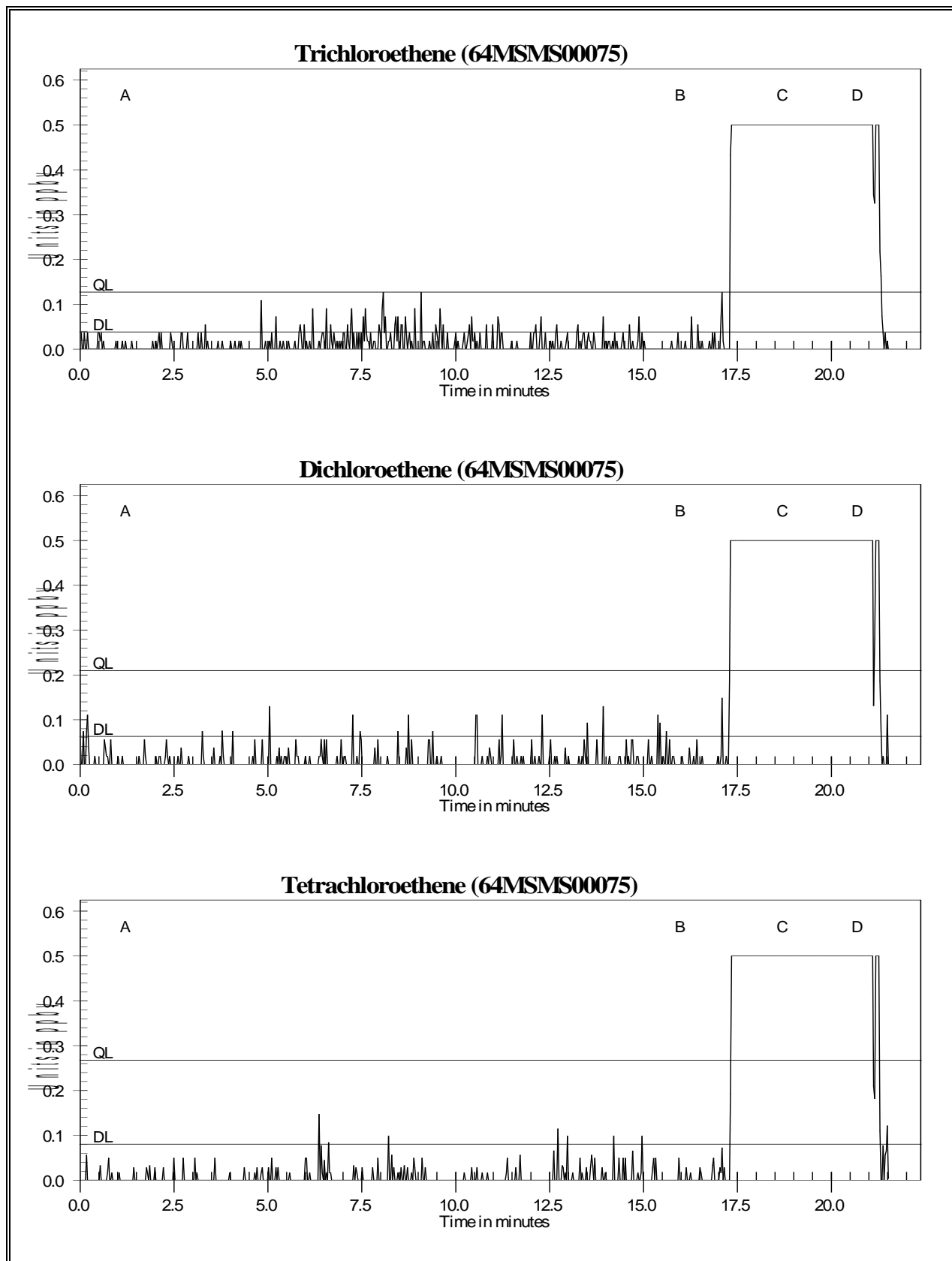


Figure 1c Mobile Monitoring One in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

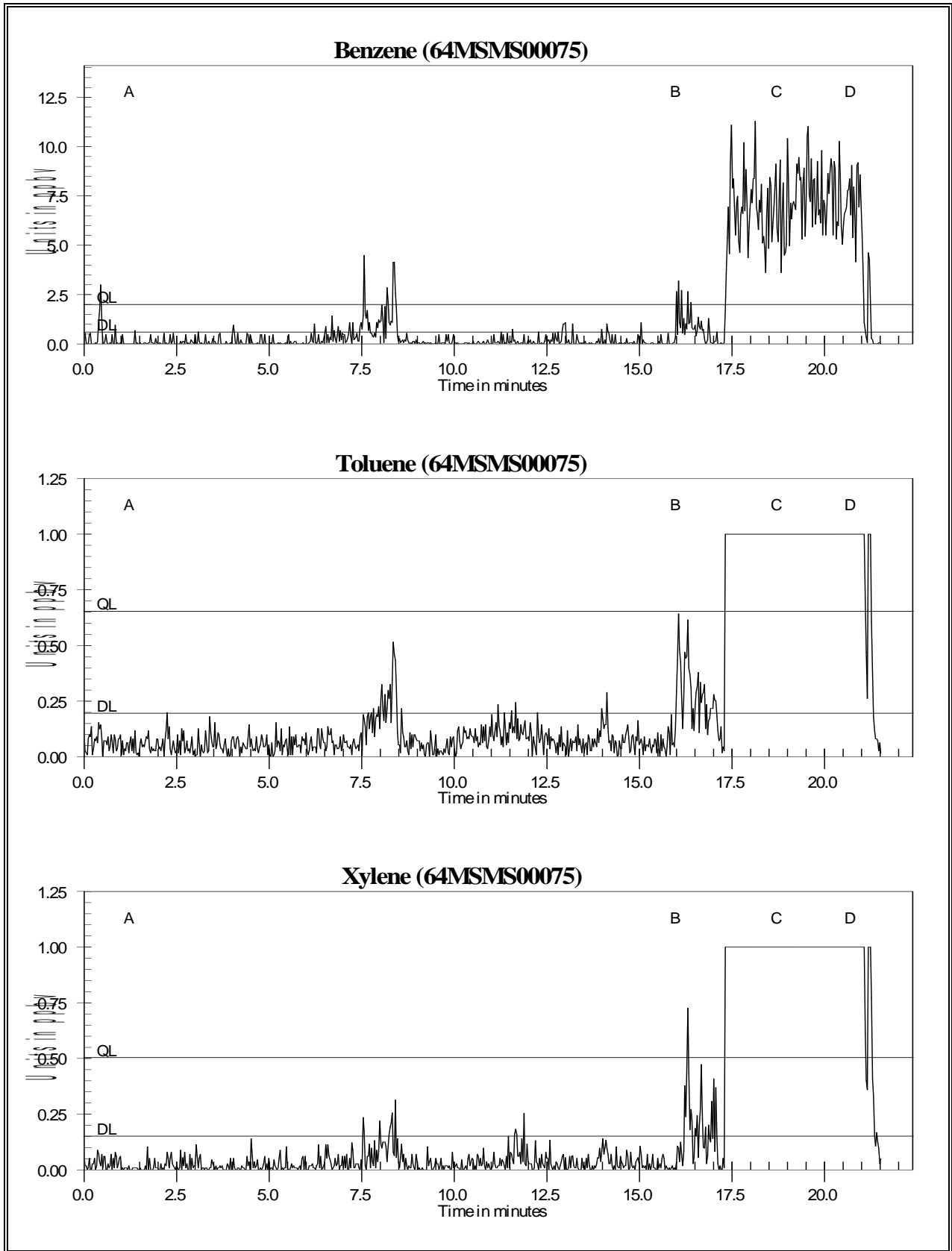


Figure 1d Mobile Monitoring One in ppbv for Benzene, Toluene, and Xylenes

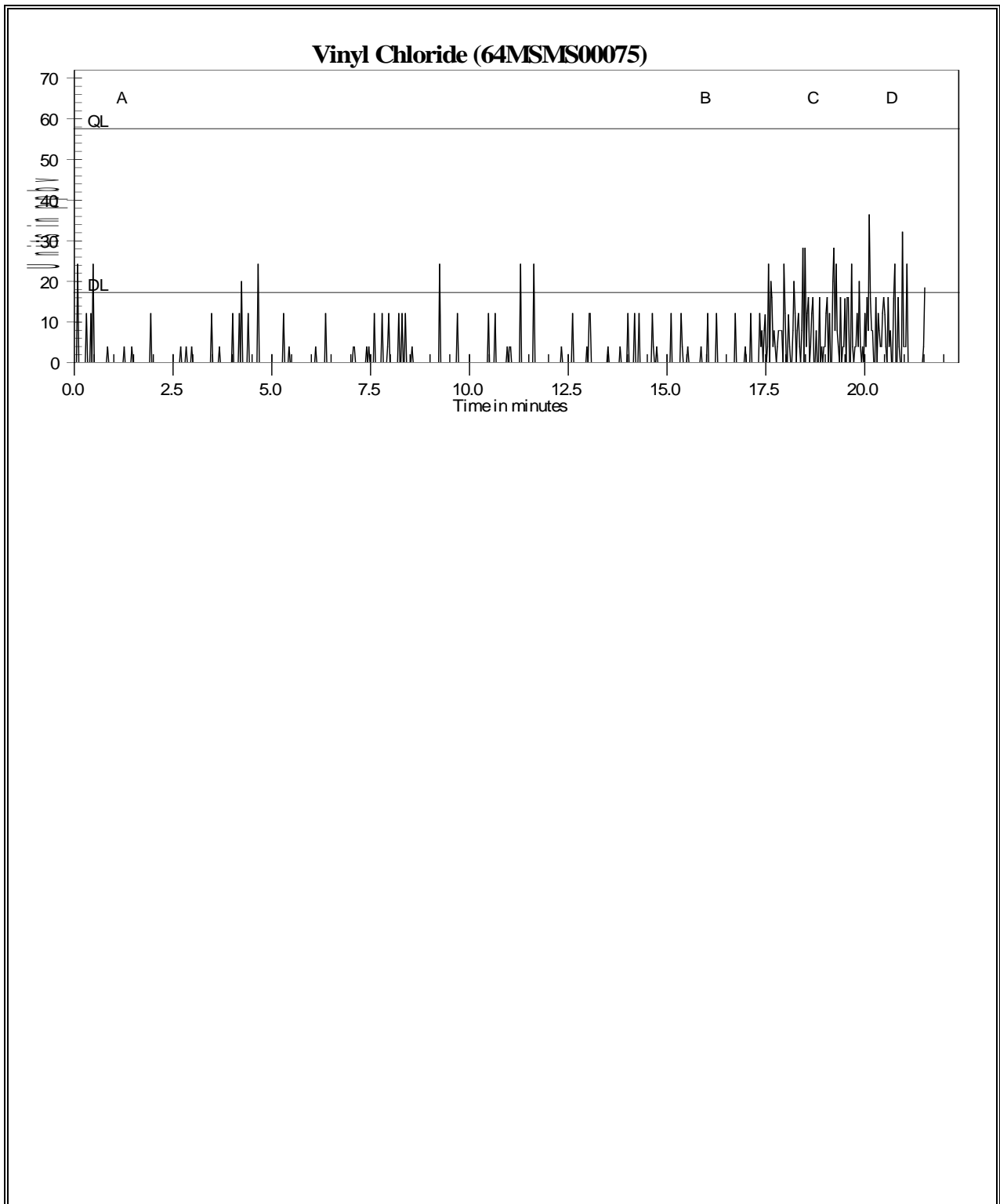


Figure 1e Mobile Monitoring One in ppbv for Vinyl Chloride

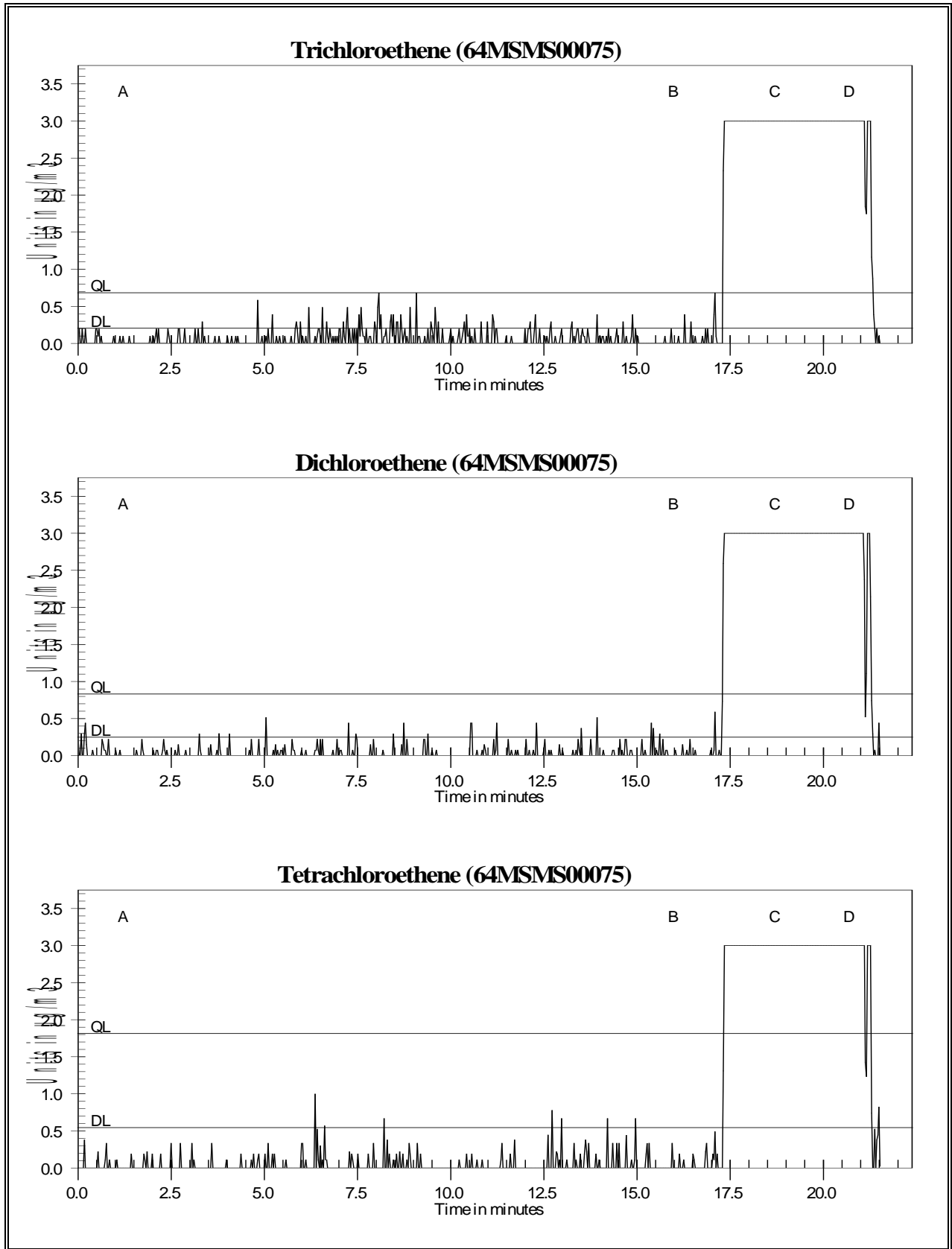


Figure 1f Mobile Monitoring One in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

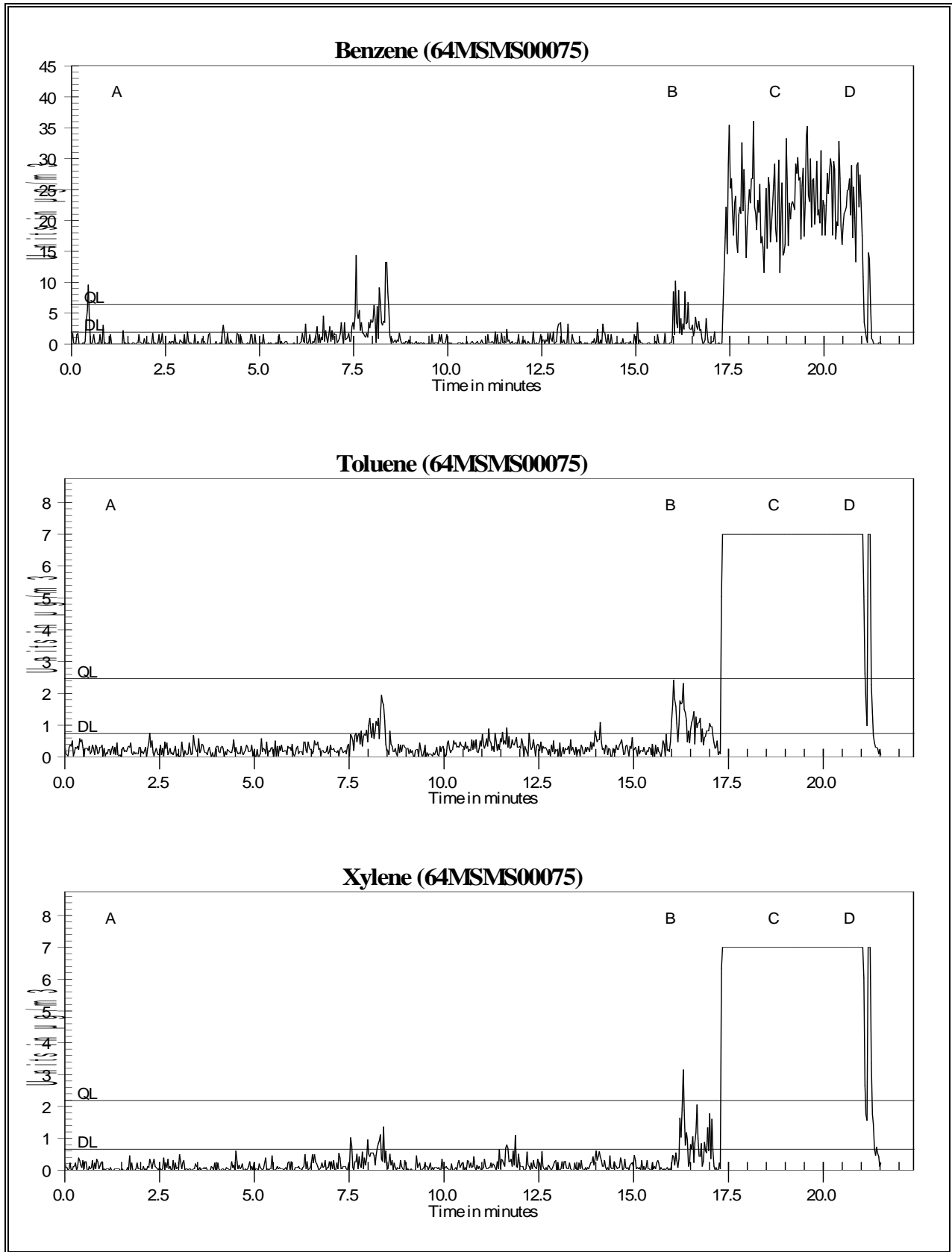


Figure 1g Mobile Monitoring One in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

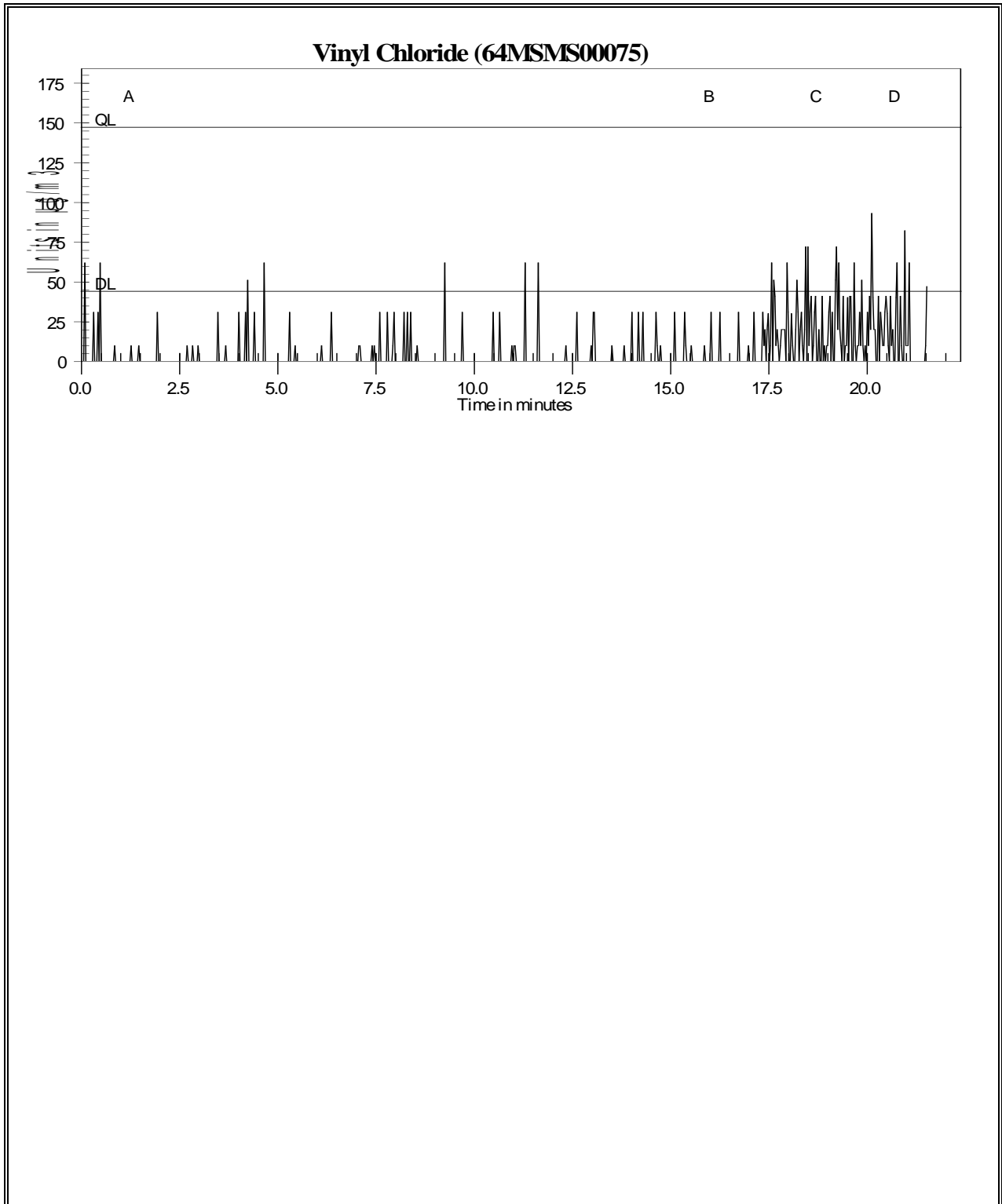


Figure 1h Mobile Monitoring One in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride



Figure 2a Mobile Monitoring Two Path, 64MSMS00084

Figure 2b

TAGA File Event Summary			
File: 64MSMS00084 Acquired on 04 May 2016 at 15:55:56			
Title: Mobile Monitoring Two			
Flag	Time	Sequence	Description
A	0.8	30	Start of the mobile monitoring
B	15.1	539	End of the mobile monitoring
C	18.3	654	Start of 30mL/min spike
D	19.3	690	End of 30mL/min spike

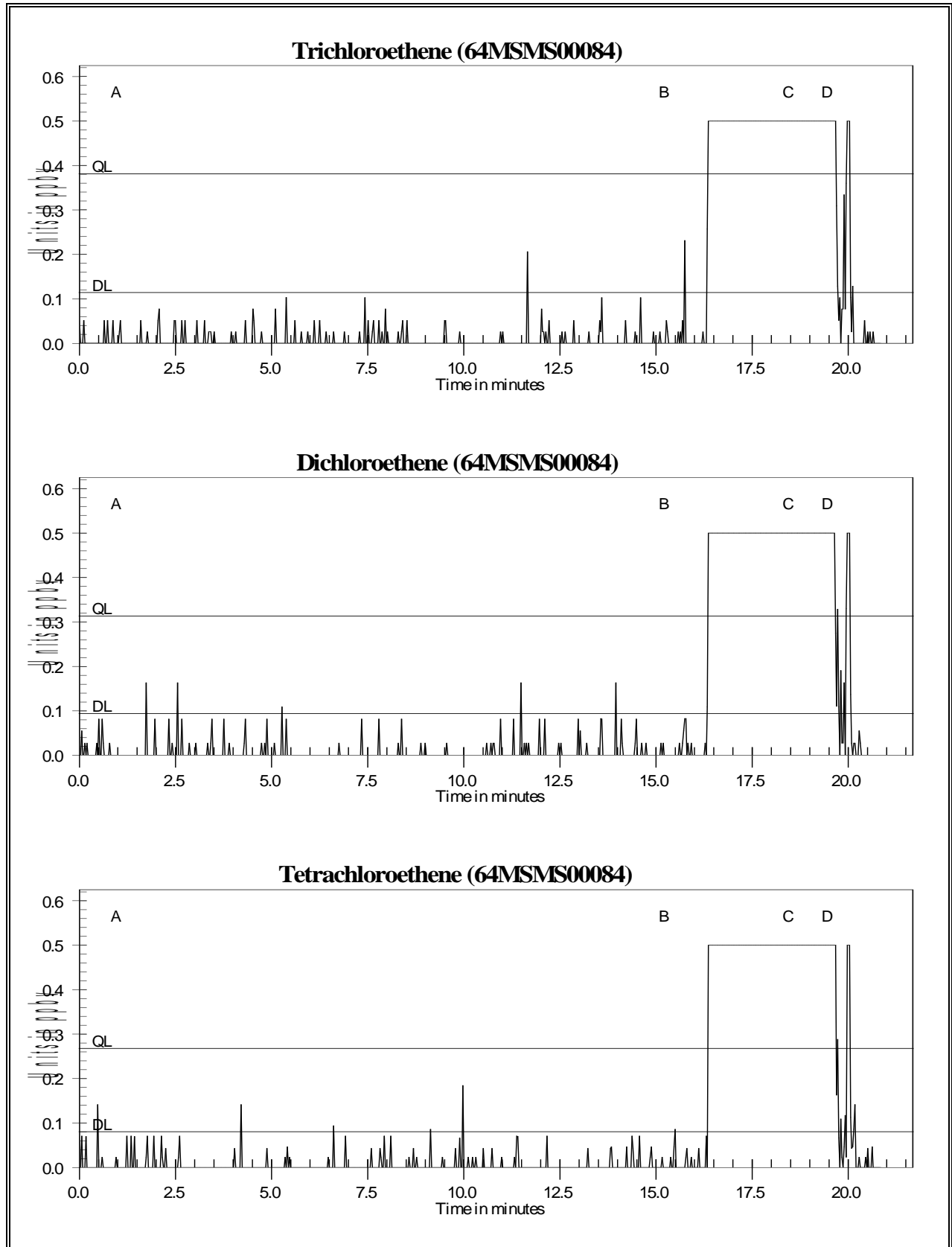


Figure 2c Mobile Monitoring Two in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

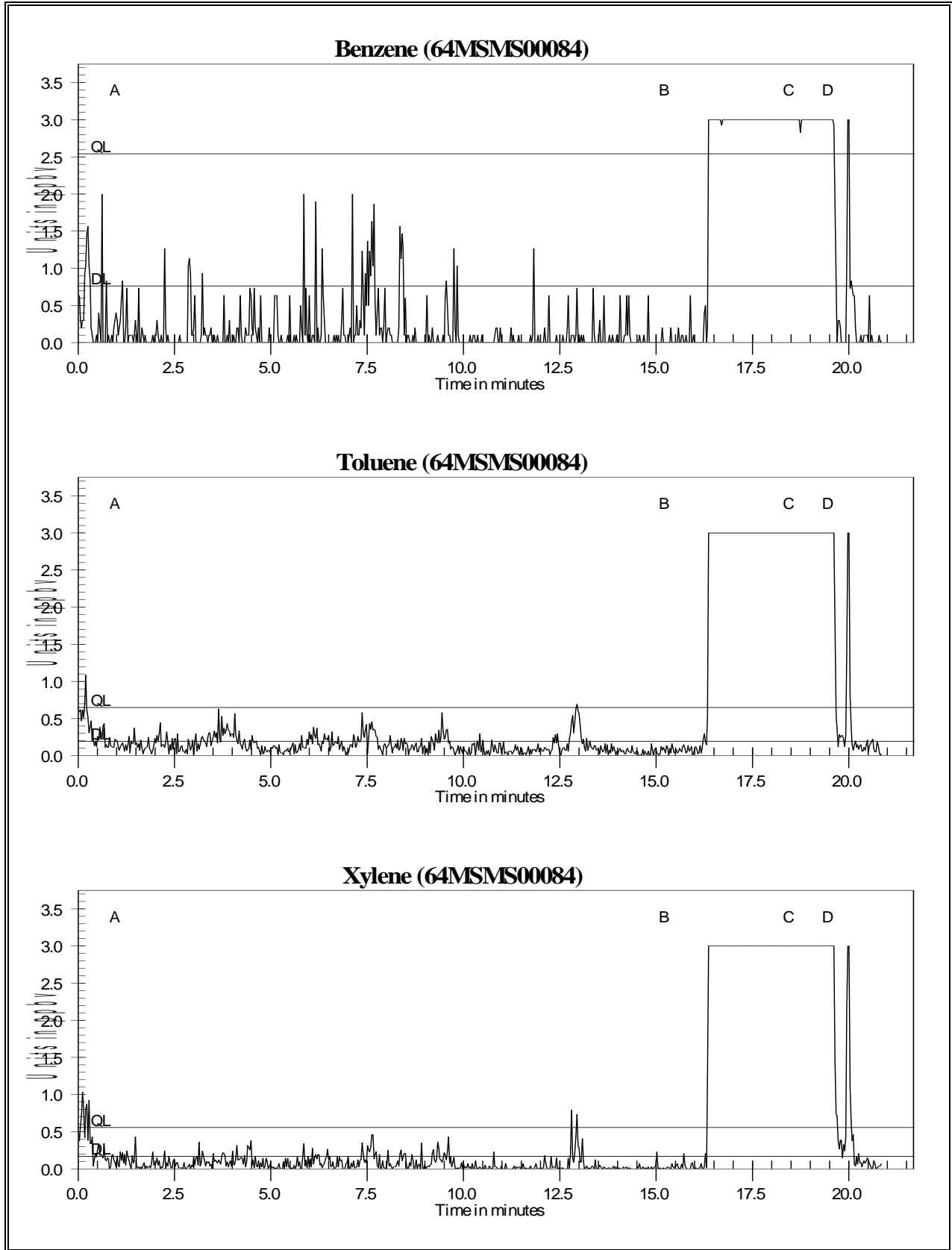


Figure 2d Mobile Monitoring Two in ppbv for Benzene, Toluene, and Xylenes

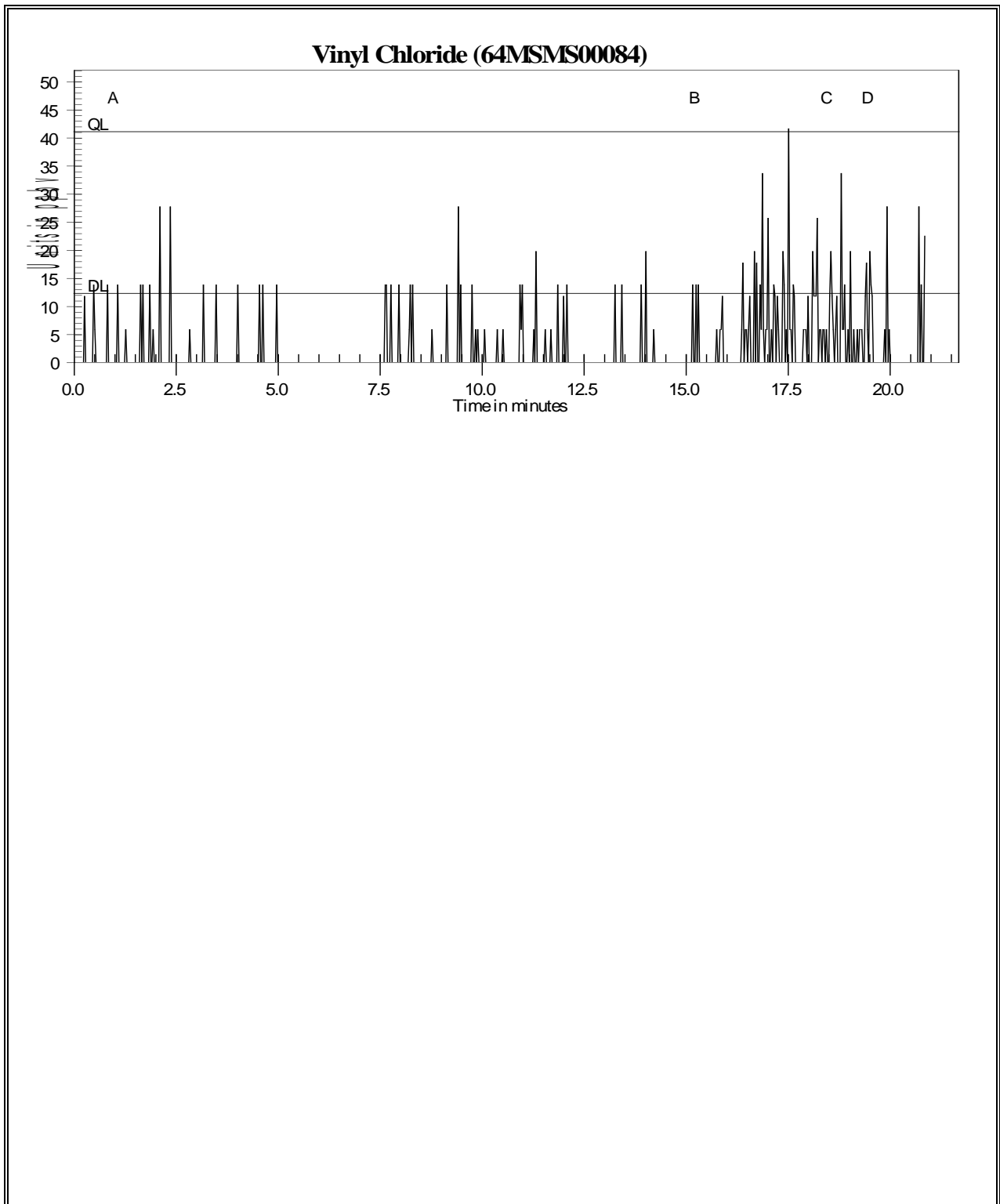


Figure 2e Mobile Monitoring Two in ppbv for Vinyl Chloride

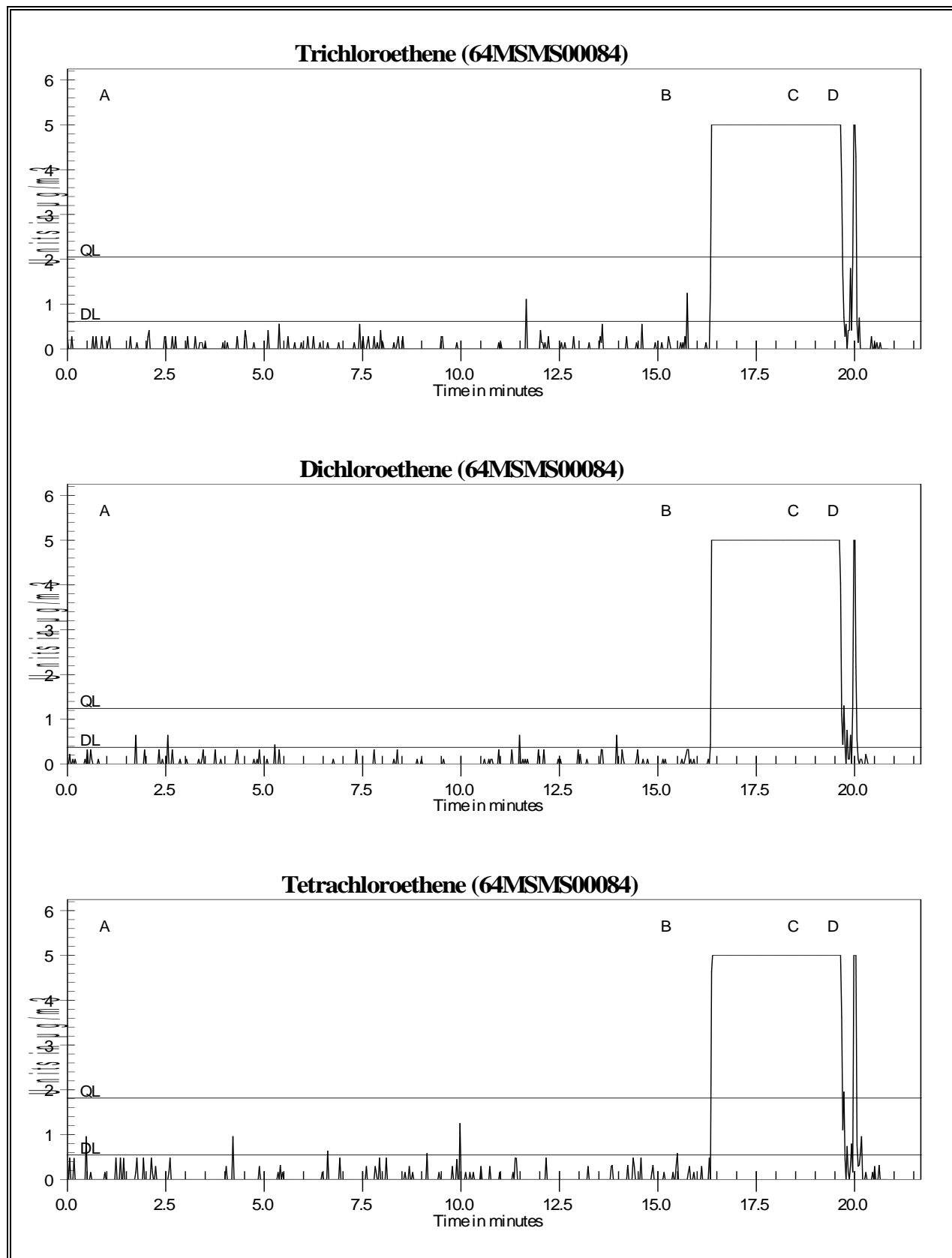


Figure 2f Mobile Monitoring Two in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

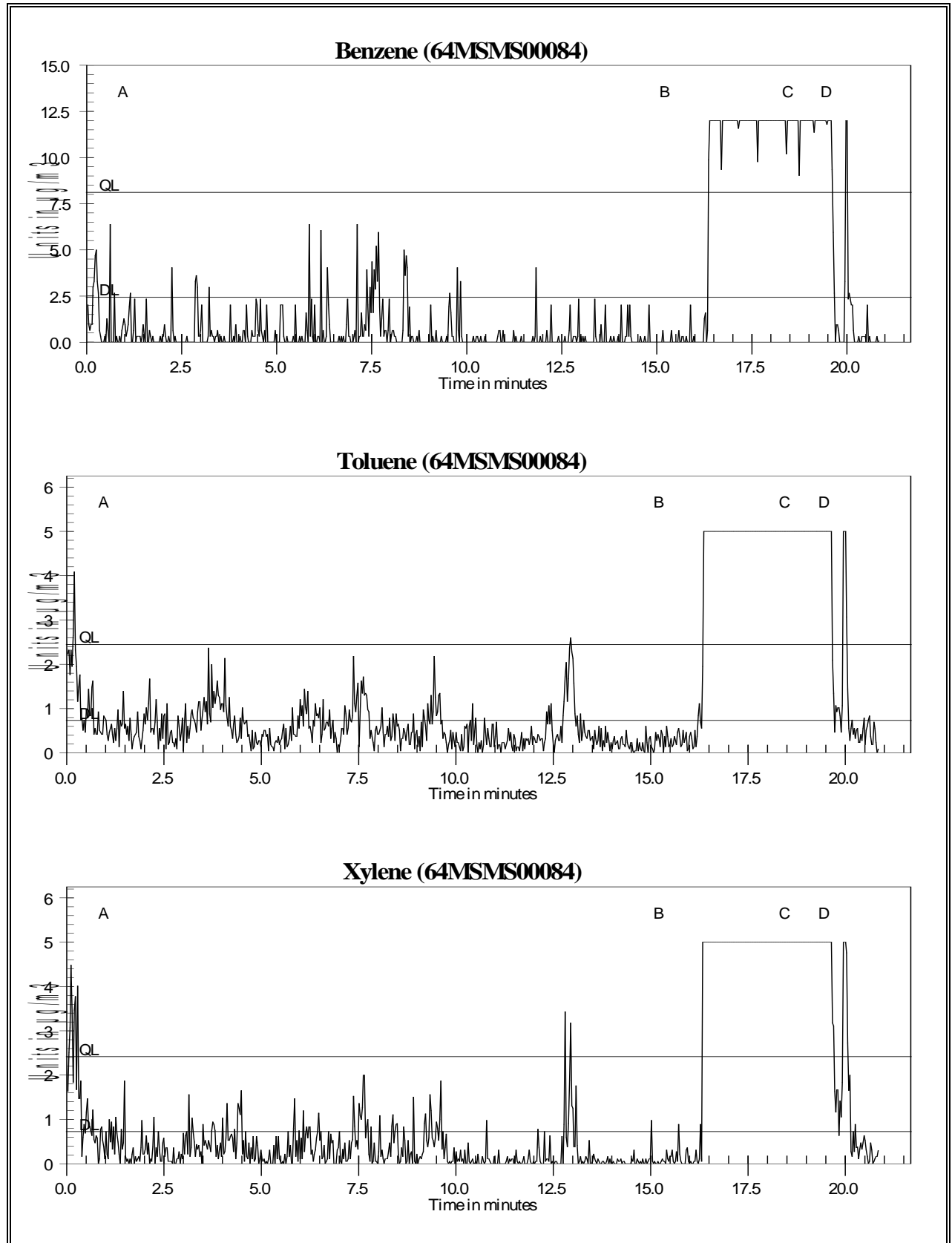


Figure 2g Mobile Monitoring Two in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

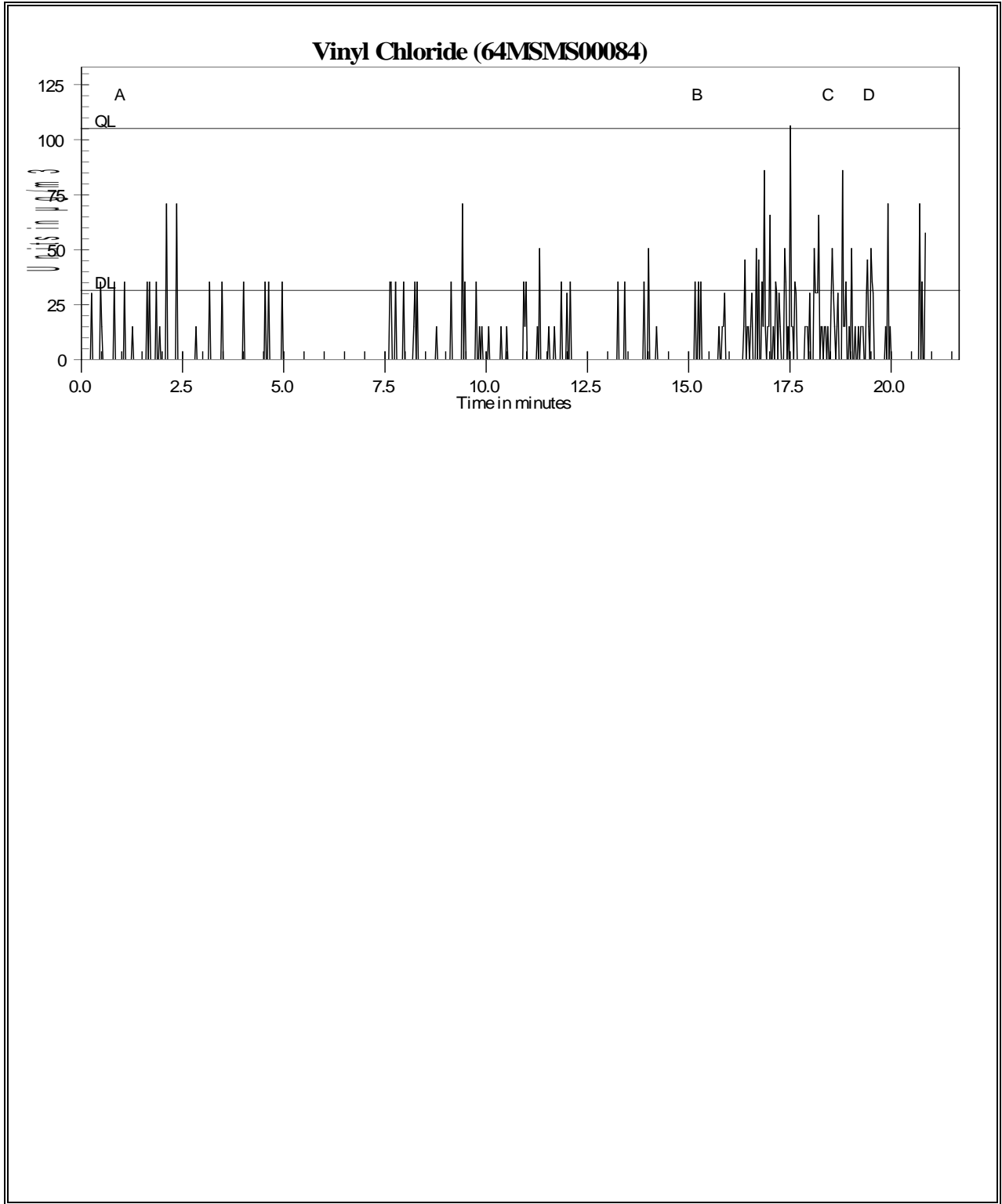


Figure 2h Mobile Monitoring Two in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

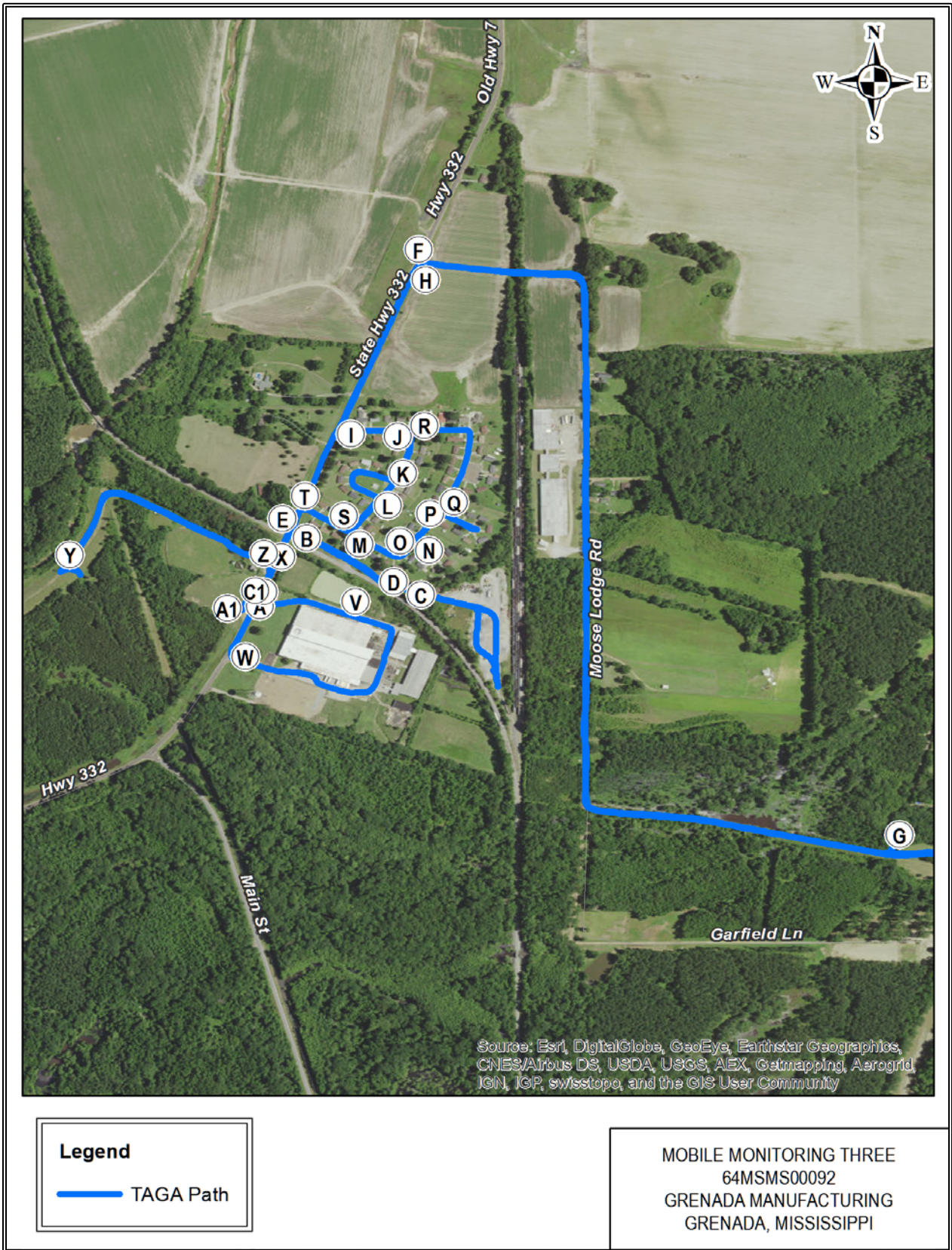


Figure 3a Mobile Monitoring Three Path, 64MSMS00092

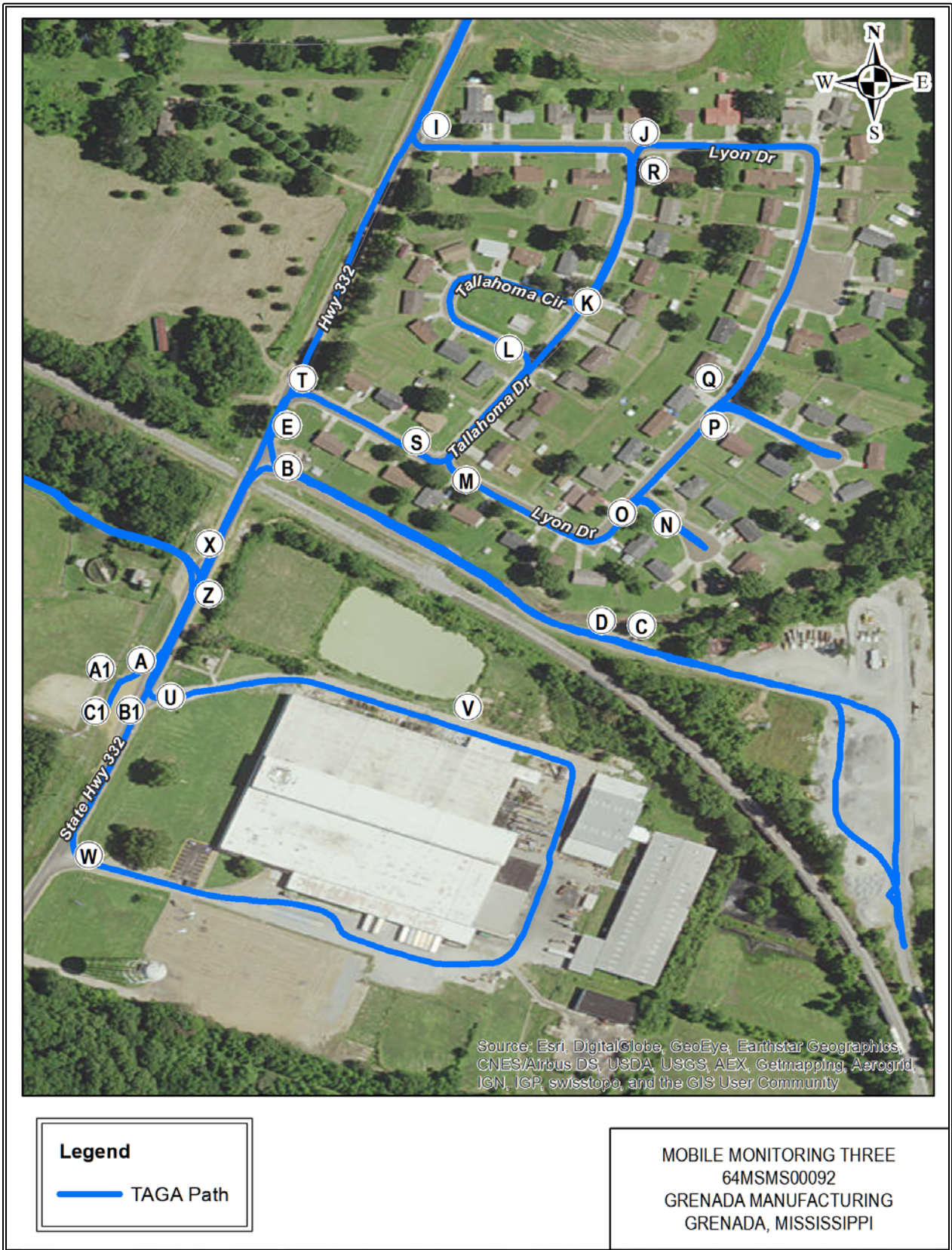


Figure 3b Mobile Monitoring Three Path -Zoomed, 64MSMS00092

Figure 3c

TAGA File Event Summary			
File: 64MSMS00092 Acquired on 05 May 2016 at 08:44:22			
Title: Mobile Monitoring Three			
Flag	Time	Sequence	Description
A	2.4	87	Starting mobile monitoring across from Grenada Manufacturing
B	3.2	114	Turning right to stone quarry
C	8.2	294	Entering the quarry
D	16.3	582	Exiting the quarry
E	21.4	763	Turning right onto Highway 332 / Old Highway 7
F	24.4	873	Turning right onto Moose Lodge Road
G	41.3	1474	Turning around at the Old Moose Lodge
H	64.3	2296	Turning left onto Highway 332 / Old Highway 7
I	65.9	2353	Turning left onto Lyon Drive (Eastern Heights Neighborhood)
J	66.9	2390	Turning right onto Tallahoma Drive
K	67.8	2422	Turning right onto Tallahoma Circle
L	69.0	2463	Turning right onto Tallahoma Drive
M	69.7	2488	Turning left onto Lyon Drive
N	70.8	2527	Turning right onto Rockwell Circle
O	72.6	2593	Turning right onto Lyon Drive
P	73.2	2615	Turning right onto Pittsburgh Circle
Q	75.1	2682	Turning right onto Lyon Drive
R	77.1	2753	Turning left onto Tallahoma Drive
S	78.4	2799	Turning right onto Lyon Drive
T	79.1	2825	Turning left onto Highway 332 / Old Highway 7
U	80.4	2869	Turning left into Grenada Manufacturing facility
V	82.7	2954	Passing east end of the pond
W	88.5	3160	Turning right onto Highway 332 / Old Highway 7
X	89.1	3180	Turning left onto access road
Y	96.0	3427	Making U-turn
Z	106.8	3814	Turning right onto Highway 332 / Old Highway 7
A1	107.7	3845	Stopping mobile monitoring at Ball park across from Grenada Manufacturing
B1	111.6	3984	Start of 30 mL/min spike
C1	112.7	4022	End of 30 mL/min spike

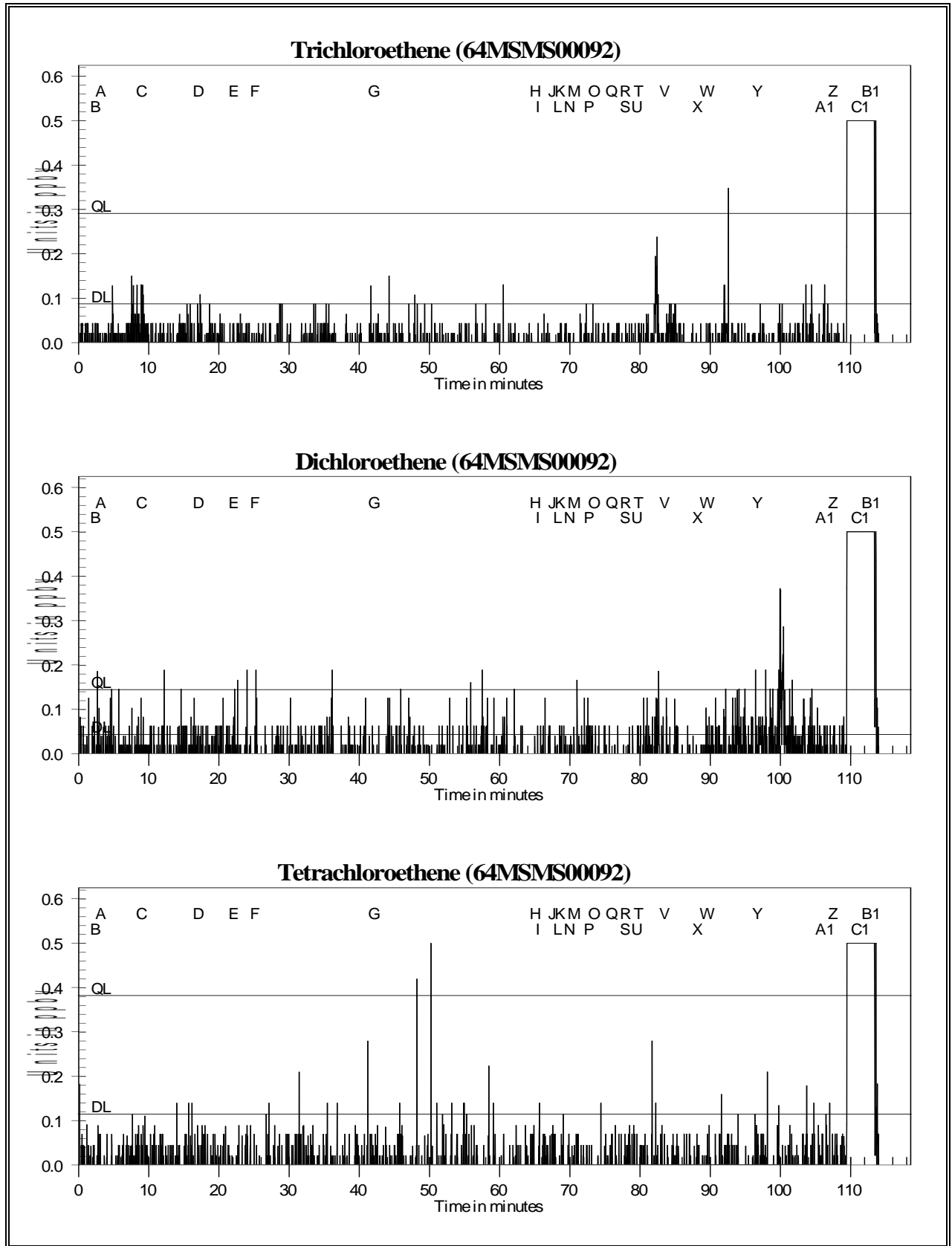


Figure 3d Mobile Monitoring Three in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

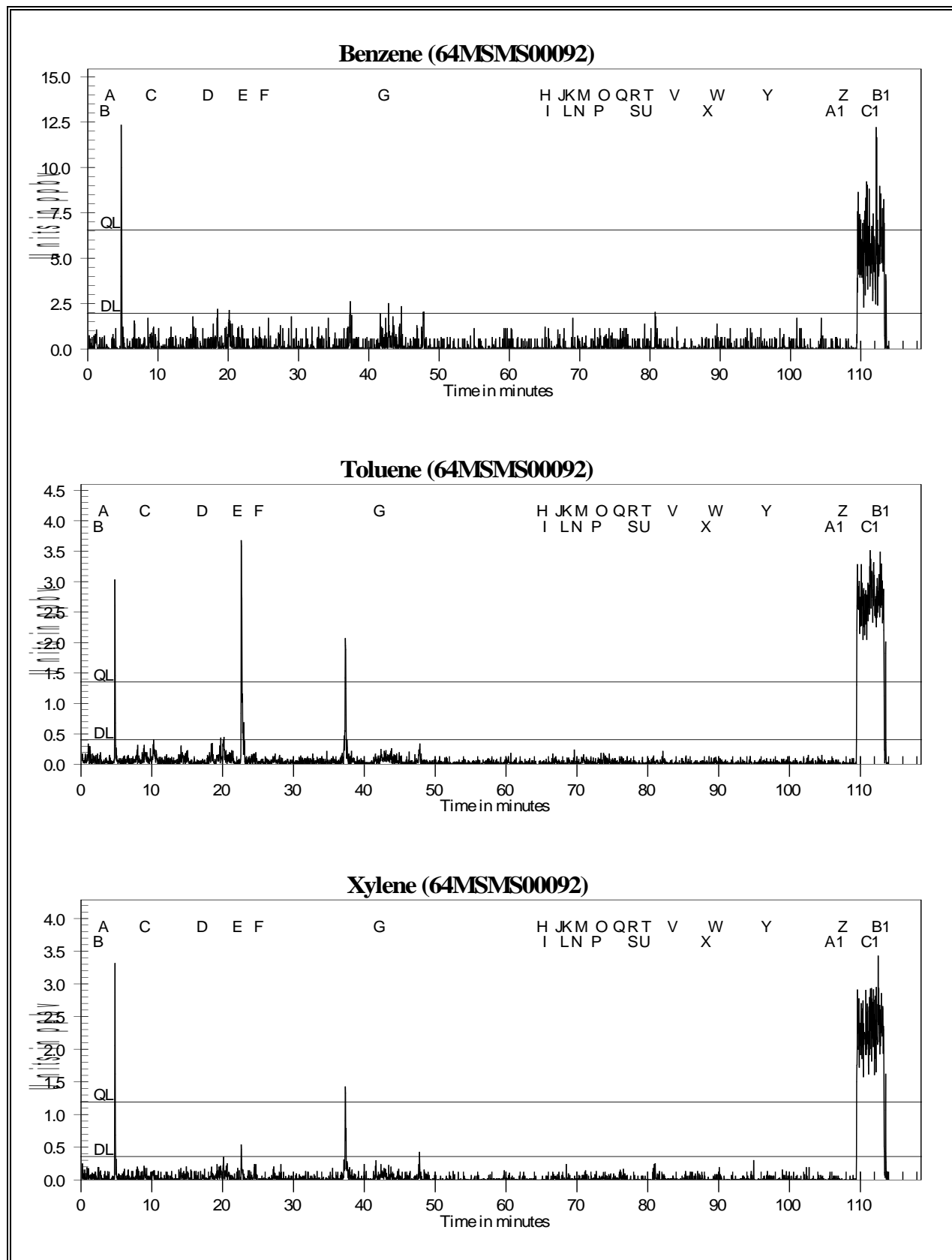


Figure 3e Mobile Monitoring Three in ppbv for Benzene, Toluene, and Xylenes

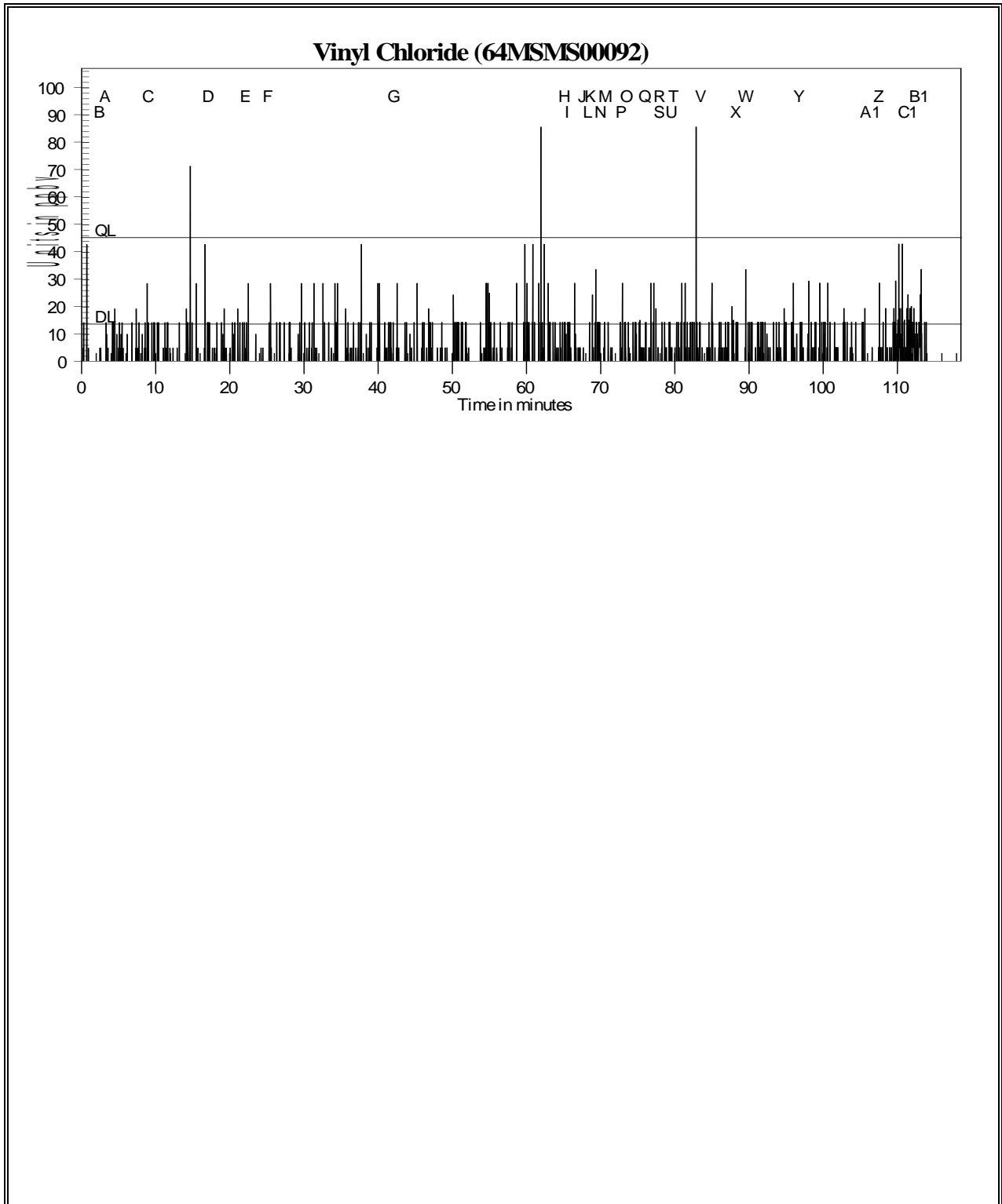


Figure 3f Mobile Monitoring Three in ppbv for Vinyl Chloride

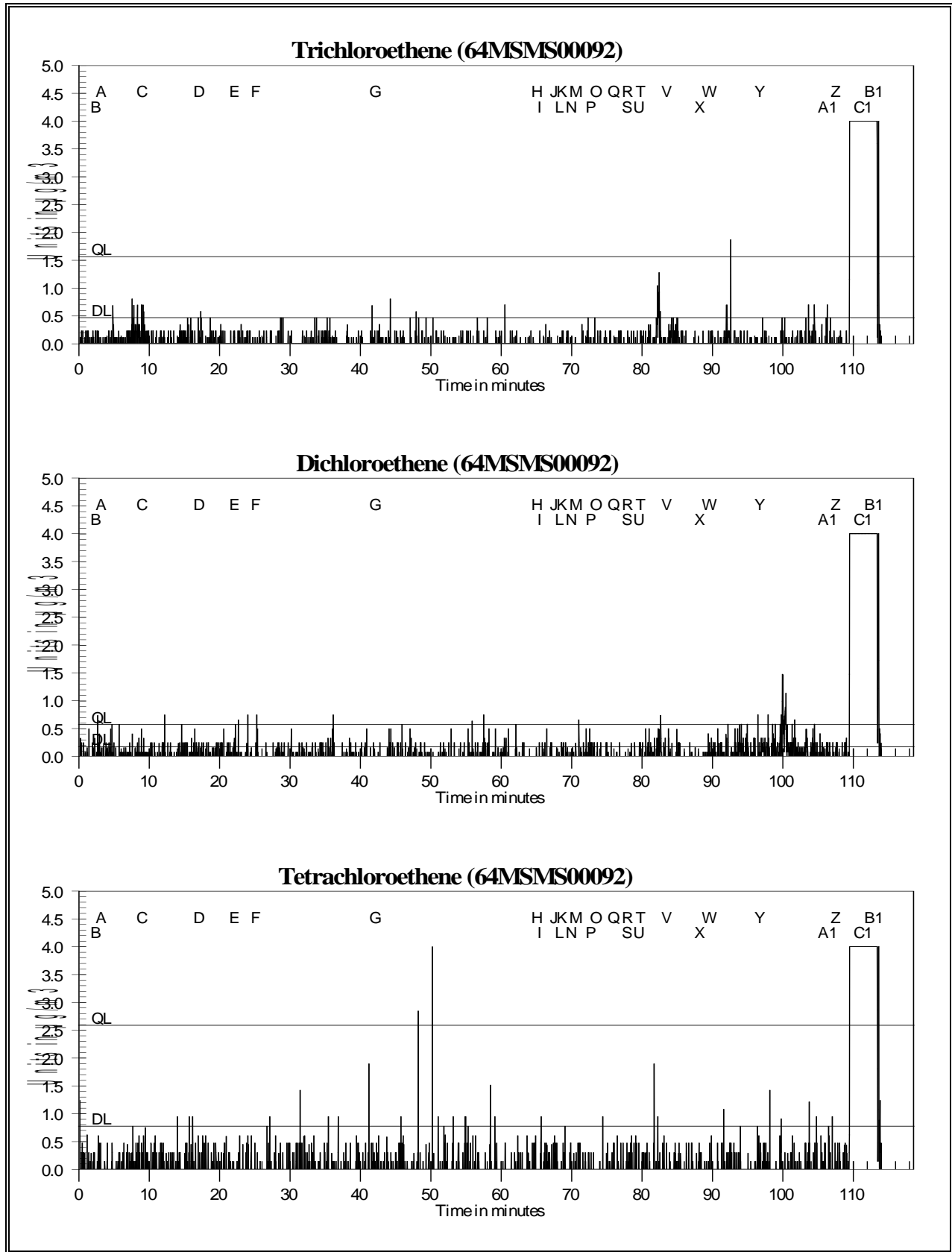


Figure 3g Mobile Monitoring Three in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

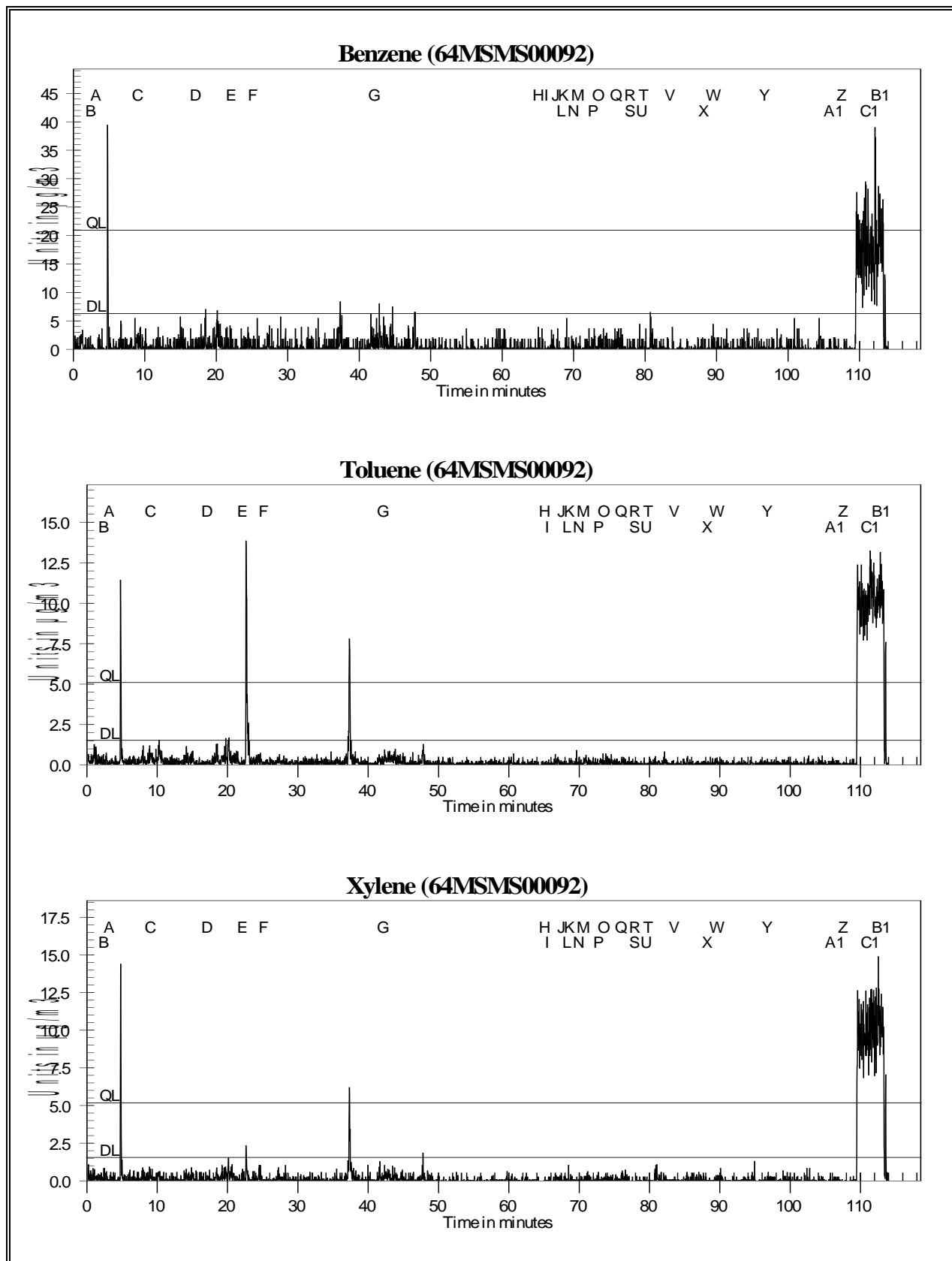


Figure 3h Mobile Monitoring Three in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

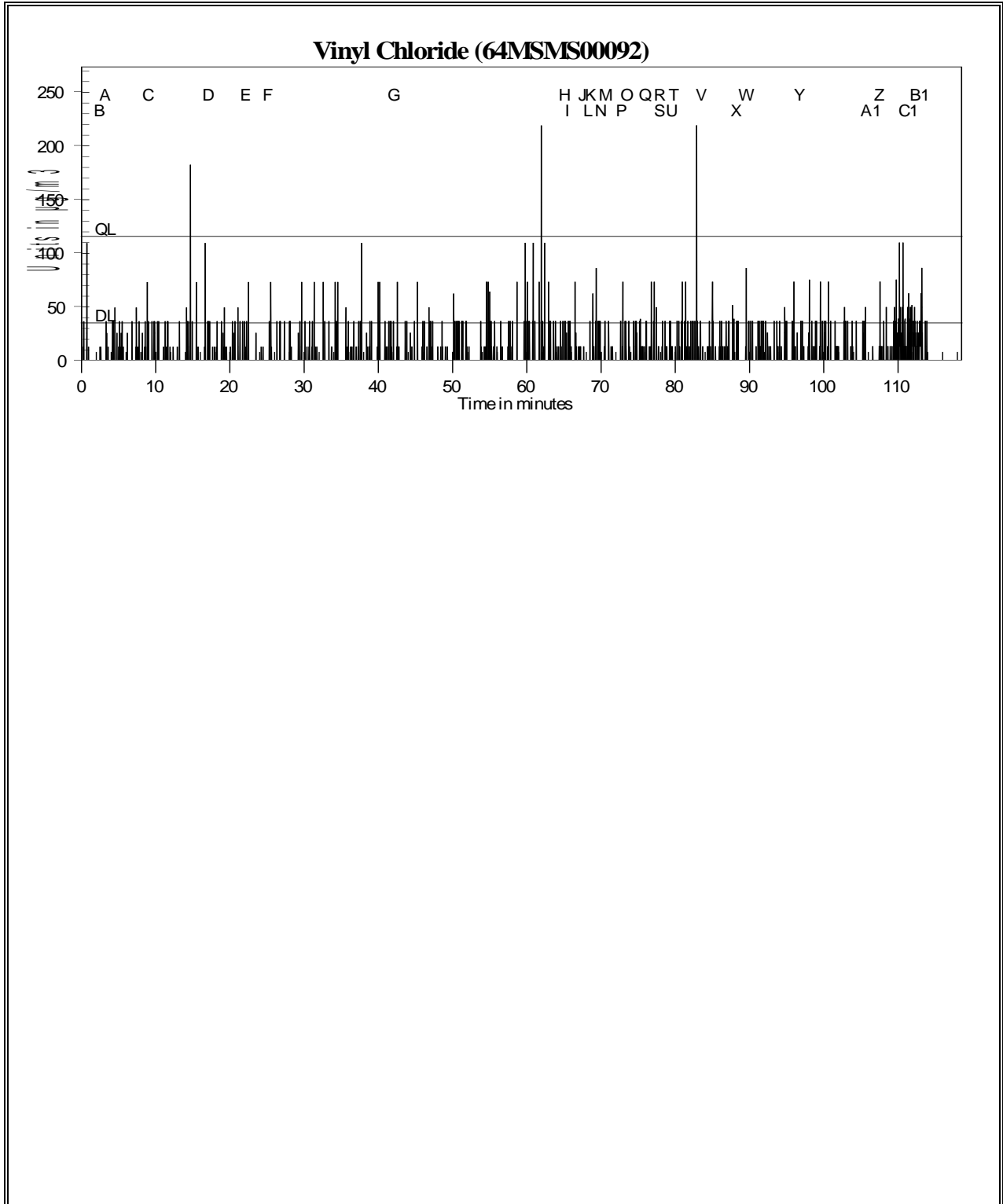


Figure 3i Mobile Monitoring Three in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

APPENDIX A

Sampling Worksheets and Chain of Custody Records

**Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)**

August 2016

**EPA/Environmental Response Team
 Scientific, Engineering, Response & Analytical Services (SERAS) Contract
 Tedlar® Bag Sampling Work Sheet**

Lockheed Martin Corp., Edison, NJ
 EPA Contract No. EP-W-09-031

Site: GRENADA

WA#: 0-293

Sampler: MICKUNAS/WEEDS

EPA/ERT WAM: MICKUNAS

Date: 5/3/16

SERAS Task Leader: KANUPP

Sample #	<u>NW 4430 DM</u>	<u>4431 DM</u>	<u>4432 DM</u>	<u>4433 DM</u>	<u>4434 DM</u>
Location	<u>UNIT 10 SS PORT</u>	<u>UNIT 14</u>	<u>UNIT 15</u>	<u>UNIT 7</u>	<u>UNIT 9</u>
Time	<u>0845</u>	<u>1010</u>	<u>1100</u>	<u>1201</u>	<u>1429</u>
Media	<u>Tedlar®</u>	<u>Tedlar®</u>	<u>Tedlar®</u>	<u>Tedlar®</u>	<u>Tedlar®</u>
Analysis/Method	<u>GC/MS LOOP</u>	<u>GC/MS LOOP</u>	<u>GC/MS LOOP</u>	<u>GC/MS LOOP</u>	<u>GC/MS LOOP</u>
Sample Volume	<u>1L</u>	<u>1L</u>	<u>1L</u>	<u>1L</u>	<u>1L</u>

MET Station on Site? Y N

SS PORT SAMPLES - SOIL GAS SOP 1741: GC/MS LOOP
He Leak ✓ @ ALL LOCATIONS

**EPA/Environmental Response Team
 Scientific, Engineering, Response & Analytical Services (SERAS) Contract
 Tedlar® Bag Sampling Work Sheet**

Lockheed Martin Corp., Edison, NJ
 EPA Contract No. EP-W-09-031

Site: Grenada

WA#: 0-293

Sampler: Mickunas/WEEKS

EPA/ERT WAM: Mickunas

Date: 5/3/16

SERAS Task Leader: KANUPP

Sample #	B 51077 ^{DM} _{MM}	B 51078 ^{MM} _{DM}	B 51079 ^{MM} _{DM}	B 51080 ^{MM} _{DM}	
Location	Unit 12 55 Port	UNIT 17	UNIT 20	UNIT 21	
Time	1506	16:05	1705	1800	
Media	Tedlar®	Tedlar®	Tedlar®	Tedlar®	Tedlar®
Analysis/Method	GC/MS Loop	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP	
Sample Volume	1-L	1L	1L	1L	

MET Station on Site? Y N

55 Port Samples - SAIL GAS
 He Leak ✓ @ all locations

**EPA/Environmental Response Team
 Scientific, Engineering, Response & Analytical Services (SERAS) Contract
 Tedlar® Bag Sampling Work Sheet**

Lockheed Martin Corp., Edison, NJ
 EPA Contract No. EP-W-09-031

Site: GRENADA
 Sampler: MECKUNAS/WEERS
 Date: 5/4/16

WA#: 0-293
 EPA/ERT WAM: MECKUNAS
 SERAS Task Leader: KANUPP

Sample #	B 51060	B 51061	B 51062	B 51063	B 51064
Location	UNIT 13	UNIT 11	UNIT 18	UNIT 22	UNIT 23
Time	0815	0926	11:01	11:49	12:37
Media	Tedlar®	Tedlar®	Tedlar®	Tedlar®	Tedlar®
Analysis/Method	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP
Sample Volume	1L	1L	1L	1L	1L

MET Station on Site? / N

NO LEAK ✓ @ ALL LOCATIONS
 SS PORT SAMPLES - SOIL GAS
 SOP 1741: GC/MS LOOP

**EPA/Environmental Response Team
 Scientific, Engineering, Response & Analytical Services (SERAS) Contract
 Tedlar® Bag Sampling Work Sheet**

Lockheed Martin Corp., Edison, NJ
 EPA Contract No. EP-W-09-031

Site: GRENADA
 Sampler: MICKUNAS/WEEKS
 Date: 5/4/16

WA#: 0-293
 EPA/ERT WAM: MICKUNAS
 SERAS Task Leader: KANUPP

Sample #	C 51065	B 51066	B 51067				
Location	UNIT 8	UNIT 19 *	UNIT 16				
Time	1535	1700	1756				
Media	Tedlar®	Tedlar®	Tedlar®			Tedlar®	Tedlar®
Analysis/Method	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP				
Sample Volume	1L	1L	1L				
MET Station on Site? <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N							

He LEAK ✓ @ ALL LOCATIONS
 SS PORT SAMPLES - SOIL GAS
 * UNIT 19 SS PORT NOT CEMENTED TO AVOID FLOOR DAMAGE. PORT ONLY
 SEALED WITH CLAY ABOVE THE FLOOR TILE.
 SOP 1741: GC/MS LOOP

CHAIN OF CUSTODY RECORD

Project Name: GREUADA
 Project Number: 0-293
 LM Contact: B. KANUPP Phone: 909-541-7671

No: **15703**
 Sheet 01 of 01 (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	GC/MS	TIME	He ✓
	4430	UNIT 10	SG	5/3/16	1	TEXLAR BAG		0845	0%
	4431	UNIT 14						1010	0%
	4432	UNIT 15						1100	0%
	4433	UNIT 7						1201	0%
	4434	UNIT 9						1429	0%
	51077	UNIT 12						1506	0%
	51078	UNIT 17						1605	0%
	51079	UNIT 20						1705	0%
	51080	UNIT 21						1800	0%

Matrix:

Special Instructions:

- A- Air
- AT- Animal Tissue
- DL- Drum Liquids
- DS- Drum Solids
- GW- Groundwater
- O- Oil
- PR- Product
- PT- Plant Tissue
- PW- Potable Water
- S- Soil
- SD- Sediment
- SL- Sludge
- SW- Surface Water
- TX- TCLP Extract
- W- Water
- X- Other

SOP 1741 - GC/MS LOOP

SG - SOIL GAS

**SAMPLES TRANSFERRED FROM
 CHAIN OF CUSTODY #:**

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
ALL ANALYSES	[Signature]	5/3/16	[Signature]	5/3/16	1810						

SEAS
 REAC, Edison, NJ
 (732) 321-4200
 EPA Contract 68-C99-223 EP-W-09-031

CHAIN OF CUSTODY RECORD

Project Name: Grenada Manufacturing (Rockwell)
 Project Number: _____
 LM Contact: _____ Phone: _____

No: **15706**
 Sheet 01 of 01 (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOCs						
	GM-SG-09	GM-EH09	A	5/3/16	1	Tedlar Bag 1655	✓						
/													

Matrix:

Special Instructions:

- A- Air
- AT- Animal Tissue
- DL- Drum Liquids
- DS- Drum Solids
- GW- Groundwater
- O- Oil
- PR- Product
- PT- Plant Tissue
- PW- Potable Water
- S- Soil
- SD- Sediment
- SL- Sludge
- SW- Surface Water
- TX- TCLP Extract
- W- Water
- X- Other

**SAMPLES TRANSFERRED FROM
 CHAIN OF CUSTODY #:**

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
	<i>Johnson</i>	5/3/16	<i>McLellan</i>	5/3/16	1709						

CHAIN OF CUSTODY RECORD

Project Name: GRENADA
 Project Number: 0-293
 LM Contact: B. KANUPT Phone: 99-54-7671

No: **15704**
 Sheet 01 of 01 (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	GC/MS	TEME	He ✓
	51060	UNIT 13	SG	5/4/16	1	TEDLAR BAG		0815	0%
	51061	UNIT 11						0926	0%
	51062	UNIT 18						1101	0%
	51063	UNIT 22						1149	0%
	51064	UNIT 23						1237	0%
	51065	UNIT 8						1535	0%
	51066	UNIT 19						1700	350 PPM
	51067	UNIT 16	↓	↓	↓	↓	↓	1756	0%

Matrix:

- A- Air
- AT- Animal Tissue
- DL- Drum Liquids
- DS- Drum Solids
- GW- Groundwater
- O- Oil
- PR- Product
- PT- Plant Tissue
- PW- Potable Water
- S- Soil
- SD- Sediment
- SL- Sludge
- SW- Surface Water
- TX- TCLP Extract
- W- Water
- X- Other

Special Instructions:

SOP 1741 - GC/MS LOOP

SG - SOIL GAS

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #:

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
ALL ANALYSES	W. Kanupt	5/4/16	J. McCall	5/4/16	1800						

SEBAS
 REAC, Edison, NJ
 (732) 321-4200
 EPA Contract 68-099-223 EP-W-09-031

CHAIN OF CUSTODY RECORD

Project Name: Grenada Manufacturing (Rockwell)
 Project Number: _____
 LM Contact: _____ Phone: _____

No: **15707**
 Sheet **01** of **01** (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOCs						
	GM-SG-10	GMEHID	A	5/4/16		Tedlar Bag 8:45	✓						
<i>(The rest of the table is crossed out with a large X)</i>													

- Matrix:**
- A- Air
 - AT- Animal Tissue
 - DL- Drum Liquids
 - DS- Drum Solids
 - GW- Groundwater
 - O- Oil
 - PR- Product
 - PT- Plant Tissue
 - PW- Potable Water
 - S- Soil
 - SD- Sediment
 - SL- Sludge
 - SW- Surface Water
 - TX- TCLP Extract
 - W- Water
 - X- Other

Special Instructions:

**SAMPLES TRANSFERRED FROM
 CHAIN OF CUSTODY #:**

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
	<i>McCall</i>	5/4/16	<i>McCall</i>	5/4/16	0855						

SEAS
 REAC, Edison, NJ
 (732) 321-4200
 EPA Contract ~~68-C99-223~~ EP-W-09-031

CHAIN OF CUSTODY RECORD

Project Name: Grenada Manufacturing
 Project Number: _____
 LM Contact: _____ Phone: _____

No: **15712**
 Sheet 01 of 01 (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOCs						
	GM-SG-08	GMEH08	A	5/4/16	1	Tedlar bag 1130	✓						
(The remainder of the table is crossed out with a large diagonal line.)													

Matrix:

Special Instructions:

- A- Air
- AT- Animal Tissue
- DL- Drum Liquids
- DS- Drum Solids
- GW- Groundwater
- O- Oil
- PR- Product
- PT- Plant Tissue
- PW- Potable Water
- S- Soil
- SD- Sediment
- SL- Sludge
- SW- Surface Water
- TX- TCLP Extract
- W- Water
- X- Other

**SAMPLES TRANSFERRED FROM
 CHAIN OF CUSTODY #:**

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
	<i>[Signature]</i>	5/4/16	<i>[Signature]</i>	5/4/16	1140						

SEMS
 REAC, Edison, NJ
 (732) 321-4200
 EPA Contract 68-C99-223 EP-W-09-091

CHAIN OF CUSTODY RECORD
 Project Name: Grenada Manufacturing
 Project Number: _____
 LM Contact: _____ Phone: _____

No: **15713**
 Sheet 01 of 01 (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOLs						
	G1-SG-07	GMEH07	A	5/4/16	1	Redlar Bag 1320	✓						
<div style="font-size: 4em; opacity: 0.5; position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); pointer-events: none;">X</div>													

- Matrix:**
- A- Air
 - AT- Animal Tissue
 - DL- Drum Liquids
 - DS- Drum Solids
 - GW- Groundwater
 - O- Oil
 - PR- Product
 - PT- Plant Tissue
 - PW- Potable Water
 - S- Soil
 - SD- Sediment
 - SL- Sludge
 - SW- Surface Water
 - TX- TCLP Extract
 - W- Water
 - X- Other

Special Instructions:

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #:

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
	<i>[Signature]</i>	5/4/16	<i>[Signature]</i>	1434							

SEPTA
 REAC, Edison, NJ
 (732) 321-4200
 EPA Contract 68-C99-223-EP-W-09-031

[Signature]

CHAIN OF CUSTODY RECORD

Project Name: Grenada Manufacturing
 Project Number: _____
 LM Contact: _____ Phone: _____

No: **15720**
 Sheet 01 of 01 (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOCS			
	GM-SG-06	GMEH06	A	5/4/16	1	Tedlar Bag 1450	✓			
<i>[Large diagonal X across the table]</i>										

Matrix:

Special Instructions:

- A- Air
- AT-Animal Tissue
- DL- Drum Liquids
- DS- Drum Solids
- GW- Groundwater
- O- Oil
- PR-Product
- PT-Plant Tissue
- PW- Potable Water
- S- Soil
- SD- Sediment
- SL- Sludge
- SW- Surface Water
- TX-TCLP Extract
- W- Water
- X- Other

**SAMPLES TRANSFERRED FROM
 CHAIN OF CUSTODY #:**

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
	<i>[Signature]</i>	5/4/16	<i>[Signature]</i>	5/4/16	1628						

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APPENDIX B

Complied Meteorological Data

**Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)**

August 2016

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**Local Climatological Data-Hourly Observations Table
Greenwood-Leflore Regional Airport, Greenwood, MS**

Elevation: 133 ft. above sea level

Latitude: 33.496

Longitude: -90.086

01 through 06 May 2016

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
1	53	67	63	87	5	180	29.72	
1	153	64	61	90	0	0	29.72	
1	253	65	61	87	3	130	29.73	
1	320	65	62	90	5	90	29.75	
1	353	67	63	87	0	0	29.75	
1	453	67	63	87	5	130	29.75	
1	553	67	63	87	5	150	29.75	
1	643	68	64	87	6	170	29.77	
1	653	69	64	84	6	160	29.78	
1	706	70	64	81	3	130	29.77	
1	753	70	65	84	3	190	29.8	
1	804	71	66	84	5	180	29.8	
1	841	74	66	76	0	0	29.78	
1	850	73	66	79	5	140	29.8	
1	853	73	66	79	3	120	29.8	
1	902	72	66	82	5	130	29.8	
1	937	73	67	82	6	150	29.8	
1	953	73	67	82	5	VR	29.8	
1	1013	74	67	79	6	180	29.8	
1	1036	73	67	82	10	170	29.83	
1	1053	73	66	79	15	170	29.83	
1	1153	73	66	79	8	160	29.81	
1	1253	78	68	71	13	200	29.8	
1	1353	79	67	67	11	180	29.78	
1	1453	80	66	62	7	140	29.77	
1	1553	81	68	65	9	170	29.78	
1	1653	80	68	67	10	150	29.78	
1	1753	78	67	69	8	140	29.77	
1	1853	75	67	76	6	120	29.77	
1	1953	73	67	82	5	160	29.78	
1	2053	72	67	84	0	0	29.8	
1	2153	71	67	87	6	110	29.8	
1	2253	70	67	90	3	150	29.83	
1	2325	68	65	90	0	0	29.81	
1	2353	68	66	93	3	140	29.81	

Wind direction is the direction from which the wind is blowing.

LST = Local standard time

F = Fahrenheit

% = Percent

MPH = Miles per hour

in. Hg = Inches of mercury

VR = Variable direction

**Local Climatological Data-Hourly Observations Table
Greenwood-Leflore Regional Airport, Greenwood, MS**

Elevation: 133 ft. above sea level

Latitude: 33.496

Longitude: -90.086

01 through 06 May 2016

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
2	53	68	66	93	5	170	29.81	
2	153	68	64	87	5	180	29.8	
2	233	67	64	90	7	170	29.8	
2	253	68	64	87	6	150	29.8	
2	329	68	64	87	6	160	29.78	
2	353	67	64	90	8	180	29.78	
2	453	67	63	87	5	170	29.78	
2	553	67	64	90	0	0	29.8	
2	653	68	64	87	8	210	29.8	
2	718	68	64	87	10	200	29.81	
2	731	68	64	87	9	210	29.81	
2	753	66	62	87	11	340	29.81	T
2	829	63	60	90	9	360	29.81	
2	844	63	59	87	13	360	29.83	
2	851	63	61	93	13	360	29.83	
2	853	63	60	90	11	360	29.83	T
2	929	66	61	84	7	10	29.86	
2	937	66	60	81	6	360	29.88	
2	953	65	60	84	0	0	29.88	
2	1053	66	61	84	6	20	29.83	
2	1140	68	62	81	0	0	29.85	
2	1153	69	62	79	6	220	29.86	
2	1253	67	61	81	0	0	29.88	
2	1308	66	60	81	6	270	29.85	
2	1325	66	60	81	3	280	29.83	
2	1341	66	60	81	5	300	29.83	
2	1353	67	61	81	8	310	29.83	T
2	1402	67	61	81	0	0	29.83	
2	1422	66	60	81	7	310	29.83	
2	1440	66	60	81	9	320	29.83	
2	1453	66	61	84	5	VR	29.81	T
2	1510	66	60	81	6	340	29.81	
2	1553	65	60	84	7	350	29.78	
2	1653	64	60	87	7	330	29.78	
2	1753	64	59	84	3	VR	29.83	
2	1806	64	59	84	5	320	29.83	

Wind direction is the direction from which the wind is blowing.

LST = Local standard time

F = Fahrenheit

% = Percent

VR = Variable direction

MPH = Miles per hour

in. Hg = Inches of mercury

T = Trace precipitation

**Local Climatological Data-Hourly Observations Table
Greenwood-Leflore Regional Airport, Greenwood, MS**

Elevation: 133 ft. above sea level

Latitude: 33.496

Longitude: -90.086

01 through 06 May 2016

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
2	1834	64	59	84	0	0	29.83	
2	1853	64	59	84	0	0	29.83	
2	1917	64	59	84	0	0	29.84	
2	1938	64	60	87	0	0	29.84	
2	1953	64	60	87	3	30	29.84	
2	2024	64	60	87	0	0	29.85	
2	2051	63	61	93	0	0	29.86	
2	2053	63	60	90	0	0	29.86	
2	2153	63	59	87	0	0	29.86	
2	2223	63	60	90	0	0	29.85	
2	2249	63	61	93	0	0	29.85	
2	2253	64	60	87	0	0	29.85	
2	2353	63	60	90	0	0	29.84	
3	53	63	59	87	0	0	29.83	
3	153	61	59	93	0	0	29.81	
3	253	60	57	90	0	0	29.81	
3	353	58	56	93	3	320	29.83	
3	453	58	55	90	0	0	29.83	
3	553	58	55	90	3	330	29.84	
3	653	61	55	81	7	10	29.85	
3	753	63	55	75	7	20	29.88	
3	815	64	55	73	7	30	29.88	
3	853	66	55	68	6	40	29.88	
3	953	68	55	63	8	350	29.88	
3	1053	68	53	59	5	VR	29.86	
3	1153	72	52	50	9	330	29.85	
3	1253	70	51	51	6	340	29.83	
3	1353	71	50	48	10	350	29.83	
3	1453	68	50	53	8	340	29.81	
3	1553	68	48	49	7	350	29.81	
3	1653	68	47	47	10	340	29.81	
3	1753	65	48	54	8	350	29.83	
3	1853	61	47	60	3	330	29.83	
3	1953	58	48	70	3	330	29.83	
3	2053	54	48	80	0	0	29.84	
3	2153	53	49	86	0	0	29.84	
3	2253	53	49	86	0	0	29.83	

Wind direction is the direction from which the wind is blowing.

LST = Local standard time

F = Fahrenheit

% = Percent

MPH = Miles per hour

in. Hg = inches of mercury

VR = Variable direction

**Local Climatological Data-Hourly Observations Table
Greenwood-Leflore Regional Airport, Greenwood, MS**

Elevation: 133 ft. above sea level

Latitude: 33.496

Longitude: -90.086

01 through 06 May 2016

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
3	2353	52	49	90	0	0	29.84	
4	53	51	48	90	0	0	29.83	
4	153	51	48	90	0	0	29.83	
4	253	50	47	90	0	0	29.81	
4	353	49	47	93	0	0	29.8	
4	453	49	46	89	0	0	29.8	
4	553	51	49	93	0	0	29.8	
4	653	56	52	87	3	190	29.8	
4	753	63	53	70	5	240	29.8	
4	853	68	49	51	6	VR	29.8	
4	953	71	46	41	8	290	29.78	
4	1053	73	47	40	9	250	29.77	
4	1153	74	47	38	9	290	29.73	
4	1253	76	49	39	10	280	29.7	
4	1353	76	50	40	6	VR	29.69	
4	1453	77	48	36	11	300	29.67	
4	1553	76	48	37	10	280	29.65	
4	1653	77	49	37	8	290	29.64	
4	1753	74	50	43	3	VR	29.64	
4	1853	73	51	46	3	310	29.65	
4	1953	71	53	53	5	340	29.67	
4	2053	66	51	59	0	0	29.7	
4	2153	59	51	75	0	0	29.7	
4	2253	56	52	87	0	0	29.72	
4	2353	55	51	86	0	0	29.73	
5	53	56	50	80	3	10	29.73	
5	153	53	49	86	0	0	29.75	
5	253	51	47	86	0	0	29.75	
5	353	51	47	86	0	0	29.77	
5	453	50	46	86	0	0	29.78	
5	553	50	49	96	0	0	29.8	
5	653	57	50	78	0	0	29.83	
5	753	61	47	60	0	0	29.84	
5	853	66	46	49	7	230	29.84	
5	953	68	38	33	8	320	29.84	
5	1053	71	40	33	11	340	29.83	
5	1153	72	38	29	18	330	29.81	

Wind direction is the direction from which the wind is blowing.

LST = Local standard time
F = Fahrenheit
% = Percent

MPH = Miles per hour
in. Hg = inches of mercury
VR = Variable direction

**Local Climatological Data-Hourly Observations Table
Greenwood-Leflore Regional Airport, Greenwood, MS**

Elevation: 133 ft. above sea level

Latitude: 33.496

Longitude: -90.086

01 through 06 May 2016

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
5	1253	73	38	28	13	340	29.8	
5	1353	73	38	28	15	320	29.8	
5	1453	73	39	29	10	330	29.78	
5	1553	73	36	26	16	340	29.78	
5	1653	71	35	27	10	350	29.78	
5	1753	69	35	29	10	350	29.78	
5	1853	62	41	46	3	10	29.8	
5	1953	56	46	69	0	0	29.8	
5	2053	54	45	72	0	0	29.83	
5	2153	52	45	77	0	0	29.85	
5	2253	51	44	77	5	20	29.86	
5	2353	54	44	69	8	40	29.88	
6	53	51	44	77	0	0	29.88	
6	153	48	43	83	5	10	29.88	
6	253	47	44	89	0	0	29.89	
6	353	46	43	89	0	0	29.91	
6	453	46	43	89	3	50	29.91	
6	553	48	45	89	0	0	29.92	
6	653	55	45	69	3	10	29.96	
6	753	59	45	60	6	20	29.96	
6	853	64	46	52	3	VR	29.96	
6	953	68	46	45	5	360	29.96	
6	1053	70	46	42	6	VR	29.96	
6	1153	71	46	41		M	29.94	
6	1253	72	44	37	7	290	29.93	
6	1353	74	43	33	6	VR	29.91	
6	1453	74	43	33	8	10	29.89	
6	1553	75	43	32	8	360	29.88	
6	1653	74	44	34	6	350	29.86	
6	1753	72	44	37	5	VR	29.86	
6	1853	63	48	58	0	0	29.85	
6	1953	59	50	72	0	0	29.88	
6	2053	57	51	80	0	0	29.88	
6	2153	55	51	86	0	0	29.89	
6	2253	54	51	90	3	180	29.88	
6	2353	53	49	86	0	0	29.88	

Wind direction is the direction from which the wind is blowing.

LST = Local standard time

F = Fahrenheit

% = Percent

M = Missing data

MPH = Miles per hour

in. Hg = inches of mercury

VR = Variable direction

APPENDIX C

Final Analytical GC/MS Report

**Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)**

August 2016


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GC/MS ANALYTICAL REPORT
GRENADA MANUFACTURING
(a.k.a. ROCKWELL INTERNATIONAL WHEEL AND TRIM)
GRENADA, MISSISSIPPI
JUNE 2016


U.S. EPA Work Assignment No.: SERAS-293
LOCKHEED MARTIN Work Order No.: SER00293
U.S. EPA Contract No.: EP-W-09-031

Submitted to
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6/23/16
Date

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APPENDICES

Appendix A	Sampling Worksheets and Chain of Custody Records
Appendix B	Certificates of Analysis
Appendix C	Calibration Data
Appendix D	Quantitation Reports

1.0 INTRODUCTION

The Environmental Protection Agency/Environmental Response Team (EPA/ERT) issued Work Assignment # SERAS-293 to Lockheed Martin under the Scientific, Engineering, Response, and Analytical Services (SERAS) contract to conduct a vapor intrusion study at the Grenada Manufacturing (a.k.a. Rockwell International Wheel and Trim) in Grenada, Mississippi.

An Agilent®7890 gas chromatograph and 5975C mass spectrometer (GC/MS) were used to perform volatile organic compound (VOC) analysis of sub-slab soil gas and soil gas samples collected in one-liter (L) Tedlar® bags. The following analytes comprised the target compound list: trichloroethene (TCE), tetrachloroethene (PCE), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), toluene, benzene, ethylbenzene, m&p-xylenes, o-xylene, and vinyl chloride (VCL).

On-site GC/MS analyses occurred from 01 May 2016 to 04 May 2016 on 17 sub-slab soil gas and seven soil gas samples collected by SERAS and Superfund Technical Assessment and Response Team (START) personnel, respectively. Analysis was performed in accordance with SERAS standard operating procedure (SOP) #1741, *Field Analysis of VOCs in Gaseous Phase Samples by GC/MSD Loop Injection*. The analytical data meets definitive data (DD) requirements as per EPA Method TO-15 modified for samples collected in Tedlar bags. Table 1 details the samples by chain of custody (COC) record, number of samples, sampled and received dates, sample matrix, and analysis. Copies of the COC records are included in Appendix A.

2.0 PROCEDURES

A Tedlar bag was attached to the sample introduction port of the heated dual loop injection apparatus. One of the loops was filled with a sample and the other loop with internal standard. The content of both loops were simultaneously injected onto the head of the column for subsequent analysis by GC/MS. The Agilent ChemStation® data system was used to acquire the GC/MS response. The Agilent EnviroQuant® software was used to evaluate and process the data. Table 2 lists the operating conditions of the dual loop injection apparatus and the GC/MS system.

2.1 Sub-Slab Soil Gas and Soil Gas Analysis

An aliquot of sample was directly introduced into the first loop of the injection apparatus from a Tedlar bag using the sample introduction port. The second loop was filled from a SUMMA® canister containing the internal standard. The loops were switched in line with the carrier gas to inject the sample and internal standard into the GC/MS system.

The GC oven was temperature programmed to focus the sample on the head of the column and to achieve quick separation of the VOCs in the sample, which were then detected by the MS detector. Comparing their retention times and mass spectra with those of the 500 parts per billion by volume (ppbv) reference standard permits identification of the VOCs in the sample.

2.2 Tuning and Calibration Standards

All certified standards were obtained from commercial vendors and the certificates of analysis (COA) are presented in Appendix B. The standards' cylinder numbers, concentrations, and compound quantitation ions used are presented in Table 3.

Mass spectrometer tuning was checked daily and re-tuned as needed. Five milliliters (mL) of p-bromofluorobenzene (BFB) at one part per million by volume (ppmv) were analyzed to validate the mass spectrometer tuning parameters.

The primary calibration standard and the secondary verification standard both contained 15 target compounds in a balance of nitrogen. The compound concentrations used for the initial and the

continuing calibrations were based on actual concentration of the compound in the standards.

The internal standard mix consists of bromochloromethane, 1,4-difluorobenzene, and chlorobenzene-d₅ each at approximately one ppmv. Fifty microliters (μL) of the internal standard, equivalent to 10 ppbv in a 5-mL injection were co-injected with all standards, blanks, and samples. After the instrument performance check standard criteria were met, the GC/MS was calibrated with a minimum of five concentrations that spanned the monitoring range of interest in an initial calibration sequence to determine the sensitivity and linearity of the instrument's response for the target compounds.

The continuing calibration verification (CCV) at the mid-point concentration and the low level continuing calibration verification (LLCCV) standard at the lowest concentration level were analyzed as daily calibration verification check standards. Samples were analyzed in the 24-hour period after meeting the acceptance criteria for the daily CCV and LLCCV standards.

2.3 Compound Identification and Quantitation

VOCs in the samples were identified and quantitated using the Agilent EnviroQuant software. The software uses mass spectra reference libraries and extracted ion chromatograms matched with retention time windows to identify and quantify target compounds. The report format prints the internal standards, identified compound, calculated concentration, mass spectra (both raw and background subtracted), quantitation, and qualifier ion chromatograms.

The reporting limit (RL) for each compound was calculated using the following equation:

$$RL(ppbv) = \text{Lowest Calibration Standard } (ppbv) \times \text{Dilution Factor } (DF)$$

Dilution of the sample was performed when target compounds exceeded the upper range of the initial calibration. The dilution was documented in the injection logbook and the dilution factor was calculated using the following equation:

$$DF = \frac{\text{Final Sample Volume } (mL)}{\text{Initial Sample Volume } (mL)}$$

The target compound results were calculated using the following equation:

$$\text{Concentration } (ppbv) = \text{Analytical Concentration of Compound } (ppbv) \times DF$$

2.4 Quality Assurance/Quality Control

The following Quality Assurance/Quality Control (QA/QC) procedures were performed for this assignment:

- The GC/MS was tuned, as needed, with perfluorotributylamine (PFTBA) to meet ion abundance criteria for BFB listed in the BFB report included in the calibration data section (Appendix C).
- A six-point initial calibration and continuing calibrations were prepared, analyzed, and acceptance criteria verified prior to sample analysis. Evaluations for the initial calibration standards (ICAL STD) or CCV and LLCCV standards are in the calibration data section (Appendix C).
- Immediately following an initial calibration, the initial calibration verification (ICV) standard was prepared from the secondary standard, analyzed, and acceptance criteria

verified. Evaluation of the ICV standard is in the calibration data section (Appendix C).

- Method blanks (MB) were analyzed after the calibration standards and before samples were analyzed to assess possible laboratory contamination and/or carryover. When necessary, method blanks were analyzed to minimize carryover from standards or samples with high levels of target or non-target VOCs.
- During the 24-hour analytical period, at least one laboratory control sample (LCS) was prepared from the secondary standard, analyzed, and acceptance criteria verified. Evaluations for the LCS results are in the calibration data section (Appendix C).
- Internal standards from all standards, method blanks and samples were evaluated and acceptance criteria verified. Evaluations for the internal standards are in the calibration data section (Appendix C).
- During the 24-hour analytical period, at least one replicate sample (Rep) was analyzed and acceptance criteria verified. Evaluations for the replicate sample results are in the quantitation reports section (Appendix D).
- The lowest standard used in the initial calibration was used for the RL.
- The following is the QA/QC flag used in validating the results:

U - None detected at or above the RL.

All applicable data qualifiers were inserted into the results table.

3.0 RESULTS

Target compound results are reported, to two significant figures and in ppbv and micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), in Table 4 and Table 5, respectively. Target compound results for LCS and replicate samples are reported in ppbv in Table 6 and Table 7, respectively.

The COC records and Tedlar Bag Sampling Worksheets are found in Appendix A. The COAs, for all standards used are found in Appendix B. The calibration package for each day of analysis is included in Appendix C. This package includes copies of the injection logbook # SERAS-L-0450, air and water reports, BFB tune reports, internal standard evaluations, initial and continuing calibration reports, LLCCV calibration reports, ICV and LCS evaluation reports, and all standard quantitation reports. Quantitation reports for all method blanks and samples are included in Appendix D.

All quantitation reports list the retention times, quantitation ions, peak areas, and concentrations of target compounds in ppbv. Calculated concentrations are generated using the average relative response factor from the initial calibration curve for each target compound.

4.0 DISCUSSION OF RESULTS

All analyses were performed using the Loop GC/MS instrument located on TAGA Mobile Laboratory EPA3064.

On 01 May 2016, five mL of BFB was analyzed and found to meet acceptance criteria. Six ICAL STDs were prepared, analyzed, reviewed, and found to meet acceptance criteria. An ICV standard, MB, and LCS were prepared, analyzed, reviewed, and found to meet acceptance criteria.

On 03 May 2016, five mL of BFB was analyzed and found to meet the acceptance criteria. The CCV and LLCCV standards, MB, and LCS were prepared, analyzed, reviewed, and found to meet acceptance

criteria. Nine sub-slab soil gas samples were collected and analyzed on-site by SERAS personnel. Three soil gas samples collected by START personnel were analyzed on-site by SERAS personnel. All internal standards for samples analyzed were reviewed and found to be within the acceptable range. The LCS and one replicate sample analyzed were reviewed and found to meet acceptance criteria.

Preliminary results were reported to the Work Assignment Manager (WAM). Of the nine sub-slab soil gas samples analyzed on 03 May 2016, sample number 51079 (Unit 20) detected the highest concentration for toluene at 4.0 ppbv ($15 \mu\text{g}/\text{m}^3$). There were no concentrations detected above the RL for TCE, PCE, 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, benzene, ethylbenzene, m&p-xylenes, o-xylene, and VCL in the remaining sub-slab soil gas samples. Of the three soil gas samples analyzed on 03 May 2016, sample number GM-SG-09 (GMEH09) detected the highest concentrations for cis-1,2-DCE at 0.59 ppbv ($2.3 \mu\text{g}/\text{m}^3$), benzene at 2.8 ppbv ($9.0 \mu\text{g}/\text{m}^3$), TCE at 14 ppbv ($75 \mu\text{g}/\text{m}^3$), toluene at 3.6 ppbv ($14 \mu\text{g}/\text{m}^3$), ethylbenzene at 10 ppbv ($44 \mu\text{g}/\text{m}^3$), m&p-xylenes at 40 ppbv ($170 \mu\text{g}/\text{m}^3$), and o-xylene at 11 ppbv ($48 \mu\text{g}/\text{m}^3$).

On 04 May 2016, five mL of BFB was analyzed and found to meet the acceptance criteria. The CCV and LLCCV standards, MB, and LCS were prepared, analyzed, reviewed, and found to meet acceptance criteria. Eight sub-slab soil gas samples were collected and analyzed on-site by SERAS personnel. Four soil gas samples collected by START personnel were analyzed on-site by SERAS personnel. All internal standards for samples analyzed were reviewed and found to be within the acceptable range. The LCS and one replicate sample analyzed were reviewed and found to meet acceptance criteria.

Preliminary results were reported to the WAM. Of the eight sub-slab soil gas samples analyzed on 04 May 2016, sample number 51060 (Unit 13) detected the highest concentration for benzene at 0.51 ppbv ($1.6 \mu\text{g}/\text{m}^3$) and toluene at 0.91 ppbv ($3.4 \mu\text{g}/\text{m}^3$). There were no concentrations detected above the RL for TCE, PCE, 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, ethylbenzene, m&p-xylenes, o-xylene, and VCL in the remaining sub-slab soil gas samples. Of the four soil gas samples analyzed on 04 May 2016, sample number GM-SG-10 (GMEH10) detected the highest concentrations for TCE at 1.6 ppbv ($8.4 \mu\text{g}/\text{m}^3$), ethylbenzene at 12 ppbv ($54 \mu\text{g}/\text{m}^3$), m&p-xylenes at 41 ppbv ($180 \mu\text{g}/\text{m}^3$), and o-xylene at 11 ppbv ($48 \mu\text{g}/\text{m}^3$). Sample number GM-SG-08 (GMEH08) detected the highest concentrations for cis-1,2-DCE at 1.1 ppbv ($4.4 \mu\text{g}/\text{m}^3$) and benzene at 37 ppbv ($120 \mu\text{g}/\text{m}^3$) and toluene at 28 ppbv ($100 \mu\text{g}/\text{m}^3$).

TABLES

TABLE 1
Summary of Chain of Custody Records
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

COC #	Number of Samples	Date Sampled	Date Received	Matrix	Analysis
15703	9	5/3/2016	5/3/2016	Sub-slab soil gas	VOC/Loop Method
15705	2	5/3/2016	5/3/2016	Soil gas	VOC/Loop Method
15706	1	5/3/2016	5/3/2016	Soil gas	VOC/Loop Method
15704	8	5/4/2016	5/4/2016	Sub-slab soil gas	VOC/Loop Method
15707	1	5/4/2016	5/4/2016	Soil gas	VOC/Loop Method
15712	1	5/4/2016	5/4/2016	Soil gas	VOC/Loop Method
15713	1	5/4/2016	5/4/2016	Soil gas	VOC/Loop Method
15720	1	5/4/2016	5/4/2016	Soil gas	VOC/Loop Method

TABLE 2
Instrument Conditions for Analysis of Volatile Organic Compounds
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

AGILENT® GC EPA3064

Sample Loop	
Loop Volume	5 mL
Loop Temperature	160°C
Internal Standard Loop	
Loop Volume	50 µL (equivalent to 10ppbv)
Loop Temperature	160°C
GC Inlet	
Gas Type	Helium
Mode	Pulsed Splitless
Temperature	190°C
Pressure	23.099 psi
Pulsed Pressure	50.0 psi
Pulsed Time	1.50 minute
Purge Flow	25.0 mL/minute
Purge Time	0.00 minute
Septum Flow	3.0 mL/minute
Total Flow	29.5 mL/ minute
GC Oven	
Column	Rtx-Volatiles, 20 m x 0.18 mm ID x 2. 0 µm df
Mode	Constant Flow
Flow Rate	1.5 mL/ minute
Cryo (CO ₂)	On
Quick Cryo Cooling	On
Initial Temperature	-10°C
Initial Temperature Hold Time	0.50 minute
Ramp Program	30°C/ minute to 130°C for 0.5 min 25°C/ minute to 160°C for 0.5 min
Final Temperature	160°C
Final Temperature Hold Time	0.5 minute
Total Run Time	7.3667 minute

AGILENT® MS EPA3064

MS Temperatures	
MS Quadrupole	150°C
MS Ion Source	230°C
MS Transfer Line	220°C
MS Tune File	BFB.u
MS Acquisition Mode	Scan/SIM
Solvent Delay	1.35 minute

TABLE 2 (continued)
Instrument Conditions for Analysis of Volatile Organic Compounds
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

SIMS Parameters	
Group 1 Start Time	1.35 min
Ions/Dwell in Group 1	(27/80) (53/80) (54/80) (62/80) (64/80)
Group 2 Start Time	2.90 min
Ions/Dwell in Group 2	(61/40) (63/40) (96/40)
Group 3 Start Time	3.45 min
Ions/Dwell in Group 3	(41/30) (53/30) (61/30) (73/30) (96/30) (98/30)
Group 4 Start Time	3.85 min
Ions/Dwell in Group 4	(27/40) (53/40) (63/40) (65/40) (88/40)
Group 5 Start Time	4.10 min
Ions/Dwell in Group 5	(61/40) (96/40) (98/40)
Group 6 Start Time	4.30 min
Ions/Dwell in Group 6	(49/40) (93/40) (128/40) (130/40)
Group 7 Start Time	4.43 min
Ions/Dwell in Group 7	(61/40) (97/40) (99/40)
Group 8 Start Time	4.60 min
Ions/Dwell in Group 8	(50/30) (63/30) (77/30) (78/30) (88/30) (114/30)
Group 9 Start Time	4.90 min
Ions/Dwell in Group 9	(95/40) (130/40) (132/40)
Group 10 Start Time	5.30 min
Ions/Dwell in Group 10	(91/40) (92/40)
Group 11 Start Time	5.80 min
Ions/Dwell in Group 11	(94/40) (131/40) (164/40) (166/40)
Group 12 Start Time	6.20 min
Ions/Dwell in Group 11	(82/30) (91/30) (105/30) (106/30) (117/30) (119/30)

TABLE 3
Concentrations and Quantitation Ions for Air Toxic Standards
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Linde, Custom Class Calibration Standard

Cylinder Number: CC-82181
 Certification Date: 05 August 2015
 Expiration Date: 05 August 2016

<u>BFB Compound</u>	<u>Quant Ion</u>	<u>Concentration</u>
4-Bromofluorobenzene	N/A	1.03 ppm

Linde, Custom Class Calibration Standard

Cylinder Number: CC-230045
 Certification Date: 29 January 2016
 Expiration Date: 29 January 2017

<u>Internal Standard</u>	<u>Quant Ion</u>	<u>Concentration</u>
Bromochloromethane	49	1.02 ppm
1,4-Difluorobenzene	114	1.05 ppm
Chlorobenzene-d ₅	117	1.05 ppm

Linde, Custom Class Calibration Standard

Cylinder Number: CC-128244
 Certification Date: 21 May 2015
 Expiration Date: 21 May 2016

<u>Volatile Organic Compound</u>	<u>Quant Ion</u>	<u>Concentration</u>
Vinyl chloride	62	20.3 ppm
1,1-Dichloroethene	61	20.2 ppm
trans-1,2-Dichloroethene	61	20.7 ppm
1,1-Dichloroethane	63	20.4 ppm
Methyl tert-Butyl Ether	73	20.1 ppm
cis-1,2-Dichloroethene	61	20.6 ppm
1,1,1-Trichloroethane	97	20.1 ppm
Benzene	78	20.5 ppm
Trichloroethene	130	20.1 ppm
Toluene	91	20.3 ppm
Tetrachloroethene	166	20.2 ppm
Ethylbenzene	91	21.5 ppm
m-Xylene	91	10.2 ppm
p-Xylene	91	10.2 ppm
o-Xylene	91	20.2 ppm

TABLE 3 (continued)
Concentrations and Quantitation Ions for Air Toxic Standards
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Linde, Custom Class Calibration Standard

Cylinder Number: CC-143609
 Certification Date: 22 May 2015
 Expiration Date: 22 May 2016

<u>Volatile Organic Compound</u>	<u>Quant Ion</u>	<u>Concentration</u>
Vinyl chloride	62	20.0 ppm
1,1-Dichloroethene	61	20.0 ppm
trans-1,2-Dichloroethene	61	20.8 ppm
1,1-Dichloroethane	63	20.4 ppm
Methyl tert-Butyl Ether	73	20.0 ppm
cis-1,2-Dichloroethene	61	20.6 ppm
1,1,1-Trichloroethane	97	19.9 ppm
Benzene	78	20.2 ppm
Trichloroethene	130	20.0 ppm
Toluene	91	20.3 ppm
Tetrachloroethene	166	20.1 ppm
Ethylbenzene	91	20.5 ppm
m-Xylene	91	10.1 ppm
p-Xylene	91	10.1 ppm
o-Xylene	91	20.1 ppm

TABLE 4
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00182	64GCMS00184	64GCMS00185	64GCMS00186
Sample Number:	20160503-MB	4430	4431	4432
Sample Location:	Method Blank	Unit 10	Unit 14	Unit 15
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	U	0.51	U	0.51	U	0.51
Trichloroethene	U	0.50	U	0.50	U	0.50	U	0.50
Toluene	U	0.51	U	0.51	U	0.51	U	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	U	0.54	U	0.54	U	0.54
m,p-Xylene	U	0.51	U	0.51	U	0.51	U	0.51
o-Xylene	U	0.51	U	0.51	U	0.51	U	0.51

Results are in parts per billion by volume (ppbv)
U = None detected at or above the Reporting Limit (RL)

TABLE 4 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00187	64GCMS00188	64GCMS00189	64GCMS00190
Sample Number:	4433	GM-SG-05	GM-SG-01	4434
Sample Location:	Unit 7	GMEH05	GMEH01	Unit 9
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	2.4	0.51	2.1	0.51	U	0.51
Trichloroethene	U	0.50	U	0.50	U	0.50	U	0.50
Toluene	U	0.51	3.2	0.51	2.5	0.51	U	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	2.5	0.54	1.8	0.54	U	0.54
m,p-Xylene	U	0.51	8.0	0.51	5.6	0.51	U	0.51
o-Xylene	U	0.51	3.0	0.51	2.5	0.51	U	0.51

Results are in parts per billion by volume (ppbv)
U = None detected at or above the Reporting Limit (RL)

TABLE 4 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00191	64GCMS00193	64GCMS00194	64GCMS00195
Sample Number:	51077	51078	51079	GM-SG-09
Sample Location:	Unit 12	Unit 17	Unit 20	GMEH09
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	0.59	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	U	0.51	U	0.51	2.8	0.51
Trichloroethene	U	0.50	U	0.50	U	0.50	14	0.50
Toluene	U	0.51	U	0.51	4.0	0.51	3.6	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	U	0.54	U	0.54	10	0.54
m,p-Xylene	U	0.51	U	0.51	U	0.51	40	0.51
o-Xylene	U	0.51	U	0.51	U	0.51	11	0.51

Results are in parts per billion by volume (ppbv)
U = None detected at or above the Reporting Limit (RL)

TABLE 4 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00196	64GCMS00201	64GCMS00203	64GCMS00204
Sample Number:	51080	20160504-MB	51060	GM-SG-10
Sample Location:	Unit 21	Method Blank	Unit 13	GMEH10
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	3 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	0.78	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	U	0.51	0.51	0.51	20	0.51
Trichloroethene	U	0.50	U	0.50	U	0.50	1.6	0.50
Toluene	U	0.51	U	0.51	0.91	0.51	18	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	U	0.54	U	0.54	12	0.54
m,p-Xylene	U	0.51	U	0.51	U	0.51	41	0.51
o-Xylene	U	0.51	U	0.51	U	0.51	11	0.51

Results are in parts per billion by volume (ppbv)

U = None detected at or above the Reporting Limit (RL)

TABLE 4 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00205	64GCMS00207	64GCMS00210	64GCMS00211
Sample Number:	51061	51062	GM-SG-08	51063
Sample Location:	Unit 11	Unit 18	GMEH08	Unit 22
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	4 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	1.1	0.52	U	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	U	0.51	37	0.51	U	0.51
Trichloroethene	U	0.50	U	0.50	0.87	0.50	U	0.50
Toluene	U	0.51	U	0.51	28	0.51	U	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	U	0.54	7.8	0.54	U	0.54
m,p-Xylene	U	0.51	U	0.51	23	0.51	U	0.51
o-Xylene	U	0.51	U	0.51	9.7	0.51	U	0.51

Results are in parts per billion by volume (ppbv)
U = None detected at or above the Reporting Limit (RL)

TABLE 4 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00212	64GCMS00213	64GCMS00214	64GCMS00215
Sample Number:	51064	GM-SG-07	GM-SG-06	51065
Sample Location:	Unit 23	GMEH07	GMEH06	Unit 8
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	4 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	3.4	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50	U	0.50	U	0.50
Benzene	U	0.51	5.2	0.51	4.4	0.51	U	0.51
Trichloroethene	U	0.50	U	0.50	U	0.50	U	0.50
Toluene	U	0.51	7.2	0.51	5.9	0.51	U	0.51
Tetrachloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Ethyl Benzene	U	0.54	2.6	0.54	4.5	0.54	U	0.54
m,p-Xylene	U	0.51	6.9	0.51	15	0.51	U	0.51
o-Xylene	U	0.51	3.5	0.51	6.7	0.51	U	0.51

Results are in parts per billion by volume (ppbv)
U = None detected at or above the Reporting Limit (RL)

TABLE 4 (continued)
Results of Target Compounds for Volatile Organic Compounds in ppbv
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00216	64GCMS00217
Sample Number:	51066	51067
Sample Location:	Unit 19	Unit 16
Sample Volume (ml):	5	5
Dilution multiplier:	1	1
Date Sampled:	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL
Vinyl Chloride	U	5.1	U	5.1
1,1-Dichloroethene	U	0.51	U	0.51
Methyl Tert Butyl Ether	U	0.50	U	0.50
trans-1,2-Dichloroethene	U	0.52	U	0.52
1,1-Dichloroethane	U	0.51	U	0.51
cis-1,2-Dichloroethene	U	0.52	U	0.52
1,1,1-Trichloroethane	U	0.50	U	0.50
Benzene	U	0.51	U	0.51
Trichloroethene	U	0.50	U	0.50
Toluene	U	0.51	U	0.51
Tetrachloroethene	U	0.51	U	0.51
Ethyl Benzene	U	0.54	U	0.54
m,p-Xylene	U	0.51	U	0.51
o-Xylene	U	0.51	U	0.51

Results are in parts per billion by volume (ppbv)
U = None detected at or above the Reporting Limit (RL)

TABLE 5
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00182	64GCMS00184	64GCMS00185	64GCMS00186
Sample Number:	20160503-MB	4430	4431	4432
Sample Location:	Method Blank	Unit 10	Unit 14	Unit 15
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	U	1.6	U	1.6	U	1.6
Trichloroethene	U	2.7	U	2.7	U	2.7	U	2.7
Toluene	U	1.9	U	1.9	U	1.9	U	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	U	2.3	U	2.3	U	2.3
m,p-Xylene	U	2.2	U	2.2	U	2.2	U	2.2
o-Xylene	U	2.2	U	2.2	U	2.2	U	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 5 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00187	64GCMS00188	64GCMS00189	64GCMS00190
Sample Number:	4433	GM-SG-05	GM-SG-01	4434
Sample Location:	Unit 7	GMEH05	GMEH01	Unit 9
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	7.8	1.6	6.6	1.6	U	1.6
Trichloroethene	U	2.7	U	2.7	U	2.7	U	2.7
Toluene	U	1.9	12	1.9	9.5	1.9	U	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	11	2.3	7.6	2.3	U	2.3
m,p-Xylene	U	2.2	35	2.2	24	2.2	U	2.2
o-Xylene	U	2.2	13	2.2	11	2.2	U	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 5 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00191	64GCMS00193	64GCMS00194	64GCMS00195
Sample Number:	51077	51078	51079	GM-SG-09
Sample Location:	Unit 12	Unit 17	Unit 20	GMEH09
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	3 May 2016	3 May 2016	3 May 2016
Date Analyzed:	3 May 2016	3 May 2016	3 May 2016	3 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	2.3	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	U	1.6	U	1.6	9.0	1.6
Trichloroethene	U	2.7	U	2.7	U	2.7	75	2.7
Toluene	U	1.9	U	1.9	15	1.9	14	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	U	2.3	U	2.3	44	2.3
m,p-Xylene	U	2.2	U	2.2	U	2.2	170	2.2
o-Xylene	U	2.2	U	2.2	U	2.2	48	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 5 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00196	64GCMS00201	64GCMS00203	64GCMS00204
Sample Number:	51080	20160504-MB	51060	GM-SG-10
Sample Location:	Unit 21	Method Blank	Unit 13	GMEH10
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	3 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	3 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	3.1	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	U	1.6	1.6	1.6	63	1.6
Trichloroethene	U	2.7	U	2.7	U	2.7	8.4	2.7
Toluene	U	1.9	U	1.9	3.4	1.9	68	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	U	2.3	U	2.3	54	2.3
m,p-Xylene	U	2.2	U	2.2	U	2.2	180	2.2
o-Xylene	U	2.2	U	2.2	U	2.2	48	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 5 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00205	64GCMS00207	64GCMS00210	64GCMS00211
Sample Number:	51061	51062	GM-SG-08	51063
Sample Location:	Unit 11	Unit 18	GMEH08	Unit 22
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	4 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	4.4	2.1	U	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	U	1.6	120	1.6	U	1.6
Trichloroethene	U	2.7	U	2.7	4.7	2.7	U	2.7
Toluene	U	1.9	U	1.9	100	1.9	U	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	U	2.3	34	2.3	U	2.3
m,p-Xylene	U	2.2	U	2.2	99	2.2	U	2.2
o-Xylene	U	2.2	U	2.2	42	2.2	U	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 5 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00212	64GCMS00213	64GCMS00214	64GCMS00215
Sample Number:	51064	GM-SG-07	GM-SG-06	51065
Sample Location:	Unit 23	GMEH07	GMEH06	Unit 8
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	4 May 2016	4 May 2016	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	12	1.8	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1	U	2.1	U	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7	U	2.7	U	2.7
Benzene	U	1.6	17	1.6	16	1.6	U	1.6
Trichloroethene	U	2.7	U	2.7	U	2.7	U	2.7
Toluene	U	1.9	27	1.9	22	1.9	U	1.9
Tetrachloroethene	U	3.5	U	3.5	U	3.5	U	3.5
Ethyl Benzene	U	2.3	11	2.3	20	2.3	U	2.3
m,p-Xylene	U	2.2	30	2.2	66	2.2	U	2.2
o-Xylene	U	2.2	15	2.2	29	2.2	U	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 5 (continued)
Results of Target Compounds for Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00216	64GCMS00217
Sample Number:	51066	51067
Sample Location:	Unit 19	Unit 16
Sample Volume (ml):	5	5
Dilution multiplier:	1	1
Date Sampled:	4 May 2016	4 May 2016
Date Analyzed:	4 May 2016	4 May 2016

Compound	Results	RL	Results	RL
Vinyl Chloride	U	13	U	13
1,1-Dichloroethene	U	2.0	U	2.0
Methyl Tert Butyl Ether	U	1.8	U	1.8
trans-1,2-Dichloroethene	U	2.1	U	2.1
1,1-Dichloroethane	U	2.0	U	2.0
cis-1,2-Dichloroethene	U	2.1	U	2.1
1,1,1-Trichloroethane	U	2.7	U	2.7
Benzene	U	1.6	U	1.6
Trichloroethene	U	2.7	U	2.7
Toluene	U	1.9	U	1.9
Tetrachloroethene	U	3.5	U	3.5
Ethyl Benzene	U	2.3	U	2.3
m,p-Xylene	U	2.2	U	2.2
o-Xylene	U	2.2	U	2.2

Results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

U = None detected at or above the Reporting Limit (RL)

TABLE 6
Summary of Laboratory Control Samples for Volatile Organic Compounds
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File 64GCMS00177
Standard Number 20160501-LCS
Standard Name 500 ppbv STD
Loop Size 5 mL

Sample Multplier: Units Date Analyzed	1 ppbv 5/1/2016	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %
Vinyl Chloride	519.04	500.00	104	70-130
1,1-Dichloroethene	501.37	500.00	100	70-130
Methyl Tert Butyl Ether	509.26	500.00	102	70-130
trans-1,2-Dichloroethene	554.42	520.00	107	70-130
1,1-Dichloroethane	523.28	510.00	103	70-130
cis-1,2-Dichloroethene	515.21	515.00	100	70-130
1,1,1-Trichloroethane	496.69	497.50	100	70-130
Benzene	528.46	505.00	105	70-130
Trichloroethene	487.48	500.00	97	70-130
Toluene	524.91	507.50	103	70-130
Tetrachloroethene	461.41	502.50	92	70-130
Ethyl Benzene	574.00	512.50	112	70-130
m,p-Xylene	558.00	505.00	110	70-130
o-Xylene	512.60	502.50	102	70-130

Secondary Standard Cylinder # CC-143609

TABLE 6 (continued)
Summary of Laboratory Control Samples for Volatile Organic Compounds
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File 64GCMS00183
Standard Number 20160503-LCS
Standard Name 500 ppbv STD
Loop Size 5 mL

Sample Multplier: Units Date Analyzed	1 ppbv 5/3/2016	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %
Vinyl Chloride	501.49	500.00	100	70-130
1,1-Dichloroethene	483.69	500.00	97	70-130
Methyl Tert Butyl Ether	481.58	500.00	96	70-130
trans-1,2-Dichloroethene	539.13	520.00	104	70-130
1,1-Dichloroethane	500.94	510.00	98	70-130
cis-1,2-Dichloroethene	498.27	515.00	97	70-130
1,1,1-Trichloroethane	477.05	497.50	96	70-130
Benzene	523.68	505.00	104	70-130
Trichloroethene	476.07	500.00	95	70-130
Toluene	523.41	507.50	103	70-130
Tetrachloroethene	458.16	502.50	91	70-130
Ethyl Benzene	575.21	512.50	112	70-130
m,p-Xylene	562.72	505.00	111	70-130
o-Xylene	516.67	502.50	103	70-130

Secondary Standard Cylinder # CC-143609

TABLE 6 (continued)
Summary of Laboratory Control Samples for Volatile Organic Compounds
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File 64GCMS00202
Standard Number 20160504-LCS
Standard Name 500 ppbv STD
Loop Size 5 mL

Sample Multplier: Units Date Analyzed	1 ppbv 5/4/2016	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %
Vinyl Chloride	412.65	500.00	83	70-130
1,1-Dichloroethene	396.96	500.00	79	70-130
Methyl Tert Butyl Ether	395.31	500.00	79	70-130
trans-1,2-Dichloroethene	464.75	520.00	89	70-130
1,1-Dichloroethane	430.36	510.00	84	70-130
cis-1,2-Dichloroethene	422.36	515.00	82	70-130
1,1,1-Trichloroethane	406.56	497.50	82	70-130
Benzene	488.47	505.00	97	70-130
Trichloroethene	436.45	500.00	87	70-130
Toluene	466.30	507.50	92	70-130
Tetrachloroethene	410.93	502.50	82	70-130
Ethyl Benzene	515.56	512.50	101	70-130
m,p-Xylene	512.90	505.00	102	70-130
o-Xylene	465.41	502.50	93	70-130

Secondary Standard Cylinder # CC-143609

TABLE 7
Summary of Replicate Samples for Volatile Organic Compounds
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00191	64GCMS00192		
Sample Number:	51077	51077		
Sample Location:	Unit 12	Unit 12 Rep		
Sample Volume (ml):	5	5		
Dilution multiplier:	1	1		
Date Sampled:	3 May 2016	3 May 2016		
Date Analyzed:	3 May 2016	3 May 2016		RPD Limit
Compound	Results	Results	RPD	
Vinyl Chloride	U	U	NC	25
1,1-Dichloroethene	U	U	NC	25
Methyl Tert Butyl Ether	U	U	NC	25
trans-1,2-Dichloroethene	U	U	NC	25
1,1-Dichloroethane	U	U	NC	25
cis-1,2-Dichloroethene	U	U	NC	25
1,1,1-Trichloroethane	U	U	NC	25
Benzene	U	U	NC	25
Trichloroethene	U	U	NC	25
Toluene	U	U	NC	25
Tetrachloroethene	U	U	NC	25
Ethyl Benzene	U	U	NC	25
m,p-Xylene	U	U	NC	25
o-Xylene	U	U	NC	25

Results are in parts per billion by volume (ppbv)

U = None detected at or above the Reporting Limit (RL)

RPD = Relative Percent Difference

NC = Not Calculable

Rep = Replicate

TABLE 7 (continued)
Summary of Replicate Samples for Volatile Organic Compounds
Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
June 2016

Data File:	64GCMS00205	64GCMS00206		
Sample Number:	51061	51061		
Sample Location:	Unit 11	Unit 11 Rep		
Sample Volume (ml):	5	5		
Dilution multiplier:	1	1		
Date Sampled:	4 May 2016	4 May 2016		
Date Analyzed:	4 May 2016	4 May 2016		
Compound	Results	Results	RPD	RPD Limits
Vinyl Chloride	U	U	NC	25
1,1-Dichloroethene	U	U	NC	25
Methyl Tert Butyl Ether	U	U	NC	25
trans-1,2-Dichloroethene	U	U	NC	25
1,1-Dichloroethane	U	U	NC	25
cis-1,2-Dichloroethene	U	U	NC	25
1,1,1-Trichloroethane	U	U	NC	25
Benzene	U	U	NC	25
Trichloroethene	U	U	NC	25
Toluene	U	U	NC	25
Tetrachloroethene	U	U	NC	25
Ethyl Benzene	U	U	NC	25
m,p-Xylene	U	U	NC	25
o-Xylene	U	U	NC	25

Results are in parts per billion by volume (ppbv)

U = None detected at or above the Reporting Limit (RL)

RPD = Relative Percent Difference

NC = Not Calculable

Rep = Replicate

APPENDIX A

Sampling Worksheets and Chain of Custody Records

**Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)**

GC/MS Analytical Report

June 2016

**EPA/Environmental Response Team
 Scientific, Engineering, Response & Analytical Services (SERAS) Contract
 Tedlar® Bag Sampling Work Sheet**

Lockheed Martin Corp., Edison, NJ
 EPA Contract No. EP-W-09-031

Site: GRENADA

WA#: 0-293

Sampler: MICKUNAS/WECKS

EPA/ERT WAM: MICKUNAS

Date: 5/3/16

SERAS Task Leader: KANUPP

Sample #	^{NOV} 4430 ^{DM}	4431 ^{NOV} ^{DM}	4432 ^{NOV} ^{DM}	4433 ^{NOV} ^{DM}	4434 ^{NOV} ^{DM}
Location	UNIT 10 SS PORT	UNIT 14	UNIT 15	UNIT 7	UNIT 9
Time	0845	1010	1100	1201	1429
Media	Tedlar®	Tedlar®	Tedlar®	Tedlar®	Tedlar®
Analysis/Method	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP
Sample Volume	1L	1L	1L	1L	1L

MET Station on Site? Y / N

SS PORT SAMPLES - SOIL GAS SOP 174: GC/MS LOOP
 He LEAK ✓ @ ALL LOCATIONS

**EPA/Environmental Response Team
 Scientific, Engineering, Response & Analytical Services (SERAS) Contract
 Tedlar® Bag Sampling Work Sheet**

Lockheed Martin Corp., Edison, NJ
 EPA Contract No. EP-W-09-031

Site: Grenada

WA#: 0-293

Sampler: Mickunas/WEEKS

EPA/ERT WAM: Mickunas

Date: 5/3/16

SERAS Task Leader: KANUPP

Sample #	B 51077 ^{DM} _{WJ}	B 51078 ^{DM} _{WJ}	B 51079 ^{WJ} _{DM}	B 51080 ^{WJ} _{DM}	
Location	Unit 12 55 Port	UNIT 17	UNIT 20	UNIT 21	
Time	1506	16:05	1705	1800	
Media	Tedlar®	Tedlar®	Tedlar®	Tedlar®	
Analysis/Method	GC/MS Loop	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP	
Sample Volume	1-L	1L	1L	1L	

MET Station on Site? Y N

55 Port Samples - SAIL GAS
 He Leak ✓ @ all locations

**EPA/Environmental Response Team
 Scientific, Engineering, Response & Analytical Services (SERAS) Contract
 Tedlar® Bag Sampling Work Sheet**

Lockheed Martin Corp., Edison, NJ
 EPA Contract No. EP-W-09-031

Site: GRENADE

WA#: 0-293

Sampler: MECKONAS/WEERS

EPA/ERT WAM: MECKONAS

Date: 5/4/16

SERAS Task Leader: KANUPP

Sample #	B 51060	B 51061	B 51062	B 51063	B 51064
Location	UNIT 13	UNIT 11	UNIT 18	UNIT 22	UNIT 23
Time	0815	0926	11:01	11:49	12:37
Media	Tedlar®	Tedlar®	Tedlar®	Tedlar®	Tedlar®
Analysis/Method	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP
Sample Volume	1L	1L	1L	1L	1L

MET Station on Site? / N

NO LEAK ✓ @ ALL LOCATIONS
 SS PORT SAMPLES - SOLID GAS
 SOP 1741: GC/MS LOOP

**EPA/Environmental Response Team
 Scientific, Engineering, Response & Analytical Services (SERAS) Contract
 Tedlar® Bag Sampling Work Sheet**

Lockheed Martin Corp., Edison, NJ
 EPA Contract No. EP-W-09-031

Site: GRENADA
 Sampler: MICKUNAS/WEIKS
 Date: 5/4/16

WA#: 0-293
 EPA/ERT WAM: MICKUNAS
 SERAS Task Leader: KANUPP

Sample #	C 51065	B 51066	B 51067		
Location	UNIT 8	UNIT 19 *	UNIT 16		
Time	1535	1700	1756		
Media	Tedlar®	Tedlar®	Tedlar®	Tedlar®	Tedlar®
Analysis/Method	GC/MS LOOP	GC/MS LOOP	GC/MS LOOP		
Sample Volume	1L	1L	1L		

MET Station on Site? Y N

He LEAK ✓ @ ALL LOCATIONS
 SS PORT SAMPLES - SOLID GAS
 * UNIT 19 SS PORT NOT CEMENTED TO AVOID FLOOR DAMAGE. PORT ONLY
 SEALED WITH CLAY ABOVE THE FLOOR TILE.
 SOP 1744: GC/MS LOOP

CHAIN OF CUSTODY RECORD

Project Name: GREUADA
 Project Number: 0-293
 LM Contact: B. KANUPP Phone: 919 541 7671

No: **15703**
 Sheet 01 of 01 (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	GC/MS	TIME	He ✓
	4430	UNIT 10	SG	5/3/16	1	TEFLAR BAG		0845	0%
	4431	UNIT 14						1010	0%
	4432	UNIT 15						1100	0%
	4433	UNIT 7						1201	0%
	4434	UNIT 9						1429	0%
	51077	UNIT 12						1506	0%
	51078	UNIT 17						1605	0%
	51079	UNIT 20						1705	0%
	51080	UNIT 21						1800	0%

- Matrix:
- A- Air
 - AT-Animal Tissue
 - DL- Drum Liquids
 - DS- Drum Solids
 - GW- Groundwater
 - O- Oil
 - PR-Product
 - PT-Plant Tissue
 - PW- Potable Water
 - S- Soil
 - SD- Sediment
 - SL- Sludge
 - SW- Surface Water
 - TX-TCLP Extract
 - W- Water
 - X- Other

Special Instructions:
 SOP 1741 - GC/MS LOOP

SG - SOIL GAS

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #:

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
ALL ANALYSES	[Signature]	5/3/16	[Signature]	5/3/16	1810						

SEAS
 REAC, Edison, NJ
 (732) 321-4200
 EPA Contract ~~68-C99-223~~ EP-W-09-031

CHAIN OF CUSTODY RECORD

Project Name: Grenada Manufacturing (Rockwell)
 Project Number: _____
 LM Contact: _____ Phone: _____

No: **15705**
 Sheet **01** of **01** (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOCs				
	GM-SG-05	GMEH05	SG	5/3/16	1	Tedlar bag 1055	X				
	GM-SG-01	GMEH01	SG	5/3/16	1	Tedlar bag 1205	X				
/											

Matrix:

- A- Air
- AT-Animal Tissue
- DL- Drum Liquids
- DS- Drum Solids
- GW- Groundwater
- O- Oil
- PR-Product
- PT-Plant Tissue
- PW- Potable Water
- S- Soil
- SD- Sediment
- SL- Sludge
- SW- Surface Water
- TX-TCLP Extract
- W- Water
- X- Other

SG - Soil Gas

Special Instructions:

**SAMPLES TRANSFERRED FROM
 CHAIN OF CUSTODY #:**

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
ALL analyzed	<i>[Signature]</i>	5/3/16	<i>[Signature]</i>	5/3/16	1405						

SEAB
 REAC, Edison, NJ
 (732) 321-4200
 EPA Contract 68-C99-223 EP-W-09-031

CHAIN OF CUSTODY RECORD

Project Name: GRENADA
 Project Number: 0-293
 LM Contact: B. KANUPT Phone: 99-541-7671

No: **15704**
 Sheet **01** of **01** (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	GC/MS	TIME	He ✓
	51060	UNIT 13	SG	5/4/16	1	TEDLAR BAG		0815	0%
	51061	UNIT 11	↓	↓	↓	↓		0926	0%
	51062	UNIT 18	↓	↓	↓	↓		1101	0%
	51063	UNIT 22	↓	↓	↓	↓		1149	0%
	51064	UNIT 23	↓	↓	↓	↓		1237	0%
	51065	UNIT 8	↓	↓	↓	↓		1535	0%
	51066	UNIT 19	↓	↓	↓	↓		1700	350 PPM
	51067	UNIT 16	↓	↓	↓	↓	✓	1756	0%

- Matrix:**
- A- Air
 - AT-Animal Tissue
 - DL- Drum Liquids
 - DS- Drum Solids
 - GW- Groundwater
 - O- Oil
 - PR-Product
 - PT-Plant Tissue
 - PW- Potable Water
 - S- Soil
 - SD- Sediment
 - SL- Sludge
 - SW- Surface Water
 - TX-TCLP Extract
 - W- Water
 - X- Other

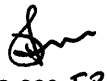
Special Instructions:
 SOP 1741 - GC/MS LOOP

SG - SOIL GAS

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #:

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
ALL ANALYSES	[Signature]	5/4/16	[Signature]	5/4/16	1800						

SERAS
 REAC, Edison, NJ
 (732) 321-4200
 EPA Contract 68-C99-223 EP-W-09-031



CHAIN OF CUSTODY RECORD

Project Name: Grenada Manufacturing (Rockwell)
 Project Number: _____
 LM Contact: _____ Phone: _____

No: **15707**
 Sheet **01** of **01** (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOCs				
	GM-SG-10	GMEHID	A	5/4/16		Tedlar Bag 8:45	✓				
(The rest of the table is crossed out with a large X)											

Matrix:

- A- Air
- AT-Animal Tissue
- DL- Drum Liquids
- DS- Drum Solids
- GW- Groundwater
- O- Oil
- PR-Product
- PT-Plant Tissue
- PW- Potable Water
- S- Soil
- SD- Sediment
- SL- Sludge
- SW- Surface Water
- TX-TCLP Extract
- W- Water
- X- Other

Special Instructions:

**SAMPLES TRANSFERRED FROM
 CHAIN OF CUSTODY #:**

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
	<i>Atkin</i>	5/4/16	<i>J. McCall</i>	5/4/16	0855						

SEBAS
 REAC, Edison, NJ
 (732) 321-4200
 EPA Contract ~~68-C99-223~~ EP-W-09-031

CHAIN OF CUSTODY RECORD
 Project Name: Grenada Manufacturing
 Project Number: _____
 LM Contact: _____ Phone: _____

No: **15712**
 Sheet **01** of **01** (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOC						
	GM-SG-08	GMEH08	A	5/4/16	1	Tedlar Bag 1130	✓						
(The remainder of the table is crossed out with a large diagonal line.)													

- Matrix:**
- A- Air
 - AT-Animal Tissue
 - DL- Drum Liquids
 - DS- Drum Solids
 - GW- Groundwater
 - O- Oil
 - PR-Product
 - PT-Plant Tissue
 - PW- Potable Water
 - S- Soil
 - SD- Sediment
 - SL- Sludge
 - SW- Surface Water
 - TX-TCLP Extract
 - W- Water
 - X- Other

Special Instructions:

**SAMPLES TRANSFERRED FROM
 CHAIN OF CUSTODY #:**

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
	<i>[Signature]</i>	5/4/16	<i>[Signature]</i>	5/4/16	1140						

SEPA5
 REAC, Edison, NJ
 (732) 321-4200
 EPA Contract 68-C99-223 EP-W-09-031

CHAIN OF CUSTODY RECORD
 Project Name: Grenada Manufacturing
 Project Number: _____
 LM Contact: _____ Phone: _____

No: **15713**
 Sheet 01 of 01 (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOCs				
	G1-56-07	GMEH07	A	5/4/16	1	Redlar Bag 1320	✓				
<div style="font-size: 4em; opacity: 0.5;">X</div>											

- Matrix:**
- A- Air
 - AT-Animal Tissue
 - DL- Drum Liquids
 - DS- Drum Solids
 - GW- Groundwater
 - O- Oil
 - PR-Product
 - PT-Plant Tissue
 - PW- Potable Water
 - S- Soil
 - SD- Sediment
 - SL- Sludge
 - SW- Surface Water
 - TX-TCLP Extract
 - W- Water
 - X- Other

Special Instructions:

**SAMPLES TRANSFERRED FROM
 CHAIN OF CUSTODY #:**

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
	<i>[Signature]</i>	5/4/16	<i>[Signature]</i>	1434							

SERIS
 REAC, Edison, NJ
 (732) 321-4200
 EPA Contract ~~68-C99-223~~ EP-W-09-031

CHAIN OF CUSTODY RECORD

Project Name: Grenada Manufacturing
 Project Number: _____
 LM Contact: _____ Phone: _____

No: **15720**
 Sheet **01** of **01** (Do not copy)
 (for addnl. samples use new form)

Sample Identification

Analyses Requested

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOGS				
	GM-SG-06	GMEH06	A	5/4/16	1	Tedlar Bag 1450	✓				
<div style="font-size: 4em; opacity: 0.5; transform: rotate(45deg); position: absolute; top: 50%; left: 50%; pointer-events: none;">X</div>											

- Matrix:**
- A- Air
 - AT-Animal Tissue
 - DL- Drum Liquids
 - DS- Drum Solids
 - GW- Groundwater
 - O- Oil
 - PR-Product
 - PT-Plant Tissue
 - PW- Potable Water
 - S- Soil
 - SD- Sediment
 - SL- Sludge
 - SW- Surface Water
 - TX-TCLP Extract
 - W- Water
 - X- Other

Special Instructions:

**SAMPLES TRANSFERRED FROM
 CHAIN OF CUSTODY #:**

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
	<i>[Signature]</i>	5/4/16	<i>[Signature]</i>	5/4/16	1628						

APPENDIX B

Certificates of Analysis

**Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)**

GC/MS Analytical Report

June 2016

THE LINDE GROUP



SHIPPED TO: Lockheed Martin
2890 Woodbridge Avenue
Edison, NJ 08837

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	113075188	Cylinder Size: 2A (8" X 47.5")
Production#:	3005150	Cylinder # : CC-82181
Certification Date:	Aug-05-2015	Cylinder Pressure: 1400 psig
P.O.# :	Vaida, Amit M	Cylinder Valve: CGA 350 / Steel
Blend Type:	CERTIFIED	Cylinder Volume: 29.5 Liter
Material#:	14004551	Cylinder Material: Aluminum
Traceability:	NIST by weight	Gas Volume: 2800 Liters
Expiration Date:	Aug-05-2016	Blend Tolerance: 10% Relative
Do NOT use under:	150 psig	Analytical Accuracy: 5% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
4-Bromofluorobenzene	460-00-4	1.00 ppm	1.03 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: 
Matthew Booth

DATE: Aug-05-2015

THE LINDE GROUP



SHIPPED TO: Lockheed Martin
2890 Woodbridge Ave.
Edison, NJ 08837-3679

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	113663706	Cylinder Size:	152 (8" X 47.5")
Production#:	1366443	Cylinder # :	CC-230045
Certification Date:	Jan-29-2016	Cylinder Pressure:	2000 psig
P.O.# :	CC-Order	Cylinder Valve:	CGA 350 / Steel
Blend Type:	CERTIFIED	Cylinder Volume:	29.5 Liter
Material#:	24088165	Cylinder Material:	Aluminum
Traceability:	NIST by weight	Gas Volume:	4000 Liters
Expiration Date:	Jan-29-2017	Blend Tolerance:	10% Relative
Do NOT use under:	150 psig	Analytical Accuracy:	5% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Bromochloromethane	74-97-5	1.00 ppm	1.02 ppm
1,4-Difluorobenzene	540-36-3	1.00 ppm	1.05 ppm
Chlorobenzene-d5	3114-55-4	1.00 ppm	1.05 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: 
Lou Lorenzetti

DATE: Jan-29-2016



SHIPPED TO: Lockheed Martin
2890 Woodbridge Ave.
Edison, NJ 08837-3679

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	112822282	Cylinder Size:	2A (8" X 47.5")
Production#:	1337402	Cylinder # :	CC-128244
Certification Date:	May-21-2015	Cylinder Pressure:	736 psig
P.O.# :	4101771497	Cylinder Valve:	CGA 350 / Steel
Blend Type:	CERTIFIED	Cylinder Volume:	29.5 Liter
Material#:	24086386	Cylinder Material:	Aluminum
Traceability:	NIST by weight	Gas Volume:	1472 Liters
Expiration Date:	May-21-2016	Blend Tolerance:	5% Relative
Do NOT use under:	150 psig	Analytical Accuracy:	2% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Vinyl Chloride	75-01-4	20.0 ppm	20.3 ppm
1,1-Dichloroethene	75-35-4	20.0 ppm	20.2 ppm
Trans-1,2-Dichloroethylene	156-60-5	20.0 ppm	20.7 ppm
1,1-Dichloroethane	75-34-3	20.0 ppm	20.4 ppm
Methyl Tert-Butyl Ether	1634-04-4	20.0 ppm	20.1 ppm
Cis-1,2-Dichloroethylene	156-59-2	20.0 ppm	20.6 ppm
1,1,1-Trichloroethane	71-55-6	20.0 ppm	20.1 ppm
Benzene	71-43-2	20.0 ppm	20.5 ppm
Trichloroethylene	79-01-6	20.0 ppm	20.1 ppm
Toluene	108-88-3	20.0 ppm	20.3 ppm
Tetrachloroethylene	127-18-4	20.0 ppm	20.2 ppm
Ethylbenzene	100-41-4	20.0 ppm	21.5 ppm
p-xylene	106-42-3	10.0 ppm	10.2 ppm
m-xylene	108-38-3	10.0 ppm	10.2 ppm
o-xylene	95-47-6	20.0 ppm	20.2 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: 
Lou Lorenzetti

DATE: May-21-2015

THE LINDE GROUP



SHIPPED TO: Lockheed Martin
2890 Woodbridge Ave.
Edison, NJ 08837-3679

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	112822282	Cylinder Size:	2A (8" X 47.5")
Production#:	1340136	Cylinder #:	CC-143609
Certification Date:	May-22-2015	Cylinder Pressure:	736 psig
P.O.#:	4101771497	Cylinder Valve:	CGA 350 / Steel
Blend Type:	CERTIFIED	Cylinder Volume:	29.5 Liter
Material#:	24086386	Cylinder Material:	Aluminum
Traceability:	NIST by weight	Gas Volume:	1472 Liters
Expiration Date:	May-22-2016	Blend Tolerance:	5% Relative
Do NOT use under:	150 psig	Analytical Accuracy:	2% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Vinyl Chloride	75-01-4	20.0 ppm	20.0 ppm
1,1-Dichloroethene	75-35-4	20.0 ppm	20.0 ppm
Trans-1,2-Dichloroethylene	156-60-5	20.0 ppm	20.8 ppm
1,1-Dichloroethane	75-34-3	20.0 ppm	20.4 ppm
Methyl Tert-Butyl Ether	1634-04-4	20.0 ppm	20.0 ppm
Cis-1,2-Dichloroethylene	156-59-2	20.0 ppm	20.6 ppm
1,1,1-Trichloroethane	71-55-6	20.0 ppm	19.9 ppm
Benzene	71-43-2	20.0 ppm	20.2 ppm
Trichloroethylene	79-01-6	20.0 ppm	20.0 ppm
Toluene	108-88-3	20.0 ppm	20.3 ppm
Tetrachloroethylene	127-18-4	20.0 ppm	20.1 ppm
Ethylbenzene	100-41-4	20.0 ppm	20.5 ppm
p-xylene	106-42-3	10.0 ppm	10.1 ppm
m-xylene	108-38-3	10.0 ppm	10.1 ppm
o-xylene	95-47-6	20.0 ppm	20.1 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: 
Lou Lorenzetti

DATE: May-22-2015

APPENDIX C

Calibration Data

**Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)**

GC/MS Analytical Report

June 2016

4/26/16 646CMS00158 BFB / 1ppmv / 5ml
 646CMS00159 20160426-01 / 500ppbv CCV / 5ml ~~OK~~
 646CMS00160 20160426-02 / 500ppbv LCS / 5ml ~~OK~~

4/27/16 Standards are the same as 042616
 Time Reports generated @ 125°C

Standards Prep

20160427-01 500ppbv CCV 975ml H2A + 25ml 1° STD
 20160427-02 500ppbv LCS 975ml H2A + 25ml 2° STD

646CMS00161 BFB / 1ppmv / 5ml
 646CMS00162 BFB / 1ppmv / 5ml ReRun
 646CMS00163 20160427-01 / 500ppbv CCV / 5ml
 646CMS00164 20160427-02 / 500ppbv LCS / 5ml High OK
 646CMS00165 20160427-02 / 500ppbv LCS / 5ml ReRun OK

4/28/16 changed Helium ~1900psi
 air ~ 25% purged down to ~ 4% ~~OK~~

4/29/16 Standards are the same as 042616
 Time Reports generated @ 125°C

646CMS00166 BFB / 1ppmv / 5ml ~~OK~~
 Prepared for mobilization ~~OK~~

5/1/16 Air & water checked @ 125°C
 Time report generated @ 125°C

646CMS00167 BFB / 1ppmv / 5ml ~~OK~~

Standard Prep

STD 2016 0501-01	/ 10ppmv ICAL	/ 500ml H2A + 500 ml	1° std.	cc128244
-02	/ 2ppmv	" / 900ml "	"	"
-03	/ 500ppbv	" / 975ml "	"	"

Continued on Page 11

J McCall
 Signed

5/1/16
 Date

Read and Understood By

Signed

Date

5/1/16 continued

standard prep

STD20160501-04 / 100ppbv ICAL / 950ml HZA + 50ml STD20160501-02
 -05 / 5ppbv " / 990ml " + 10ml STD20160501-03
 -06 / 0.5ppbv " / 900ml " + 100ml STD20160501-05
 -07 / 500ppbv ICV / 975ml " + 25ml 2nd std cc143609
 20160501-MB / Method Blank / 1000ml "
 20160501-LCS / 500ppbv LCS / Same as ICV

new tank	64GCM500168	STD20160501-01 / 10ppmv ICAL / 5ml	} Loop 2016-0501.H	OK
	64GCM500169	-02 / 2ppmv " / "		} OK
	64GCM500170	-03 / 500ppbv ICAL / "		
	64GCM500171	-04 / 100ppbv " / "		
	64GCM500172	-05 / 5ppbv " / "		
	64GCM500173	-06 / 0.5ppbv " / "		
	64GCM500174	-07 / 500ppbv ICV / "		
	64GCM500175	20160501-MB / Method Blank / 5ml		
64GCM500176	" -MB / Method Blank / 5ml	OK		
64GCM500177	" -LCS / 500ppbv LCS / 5ml	OK		

changing from eastern to central time (6:46 to 5:46)

5/3/16 Air & water checked @ 125°C
 Tune report generated @ 125°C

64GCM500178 BFB / 1ppmv / 5ml OK
 STD20160503-01 / 500ppbv CCV / 975ml HZA + 25ml 1st std cc138244
 -02 / 5ppbv LCCV / 990ml HZA + 10ml STD20160503-01
 -03 / 0.5ppbv LCCV / 900ml HZA + 100ml STD20160503-02
 20160503-MB / 1000ml HZA / Method Blank
 20160503-LCS / 500ppbv LCS / 975ml HZA + 25ml 2nd std cc143609
 64GCM500179 STD20160503-01 / 500ppbv CCV / 5ml OK
 64GCM500180 STD20160503-02 / 5ppbv LCCV / 5ml OK
 64GCM500181 STD20160503-03 / 0.5ppbv LCCV / 5ml OK
 64GCM500182 ~~STD~~ 20160503-MB / Method Blank / 5ml OK
 64GCM500183 20160503-LCS / 500ppbv LCS / 5ml OK

Continued on Page 10

Read and Understood By

J. McCall
 Signed

5/3/16
 Date

Signed

Date

5/3/16 continued		
64 GCMS 00184	4430 / unit 10 / 5ml	ok
64 GCMS 00185	4431 / unit 14 / 5ml	ok
64 GCMS 00186	4432 / unit 15 / 5ml	ok
64 GCMS 00187	4433 / unit 7 / 5ml	ok
64 GCMS 00188	GM-SG-05 / GMEH05 / 5ml	ok
64 GCMS 00189	GM-SG-01 / GMEH01 / 5ml	ok
64 GCMS 00190	4434 / unit 9 / 5ml	ok
64 GCMS 00191	51077 / unit 12 / 5ml	ok
64 GCMS 00192	51077 / unit 12 Rep / 5ml	ok
64 GCMS 00193	51078 / unit 17 / 5ml	ok
64 GCMS 00194	51079 / unit 20 / 5ml	ok
64 GCMS 00195	GM-SG-09 / GMEH09 / 5ml	ok
64 GCMS 00196	51080 / unit 21 / 5ml	ok

5/4/16 Air & water checked @ 125°C

Time report generated @ 125°C

64 GCMS 00197 BFB / 1ppmV / 5ml ok

STD 20160504-01 / 500 ppbv CCV / 975ml HZA + 25ml 1st std CC 128244

-02 / 5 ppbv LLCV / 990ml + 10ml STD 20160504-01

-03 / 0.5 ppbv LLCV / 900ml + 100ml STD 20160504-02

20160504-MB / Method Blank / 1000ml HZA ≠

20160504-LCS / 500 ppbv LCS / 975ml HZA + 25ml 2nd std. CC 43609

new tank	64 GCMS 00198	STD 20160504-01 / 500 ppbv CCV / 5ml	ok
	64 GCMS 00199	-02 / 5 ppbv LLCV / 5ml	ok
	64 GCMS 00200	-03 / 0.5 ppbv LLCV / 5ml	ok
	64 GCMS 00201	20160504-MB / Method Blank / 5ml	ok
	64 GCMS 00202	20160504-LCS / 500 ppbv LCS / 5ml	ok
	64 GCMS 00203	51060 / unit 13 / 5ml	ok
	64 GCMS 00204	GM-SG-10 / GMEH10 / 5ml	ok
	64 GCMS 00205	51061 / unit 11 / 5ml	ok
	64 GCMS 00206	51061 / unit 11 Rep / 5ml	ok
	64 GCMS 00207	51062 / unit 18 / 5ml	ok
	64 GCMS 00208	GM-SG-08 / GMEH08 / 5ml	ok
	64 GCMS 00209	Blank / Instrument Blank / 5ml	ok
	64 GCMS 00210	GM-SG-08 / GMEH08 / 5ml	ok

Remen poor injection

Continued on Page 11

Read and Understood By


Signed

5/4/16
Date

Signed

Date

5/4/16 continued

64 GCMS 00211	51063 / unit 22 / 5ml	ok
64 GCMS 00212	51064 / unit 23 / 5ml	ok
64 GCMS 00213	GM-SG-07 / GMEH07 / 5ml	ok
64 GCMS 00214	GM-SG-06 / GMEH06 / 5ml	ok
64 GCMS 00215	51065 / unit 8 / 5ml	ok
64 GCMS 00216	51066 / unit 19 / 5ml	ok
64 GCMS 00217	51067 / unit 16 / 5ml	ok

5/5/16 Air & Water checked @ 125°C

Time report generated @ 125°C

64 GCMS 00218 BFB / 1ppmv / 5ml ok

STD 20160505-01 / 500ppbv¹⁰ 10ppmv ICAL / 500ml HZA + 500ml 1st std CC128244

-02 / 2ppmv ICAL / 900ml HZA + 100ml 1st std CC128244

-03 / 500ppbv ICAL / 975ml " + 25ml " "

-04 / 100ppbv " / 950ml " + 50ml STD20160505-02

-05 / 5ppbv " / 990ml " + 10ml STD20160505-03

-06 / 0.5ppbv " / 900ml " + 100ml STD20160505-05

-07 / 500ppbv ICV / 975ml " + 25ml 2^o std CC143609

20160505 - MB / 1000ml HZA

- LCS / 975ml HZA + 25ml 2^o std CC143609 / 500ppbv LCS

64 GCMS 00219 STD 20160505-01 / 10ppmv ICAL / 5ml

64 GCMS 00220 -02 / 2ppmv ICAL / 5ml

64 GCMS 00221 -03 / 500ppbv " / 5ml

64 GCMS 00222 -04 / 100ppbv " / 5ml

64 GCMS 00223 -05 / 5ppbv " / 5ml

64 GCMS 00224 -06 / 0.5ppbv " / 5ml

64 GCMS 00225 -07 / 500ppbv ICV / 5ml

64 GCMS 00226 20160505 - MB / Method Blank / 5ml

64 GCMS 00227 20160505 - LCS / 500ppbv LCS / 5ml

PM 5/10/16

Continued on Page

Read and Understood By

[Signature]
Signed

5/10/16
Date

Signed

Date

METHOD CONTROL PARAMETERS

Method Information for: C:\MSDCHEM\1\METHODS\GSVLOOPBFB.M

Method Sections To Run:

- () Save Copy of Method With Data
- () Instrument Control Pre-Run Cmd/Macro =
- () Data Analysis Pre-Run Cmd/Macro =
- (X) Data Acquisition
- (X) Data Analysis
- () Instrument Control Post-Run Cmd/Macro =
- () Data Analysis Post-Run Cmd/Macro =

Method Comments:

GC valve method

END OF METHOD CONTROL PARAMETERS

C:\MSDCHEM\1\METHODS\GSVLOOPBFB.M
 Wed May 18 10:54:13 2016

Control Information

 Sample Inlet : GC
 Injection Source : Manual
 Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

Oven
 Equilibration Time 0.3 min
 Max Temperature 250 degrees C
 Slow Fan Disabled
 Oven Program On
 40 °C for 1 min
 then 40 °C/min to 160 °C for 3 min
 Run Time 7 min

Sample Overlap
 Sample overlap is not enabled

Front SS Inlet He
 Mode Pulsed Splitless
 Heater On 190 °C
 Pressure On 29.631 psi
 Total Flow On 29.5 mL/min
 Septum Purge Flow On 3 mL/min
 Gas Saver On 20 mL/min After 3 min
 Injection Pulse Pressure 50 psi Until 1.5 min
 Purge Flow to Split Vent 25 mL/min at 0 min

Thermal Aux 2 {MSD Transfer Line}
 Heater On
 Temperature Program On
 200 °C for 0 min
 Run Time 7 min

Column #1
 Restek Rtx-VolatilesSN 1015941; CAT.# 51675
 250 °C: 20 m x 180 µm x 2 µm
 In: Front SS Inlet He
 Out: Vacuum

(Initial) 40 °C
 Pressure 29.045 psi
 Flow 1.5 mL/min
 Average Velocity 54.393 cm/sec
 Holdup Time 0.61283 min
 Flow Program Off
 1.5 mL/min for 0 min
 Run Time 7 min

Valve 1
 Switching Valve Off

IONFOCUS : 75.922
ENTRANCE_LE : 0.000
EMVOLTS : 1305.882

Actual EMV : 1200
GAIN FACTOR : 1.45

AMUGAIN : 1916.000
AMUOFFSET : 123.313
FILAMENT : 2.000
DCPOLARITY : 0.000
ENTLENSOFFS : 12.800@ 3 12.800@ 50 13.302@ 69 16.314@131 16.314@219 20.580@
414 23.341@502 23.341@1049
MASSGAIN : -729.000
MASSOFFSET : -40.000

END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

METHOD CONTROL PARAMETERS

Method Information for: C:\MSDCHEM\1\METHODS\gsvLOOP_VOC.M

Method Sections To Run:

- () Save Copy of Method With Data
- () Instrument Control Pre-Run Cmd/Macro =
- () Data Analysis Pre-Run Cmd/Macro =
- (X) Data Acquisition
- (X) Data Analysis
- () Instrument Control Post-Run Cmd/Macro =
- () Data Analysis Post-Run Cmd/Macro =

Method Comments:

GC valve method

END OF METHOD CONTROL PARAMETERS

C:\MSDCHEM\1\METHODS\gsvLOOP_VOC.M
Wed May 18 10:57:00 2016

Control Information

Sample Inlet : GC
Injection Source : Manual
Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

Oven
Equilibration Time 0.3 min
Max Temperature 250 degrees C
Slow Fan Disabled
Oven Program On
-10 °C for 0.5 min
then 30 °C/min to 130 °C for 0.5 min
then 25 °C/min to 160 °C for 0.5 min
Run Time 7.3667 min

Sample Overlap
Sample overlap is not enabled

Front SS Inlet He
Mode Pulsed Splitless
Heater On 190 °C
Pressure On 23.099 psi
Total Flow On 29.5 mL/min
Septum Purge Flow On 3 mL/min
Gas Saver Off
Injection Pulse Pressure 50 psi Until 1.5 min
Purge Flow to Split Vent 25 mL/min at 0 min

Thermal Aux 2 {MSD Transfer Line}
Heater On
Temperature Program On
200 °C for 0 min
Run Time 7.3667 min

Column #1
Restek Rtx-VolatilesSN 1015941; CAT.# 51675
250 °C: 20 m x 180 µm x 2 µm
In: Front SS Inlet He
Out: Vacuum

(Initial) -10 °C
Pressure 23.099 psi
Flow 1.5 mL/min
Average Velocity 52.9 cm/sec
Holdup Time 0.63012 min
Flow Program On
1.5 mL/min for 0 min
Run Time 7.3667 min

Valve 1

Switching Valve Off
Valve Box
Heater On 160 °C

Signals
Test Plot Save Off
50 Hz
Test Plot Save Off
50 Hz
Test Plot Save Off
50 Hz
Test Plot Save Off
50 Hz

Run Time Events
Time (min) Event Position Setpoint
0 Valve Off
0.02 Valve On

MS ACQUISITION PARAMETERS

General Information

Tune File : bfb_20160510.u
Acquisition Mode : Scan/SIM

MS Information

Solvent Delay : 1.35 min
EMV Mode : Gain Factor
Gain Factor : 3.10
Resulting EM Voltage : 1271

[Scan Parameters]

Low Mass : 38.0
High Mass : 300.0
Threshold : 150
Sample # : 3 A/D Samples 8

[Sim Parameters]

GROUP 1
Group ID : 1
Resolution : High
Plot 1 Ion : 64.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell) (Mass, Dwell)
(27.00, 80) (53.00, 80) (54.00, 80)
(62.00, 80) (64.00, 80)

GROUP 2
Group ID : 2
Resolution : High
Group Start Time : 2.90
Plot 1 Ion : 61.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell) (Mass, Dwell)
(61.00, 40) (63.00, 40) (96.00, 40)

GROUP 3
Group ID : 3
Resolution : High
Group Start Time : 3.45
Plot 1 Ion : 61.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell) (Mass, Dwell)
(41.00, 30) (53.00, 30) (61.00, 30)

(73.00, 30) (96.00, 30) (98.00, 30)

GROUP 4
Group ID : 4
Resolution : High
Group Start Time : 3.85
Plot 1 Ion : 63.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell) (Mass, Dwell)
(27.00, 40) (53.00, 40) (63.00, 40)
(65.00, 40) (88.00, 40)

GROUP 5
Group ID : 5
Resolution : High
Group Start Time : 4.10
Plot 1 Ion : 61.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell) (Mass, Dwell)
(61.00, 40) (96.00, 40) (98.00, 40)

GROUP 6
Group ID : 6
Resolution : High
Group Start Time : 4.30
Plot 1 Ion : 49.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell) (Mass, Dwell)
(49.00, 40) (93.00, 40) (128.00, 40)
(130.00, 40)

GROUP 7
Group ID : 7
Resolution : High
Group Start Time : 4.43
Plot 1 Ion : 61.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell) (Mass, Dwell)
(61.00, 40) (97.00, 40) (99.00, 40)

GROUP 8
Group ID : 8
Resolution : High
Group Start Time : 4.60
Plot 1 Ion : 78.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell) (Mass, Dwell)
(50.00, 30) (63.00, 30) (77.00, 30)
(78.00, 30) (88.00, 30) (114.00, 30)

GROUP 9
Group ID : 9
Resolution : High
Group Start Time : 4.90
Plot 1 Ion : 95.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell) (Mass, Dwell)
(95.00, 40) (130.00, 40) (132.00, 40)

GROUP 10
Group ID : 10
Resolution : High
Group Start Time : 5.30
Plot 1 Ion : 91.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell)
(91.00, 40) (92.00, 40)

GROUP 11
Group ID : 11
Resolution : High
Group Start Time : 5.80
Plot 1 Ion : 166.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell) (Mass, Dwell)
(94.00, 40) (131.00, 40) (164.00, 40)
(166.00, 40)

GROUP 12
Group ID : 12
Resolution : High
Group Start Time : 6.20
Plot 1 Ion : 91.00
Ions/Dwell In Group (Mass, Dwell) (Mass, Dwell) (Mass, Dwell)
(82.00, 30) (91.00, 30) (105.00, 30)
(106.00, 30) (117.00, 30) (119.00, 30)

[MSZones]

MS Source : 230 C maximum 250 C
MS Quad : 150 C maximum 200 C

END OF MS ACQUISITION PARAMETERS

TUNE PARAMETERS for SN: US10353601

Trace Ion Detection is OFF.

EMISSION : 34.610
ENERGY : 69.922
REPELLER : 19.904
IONFOCUS : 75.922
ENTRANCE_LE : 0.000
EMVOLTS : 1305.882

Actual EMV : 1200
GAIN FACTOR : 1.45

AMUGAIN : 1916.000
AMUOFFSET : 123.313
FILAMENT : 2.000
DCPOLARITY : 0.000
ENTLENSOFFS : 12.800@ 3 12.800@ 50 13.302@ 69 16.314@131 16.314@219 20.580@
414 23.341@502 23.341@1049
MASSGAIN : -729.000
MASSOFFSET : -40.000

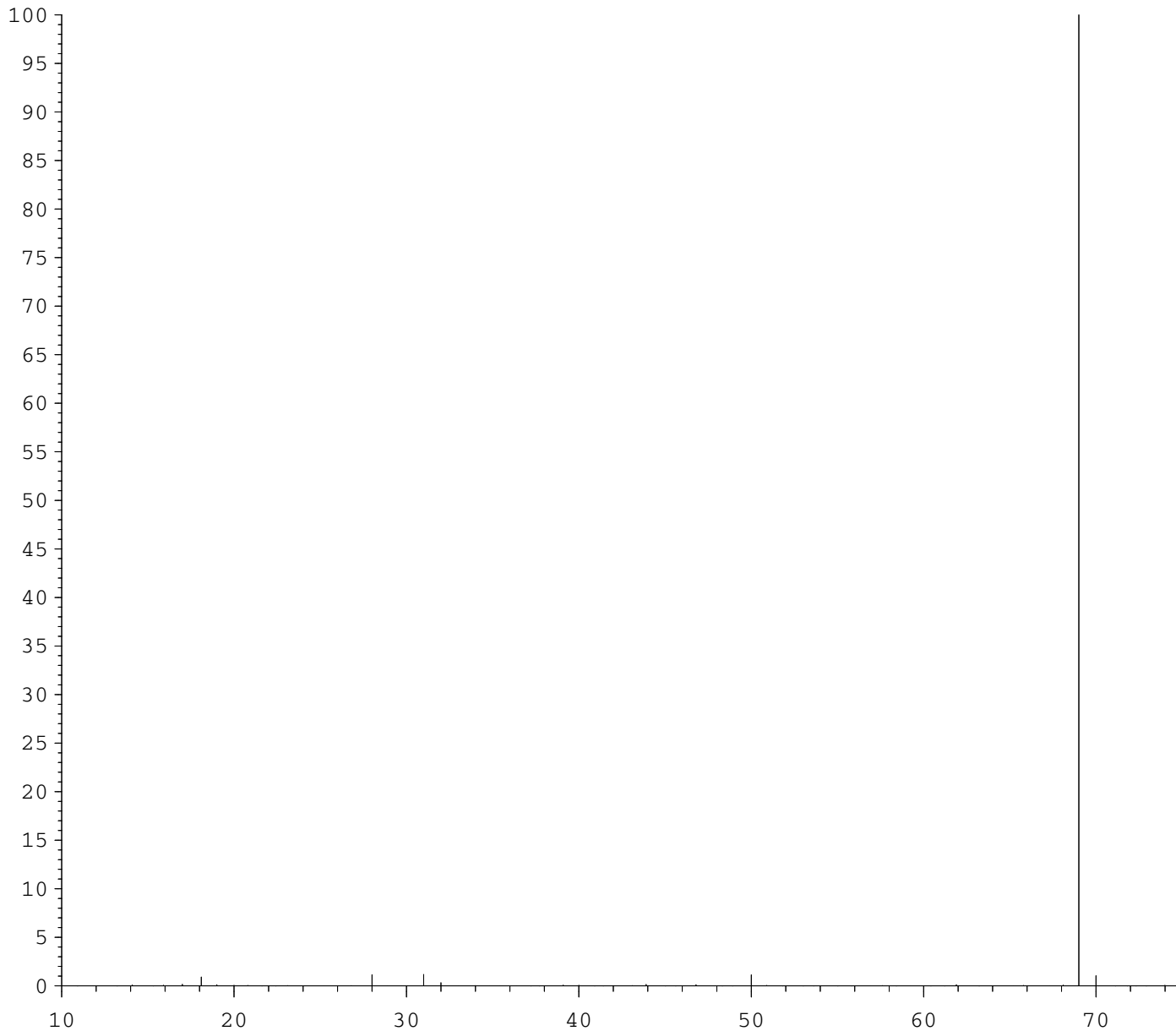
END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

Instrument: EPA 2871
 Sun May 01 15:54:27 2016

C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
 70 peaks Base: 69.00 Abundance: 508096

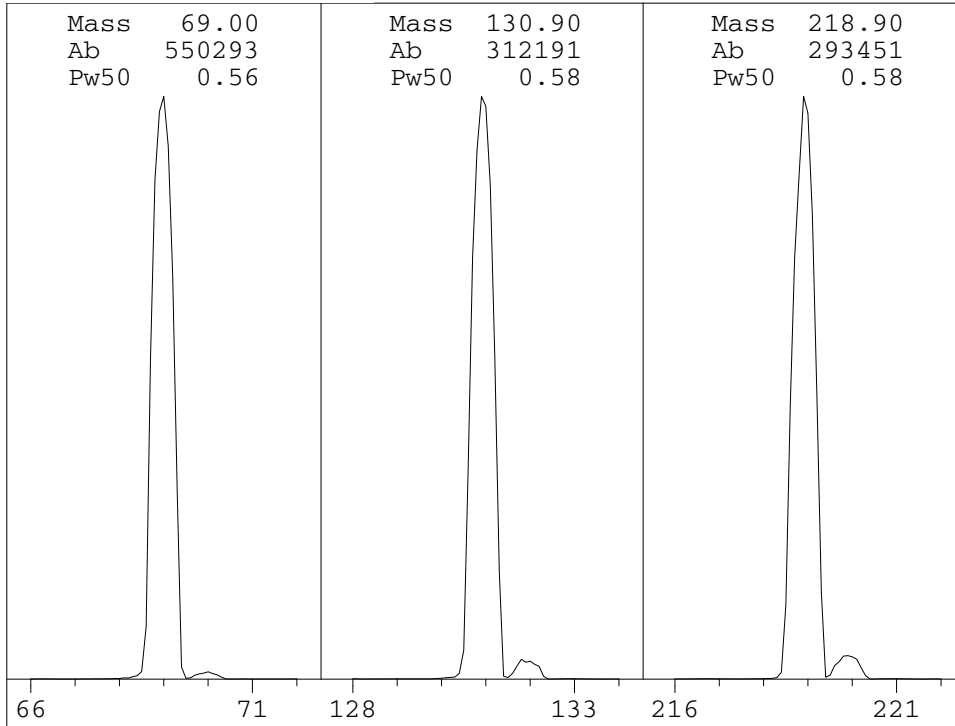


Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	508096	100.00	70.00	5367	1.06
18.10	4624	0.91	19.00	632	13.67
28.00	5884	1.16	29.70	121	2.06

Current Params used: bfb.u

Relative abundances:

18/69 = 0.91	Water%	(counts=4624)
28/69 = 1.16	Nitrogen%	(counts=5884)
32/69 = 0.32	Oxygen%	(counts=1636)
44/69 = 0.14	Carbon Dioxide%	(counts=730)
28/18 = 127.25	Nitrogen/Water%	

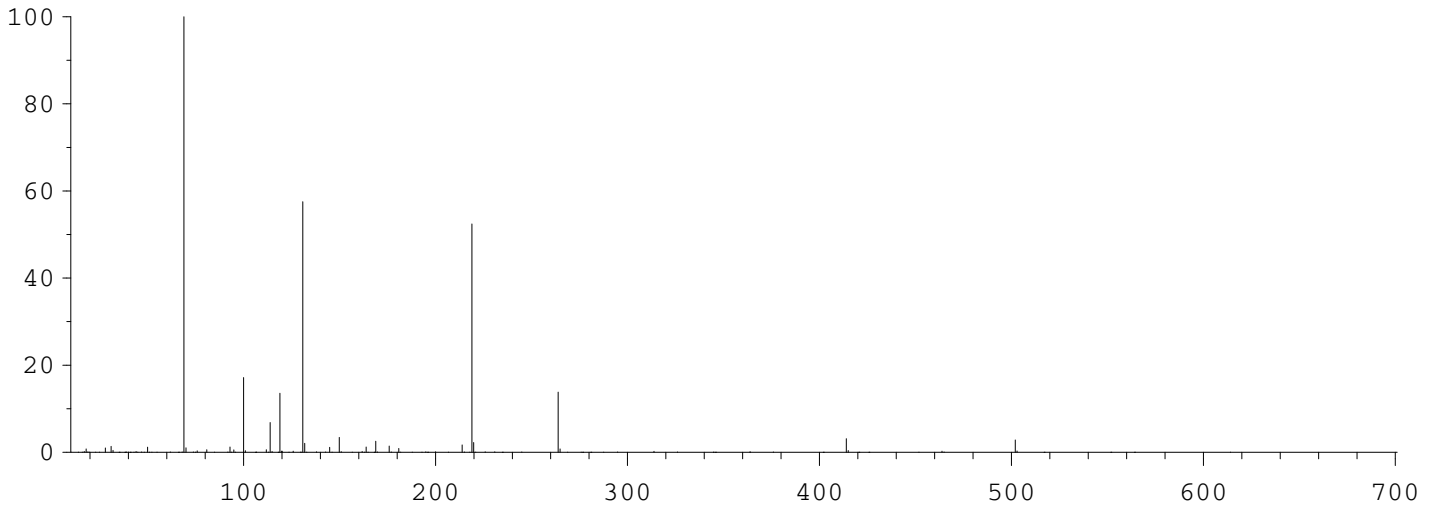


Ion Pol Pos MassGain -721
 MassOffs -41
Emission 34.6 AmuGain 1910
EIEnrgy 69.9 AmuOffs 123.38
Filament 2 Wid219 0.010
 DC Pol Pos
Repeller 19.90
IonFcus 73.1 HEDEnab On
EntLens 0.0 EMVolts 1306
EntOffs Var

 Samples 8
PFTBA Open Averages 3
 Stepsize 0.10

Temperatures and Pressures:
MS Source 230 TurboSpd 100
MS Quad 150 HiVac 9.89e06

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
123 peaks Base: 69.00 Abundance: 494336



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	494336	100.00	70.00	5108	1.03
130.90	284416	57.53	131.90	10179	3.58
219.00	259072	52.41	219.90	11015	4.25

Air/Water Check: H2O~0.78% N2~1.01% O2~0.45% CO2~0.18% N2/H2O~130.37%

Column(1) Flow: 1.5 Column(2): -1.79769e+308 ml/min. Interface Temp: 200

Ramp Criteria:

Ion Focus Maximum 90 volts using ion 69; EM Gain 441748
Repeller Maximum 20 volts using ion 131; Gain Factor 4.42

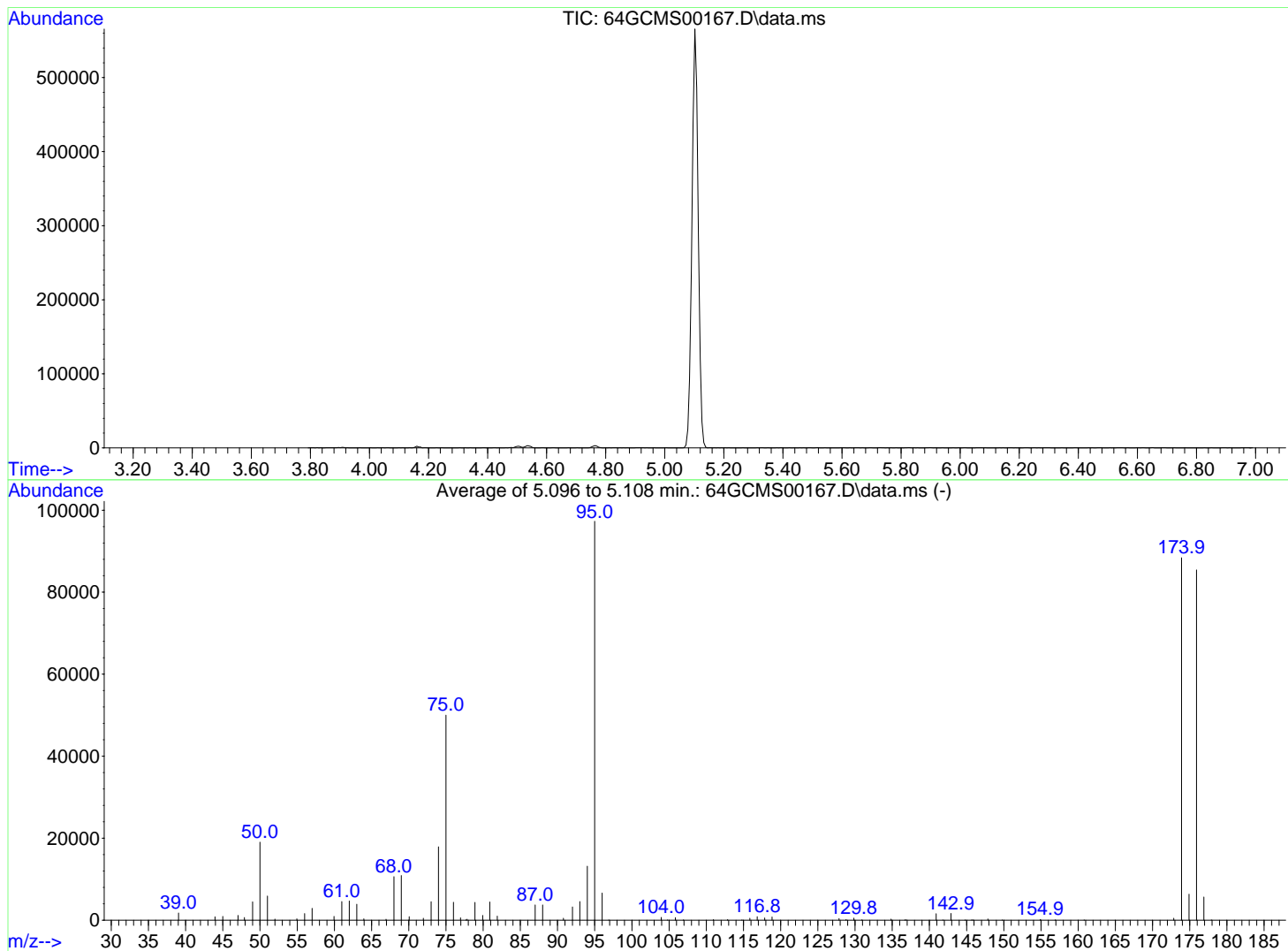
MassGain Values(Samples): -711(3) -698(2) -681(1) -608(0) -556(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	123.4	123.4	123.4	123.4	123.4	123.4	123.4
Entrance Lens Offset:	12.8	12.5	15.6	15.6	20.1	23.6	23.6
Target Abund(%):	1.0	100.0	48.0	44.0	2.4	2.0	
Actual Tune Abund(%):	1.2	100.0	57.5	52.4	3.1	2.8	

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00167.D
 Acq On : 1 May 2016 4:05 pm
 Operator : dlm
 Sample : BFB \ 1ppmv
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\LOOP2016_0323.M
 Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 Last Update : Wed Apr 27 11:28:26 2016



AutoFind: Scans 217, 218, 219; Background Corrected with Scan 210

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.6	19037	PASS
75	95	30	66	51.4	50027	PASS
95	95	100	100	100.0	97291	PASS
96	95	5	9	6.8	6611	PASS
173	174	0.00	2	0.6	493	PASS
174	95	50	120	90.9	88413	PASS
175	174	4	9	7.2	6337	PASS
176	174	93	101	96.6	85424	PASS
177	176	5	9	6.6	5648	PASS

GC/MS QA-QC Check Report

Tune File: D:\msdchem\1\data\20160501\64GCMS00167.D

Tune Time: 1 May 2016 4:05 pm

Daily Calibration File: D:\msdchem\1\data\20160501\64GCMS00170.D

File	Sample	Internal Standard Responses		
		2492	6670	6141
64GCMS00168.D	STD2016050	2350	7049	5981
64GCMS00169.D	STD2016050	2376	6967	6040
64GCMS00170.D	STD2016050	2492	6670	6141
64GCMS00171.D	STD2016050	2379	6049	5681
64GCMS00172.D	STD2016050	2285	5426	5181
64GCMS00173.D	STD2016050	2246	5008	4906
64GCMS00174.D	STD2016050	2178	5624	5199
64GCMS00175.D	20160501-M	2089	4581	4491
64GCMS00176.D	20160501-M	2209	4631	4504
64GCMS00177.D	20160501-L	1977	4972	4616

(fails) - fails 24hr time check * - fails criteria

Created: Sun May 01 19:38:28 2016 EPA 3064

Method Path : C:\msdchem\1\methods\
 Method File : LOOP2016_0501.M
 Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 Last Update : Sun May 01 19:31:49 2016
 Response Via : Initial Calibration

Calibration Files

500 =64GCMS00170.D 10K =64GCMS00168.D 2K =64GCMS00169.D 100 =64GCMS00171.D 5 =64GCMS00172.D
 0.5 =64GCMS00173.D

Compound	500	10K	2K	100	5	0.5	Avg	%RSD
1) I Bromochloromethane	-----ISTD-----							
2) Vinyl Chloride	0.668	0.669	0.670	0.612	0.637		0.651	4.01
3) 1,1-Dichloroet...	1.169	1.302	1.209	1.039	1.097	1.049	1.144	8.92
4) Methyl Tert bu...	1.726	2.053	1.830	1.395	1.418	1.427	1.641	16.56
5) trans-1,2-Dich...	1.067	1.152	1.069	0.931	0.995	0.895	1.018	9.45
6) 1,1-Dichloroet...	1.328	1.420	1.338	1.226	1.326	1.449	1.348	5.86
7) cis-1,2-Dichlo...	0.976	1.100	1.010	0.849	0.892	1.003	0.972	9.25
8) 1,1,1-Trichlor...	1.882	2.405	1.955	1.747	1.821	1.949	1.960	11.84
9) I 1,4-Difluorobenzene	-----ISTD-----							
10) Benzene	0.781	0.759	0.720	0.712	0.789	1.025	0.798	14.49
11) Trichloroethene	0.458	0.564	0.443	0.417	0.477	0.608	0.495	15.11
12) I Chlorobenzene-d5	-----ISTD-----							
13) Toluene	1.062	1.213	1.077	0.845	0.887	1.145	1.038	13.91
14) Tetrachloroethene	0.630	0.940	0.663	0.569	0.656	0.840	0.716	19.82
15) Ethyl Benzene	1.351	1.578	1.416	1.005	0.970	1.365	1.281	18.85
16) m,p-Xylene	1.111	1.345	1.145	0.853	0.740	1.039	1.039	20.84
17) o-Xylene	1.132	1.370	1.176	0.862	0.821	1.401	1.127	21.75

(#) = Out of Range

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00168.D
 Acq On : 1 May 2016 4:25 pm
 Operator : dlm
 Sample : STD20160501-01 \ 10 ppmv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

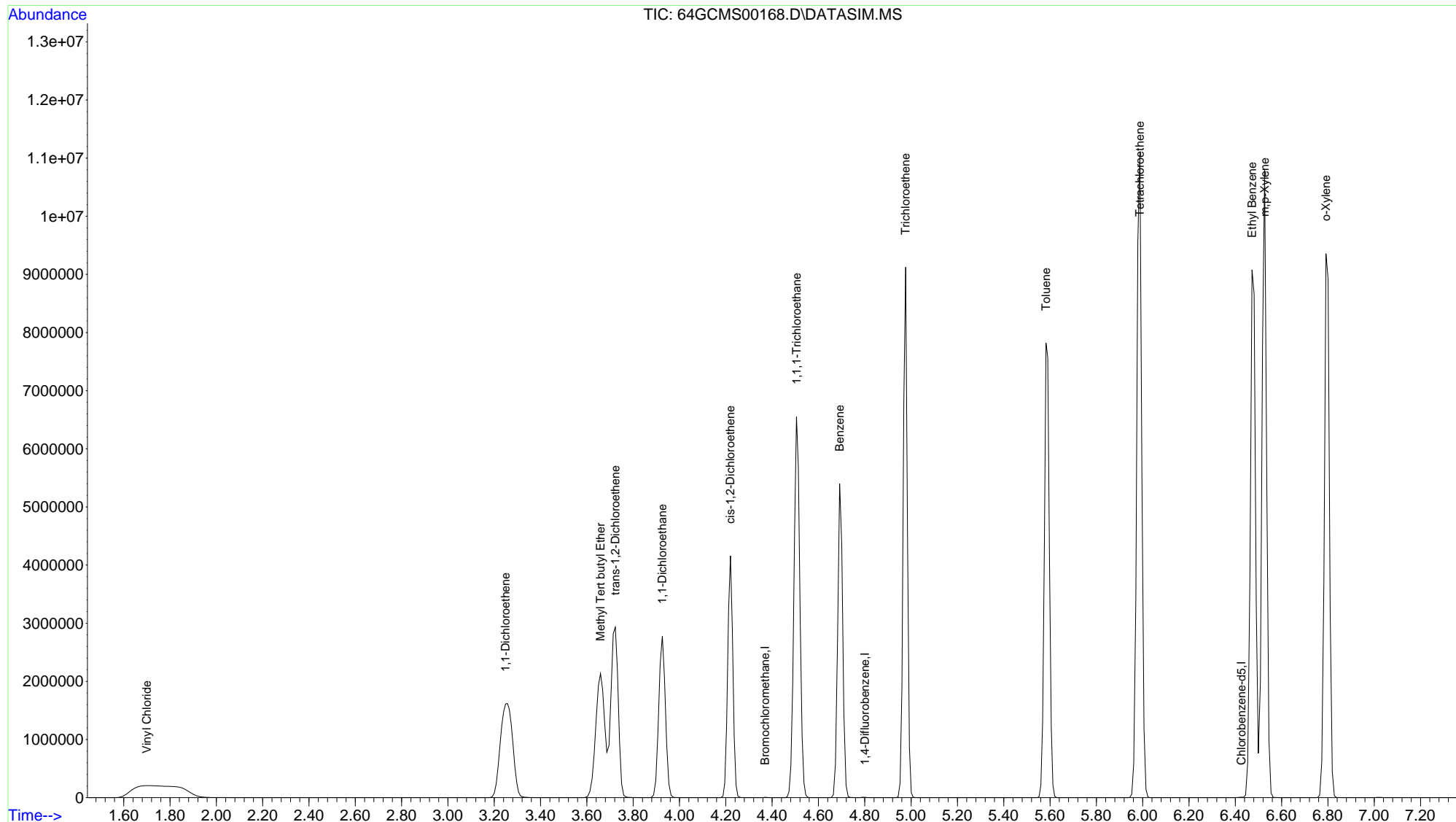
Quant Time: May 01 17:52:47 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2350	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.801	114	7049	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.426	117	5981	10.00	ppbv	0.00
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.699	62	1596606	10133.19	ppbv	# 55
3) 1,1-Dichloroethene	3.249	61	3090719	11362.56	ppbv	# 89
4) Methyl Tert butyl Ether	3.659	73	4849571	12572.77	ppbv	# 94
5) trans-1,2-Dichloroethene	3.723	61	2802605	11615.48	ppbv	# 78
6) 1,1-Dichloroethane	3.926	63	3403318	10766.80	ppbv	95
7) cis-1,2-Dichloroethene	4.220	61	2663617	11665.00	ppbv	# 77
8) 1,1,1-Trichloroethane	4.505	97	5681019	12377.23	ppbv	93
10) Benzene	4.692	78	5486575	9727.17	ppbv	96
11) Trichloroethene	4.977	130	3998913	11527.95	ppbv	88
13) Toluene	5.583	91	7362843	11859.98	ppbv	98
14) Tetrachloroethene	5.988	166	5677840	13253.88	ppbv	96
15) Ethyl Benzene	6.472	91	10143396	13241.48	ppbv	# 88
16) m,p-Xylene	6.527	91	8206415	13207.09	ppbv	89
17) o-Xylene	6.792	91	8359388	12379.99	ppbv	89

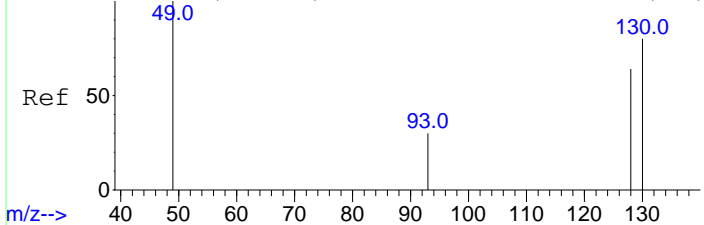
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00168.D
 Acq On : 1 May 2016 4:25 pm
 Operator : dlm
 Sample : STD20160501-01 \ 10 ppmv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:52:47 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



Abundance Scan 285 (4.369 min): 64GCMS00163.D\DATASIM.MS (-281)

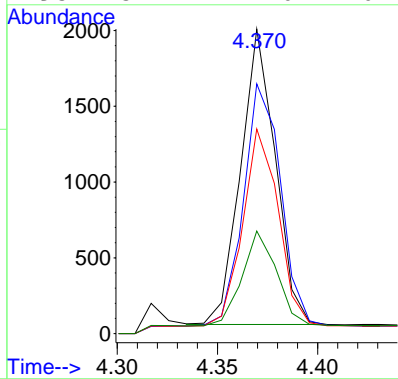
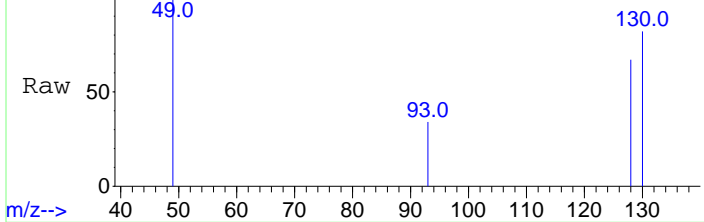


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00168.D
Acq: 1 May 2016 4:25 pm

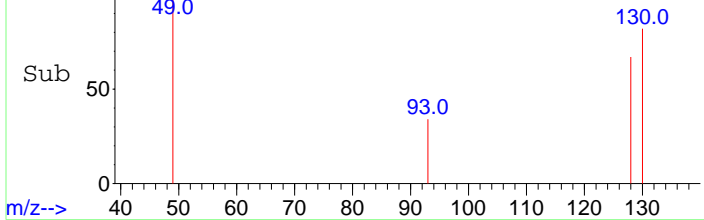
Tgt Ion: 49 Resp: 2350

Ion	Ratio	Lower	Upper
49	100		
130	86.8	46.3	69.5#
128	68.0	35.7	53.5#
93	32.1	17.6	26.4#

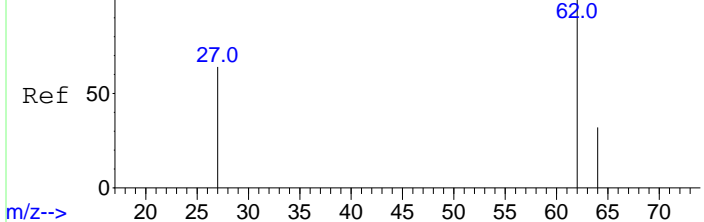
Abundance Scan 285 (4.370 min): 64GCMS00168.D\DATASIM.MS



Abundance Scan 285 (4.370 min): 64GCMS00168.D\DATASIM.MS (-277)



Abundance Scan 19 (1.673 min): 64GCMS00163.D\DATASIM.MS (-8) (-)

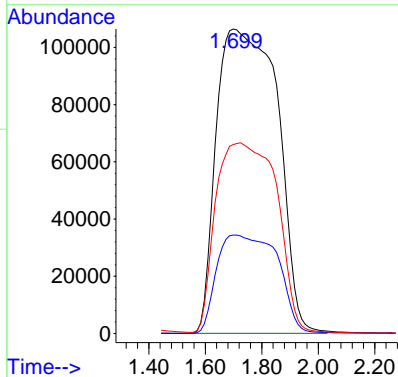
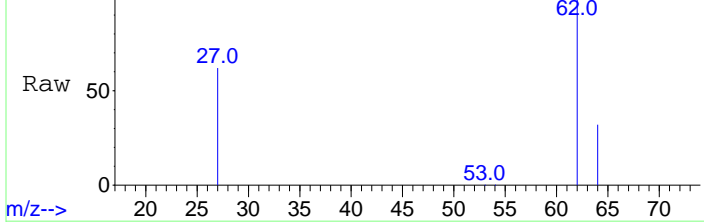


#2
Vinyl Chloride
Concen: 10133.19 ppbv
RT: 1.699 min Scan# 21
Delta R.T. 0.013 min
Lab File: 64GCMS00168.D
Acq: 1 May 2016 4:25 pm

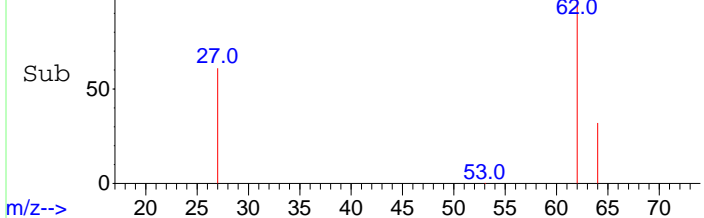
Tgt Ion: 62 Resp: 1596606

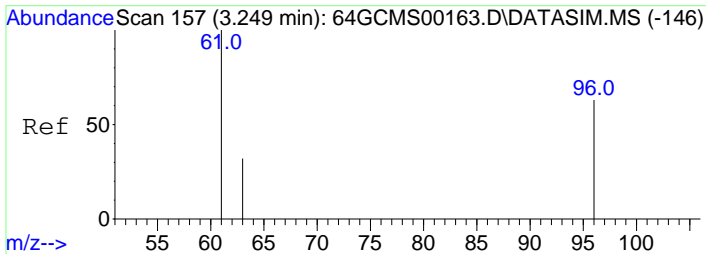
Ion	Ratio	Lower	Upper
62	100		
64	32.2	23.7	35.5
27	0.0	38.0	57.0#

Abundance Scan 21 (1.699 min): 64GCMS00168.D\DATASIM.MS



Abundance Scan 21 (1.699 min): 64GCMS00168.D\DATASIM.MS (-1) (-)

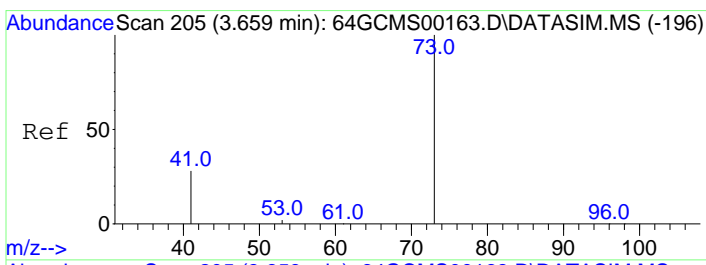
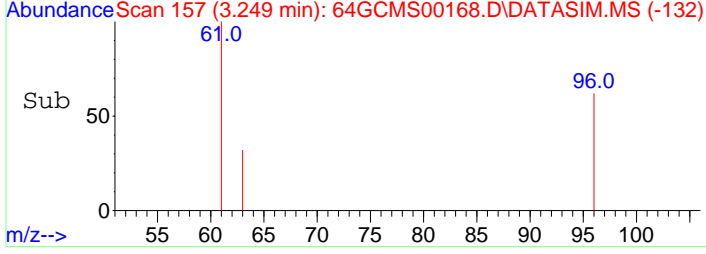
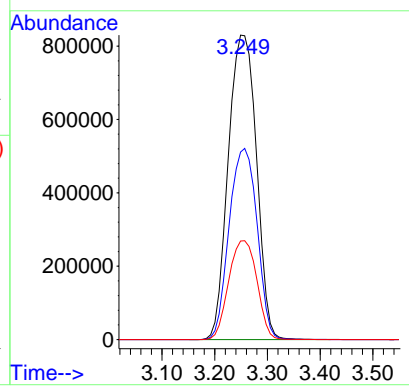
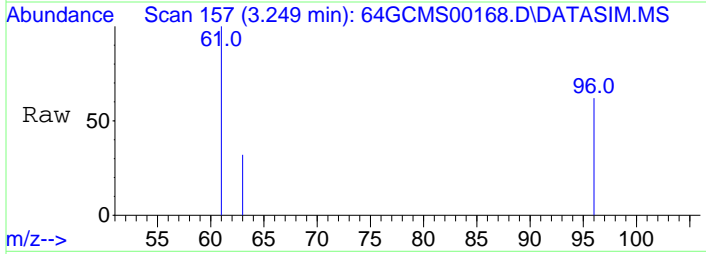




#3
 1,1-Dichloroethene
 Concen: 11362.56 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. -0.000 min
 Lab File: 64GCMS00168.D
 Acq: 1 May 2016 4:25 pm

Tgt Ion: 61 Resp: 3090719

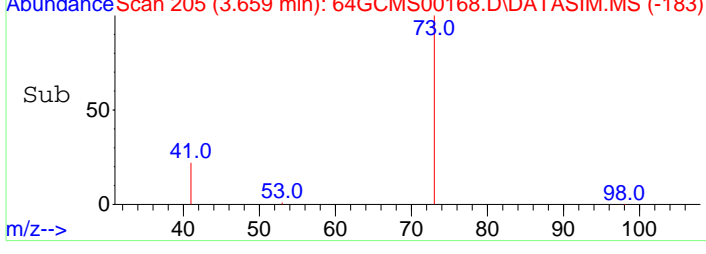
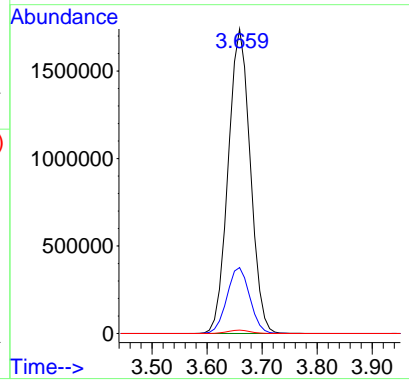
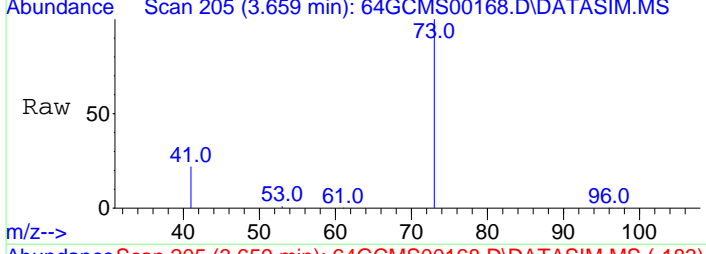
Ion	Ratio	Lower	Upper
61	100		
96	62.2	40.9	61.3#
63	32.4	24.3	36.5

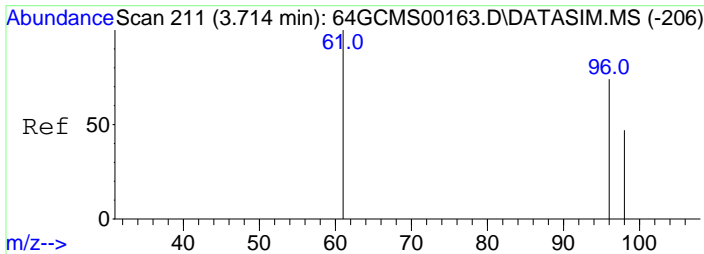


#4
 Methyl Tert butyl Ether
 Concen: 12572.77 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 64GCMS00168.D
 Acq: 1 May 2016 4:25 pm

Tgt Ion: 73 Resp: 4849571

Ion	Ratio	Lower	Upper
73	100		
41	22.3	20.6	30.8
53	1.1	1.2	1.8#

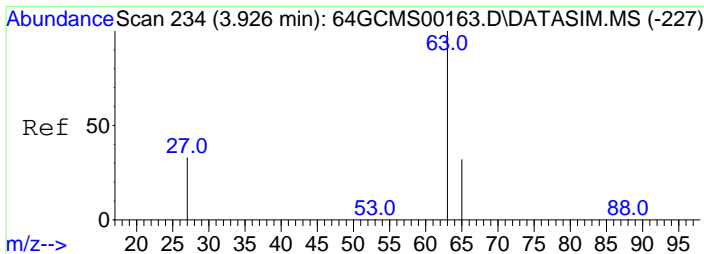
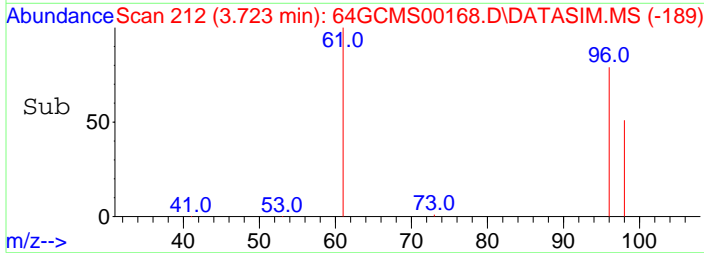
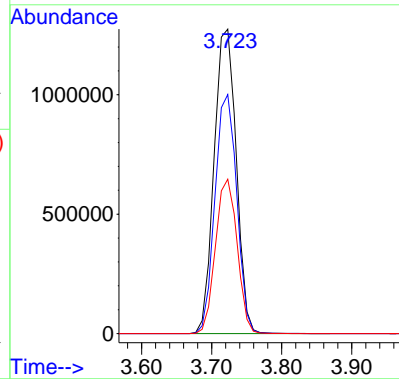
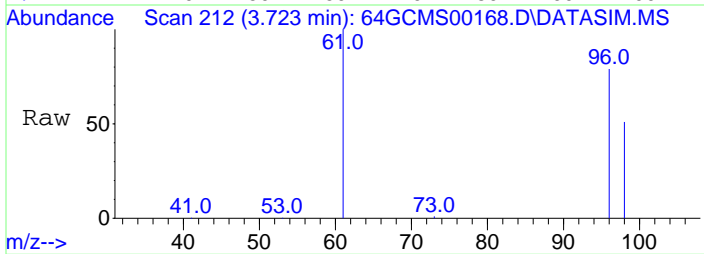




#5
 trans-1,2-Dichloroethene
 Concen: 11615.48 ppbv
 RT: 3.723 min Scan# 212
 Delta R.T. 0.009 min
 Lab File: 64GCMS00168.D
 Acq: 1 May 2016 4:25 pm

Tgt Ion: 61 Resp: 2802605

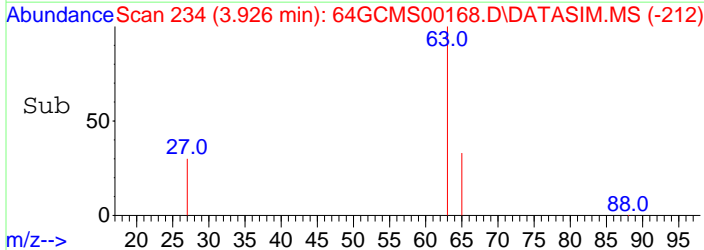
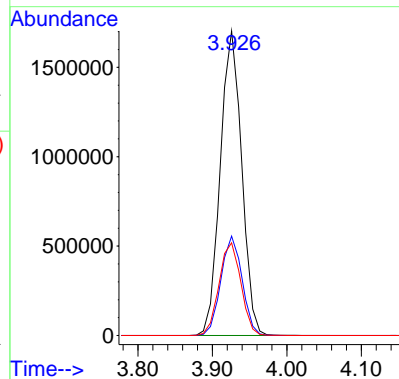
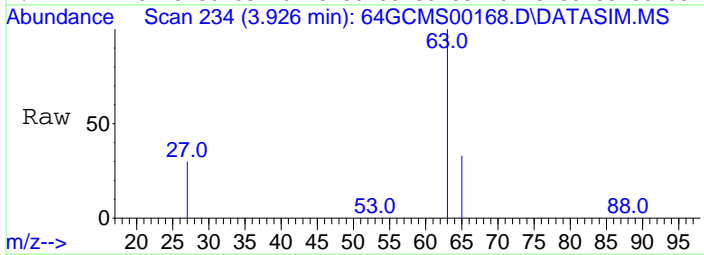
Ion	Ratio	Lower	Upper
61	100		
96	77.4	47.8	71.6#
98	49.6	30.6	46.0#

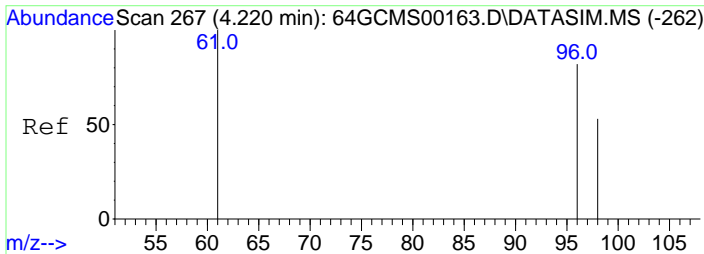


#6
 1,1-Dichloroethane
 Concen: 10766.80 ppbv
 RT: 3.926 min Scan# 234
 Delta R.T. -0.000 min
 Lab File: 64GCMS00168.D
 Acq: 1 May 2016 4:25 pm

Tgt Ion: 63 Resp: 3403318

Ion	Ratio	Lower	Upper
63	100		
65	32.4	24.8	37.2
27	31.0	21.1	31.7

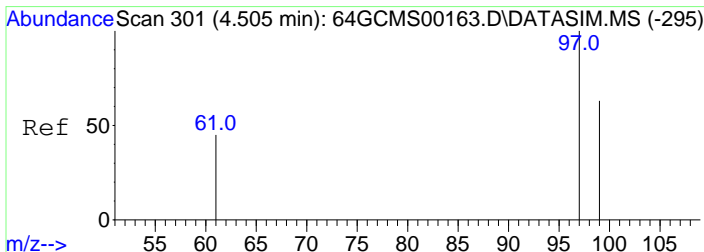
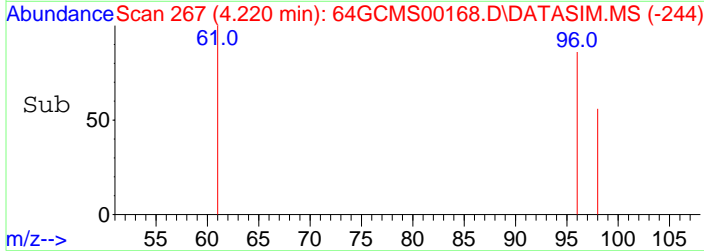
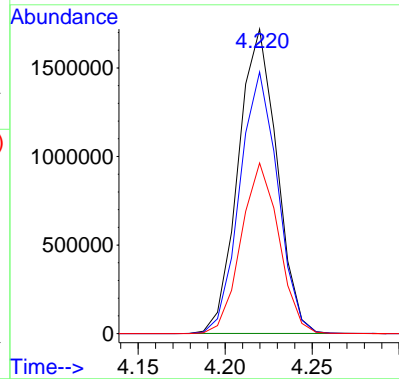
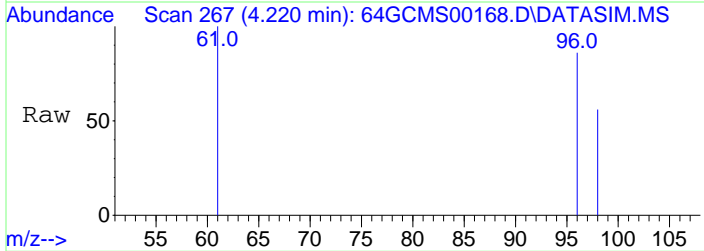




#7
 cis-1,2-Dichloroethene
 Concen: 11665.00 ppbv
 RT: 4.220 min Scan# 267
 Delta R.T. -0.000 min
 Lab File: 64GCMS00168.D
 Acq: 1 May 2016 4:25 pm

Tgt Ion: 61 Resp: 2663617

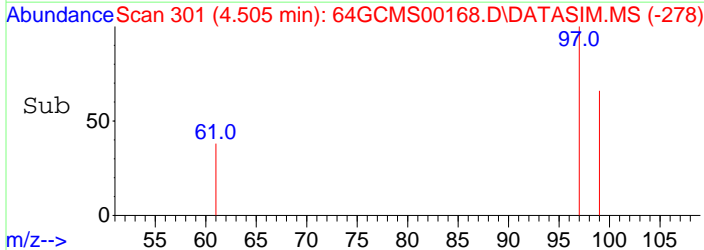
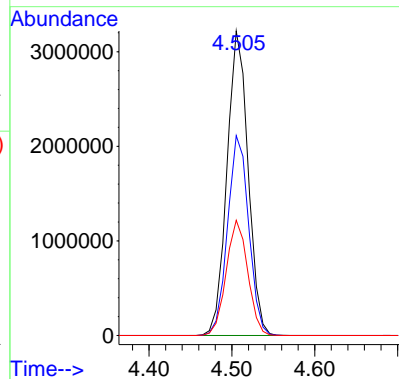
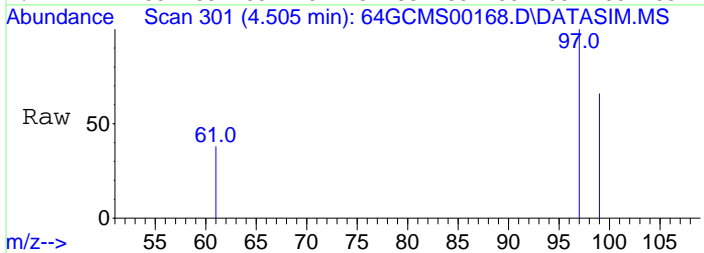
Ion	Ratio	Lower	Upper
61	100		
96	84.2	52.0	78.0#
98	54.5	33.4	50.2#

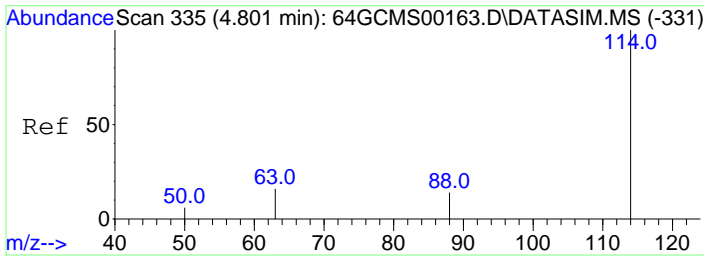


#8
 1,1,1-Trichloroethane
 Concen: 12377.23 ppbv
 RT: 4.505 min Scan# 301
 Delta R.T. -0.000 min
 Lab File: 64GCMS00168.D
 Acq: 1 May 2016 4:25 pm

Tgt Ion: 97 Resp: 5681019

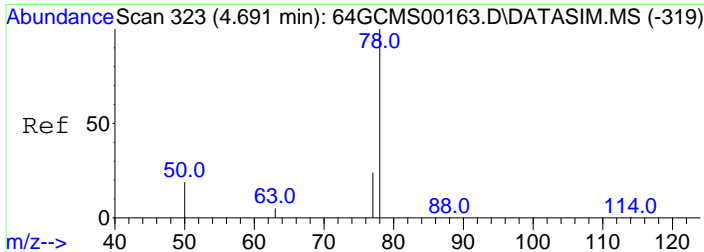
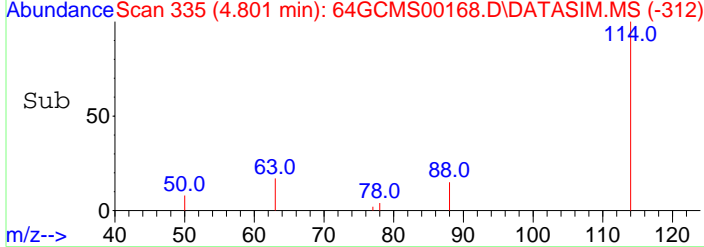
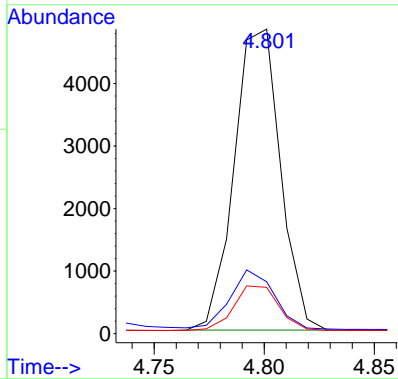
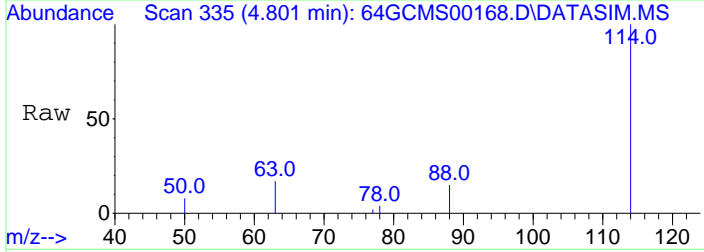
Ion	Ratio	Lower	Upper
97	100		
99	65.8	51.5	77.3
61	38.7	38.6	58.0





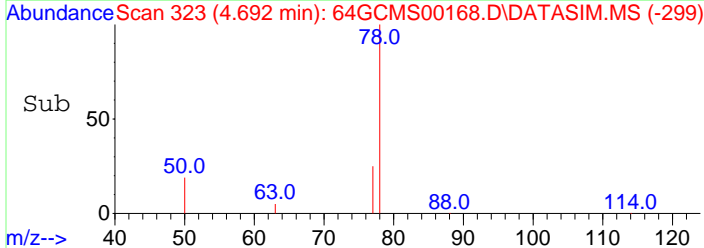
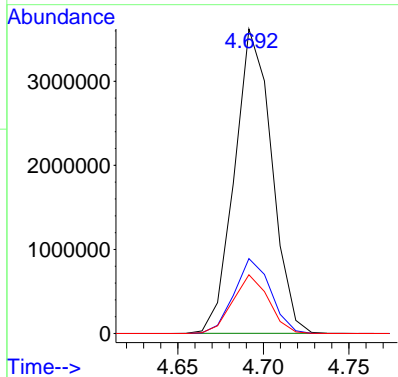
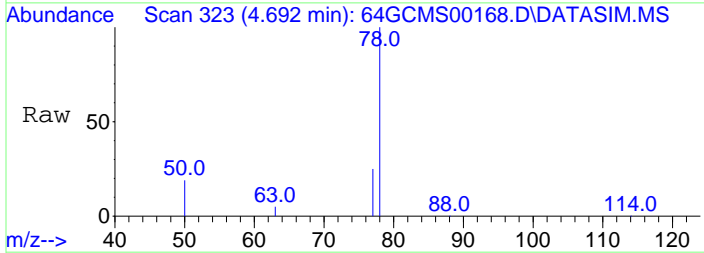
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.801 min Scan# 335
 Delta R.T. 0.009 min
 Lab File: 64GCMS00168.D
 Acq: 1 May 2016 4:25 pm

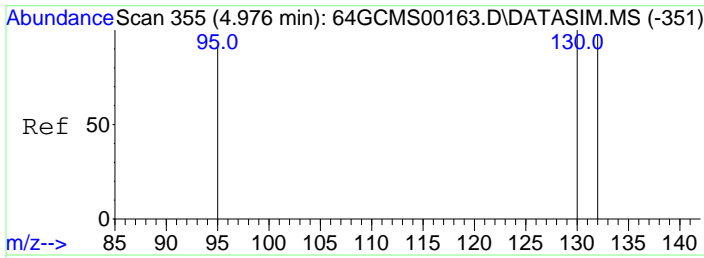
Tgt Ion	Resp	Lower	Upper
114	100		
63	0.0	19.2	28.8#
88	14.4	13.7	20.5



#10
 Benzene
 Concen: 9727.17 ppbv
 RT: 4.692 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00168.D
 Acq: 1 May 2016 4:25 pm

Tgt Ion	Resp	Lower	Upper
78	100		
77	24.1	18.2	27.4
50	18.5	16.6	24.8

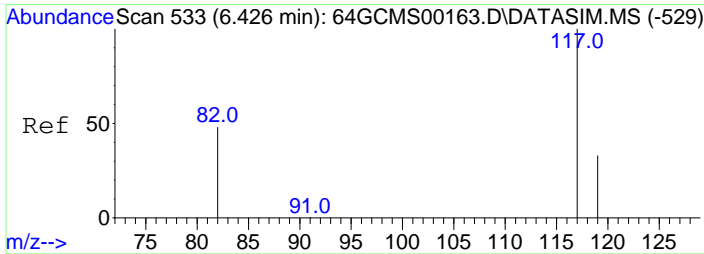
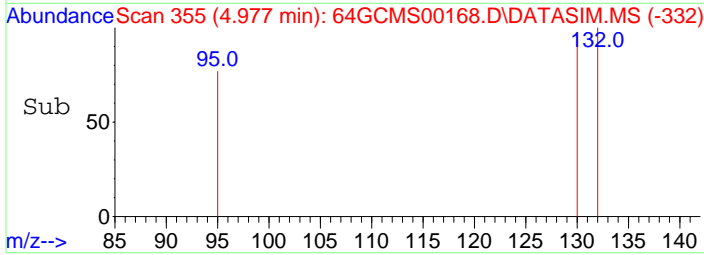
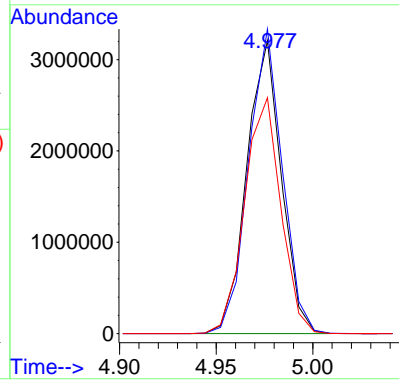
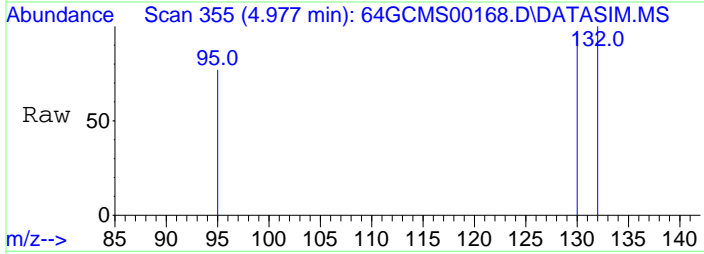




#11
 Trichloroethene
 Concen: 11527.95 ppbv
 RT: 4.977 min Scan# 355
 Delta R.T. -0.000 min
 Lab File: 64GCMS00168.D
 Acq: 1 May 2016 4:25 pm

Tgt Ion:130 Resp: 3998913

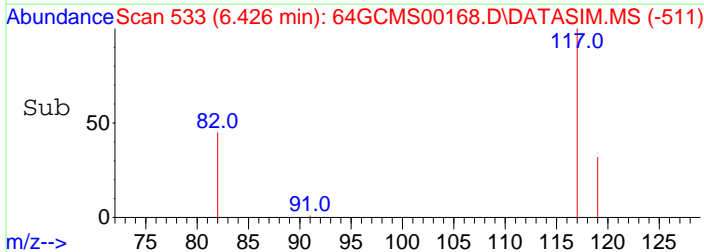
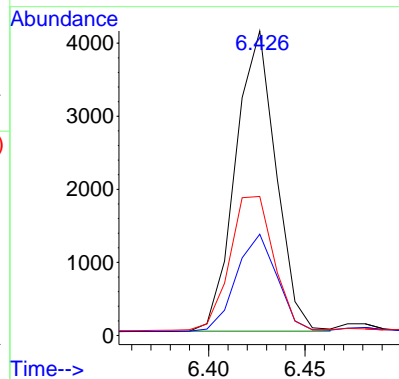
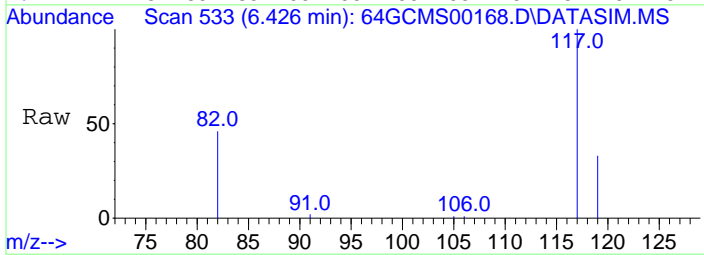
Ion	Ratio	Lower	Upper
130	100		
132	101.1	76.9	115.3
95	84.0	81.5	122.3



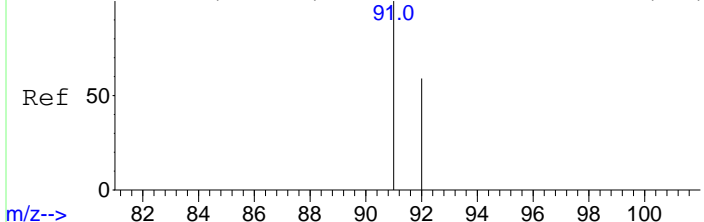
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00168.D
 Acq: 1 May 2016 4:25 pm

Tgt Ion:117 Resp: 5981

Ion	Ratio	Lower	Upper
117	100		
119	32.6	25.8	38.6
82	48.6	45.6	68.4

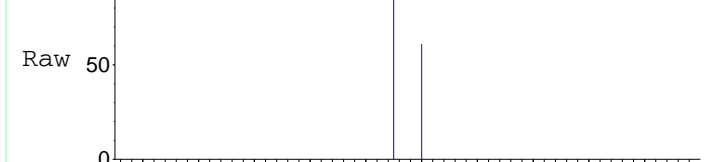


Abundance Scan 434 (5.590 min): 64GCMS00163.D\DATASIM.MS (-428)



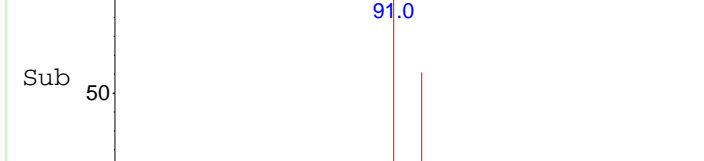
m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00168.D\DATASIM.MS



m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00168.D\DATASIM.MS (-406)

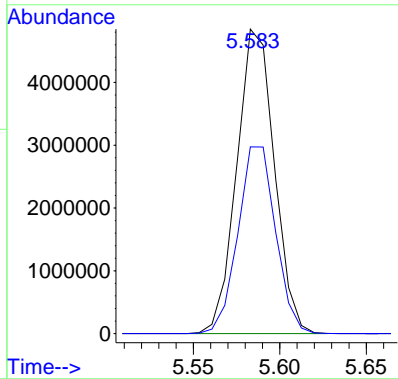


m/z-->

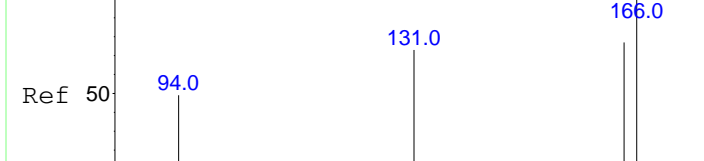
#13

Toluene
Concen: 11859.98 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00168.D
Acq: 1 May 2016 4:25 pm

Tgt Ion:	Resp:	Lower	Upper
91	100		
92	61.6	48.0	72.0

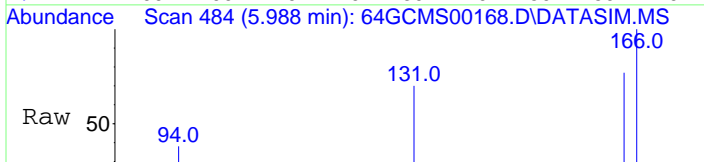


Abundance Scan 484 (5.988 min): 64GCMS00163.D\DATASIM.MS (-479)



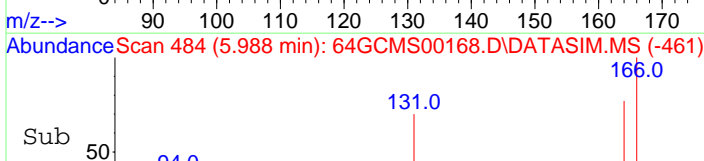
m/z-->

Abundance Scan 484 (5.988 min): 64GCMS00168.D\DATASIM.MS



m/z-->

Abundance Scan 484 (5.988 min): 64GCMS00168.D\DATASIM.MS (-461)

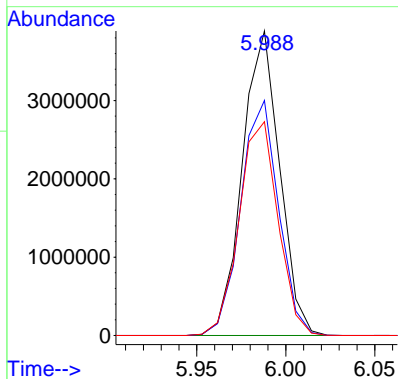


m/z-->

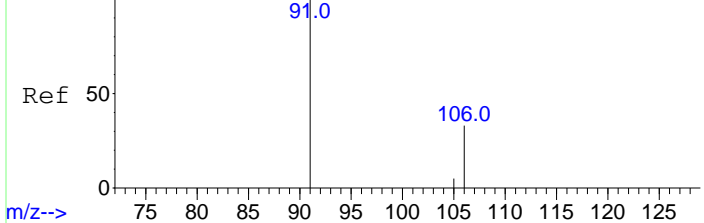
#14

Tetrachloroethene
Concen: 13253.88 ppbv
RT: 5.988 min Scan# 484
Delta R.T. -0.000 min
Lab File: 64GCMS00168.D
Acq: 1 May 2016 4:25 pm

Tgt Ion:	Resp:	Lower	Upper
166	100		
164	78.3	63.4	95.0
131	73.2	63.4	95.0

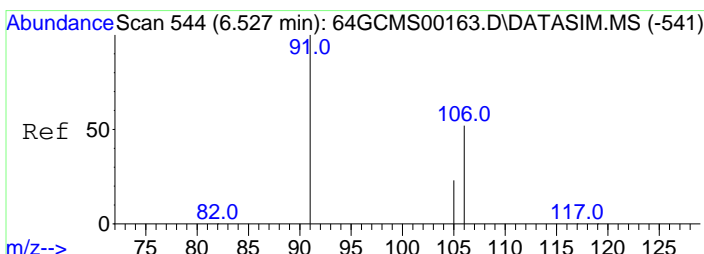
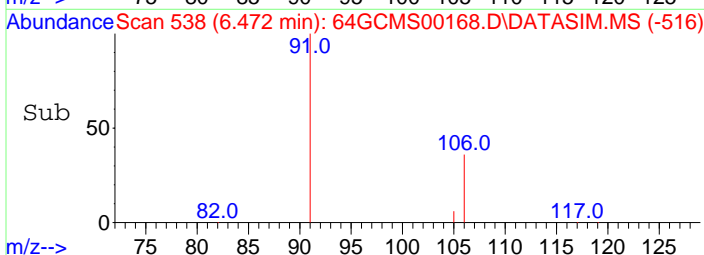
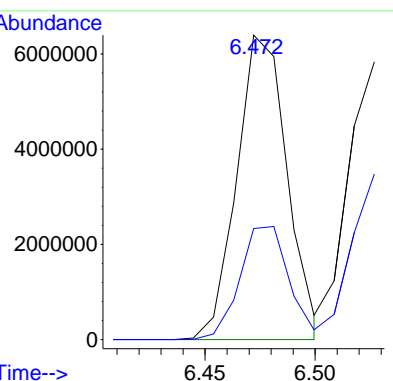
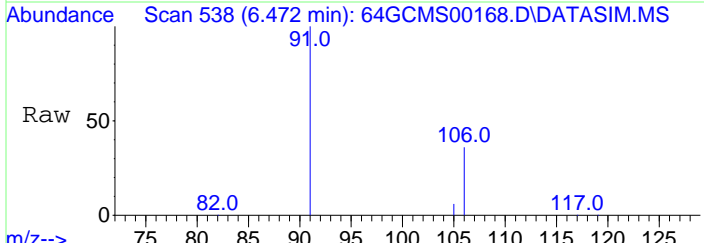


Abundance Scan 539 (6.481 min): 64GCMS00163.D\DATASIM.MS (-534)



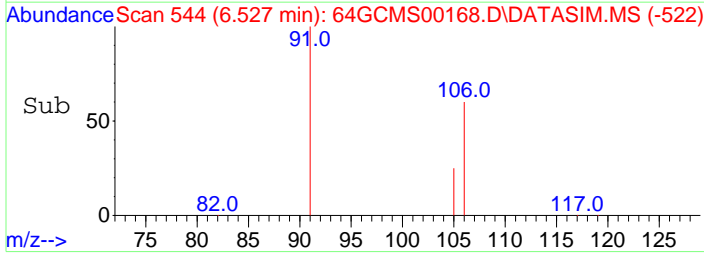
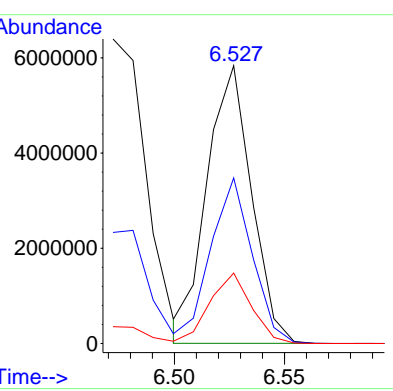
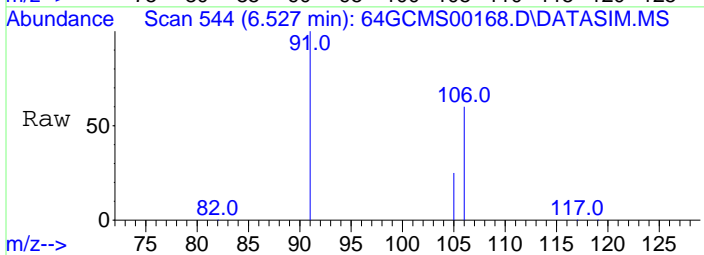
#15
Ethyl Benzene
Concen: 13241.48 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00168.D
Acq: 1 May 2016 4:25 pm

Tgt Ion: 91 Resp:10143396
Ion Ratio Lower Upper
91 100
106 36.6 24.2 36.2#

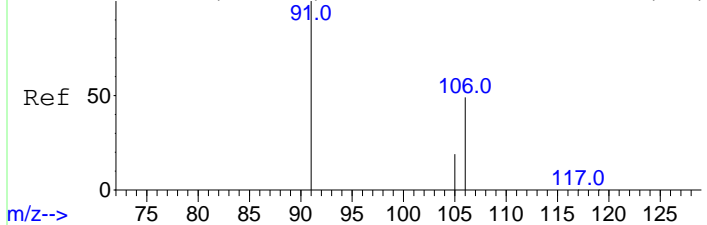


#16
m,p-Xylene
Concen: 13207.09 ppbv
RT: 6.527 min Scan# 544
Delta R.T. -0.000 min
Lab File: 64GCMS00168.D
Acq: 1 May 2016 4:25 pm

Tgt Ion: 91 Resp: 8206415
Ion Ratio Lower Upper
91 100
106 55.9 37.7 56.5
105 23.8 17.0 25.4



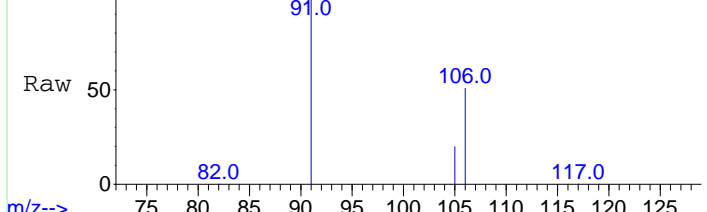
Abundance Scan 574 (6.801 min): 64GCMS00163.D\DATASIM.MS (-569)



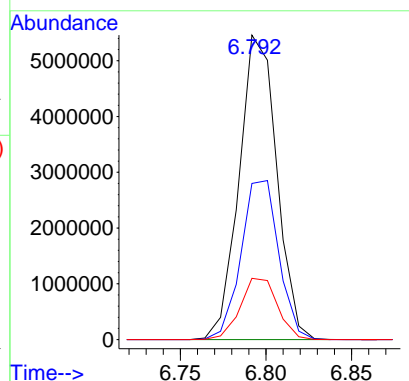
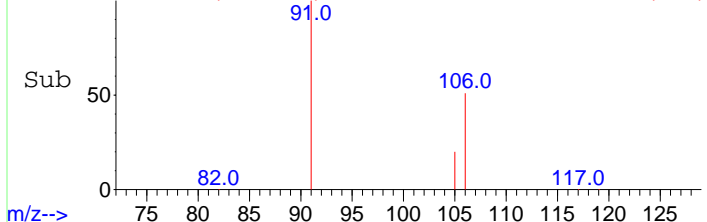
#17
 o-Xylene
 Concen: 12379.99 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00168.D
 Acq: 1 May 2016 4:25 pm

Tgt Ion:	Resp:	Lower	Upper
91	8359388		
106	52.5	35.4	53.2
105	20.0	14.0	21.0

Scan 573 (6.792 min): 64GCMS00168.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00168.D\DATASIM.MS (-551)



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00169.D
 Acq On : 1 May 2016 4:40 pm
 Operator : dlm
 Sample : STD20160501-02 \ 2 ppmv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

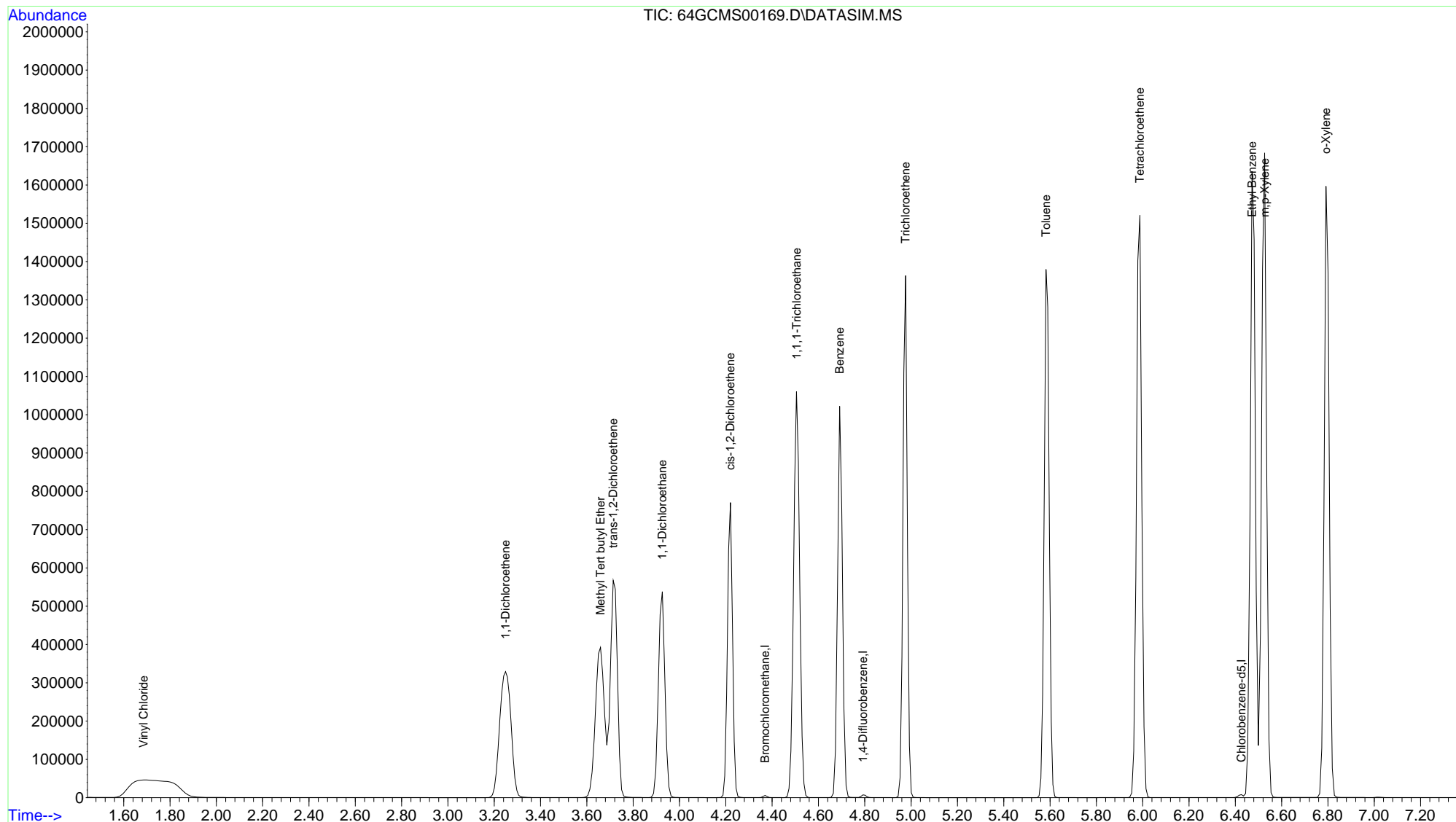
Quant Time: May 01 17:53:00 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Bromochloromethane	4.370	49	2376	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.792	114	6967	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.426	117	6040	10.00	ppbv		0.00
Target Compounds							
							Qvalue
2) Vinyl Chloride	1.686	62	323166	2028.60	ppbv	#	86
3) 1,1-Dichloroethene	3.249	61	580078	2109.23	ppbv	#	89
4) Methyl Tert butyl Ether	3.659	73	874093	2241.33	ppbv	#	97
5) trans-1,2-Dichloroethene	3.714	61	525617	2154.60	ppbv	#	80
6) 1,1-Dichloroethane	3.926	63	648665	2029.67	ppbv		95
7) cis-1,2-Dichloroethene	4.220	61	494142	2140.36	ppbv	#	80
8) 1,1,1-Trichloroethane	4.505	97	933804	2012.21	ppbv		96
10) Benzene	4.692	78	1028128	1844.23	ppbv		96
11) Trichloroethene	4.977	130	621054	1811.43	ppbv		92
13) Toluene	5.583	91	1320496	2106.26	ppbv		98
14) Tetrachloroethene	5.988	166	808960	1869.92	ppbv		96
15) Ethyl Benzene	6.472	91	1839412	2377.77	ppbv		96
16) m,p-Xylene	6.527	91	1410809	2248.32	ppbv		95
17) o-Xylene	6.792	91	1448497	2124.22	ppbv		95

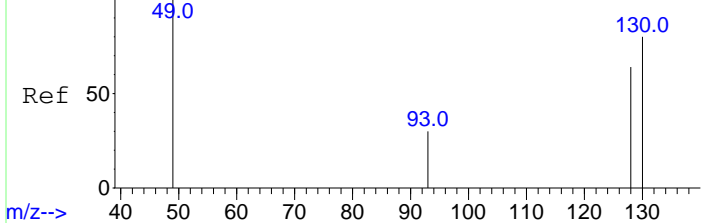
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00169.D
 Acq On : 1 May 2016 4:40 pm
 Operator : dlm
 Sample : STD20160501-02 \ 2 ppmv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:00 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



Abundance Scan 285 (4.369 min): 64GCMS00163.D\DATASIM.MS (-281)

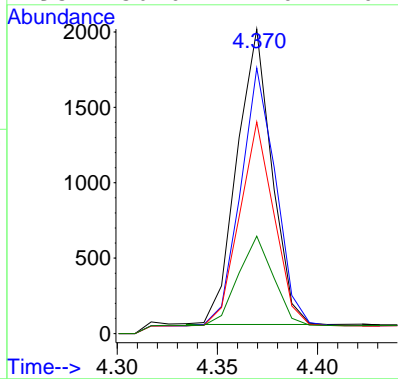
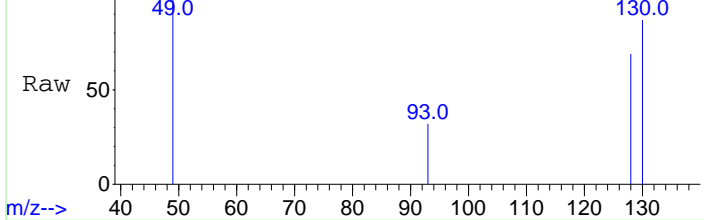


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00169.D
Acq: 1 May 2016 4:40 pm

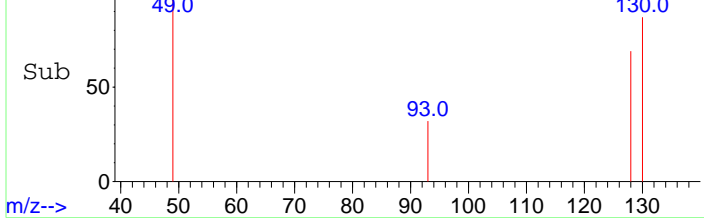
Tgt Ion: 49 Resp: 2376

Ion	Ratio	Lower	Upper
49	100		
130	88.2	46.3	69.5#
128	68.3	35.7	53.5#
93	30.6	17.6	26.4#

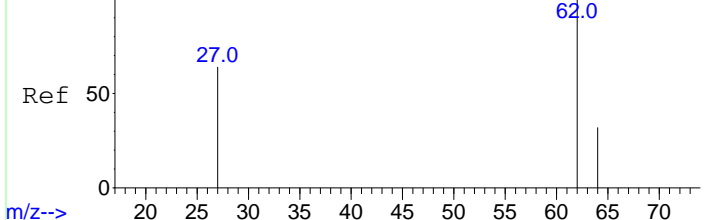
Abundance Scan 285 (4.370 min): 64GCMS00169.D\DATASIM.MS



Abundance Scan 285 (4.370 min): 64GCMS00169.D\DATASIM.MS (-277)



Abundance Scan 19 (1.673 min): 64GCMS00163.D\DATASIM.MS (-8) (-)

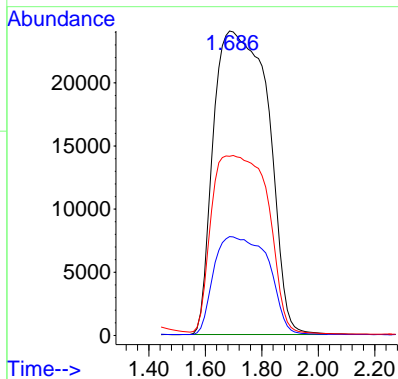
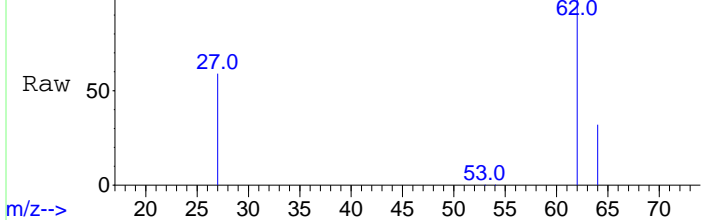


#2
Vinyl Chloride
Concen: 2028.60 ppbv
RT: 1.686 min Scan# 20
Delta R.T. -0.000 min
Lab File: 64GCMS00169.D
Acq: 1 May 2016 4:40 pm

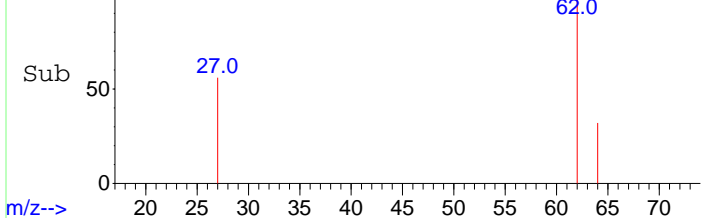
Tgt Ion: 62 Resp: 323166

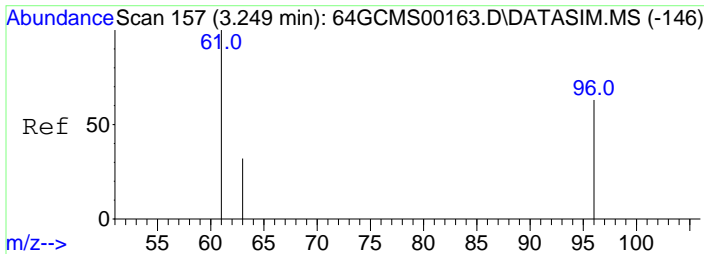
Ion	Ratio	Lower	Upper
62	100		
64	32.1	23.7	35.5
27	60.3	38.0	57.0#

Abundance Scan 20 (1.686 min): 64GCMS00169.D\DATASIM.MS



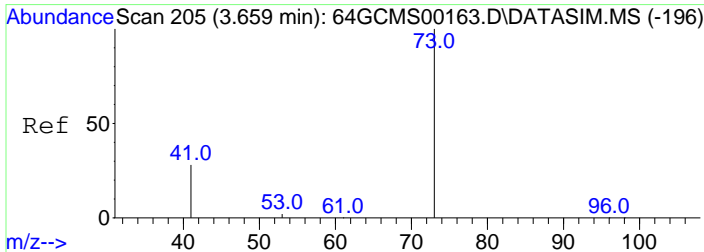
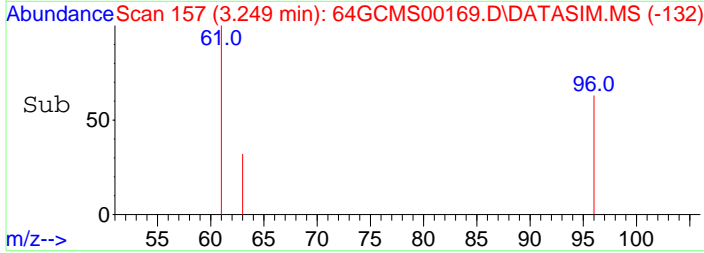
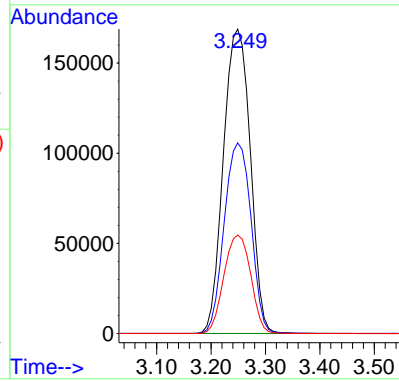
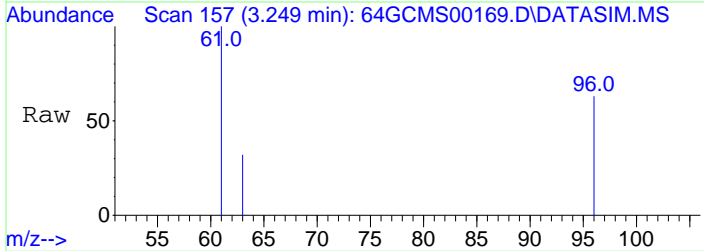
Abundance Scan 20 (1.686 min): 64GCMS00169.D\DATASIM.MS (-1) (-)





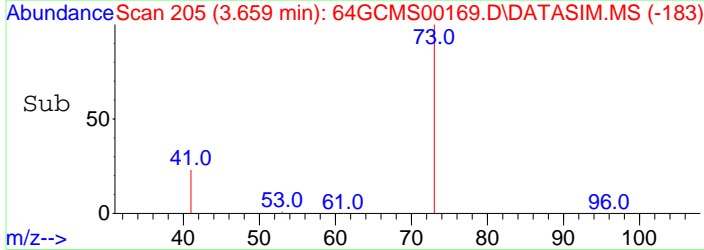
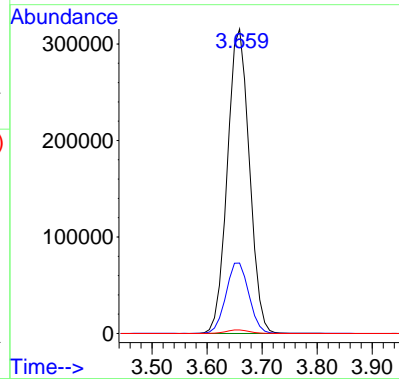
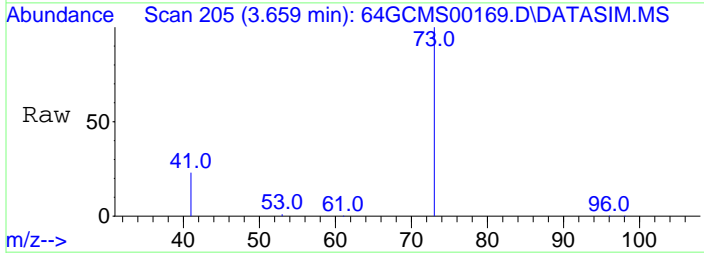
#3
 1,1-Dichloroethene
 Concen: 2109.23 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. -0.000 min
 Lab File: 64GCMS00169.D
 Acq: 1 May 2016 4:40 pm

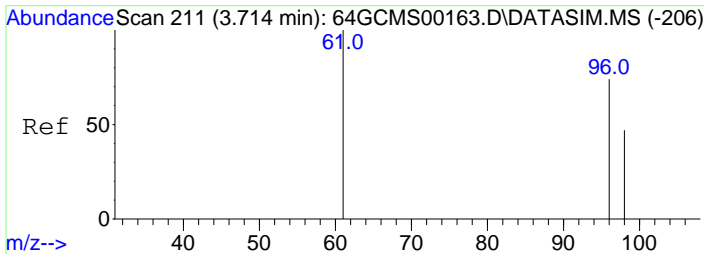
Tgt Ion:	61	Resp:	580078
Ion Ratio	Lower	Upper	
61	100		
96	62.4	40.9	61.3#
63	32.3	24.3	36.5



#4
 Methyl Tert butyl Ether
 Concen: 2241.33 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 64GCMS00169.D
 Acq: 1 May 2016 4:40 pm

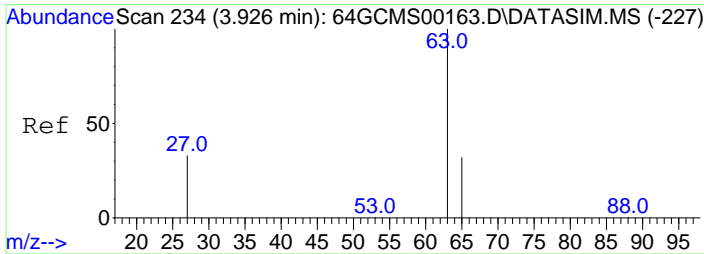
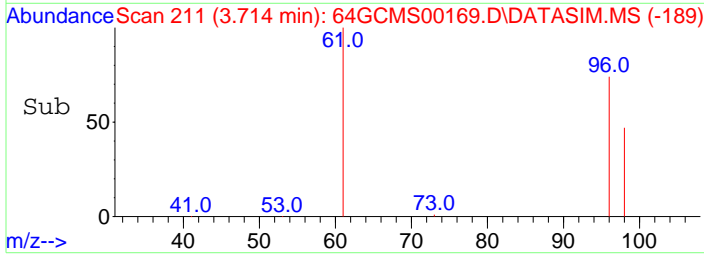
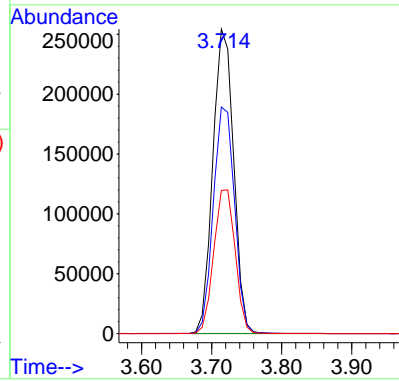
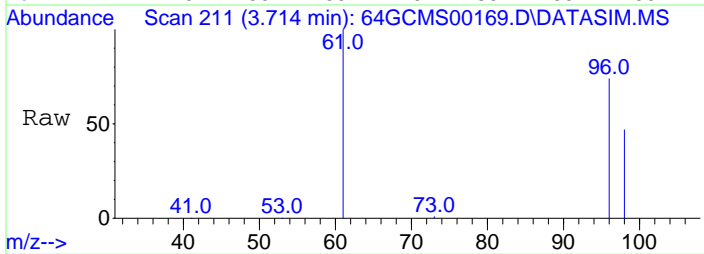
Tgt Ion:	73	Resp:	874093
Ion Ratio	Lower	Upper	
73	100		
41	24.1	20.6	30.8
53	1.2	1.2	1.8#





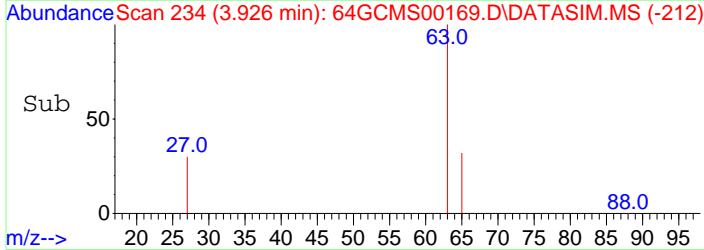
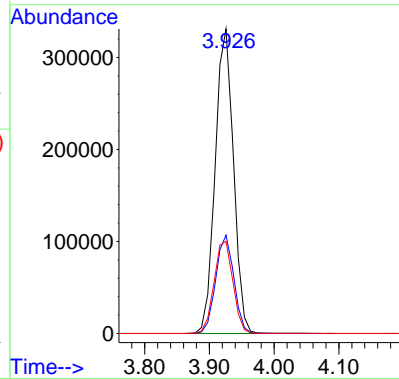
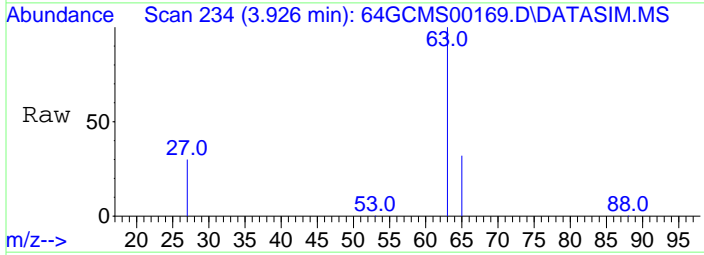
#5
 trans-1,2-Dichloroethene
 Concen: 2154.60 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. -0.000 min
 Lab File: 64GCMS00169.D
 Acq: 1 May 2016 4:40 pm

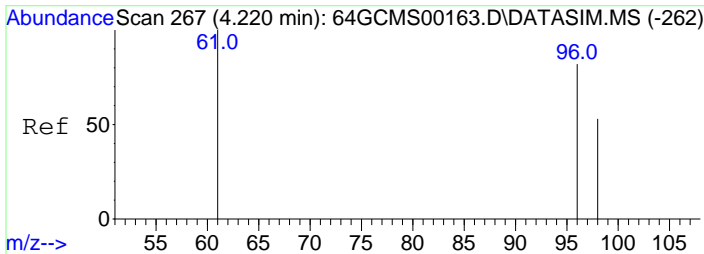
Tgt Ion	Resp	Lower	Upper
61	100		
96	75.8	47.8	71.6#
98	48.4	30.6	46.0#



#6
 1,1-Dichloroethane
 Concen: 2029.67 ppbv
 RT: 3.926 min Scan# 234
 Delta R.T. -0.000 min
 Lab File: 64GCMS00169.D
 Acq: 1 May 2016 4:40 pm

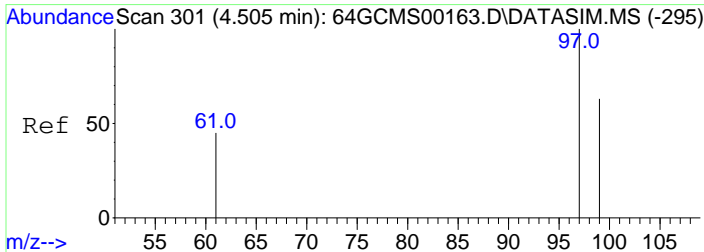
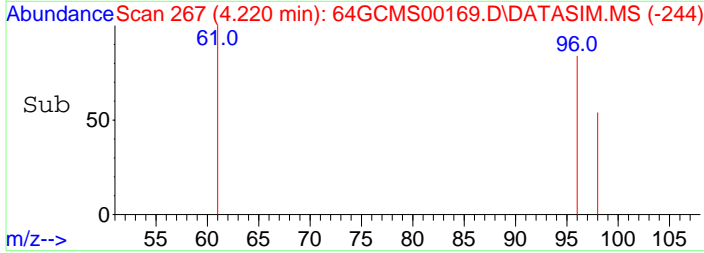
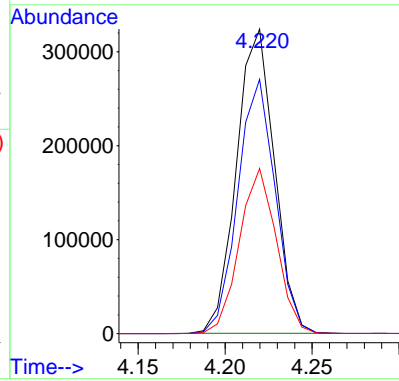
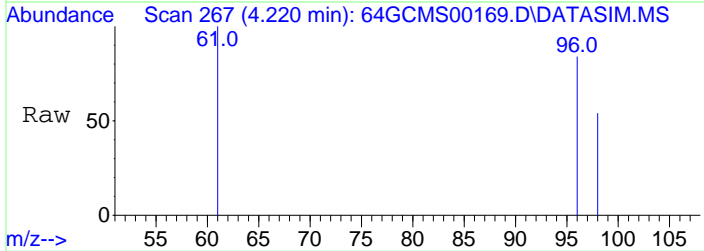
Tgt Ion	Resp	Lower	Upper
63	100		
65	31.9	24.8	37.2
27	31.2	21.1	31.7





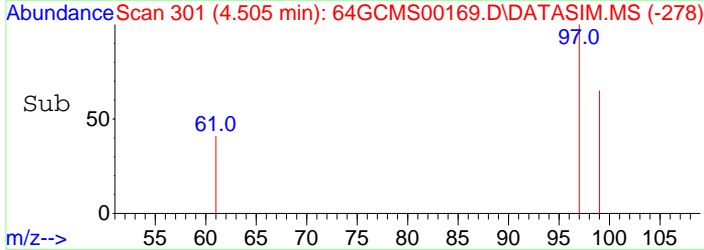
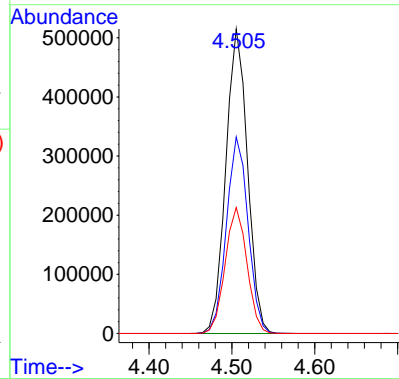
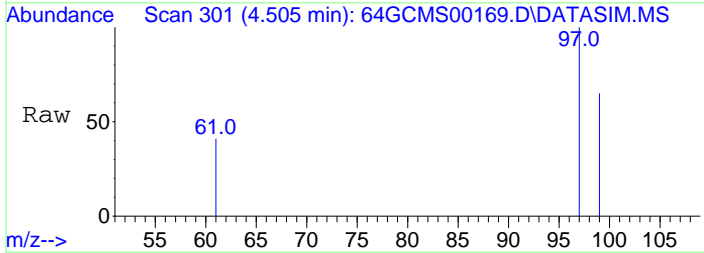
#7
 cis-1,2-Dichloroethene
 Concen: 2140.36 ppbv
 RT: 4.220 min Scan# 267
 Delta R.T. -0.000 min
 Lab File: 64GCMS00169.D
 Acq: 1 May 2016 4:40 pm

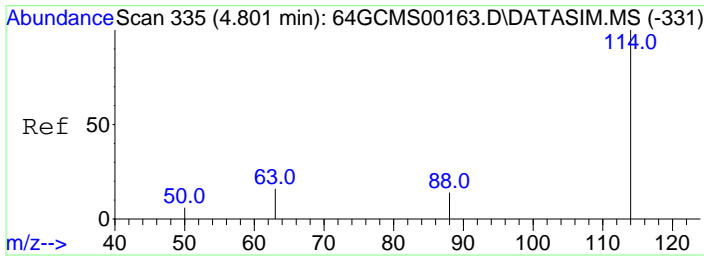
Tgt Ion:	61	Resp:	494142
Ion Ratio	Lower	Upper	
61	100		
96	82.3	52.0	78.0#
98	52.7	33.4	50.2#



#8
 1,1,1-Trichloroethane
 Concen: 2012.21 ppbv
 RT: 4.505 min Scan# 301
 Delta R.T. -0.000 min
 Lab File: 64GCMS00169.D
 Acq: 1 May 2016 4:40 pm

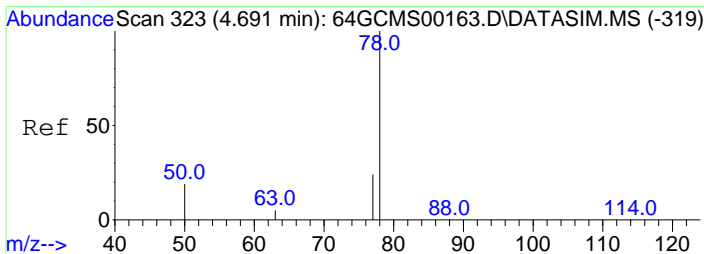
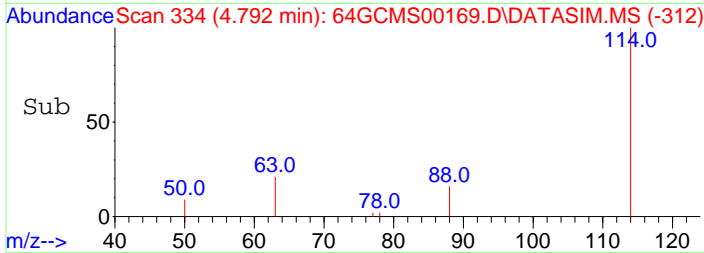
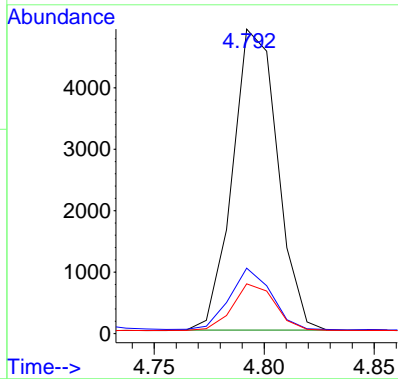
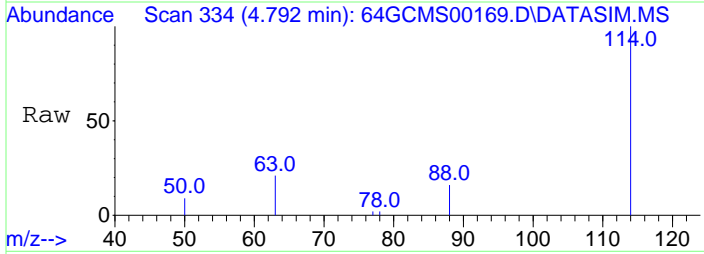
Tgt Ion:	97	Resp:	933804
Ion Ratio	Lower	Upper	
97	100		
99	64.5	51.5	77.3
61	41.9	38.6	58.0





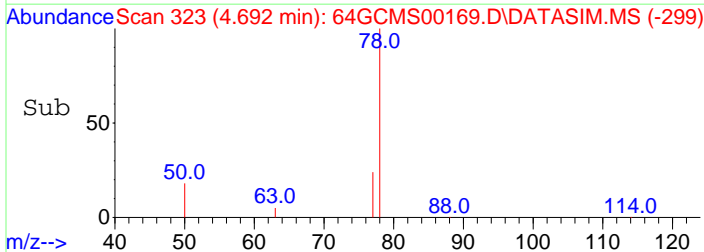
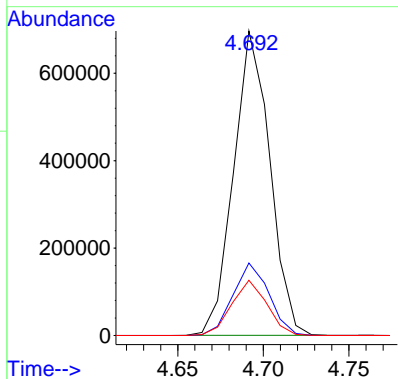
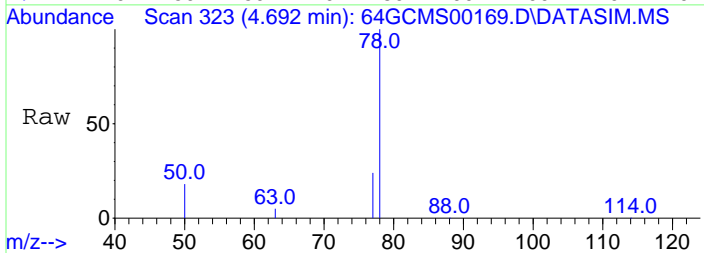
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00169.D
 Acq: 1 May 2016 4:40 pm

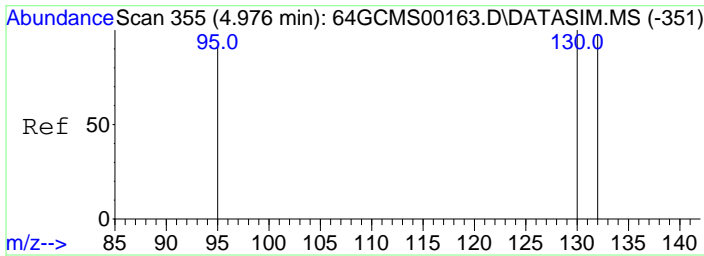
Tgt Ion	Resp	Lower	Upper
114	100		
63	0.0	19.2	28.8#
88	14.6	13.7	20.5



#10
 Benzene
 Concen: 1844.23 ppbv
 RT: 4.692 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00169.D
 Acq: 1 May 2016 4:40 pm

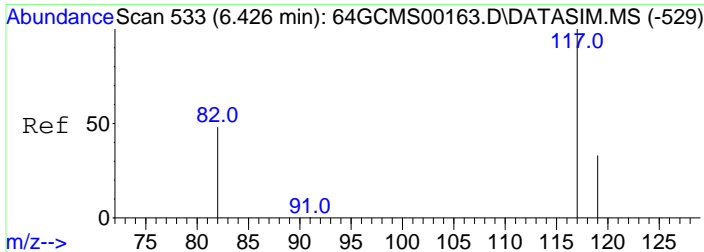
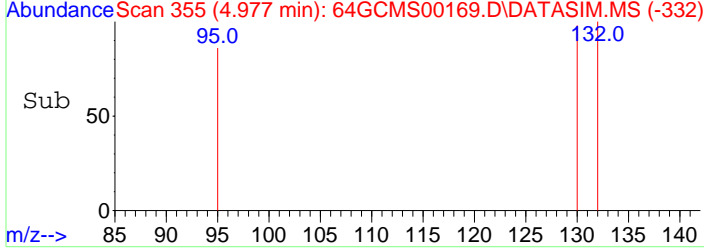
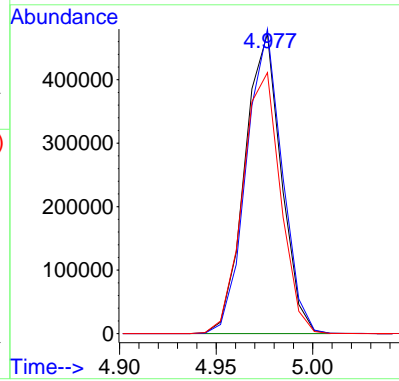
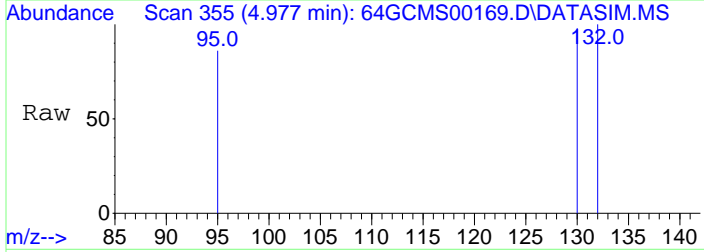
Tgt Ion	Resp	Lower	Upper
78	100		
77	23.7	18.2	27.4
50	17.6	16.6	24.8





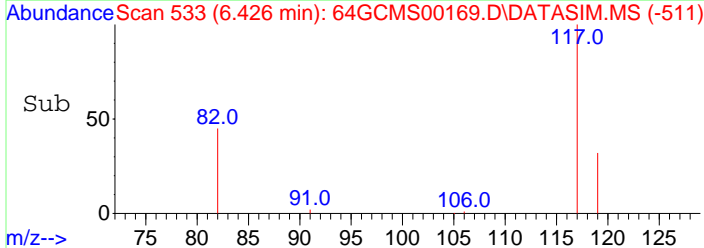
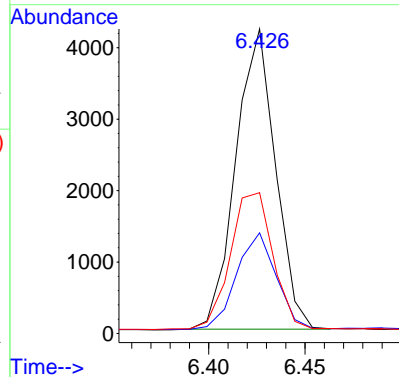
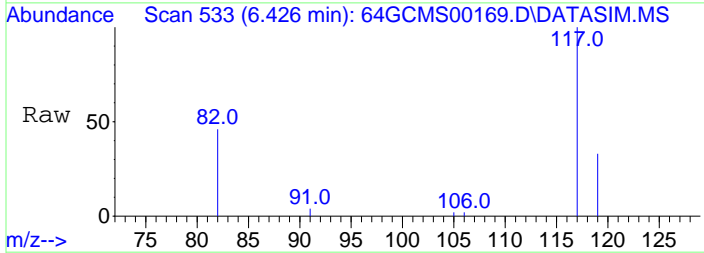
#11
 Trichloroethene
 Concen: 1811.43 ppbv
 RT: 4.977 min Scan# 355
 Delta R.T. -0.000 min
 Lab File: 64GCMS00169.D
 Acq: 1 May 2016 4:40 pm

Tgt Ion	Resp	Lower	Upper
130	100		
132	99.2	76.9	115.3
95	89.9	81.5	122.3

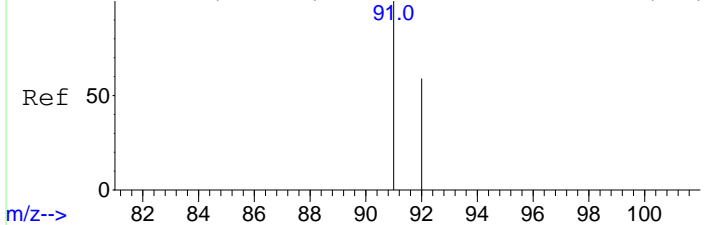


#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00169.D
 Acq: 1 May 2016 4:40 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.4	25.8	38.6
82	48.5	45.6	68.4

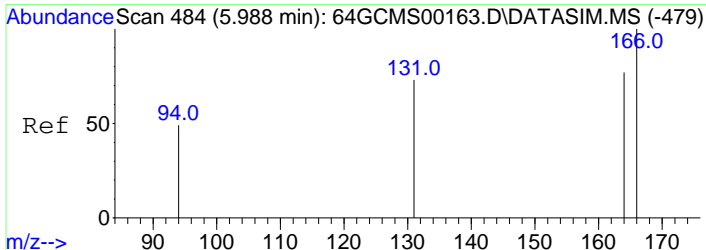
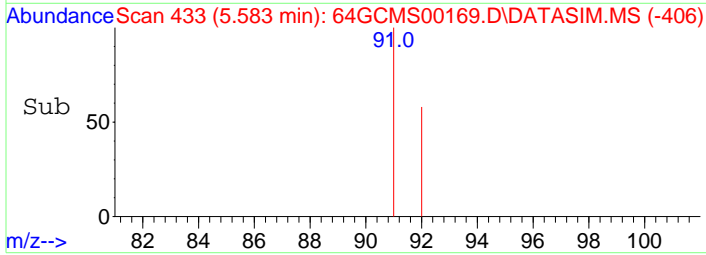
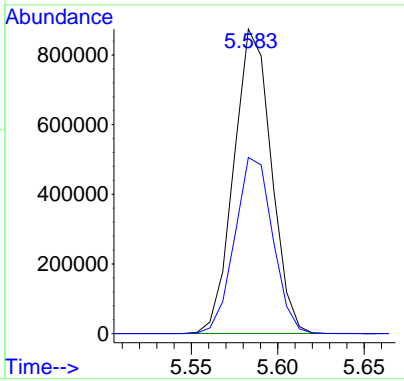
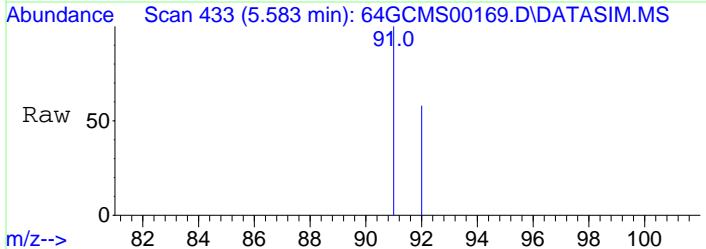


Abundance Scan 434 (5.590 min): 64GCMS00163.D\DATASIM.MS (-428)



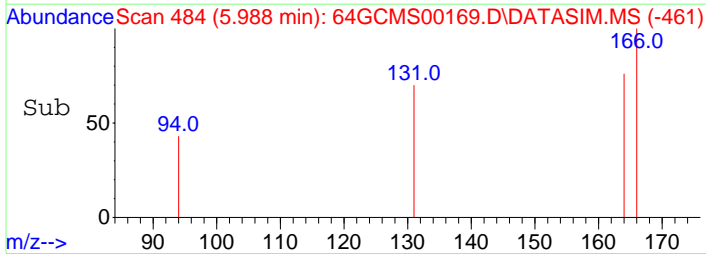
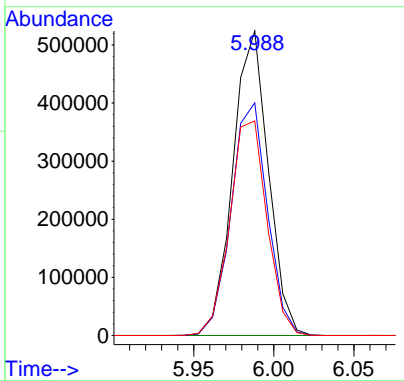
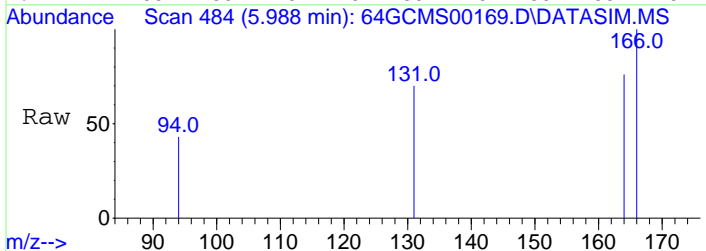
#13
Toluene
Concen: 2106.26 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00169.D
Acq: 1 May 2016 4:40 pm

Tgt Ion	Resp	Lower	Upper
91	100		
92	58.6	48.0	72.0

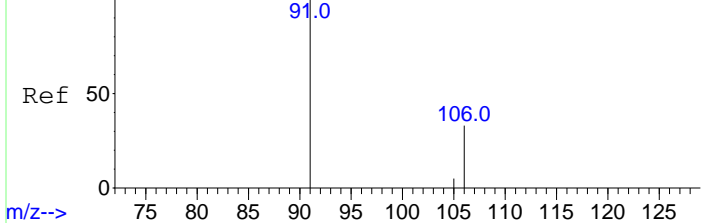


#14
Tetrachloroethene
Concen: 1869.92 ppbv
RT: 5.988 min Scan# 484
Delta R.T. -0.000 min
Lab File: 64GCMS00169.D
Acq: 1 May 2016 4:40 pm

Tgt Ion	Resp	Lower	Upper
166	100		
164	78.2	63.4	95.0
131	74.0	63.4	95.0

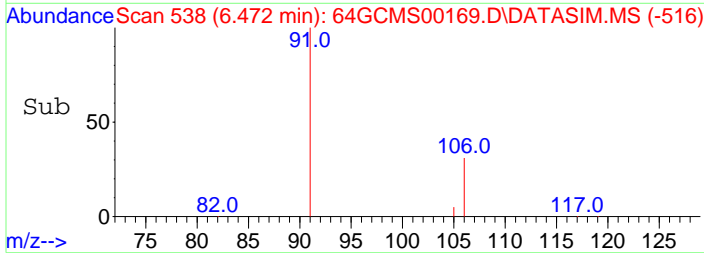
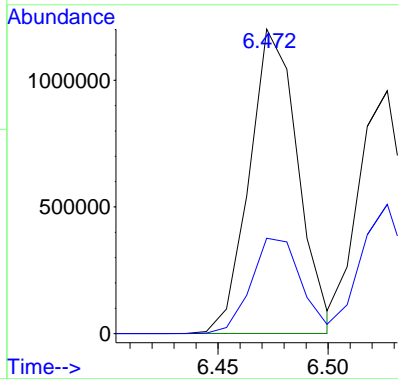
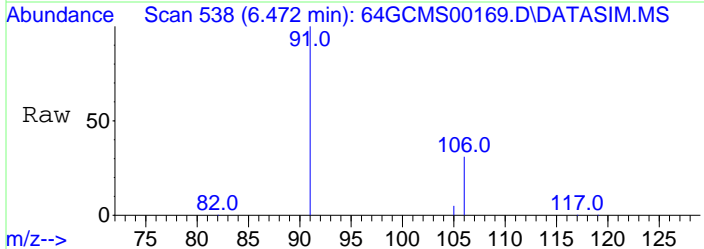


Abundance Scan 539 (6.481 min): 64GCMS00163.D\DATASIM.MS (-534)

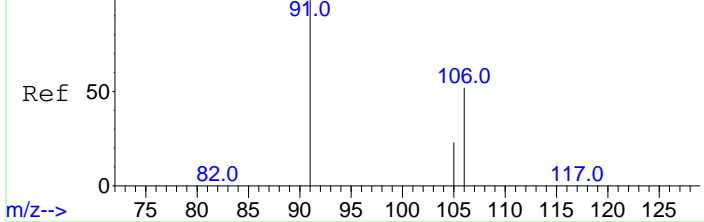


#15
Ethyl Benzene
Concen: 2377.77 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00169.D
Acq: 1 May 2016 4:40 pm

Tgt Ion: 91 Resp: 1839412
Ion Ratio Lower Upper
91 100
106 32.6 24.2 36.2

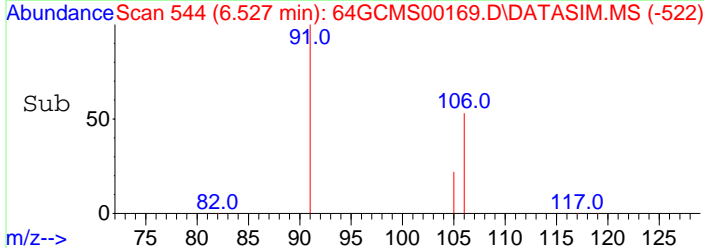
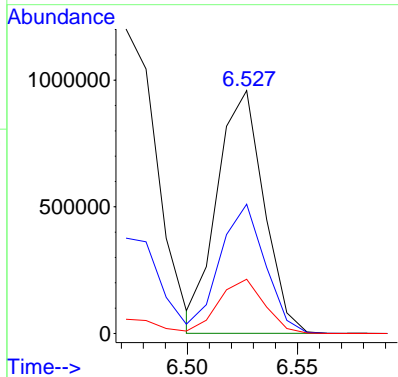
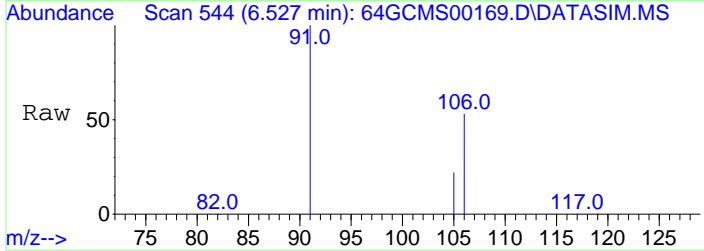


Abundance Scan 544 (6.527 min): 64GCMS00163.D\DATASIM.MS (-541)

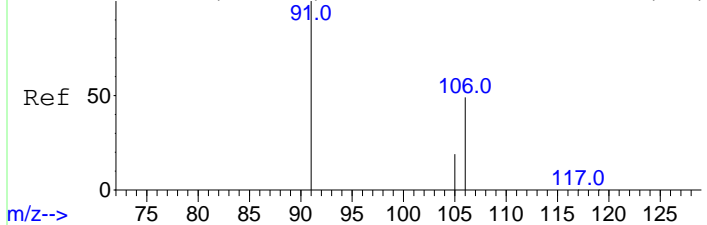


#16
m,p-Xylene
Concen: 2248.32 ppbv
RT: 6.527 min Scan# 544
Delta R.T. -0.000 min
Lab File: 64GCMS00169.D
Acq: 1 May 2016 4:40 pm

Tgt Ion: 91 Resp: 1410809
Ion Ratio Lower Upper
91 100
106 51.7 37.7 56.5
105 21.9 17.0 25.4



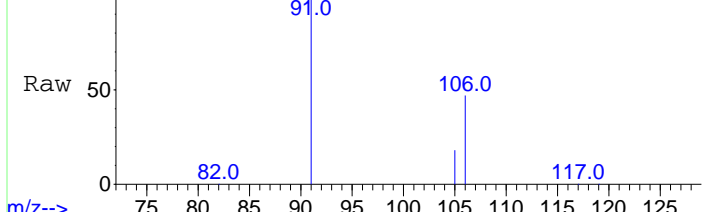
Abundance Scan 574 (6.801 min): 64GCMS00163.D\DATASIM.MS (-569)



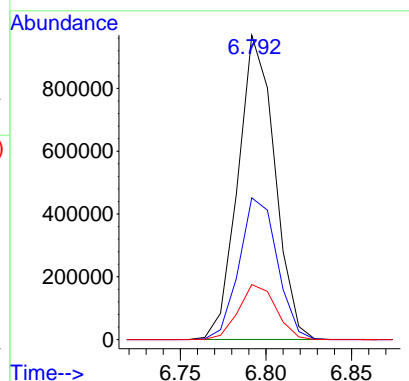
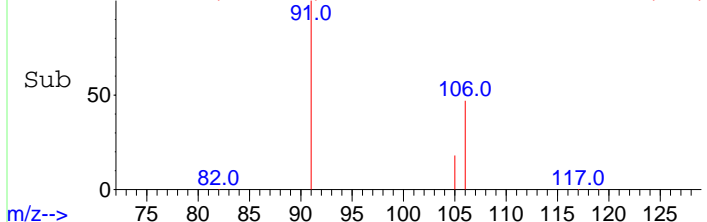
#17
 o-Xylene
 Concen: 2124.22 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00169.D
 Acq: 1 May 2016 4:40 pm

Tgt Ion:	Resp:	Lower	Upper
91	1448497		
106	48.3	35.4	53.2
105	18.5	14.0	21.0

Abundance Scan 573 (6.792 min): 64GCMS00169.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00169.D\DATASIM.MS (-551)



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00170.D
 Acq On : 1 May 2016 4:53 pm
 Operator : dlm
 Sample : STD20160501-03 \ 500 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

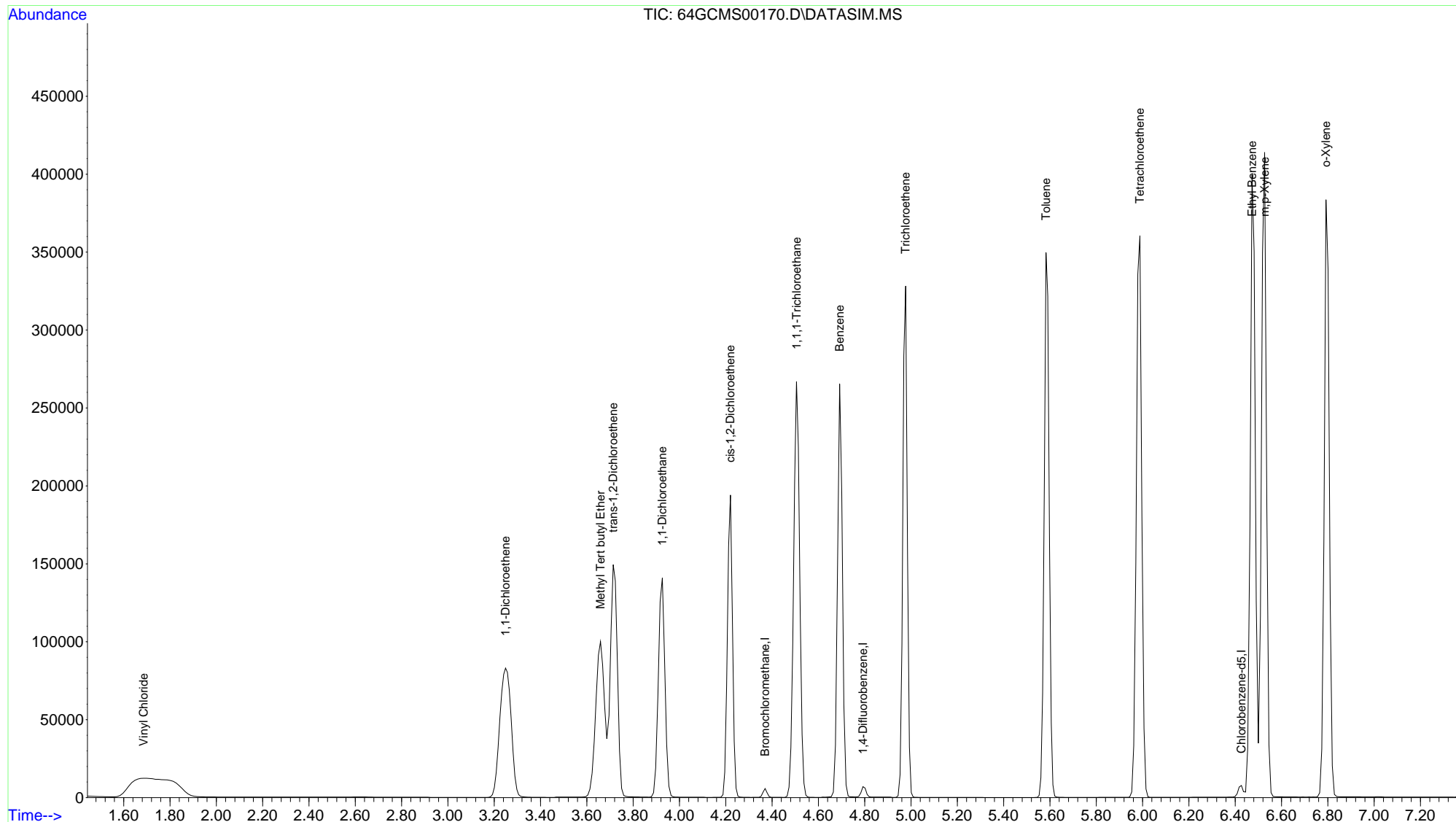
Quant Time: May 01 17:53:19 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Bromochloromethane	4.370	49	2492	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.792	114	6670	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.427	117	6141	10.00	ppbv		0.00
Target Compounds							
							Qvalue
2) Vinyl Chloride	1.686	62	84438	505.37	ppbv	#	35
3) 1,1-Dichloroethene	3.249	61	147156	510.17	ppbv	#	89
4) Methyl Tert butyl Ether	3.659	73	216085	528.29	ppbv		99
5) trans-1,2-Dichloroethene	3.714	61	137584	537.73	ppbv	#	81
6) 1,1-Dichloroethane	3.926	63	168792	503.57	ppbv	#	94
7) cis-1,2-Dichloroethene	4.220	61	125277	517.37	ppbv	#	81
8) 1,1,1-Trichloroethane	4.505	97	235670	484.20	ppbv		97
10) Benzene	4.692	78	266899	500.07	ppbv		96
11) Trichloroethene	4.977	130	153531	467.74	ppbv		93
13) Toluene	5.583	91	330837	519.02	ppbv		97
14) Tetrachloroethene	5.988	166	195247	443.89	ppbv		96
15) Ethyl Benzene	6.472	91	445841	566.85	ppbv		96
16) m,p-Xylene	6.527	91	347994	545.46	ppbv		95
17) o-Xylene	6.792	91	351167	506.52	ppbv		95

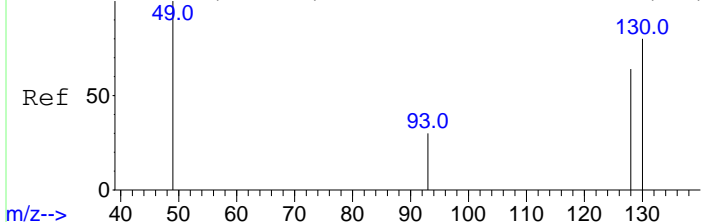
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00170.D
 Acq On : 1 May 2016 4:53 pm
 Operator : dlm
 Sample : STD20160501-03 \ 500 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:19 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



Abundance Scan 285 (4.369 min): 64GCMS00163.D\DATASIM.MS (-281)



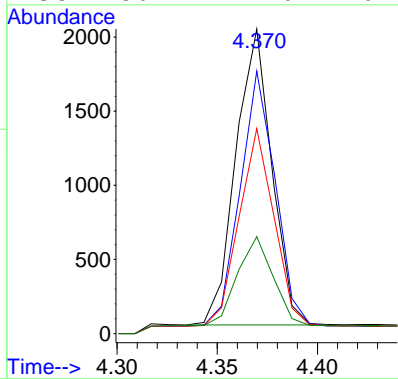
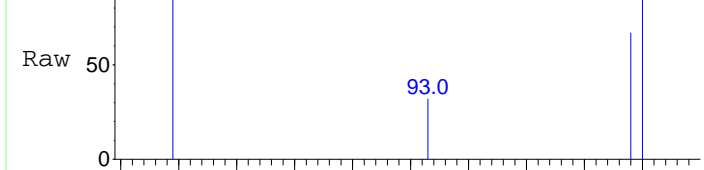
#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00170.D
Acq: 1 May 2016 4:53 pm

Tgt Ion: 49 Resp: 2492

Ion	Ratio	Lower	Upper
49	100		
130	83.8	46.3	69.5#
128	65.0	35.7	53.5#
93	30.1	17.6	26.4#

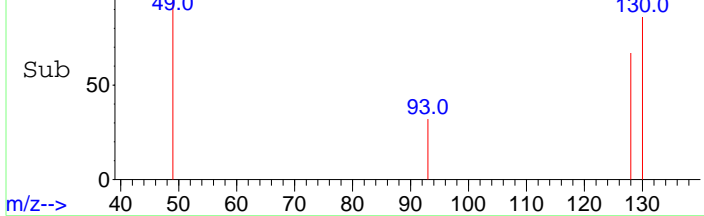
m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00170.D\DATASIM.MS

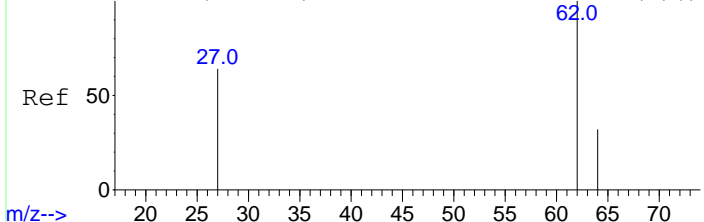


m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00170.D\DATASIM.MS (-277)



Abundance Scan 19 (1.673 min): 64GCMS00163.D\DATASIM.MS (-8) (-)



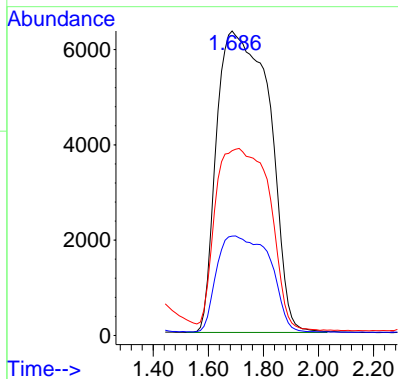
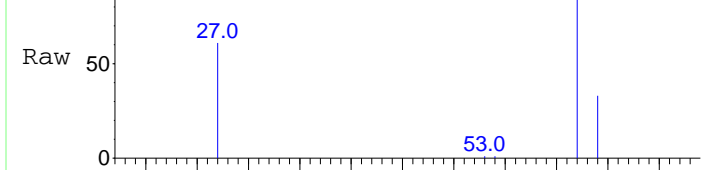
#2
Vinyl Chloride
Concen: 505.37 ppbv
RT: 1.686 min Scan# 20
Delta R.T. 0.000 min
Lab File: 64GCMS00170.D
Acq: 1 May 2016 4:53 pm

Tgt Ion: 62 Resp: 84438

Ion	Ratio	Lower	Upper
62	100		
64	0.0	23.7	35.5#
27	0.0	38.0	57.0#

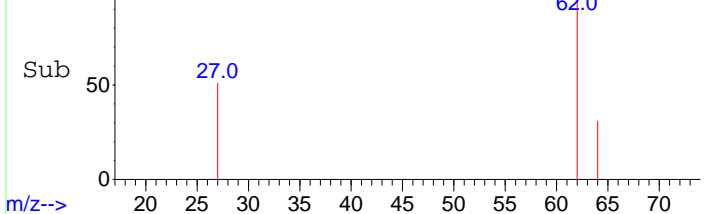
m/z-->

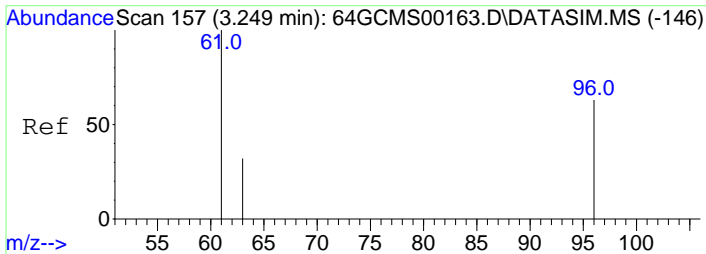
Abundance Scan 20 (1.686 min): 64GCMS00170.D\DATASIM.MS



m/z-->

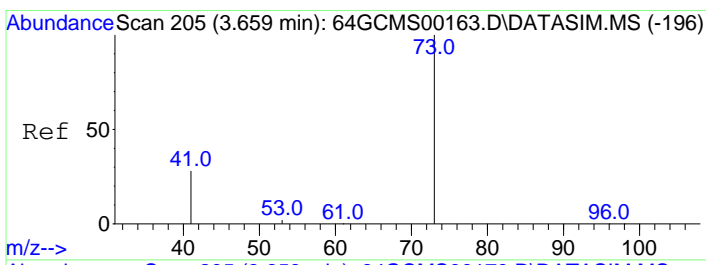
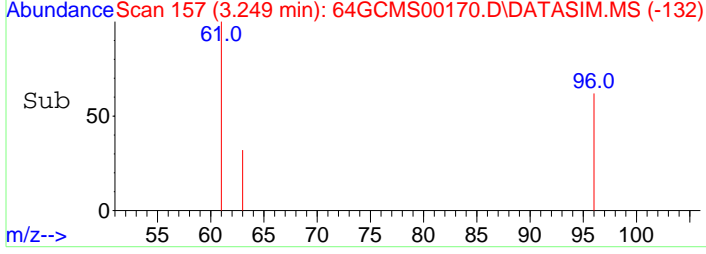
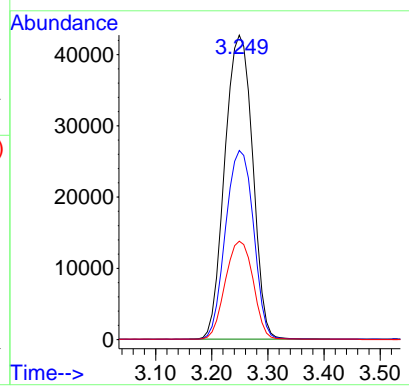
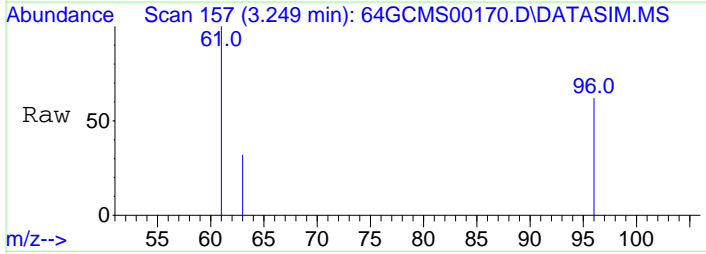
Abundance Scan 20 (1.686 min): 64GCMS00170.D\DATASIM.MS (-1) (-)





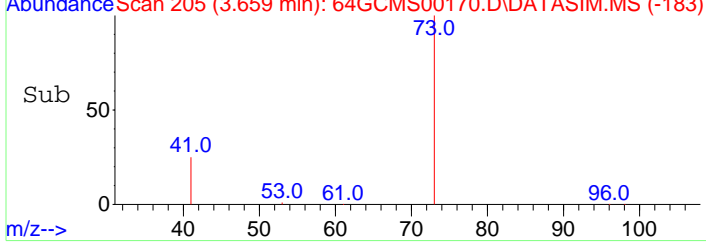
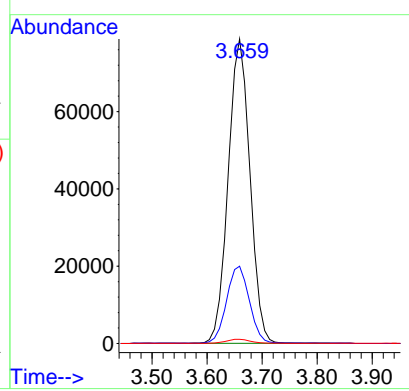
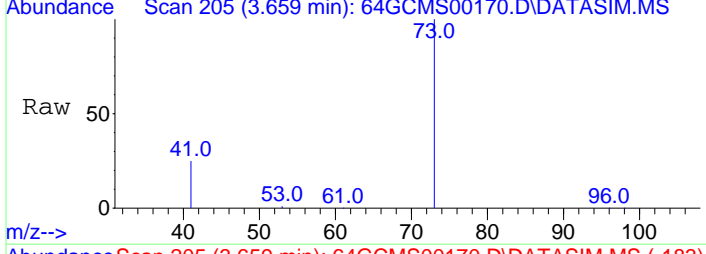
#3
 1,1-Dichloroethene
 Concen: 510.17 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. 0.000 min
 Lab File: 64GCMS00170.D
 Acq: 1 May 2016 4:53 pm

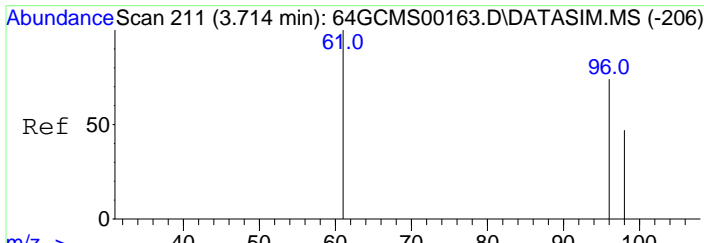
Tgt Ion:	Resp:	Lower	Upper
61	147156		
96	62.3	40.9	61.3#
63	32.2	24.3	36.5



#4
 Methyl Tert butyl Ether
 Concen: 528.29 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. 0.000 min
 Lab File: 64GCMS00170.D
 Acq: 1 May 2016 4:53 pm

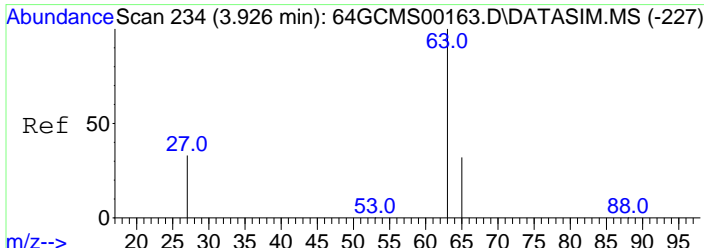
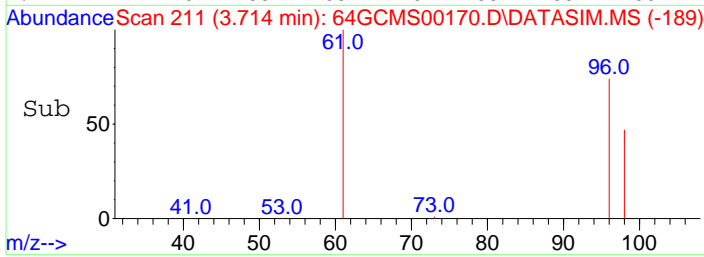
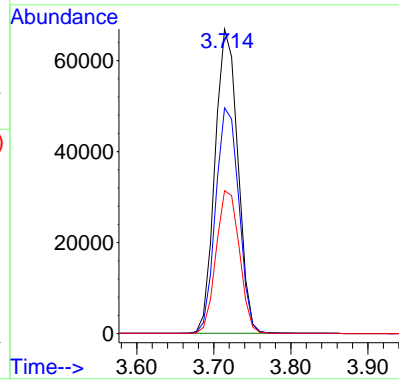
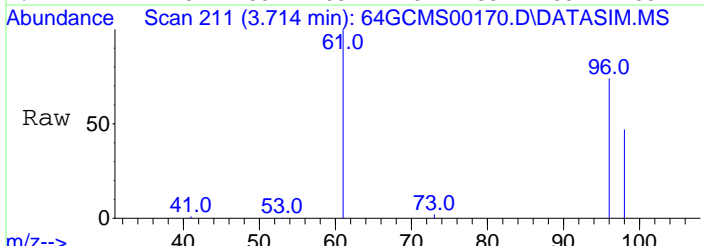
Tgt Ion:	Resp:	Lower	Upper
73	216085		
41	26.3	20.6	30.8
53	1.4	1.2	1.8





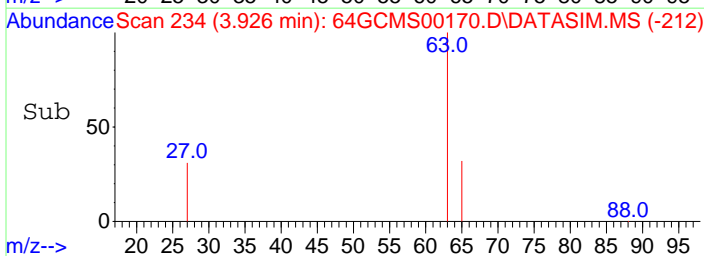
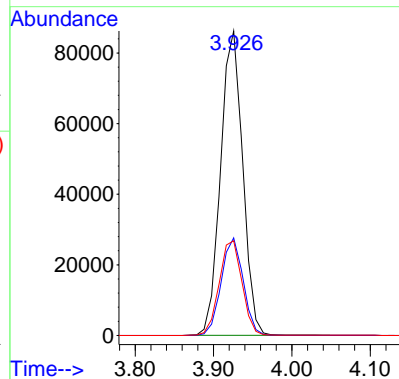
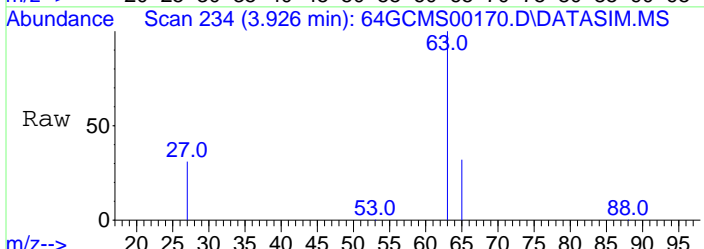
#5
 trans-1,2-Dichloroethene
 Concen: 537.73 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. 0.000 min
 Lab File: 64GCMS00170.D
 Acq: 1 May 2016 4:53 pm

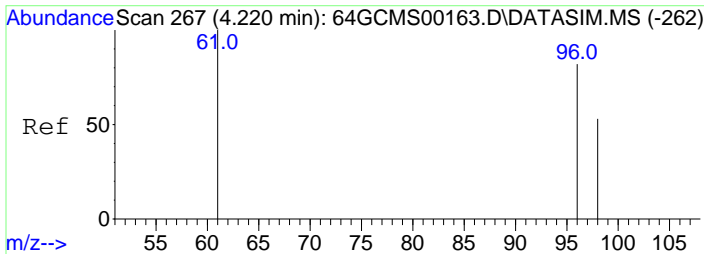
Tgt Ion	Resp	Lower	Upper
61	100		
96	75.3	47.8	71.6#
98	47.8	30.6	46.0#



#6
 1,1-Dichloroethane
 Concen: 503.57 ppbv
 RT: 3.926 min Scan# 234
 Delta R.T. 0.000 min
 Lab File: 64GCMS00170.D
 Acq: 1 May 2016 4:53 pm

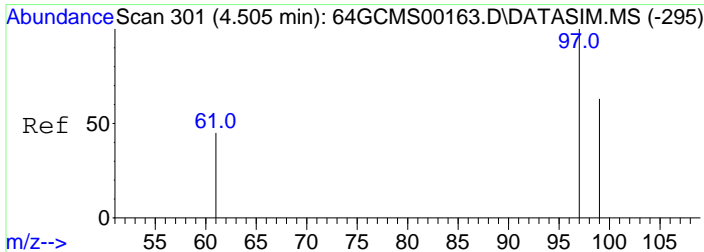
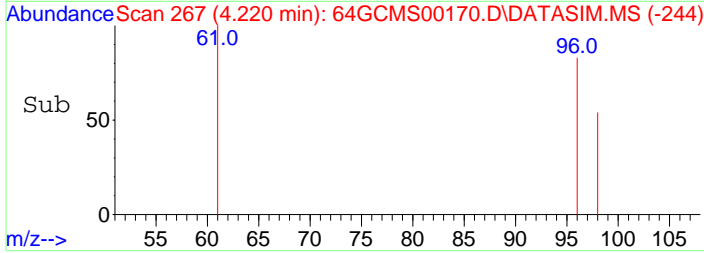
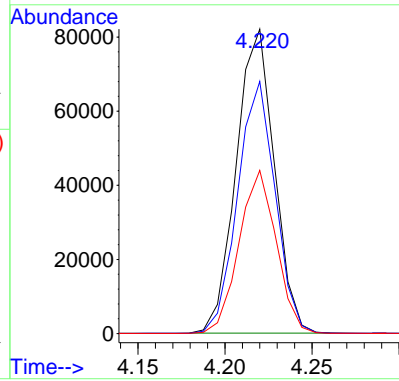
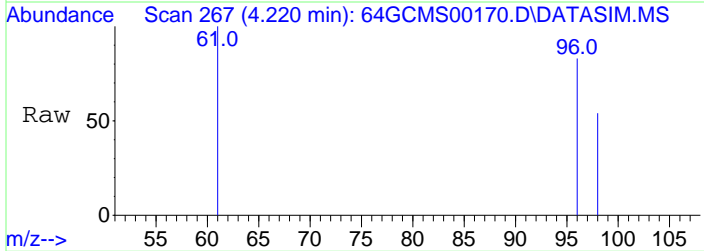
Tgt Ion	Resp	Lower	Upper
63	100		
65	32.0	24.8	37.2
27	32.4	21.1	31.7#





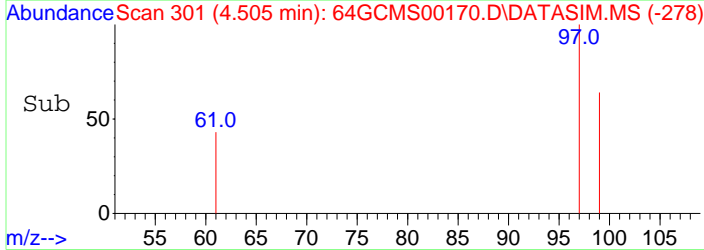
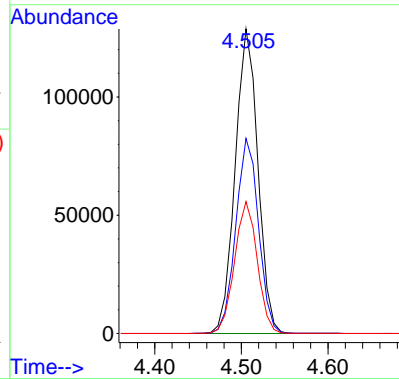
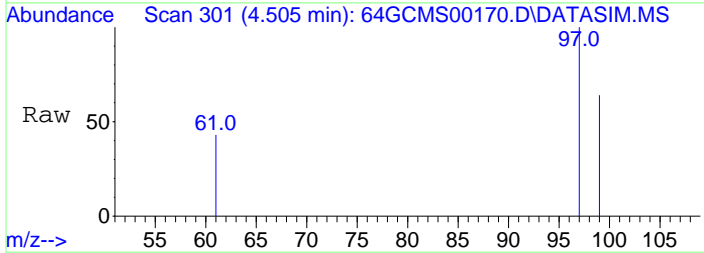
#7
 cis-1,2-Dichloroethene
 Concen: 517.37 ppbv
 RT: 4.220 min Scan# 267
 Delta R.T. 0.000 min
 Lab File: 64GCMS00170.D
 Acq: 1 May 2016 4:53 pm

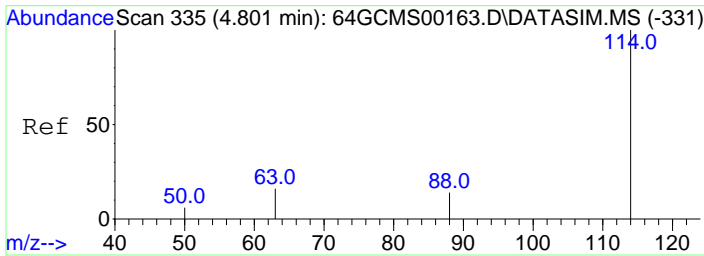
Tgt Ion	Resp	Lower	Upper
61	100		
96	81.5	52.0	78.0#
98	52.2	33.4	50.2#



#8
 1,1,1-Trichloroethane
 Concen: 484.20 ppbv
 RT: 4.505 min Scan# 301
 Delta R.T. 0.000 min
 Lab File: 64GCMS00170.D
 Acq: 1 May 2016 4:53 pm

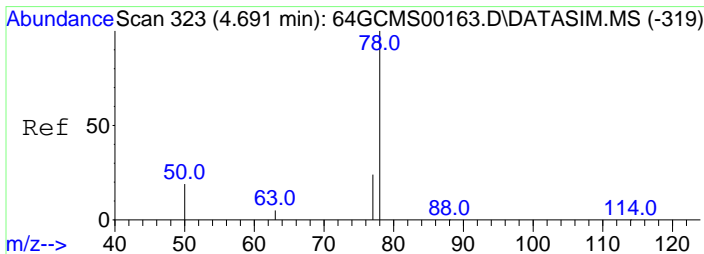
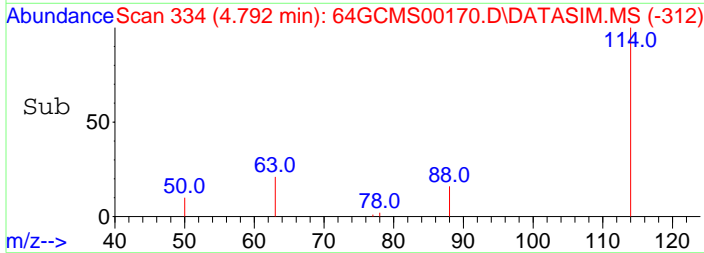
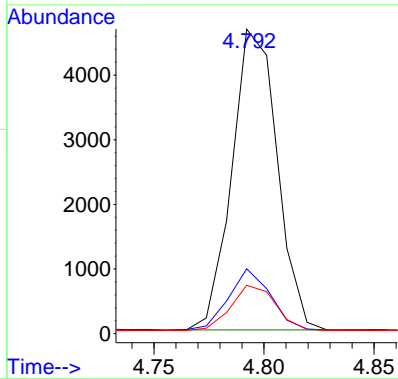
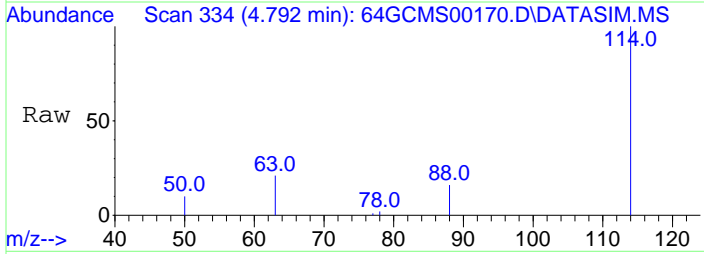
Tgt Ion	Resp	Lower	Upper
97	100		
99	64.2	51.5	77.3
61	43.4	38.6	58.0





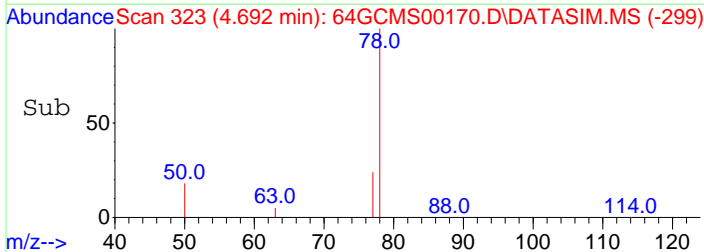
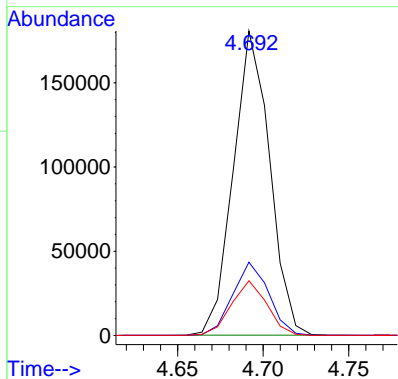
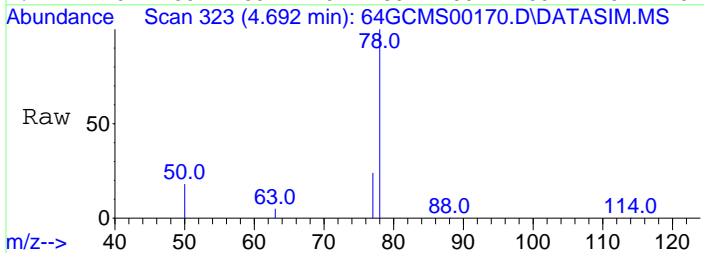
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. 0.000 min
 Lab File: 64GCMS00170.D
 Acq: 1 May 2016 4:53 pm

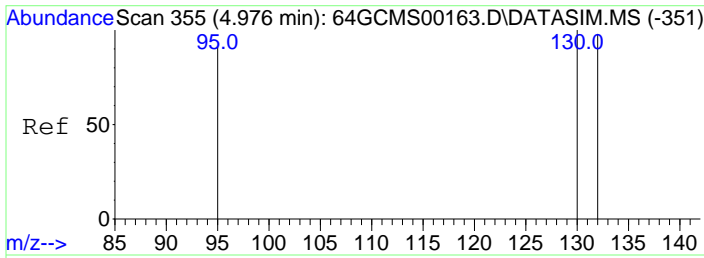
Tgt Ion	Resp	Lower	Upper
114	100		
63	18.8	19.2	28.8#
88	14.8	13.7	20.5



#10
 Benzene
 Concen: 500.07 ppbv
 RT: 4.692 min Scan# 323
 Delta R.T. 0.000 min
 Lab File: 64GCMS00170.D
 Acq: 1 May 2016 4:53 pm

Tgt Ion	Resp	Lower	Upper
78	100		
77	23.8	18.2	27.4
50	17.5	16.6	24.8

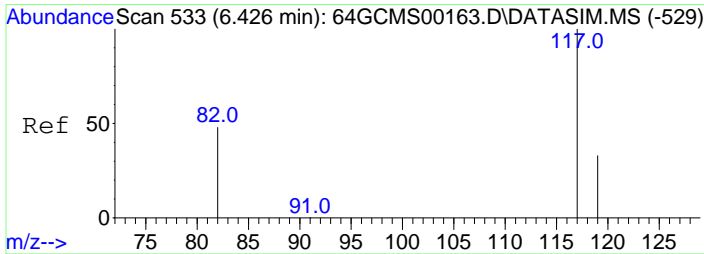
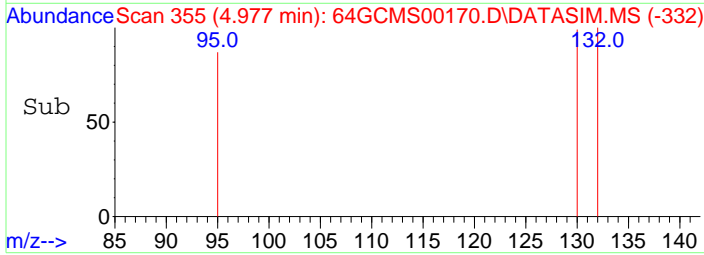
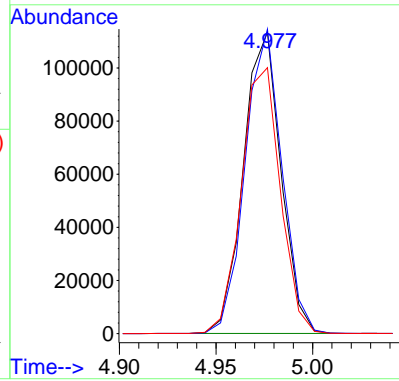
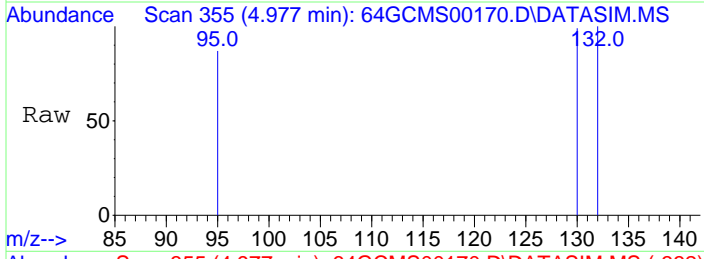




#11
 Trichloroethene
 Concen: 467.74 ppbv
 RT: 4.977 min Scan# 355
 Delta R.T. 0.000 min
 Lab File: 64GCMS00170.D
 Acq: 1 May 2016 4:53 pm

Tgt Ion:130 Resp: 153531

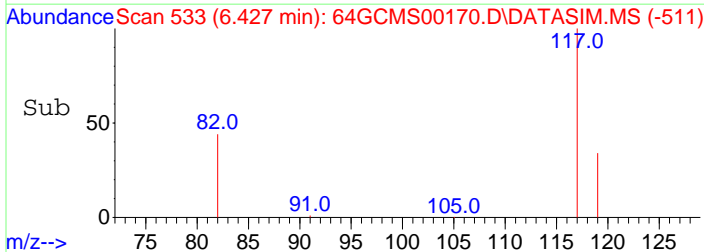
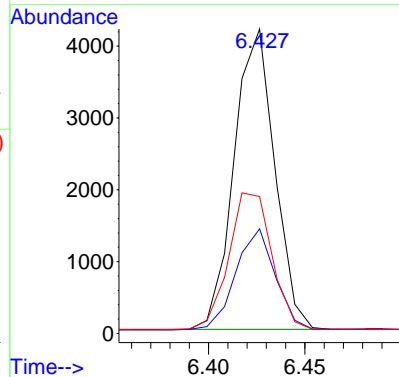
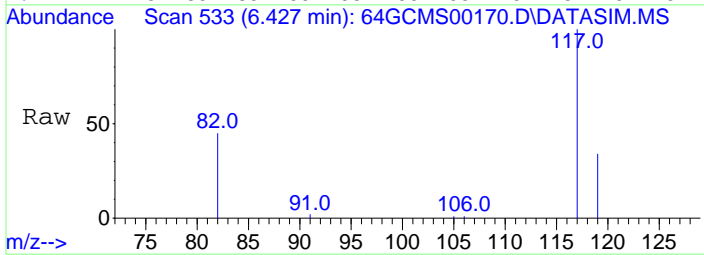
Ion	Ratio	Lower	Upper
130	100		
132	98.7	76.9	115.3
95	91.2	81.5	122.3



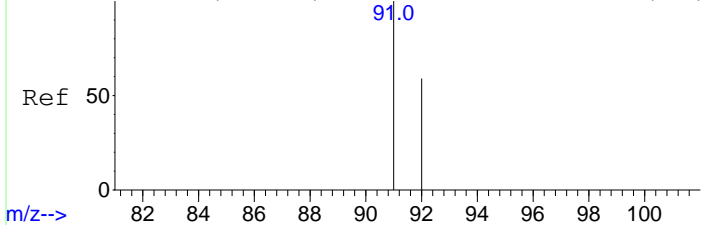
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.427 min Scan# 533
 Delta R.T. 0.000 min
 Lab File: 64GCMS00170.D
 Acq: 1 May 2016 4:53 pm

Tgt Ion:117 Resp: 6141

Ion	Ratio	Lower	Upper
117	100		
119	32.4	25.8	38.6
82	48.3	45.6	68.4

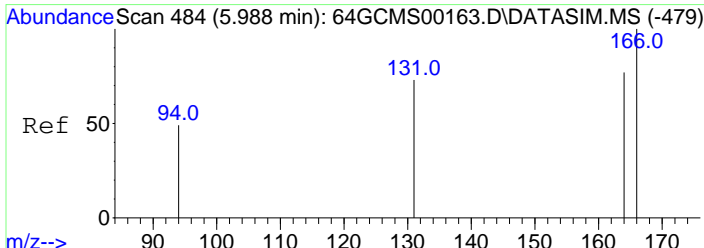
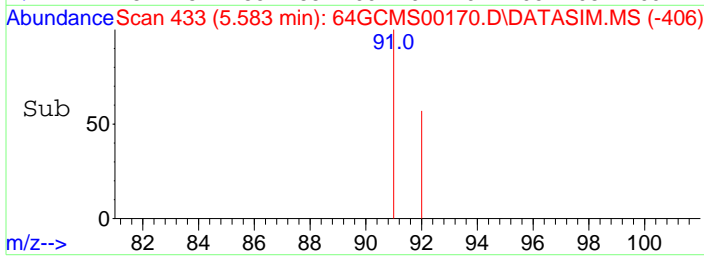
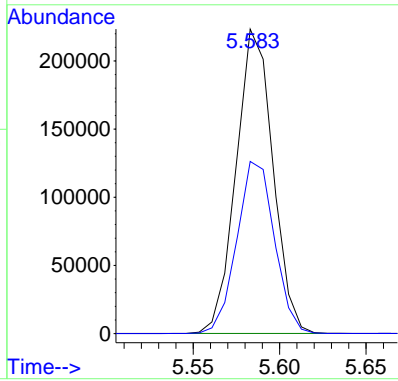
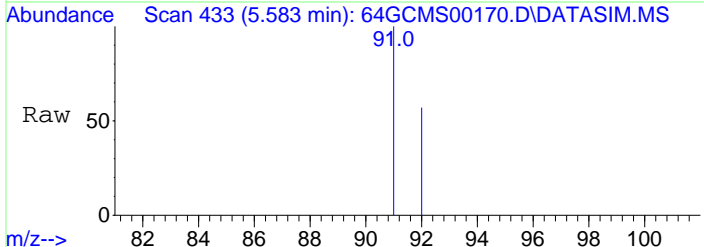


Abundance Scan 434 (5.590 min): 64GCMS00163.D\DATASIM.MS (-428)



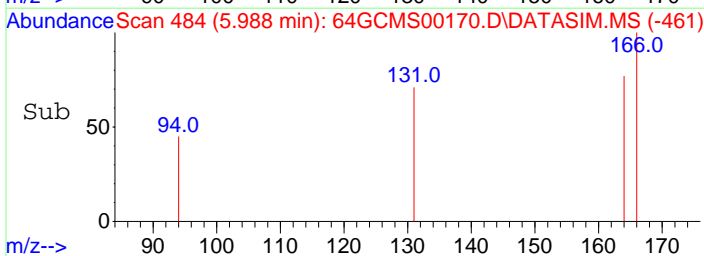
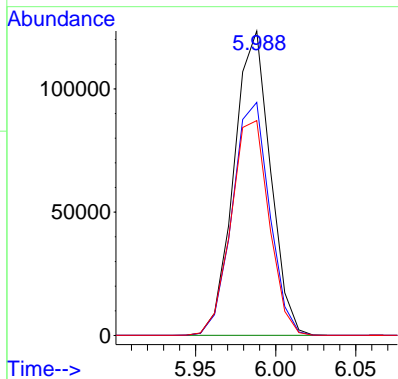
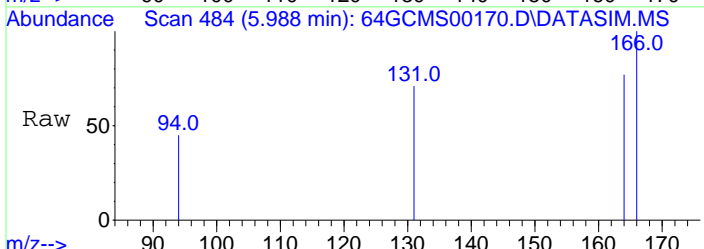
#13
Toluene
Concen: 519.02 ppbv
RT: 5.583 min Scan# 433
Delta R.T. 0.000 min
Lab File: 64GCMS00170.D
Acq: 1 May 2016 4:53 pm

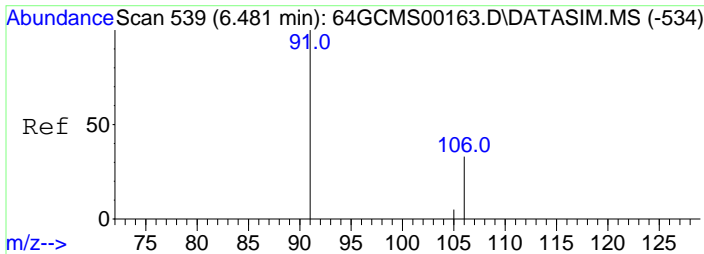
Tgt Ion	Resp	Lower	Upper
91	100		
92	57.8	48.0	72.0



#14
Tetrachloroethene
Concen: 443.89 ppbv
RT: 5.988 min Scan# 484
Delta R.T. 0.000 min
Lab File: 64GCMS00170.D
Acq: 1 May 2016 4:53 pm

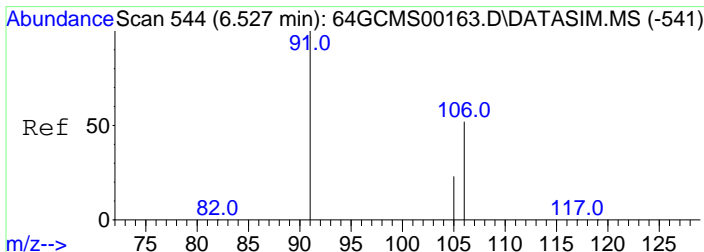
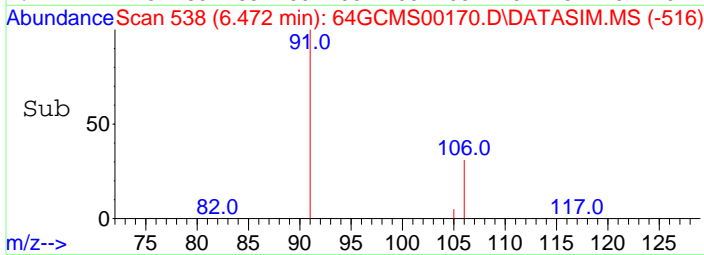
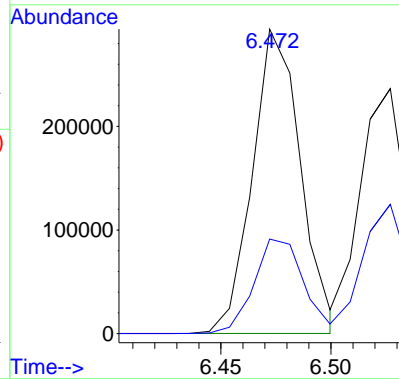
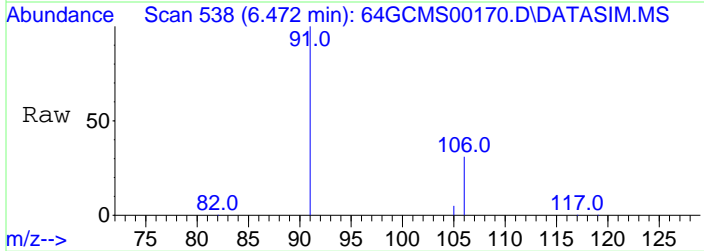
Tgt Ion	Resp	Lower	Upper
166	100		
164	78.3	63.4	95.0
131	73.6	63.4	95.0





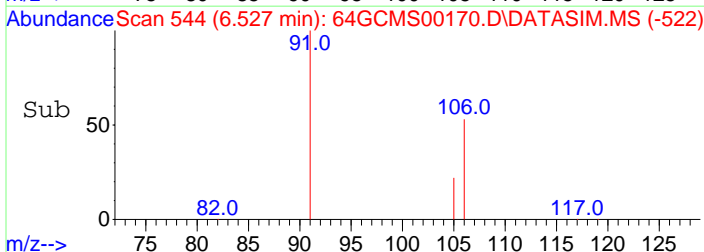
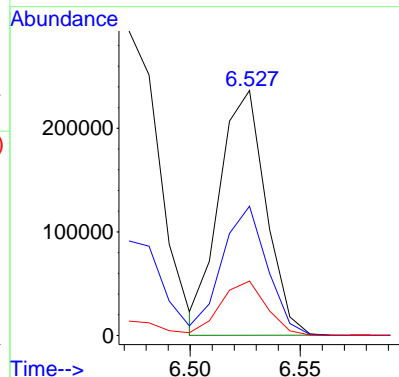
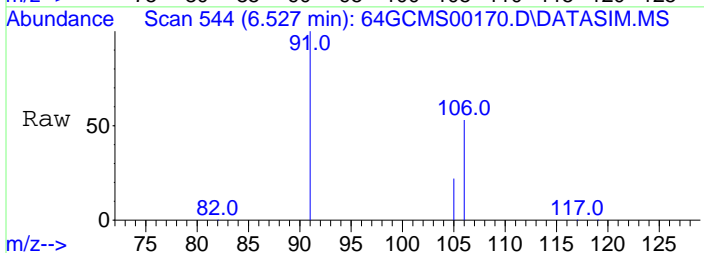
#15
Ethyl Benzene
Concen: 566.85 ppbv
RT: 6.472 min Scan# 538
Delta R.T. 0.000 min
Lab File: 64GCMS00170.D
Acq: 1 May 2016 4:53 pm

Tgt Ion: 91 Resp: 445841
Ion Ratio Lower Upper
91 100
106 32.2 24.2 36.2

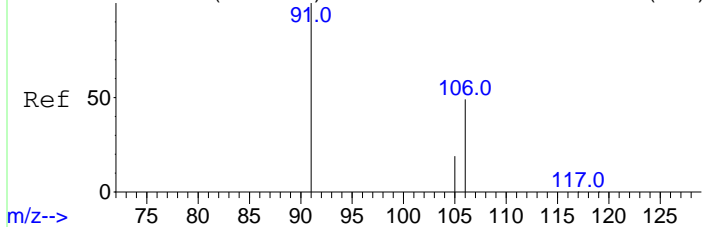


#16
m,p-Xylene
Concen: 545.46 ppbv
RT: 6.527 min Scan# 544
Delta R.T. 0.000 min
Lab File: 64GCMS00170.D
Acq: 1 May 2016 4:53 pm

Tgt Ion: 91 Resp: 347994
Ion Ratio Lower Upper
91 100
106 51.2 37.7 56.5
105 21.8 17.0 25.4



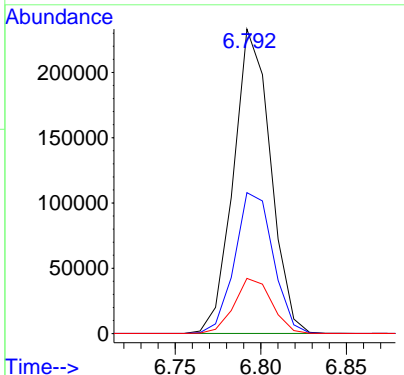
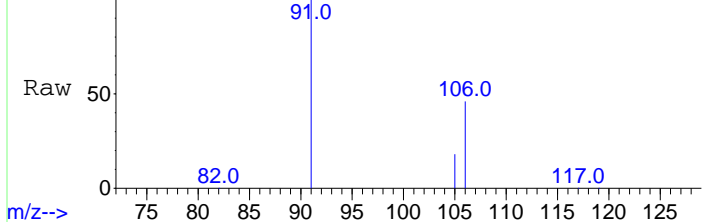
Abundance Scan 574 (6.801 min): 64GCMS00163.D\DATASIM.MS (-569)



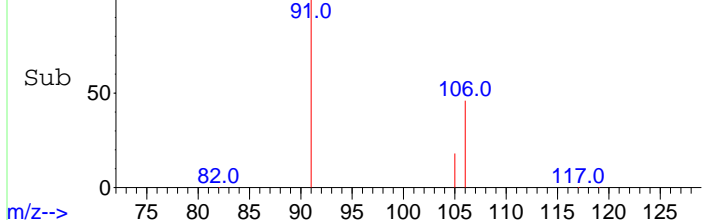
#17
 o-Xylene
 Concen: 506.52 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. 0.000 min
 Lab File: 64GCMS00170.D
 Acq: 1 May 2016 4:53 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	48.1	35.4	53.2
105	18.4	14.0	21.0

Abundance Scan 573 (6.792 min): 64GCMS00170.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00170.D\DATASIM.MS (-551)



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00171.D
 Acq On : 1 May 2016 5:06 pm
 Operator : dlm
 Sample : STD20160501-04 \ 100 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

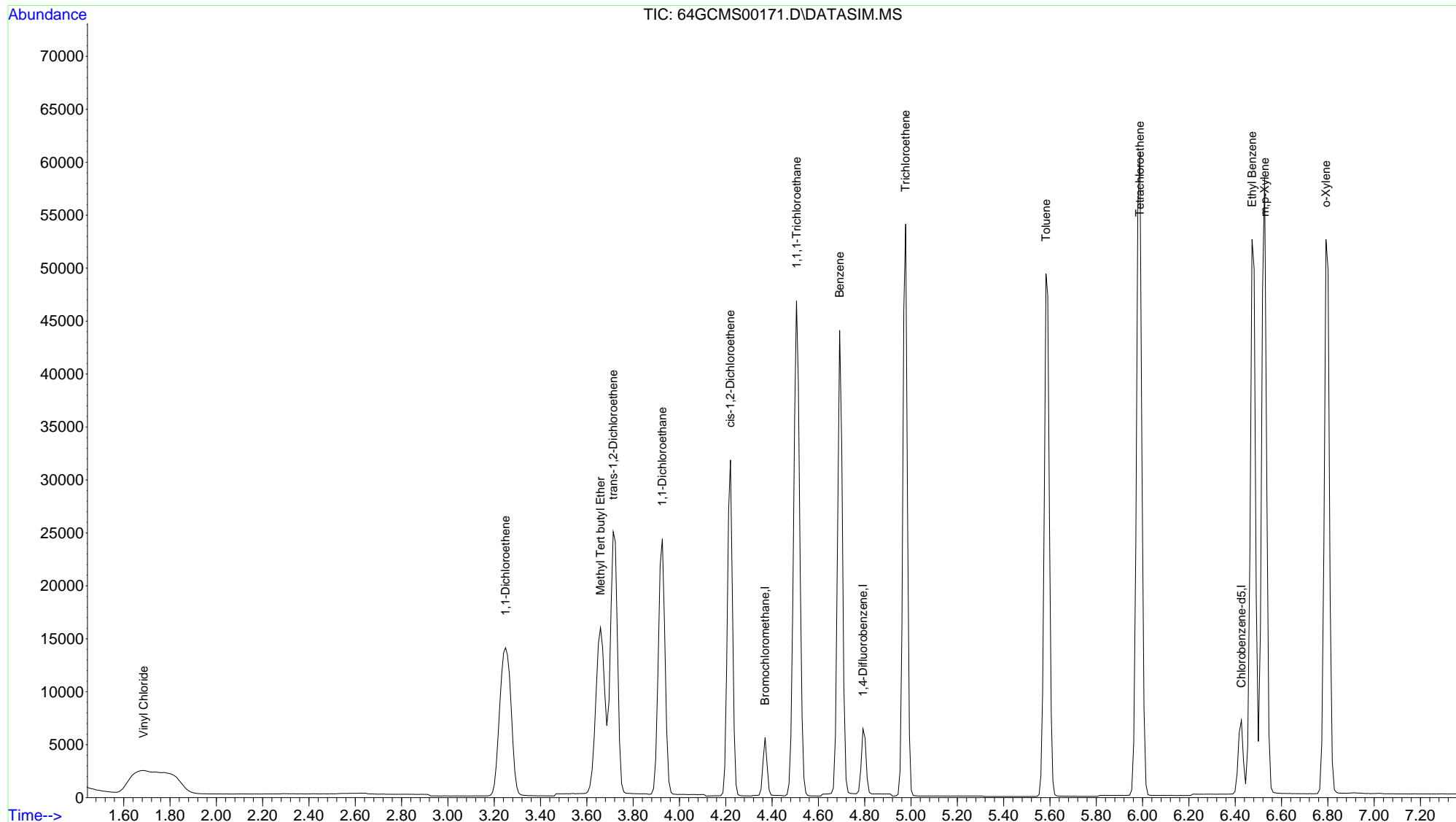
Quant Time: May 01 17:57:32 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Bromochloromethane	4.370	49	2379	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.792	114	6049	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.426	117	5681	10.00	ppbv		0.00
Target Compounds							
							Qvalue
2) Vinyl Chloride	1.686	62	14766m	92.57	ppbv		
3) 1,1-Dichloroethene	3.249	61	24965	90.66	ppbv	#	89
4) Methyl Tert butyl Ether	3.659	73	33342	85.39	ppbv		92
5) trans-1,2-Dichloroethene	3.714	61	22919	93.83	ppbv	#	81
6) 1,1-Dichloroethane	3.926	63	29761	93.00	ppbv	#	92
7) cis-1,2-Dichloroethene	4.220	61	20797	89.97	ppbv	#	81
8) 1,1,1-Trichloroethane	4.505	97	41780	89.92	ppbv		96
10) Benzene	4.692	78	44134	91.18	ppbv		96
11) Trichloroethene	4.977	130	25373	85.24	ppbv		94
13) Toluene	5.583	91	48698	82.58	ppbv		97
14) Tetrachloroethene	5.988	166	32659	80.26	ppbv		97
15) Ethyl Benzene	6.472	91	61383	84.36	ppbv		97
16) m,p-Xylene	6.527	91	49454	83.79	ppbv		96
17) o-Xylene	6.792	91	49968	77.91	ppbv		96

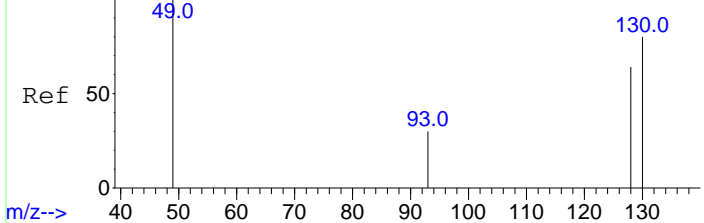
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00171.D
 Acq On : 1 May 2016 5:06 pm
 Operator : dlm
 Sample : STD20160501-04 \ 100 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:57:32 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



Abundance Scan 285 (4.369 min): 64GCMS00163.D\DATASIM.MS (-281)



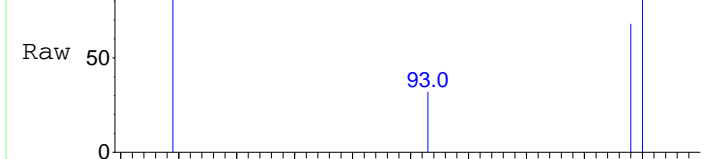
#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00171.D
Acq: 1 May 2016 5:06 pm

Tgt Ion: 49 Resp: 2379

Ion	Ratio	Lower	Upper
49	100		
130	86.2	46.3	69.5#
128	67.5	35.7	53.5#
93	29.7	17.6	26.4#

m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00171.D\DATASIM.MS

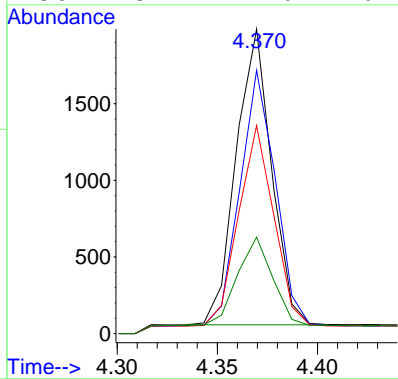


m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00171.D\DATASIM.MS (-277)



m/z-->

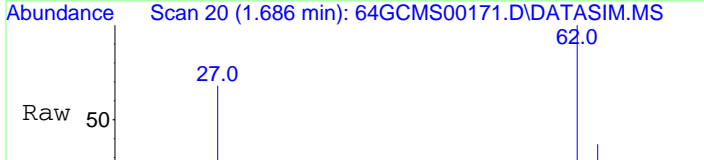


Abundance Scan 19 (1.673 min): 64GCMS00163.D\DATASIM.MS (-8) (-)



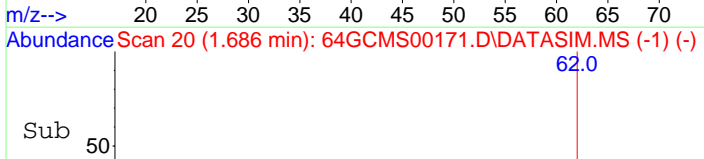
m/z-->

Abundance Scan 20 (1.686 min): 64GCMS00171.D\DATASIM.MS



m/z-->

Abundance Scan 20 (1.686 min): 64GCMS00171.D\DATASIM.MS (-1) (-)

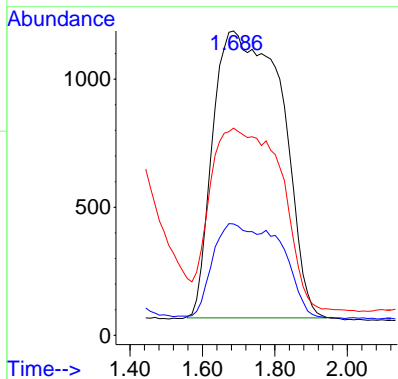


m/z-->

#2
Vinyl Chloride
Concen: 92.57 ppbv m
RT: 1.686 min Scan# 20
Delta R.T. -0.000 min
Lab File: 64GCMS00171.D
Acq: 1 May 2016 5:06 pm

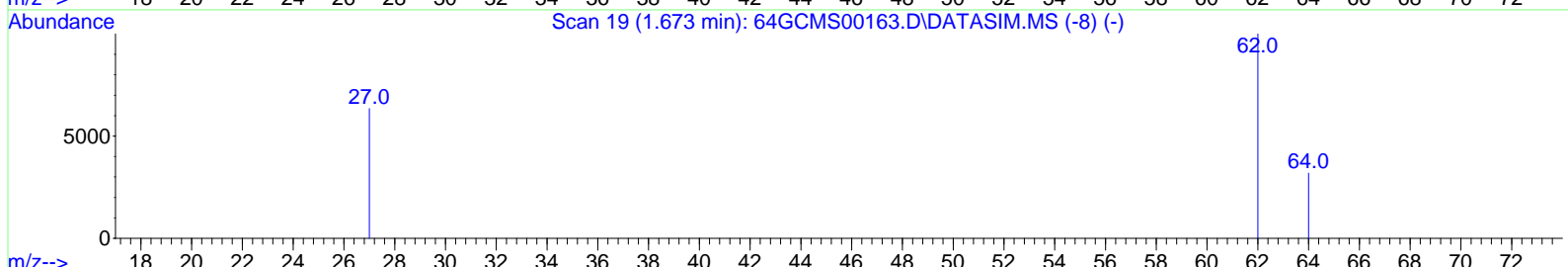
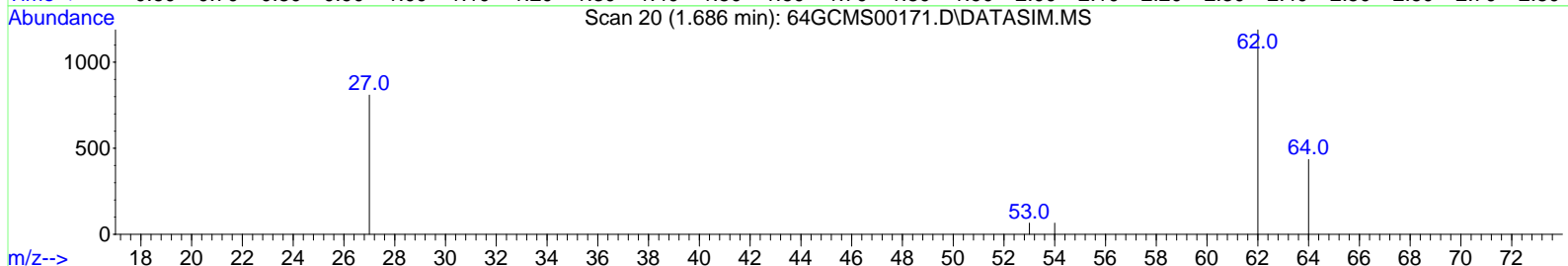
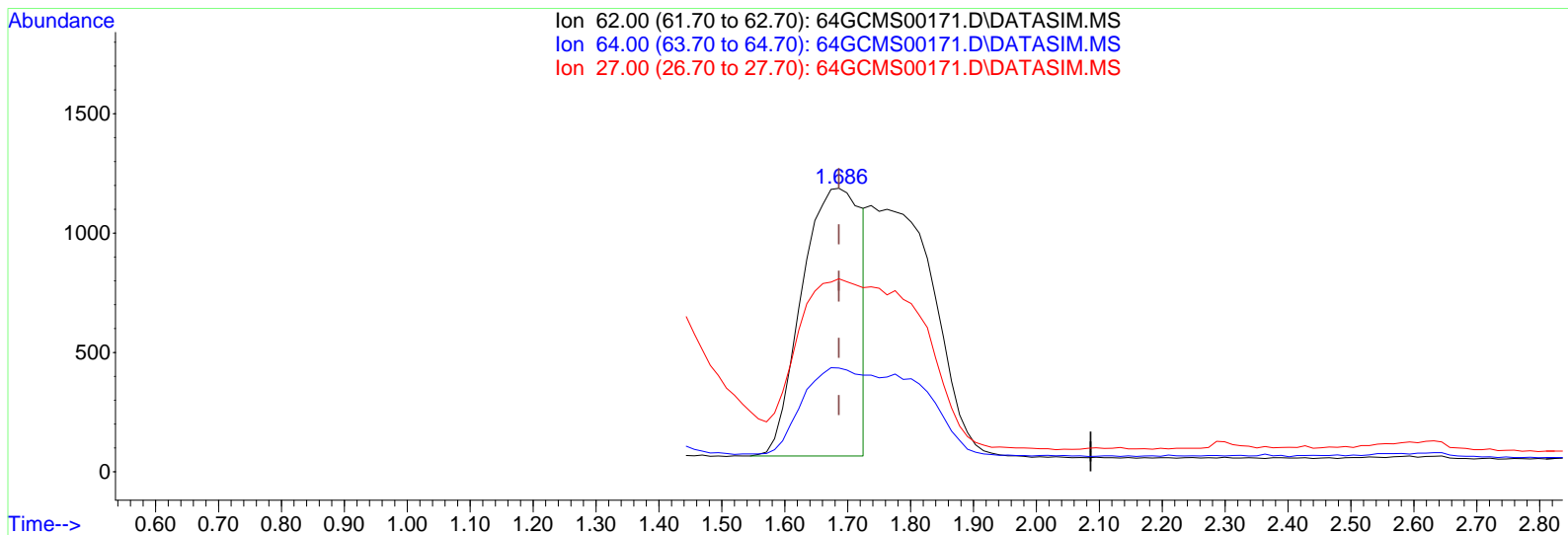
Tgt Ion: 62 Resp: 14766

Ion	Ratio	Lower	Upper
62	100		
64	19.1	23.7	35.5#
27	27.6	38.0	57.0#



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00171.D
 Acq On : 1 May 2016 5:06 pm
 Operator : dlm
 Sample : STD20160501-04 \ 100 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:27 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



TIC: 64GCMS00171.D\DATASIM.MS

(2) Vinyl Chloride

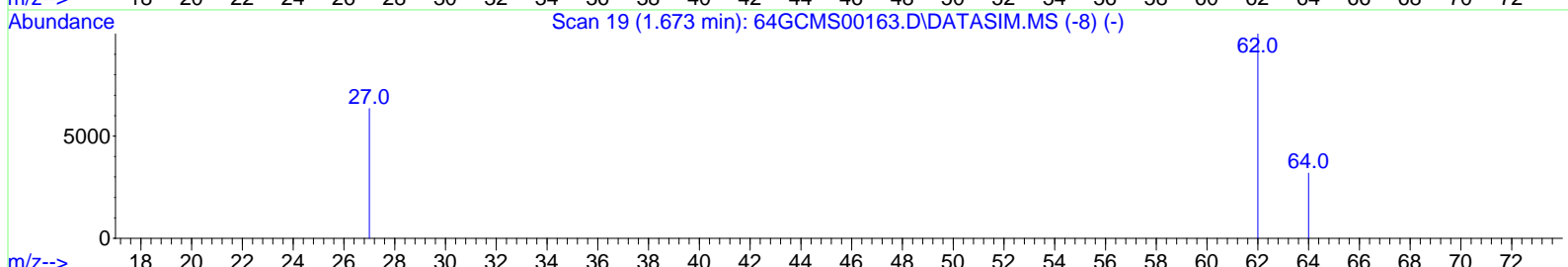
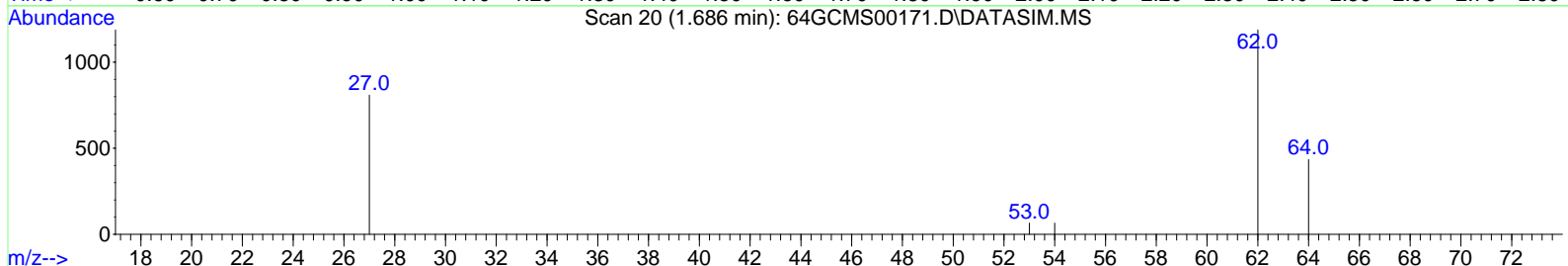
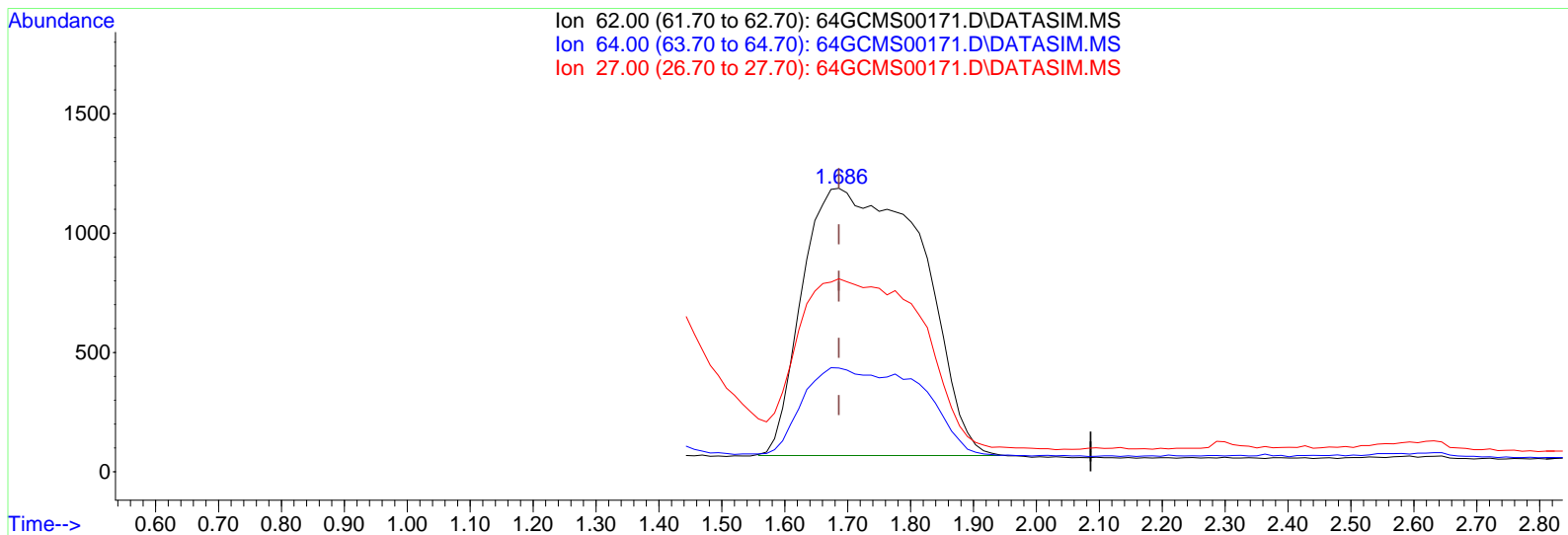
1.686min (-0.000) 46.17 ppbv

response 7364

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	38.39#
27.00	47.50	55.43
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00171.D
 Acq On : 1 May 2016 5:06 pm
 Operator : dlm
 Sample : STD20160501-04 \ 100 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:27 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



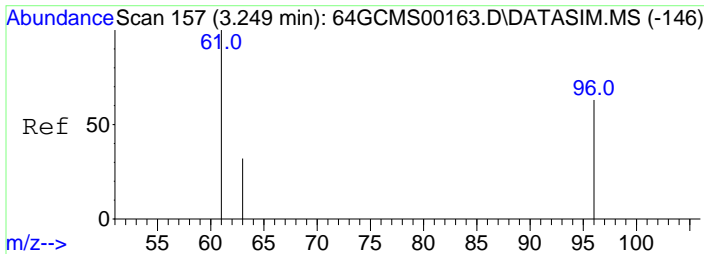
TIC: 64GCMS00171.D\DATASIM.MS

(2) Vinyl Chloride

1.686min (-0.000) 92.57 ppbv m

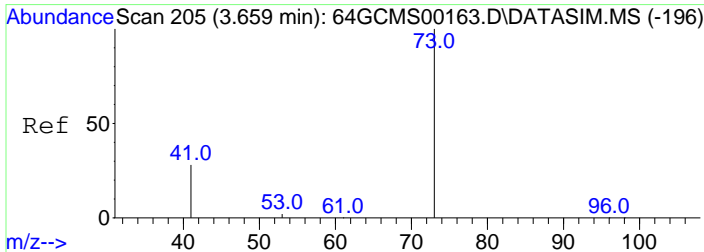
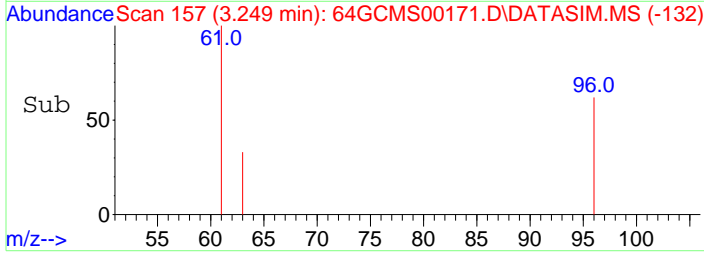
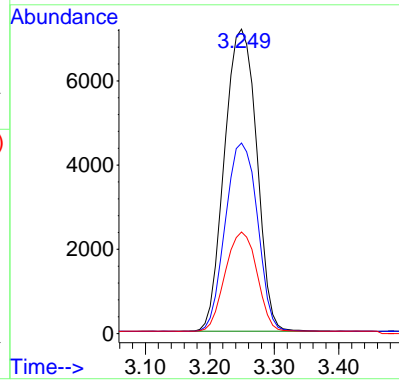
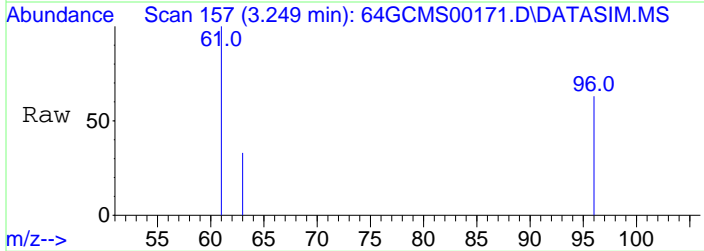
response 14766

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	19.15#
27.00	47.50	27.64#
0.00	0.00	0.00



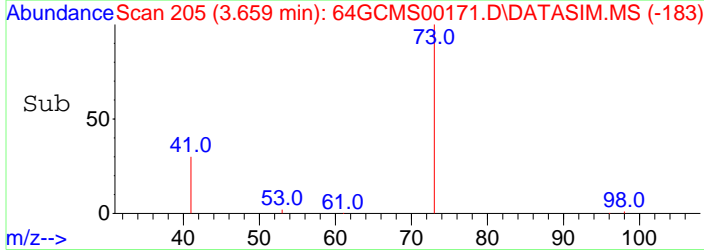
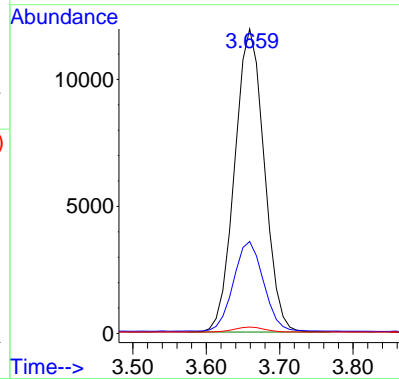
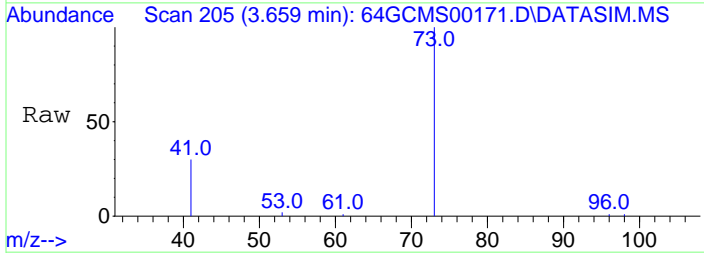
#3
 1,1-Dichloroethene
 Concen: 90.66 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. -0.000 min
 Lab File: 64GCMS00171.D
 Acq: 1 May 2016 5:06 pm

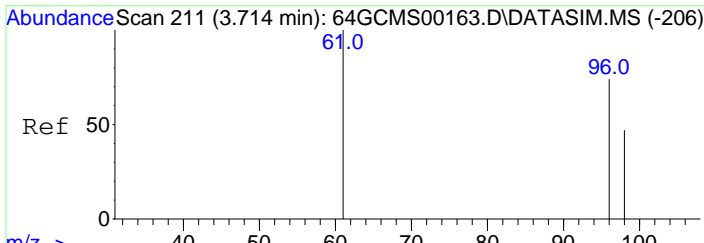
Tgt Ion:	Resp:	Lower	Upper
61	100		
96	62.0	40.9	61.3#
63	32.4	24.3	36.5



#4
 Methyl Tert butyl Ether
 Concen: 85.39 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. 0.000 min
 Lab File: 64GCMS00171.D
 Acq: 1 May 2016 5:06 pm

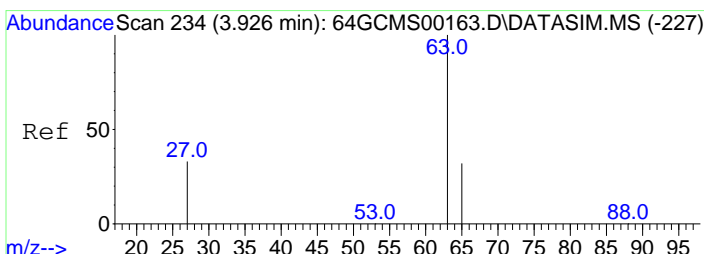
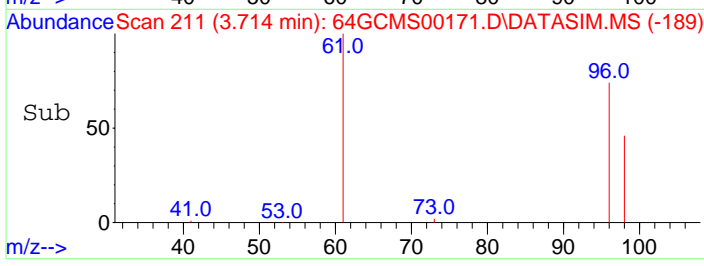
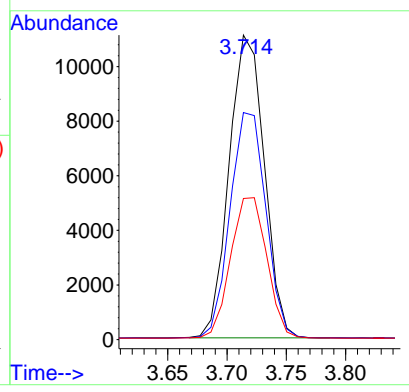
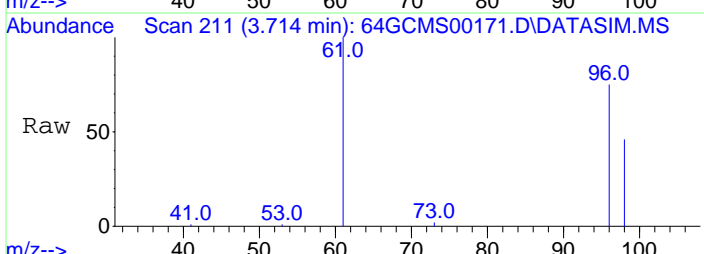
Tgt Ion:	Resp:	Lower	Upper
73	100		
41	30.0	20.6	30.8
53	1.6	1.2	1.8





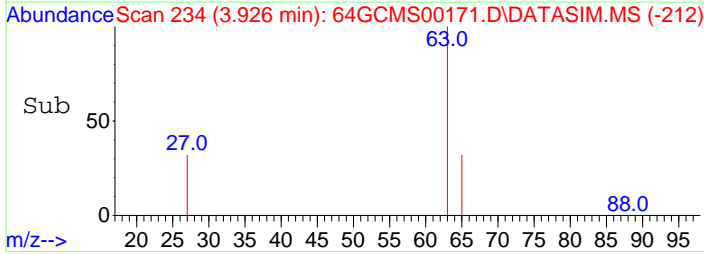
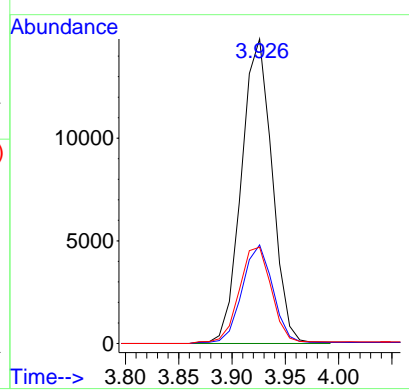
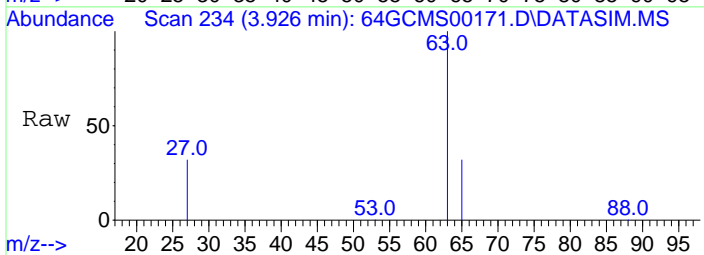
#5
 trans-1,2-Dichloroethene
 Concen: 93.83 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. -0.000 min
 Lab File: 64GCMS00171.D
 Acq: 1 May 2016 5:06 pm

Tgt Ion	Resp	Lower	Upper
61	100		
96	75.7	47.8	71.6#
98	47.7	30.6	46.0#

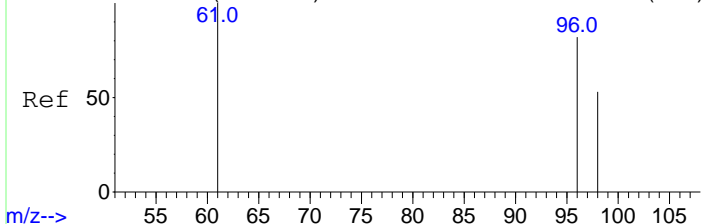


#6
 1,1-Dichloroethane
 Concen: 93.00 ppbv
 RT: 3.926 min Scan# 234
 Delta R.T. 0.000 min
 Lab File: 64GCMS00171.D
 Acq: 1 May 2016 5:06 pm

Tgt Ion	Resp	Lower	Upper
63	100		
65	32.4	24.8	37.2
27	33.5	21.1	31.7#

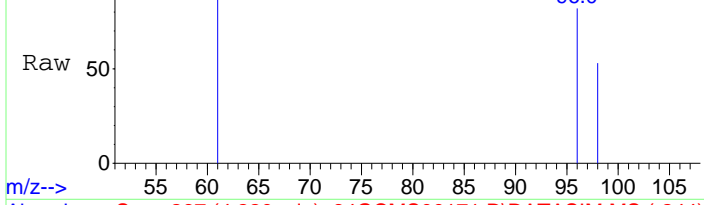


Abundance Scan 267 (4.220 min): 64GCMS00163.D\DATASIM.MS (-262)



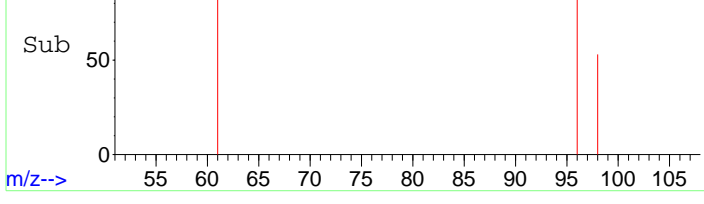
m/z-->

Abundance Scan 267 (4.220 min): 64GCMS00171.D\DATASIM.MS



m/z-->

Abundance Scan 267 (4.220 min): 64GCMS00171.D\DATASIM.MS (-244)

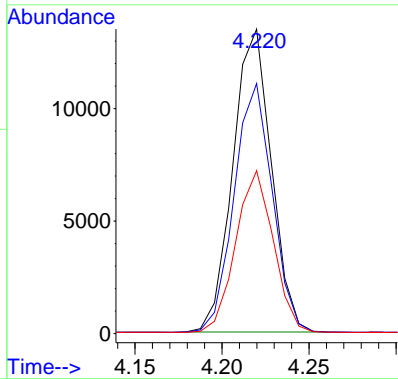


m/z-->

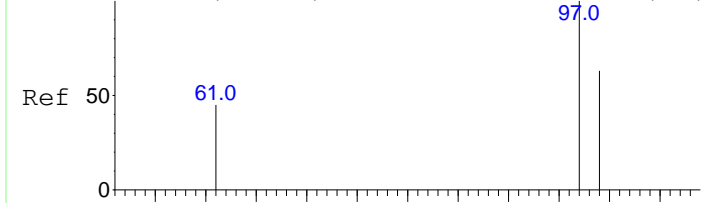
#7
cis-1,2-Dichloroethene
Concen: 89.97 ppbv
RT: 4.220 min Scan# 267
Delta R.T. -0.000 min
Lab File: 64GCMS00171.D
Acq: 1 May 2016 5:06 pm

Tgt Ion: 61 Resp: 20797

Ion	Ratio	Lower	Upper
61	100		
96	81.2	52.0	78.0#
98	52.1	33.4	50.2#

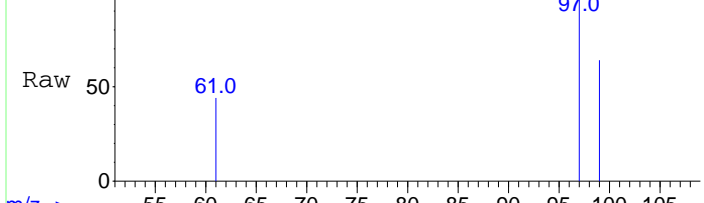


Abundance Scan 301 (4.505 min): 64GCMS00163.D\DATASIM.MS (-295)



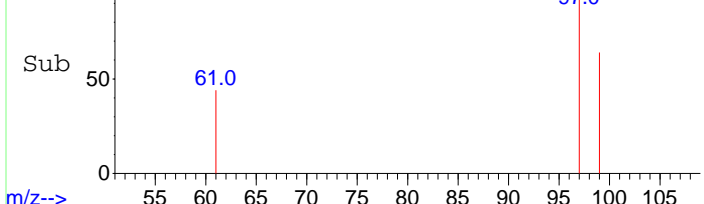
m/z-->

Abundance Scan 301 (4.505 min): 64GCMS00171.D\DATASIM.MS



m/z-->

Abundance Scan 301 (4.505 min): 64GCMS00171.D\DATASIM.MS (-278)

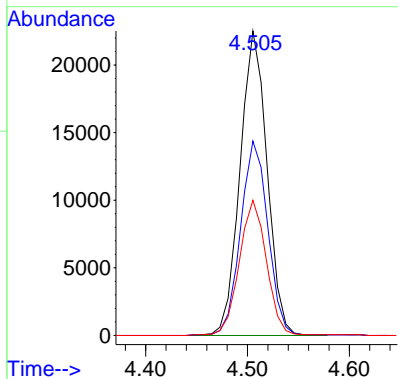


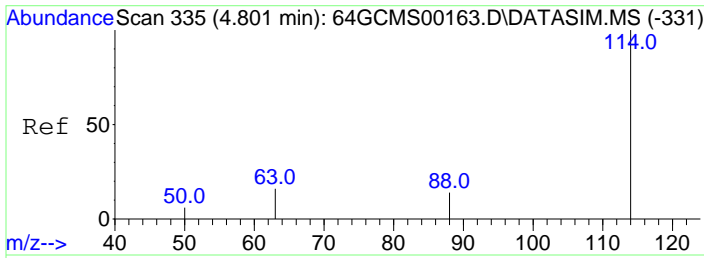
m/z-->

#8
1,1,1-Trichloroethane
Concen: 89.92 ppbv
RT: 4.505 min Scan# 301
Delta R.T. -0.000 min
Lab File: 64GCMS00171.D
Acq: 1 May 2016 5:06 pm

Tgt Ion: 97 Resp: 41780

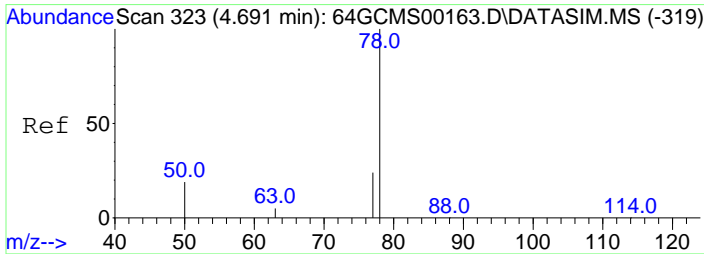
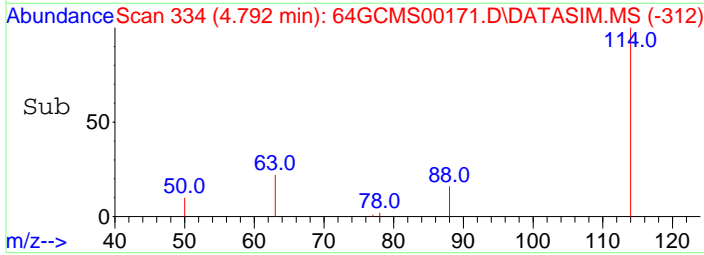
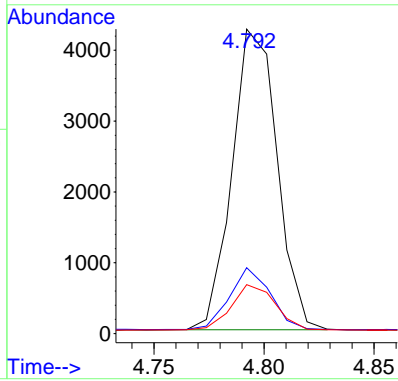
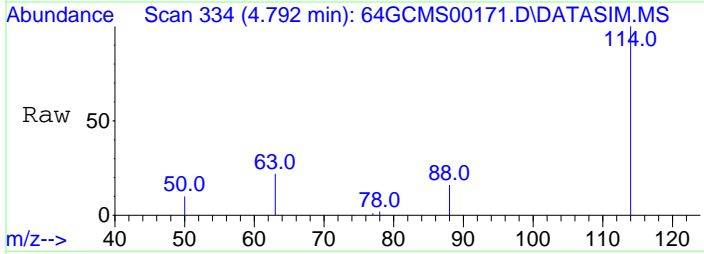
Ion	Ratio	Lower	Upper
97	100		
99	63.3	51.5	77.3
61	43.6	38.6	58.0





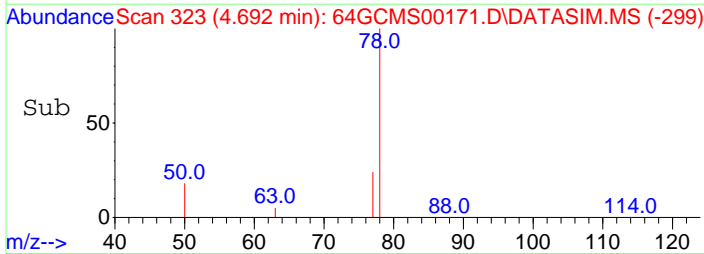
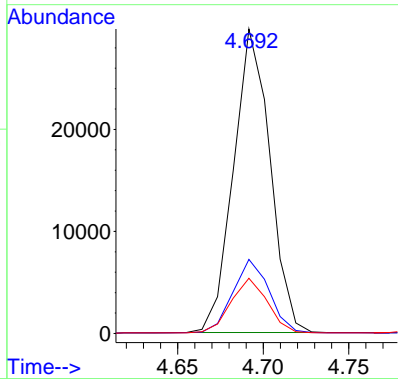
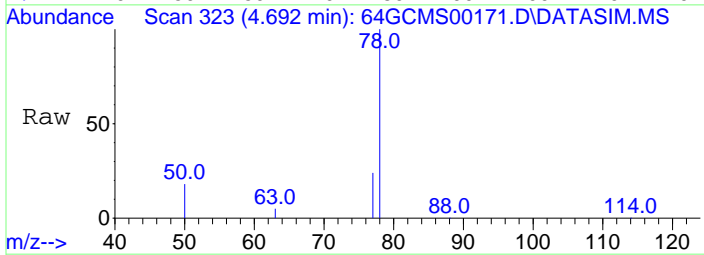
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. 0.000 min
 Lab File: 64GCMS00171.D
 Acq: 1 May 2016 5:06 pm

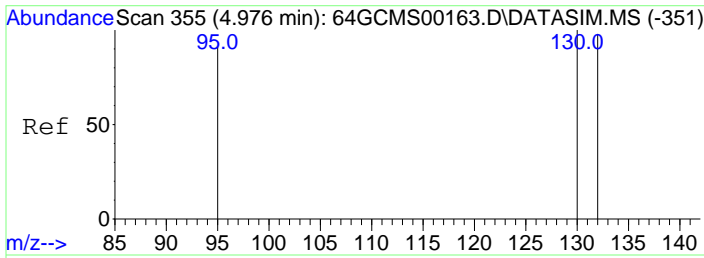
Tgt Ion	Resp	Lower	Upper
114	6049		
63	19.0	19.2	28.8#
88	14.5	13.7	20.5



#10
 Benzene
 Concen: 91.18 ppbv
 RT: 4.692 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00171.D
 Acq: 1 May 2016 5:06 pm

Tgt Ion	Resp	Lower	Upper
78	44134		
77	24.0	18.2	27.4
50	17.8	16.6	24.8

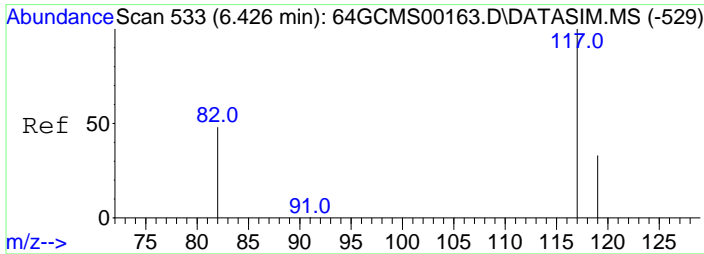
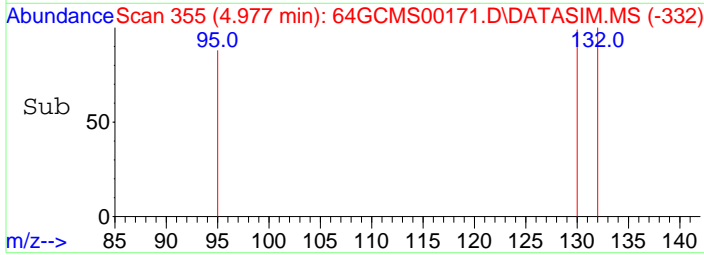
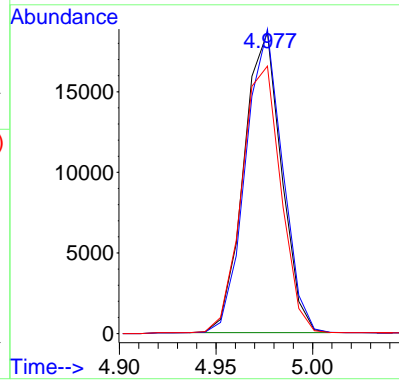
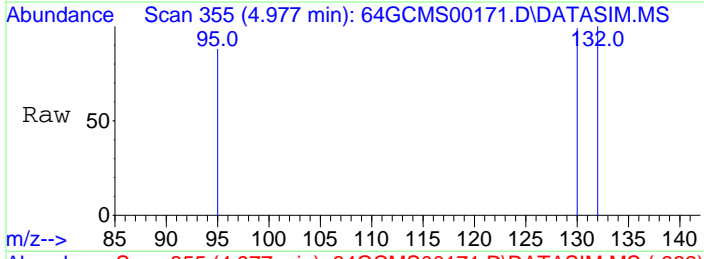




#11
 Trichloroethene
 Concen: 85.24 ppbv
 RT: 4.977 min Scan# 355
 Delta R.T. -0.000 min
 Lab File: 64GCMS00171.D
 Acq: 1 May 2016 5:06 pm

Tgt Ion:130 Resp: 25373

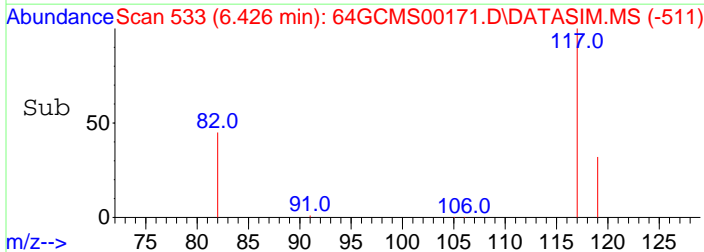
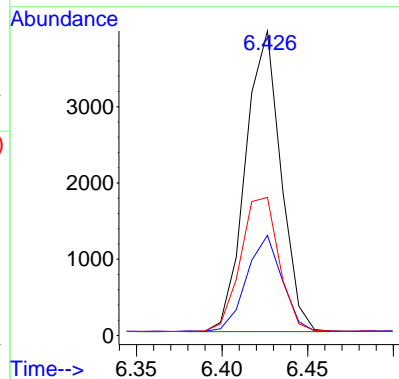
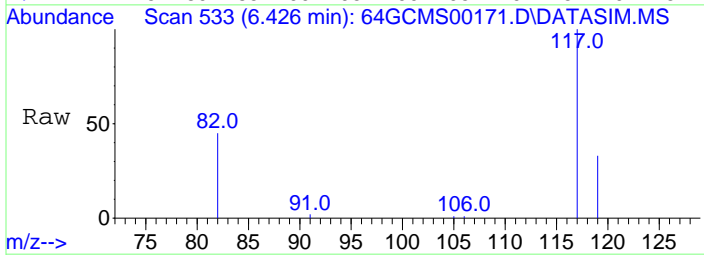
Ion	Ratio	Lower	Upper
130	100		
132	98.7	76.9	115.3
95	91.7	81.5	122.3



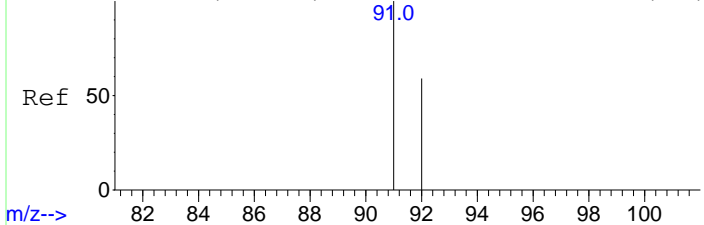
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00171.D
 Acq: 1 May 2016 5:06 pm

Tgt Ion:117 Resp: 5681

Ion	Ratio	Lower	Upper
117	100		
119	31.7	25.8	38.6
82	48.3	45.6	68.4



Abundance Scan 434 (5.590 min): 64GCMS00163.D\DATASIM.MS (-428)

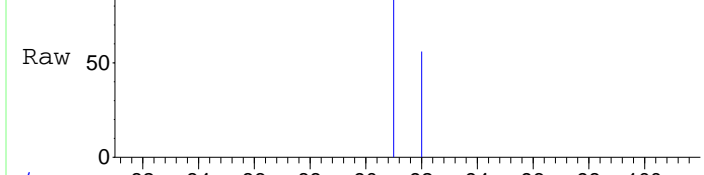


#13
Toluene
Concen: 82.58 ppbv
RT: 5.583 min Scan# 433
Delta R.T. 0.000 min
Lab File: 64GCMS00171.D
Acq: 1 May 2016 5:06 pm

Tgt Ion	Resp	Lower	Upper
91	100		
92	57.4	48.0	72.0

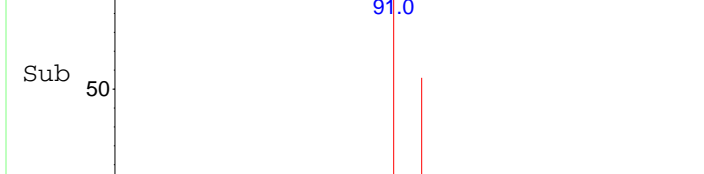
m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00171.D\DATASIM.MS

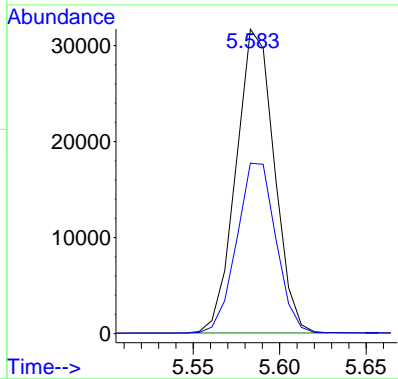


m/z-->

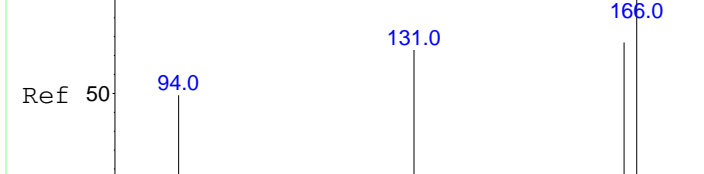
Abundance Scan 433 (5.583 min): 64GCMS00171.D\DATASIM.MS (-406)



m/z-->

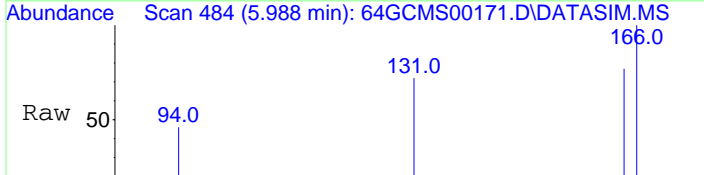


Abundance Scan 484 (5.988 min): 64GCMS00163.D\DATASIM.MS (-479)



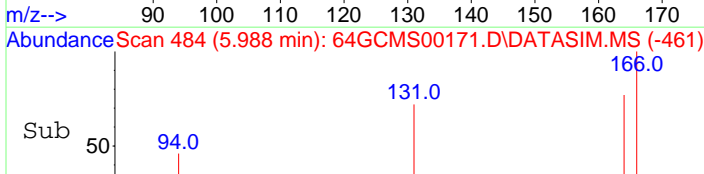
m/z-->

Abundance Scan 484 (5.988 min): 64GCMS00171.D\DATASIM.MS



m/z-->

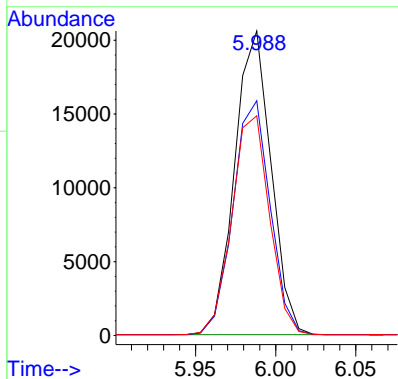
Abundance Scan 484 (5.988 min): 64GCMS00171.D\DATASIM.MS (-461)

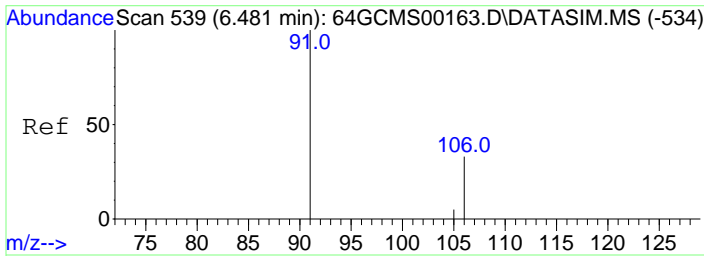


m/z-->

#14
Tetrachloroethene
Concen: 80.26 ppbv
RT: 5.988 min Scan# 484
Delta R.T. -0.000 min
Lab File: 64GCMS00171.D
Acq: 1 May 2016 5:06 pm

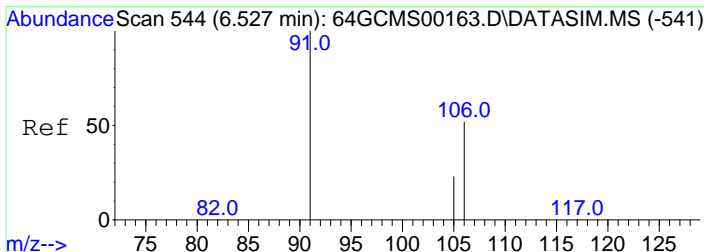
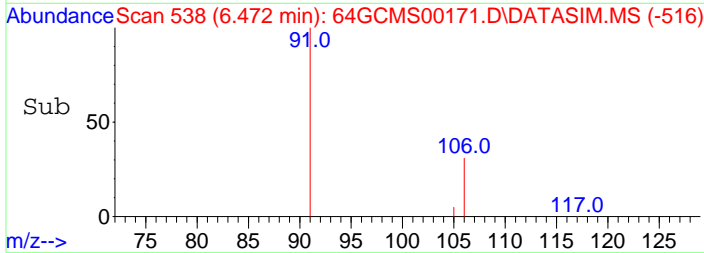
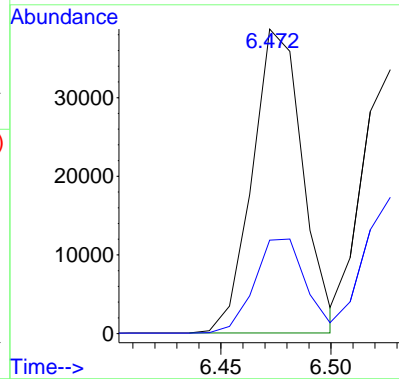
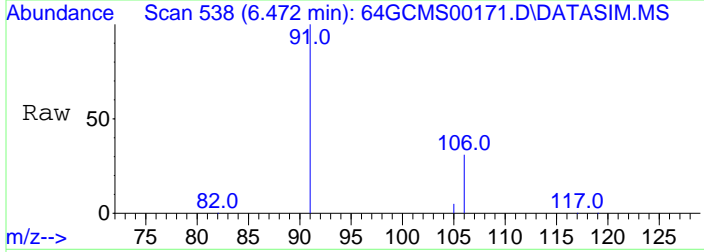
Tgt Ion	Resp	Lower	Upper
166	100		
164	78.2	63.4	95.0
131	74.2	63.4	95.0





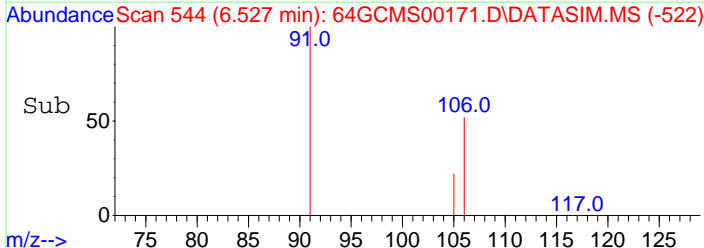
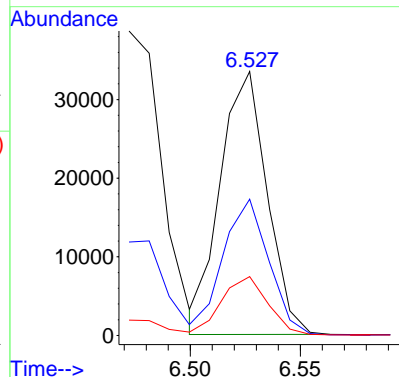
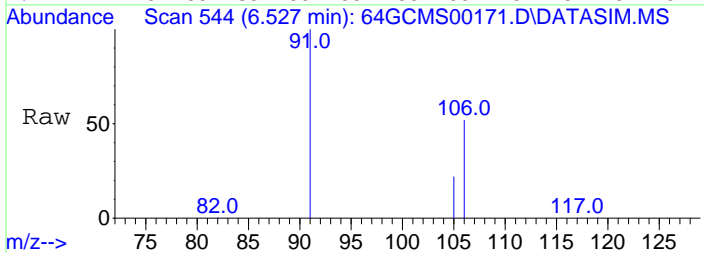
#15
Ethyl Benzene
Concen: 84.36 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00171.D
Acq: 1 May 2016 5:06 pm

Tgt Ion: 91 Resp: 61383
Ion Ratio Lower Upper
91 100
106 31.9 24.2 36.2

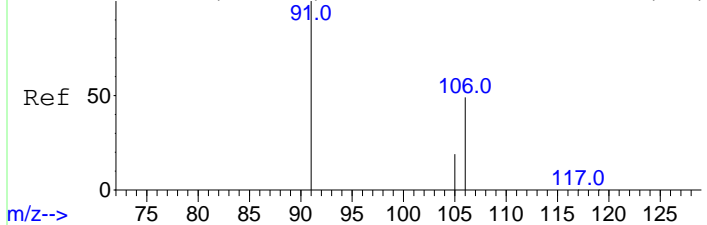


#16
m,p-Xylene
Concen: 83.79 ppbv
RT: 6.527 min Scan# 544
Delta R.T. 0.000 min
Lab File: 64GCMS00171.D
Acq: 1 May 2016 5:06 pm

Tgt Ion: 91 Resp: 49454
Ion Ratio Lower Upper
91 100
106 50.5 37.7 56.5
105 21.9 17.0 25.4



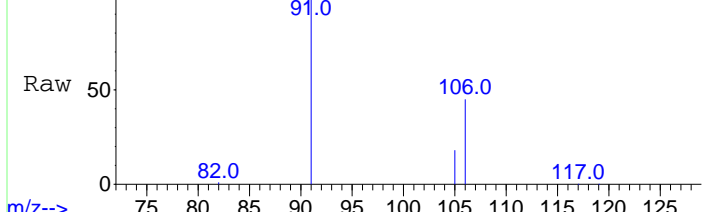
Abundance Scan 574 (6.801 min): 64GCMS00163.D\DATASIM.MS (-569)



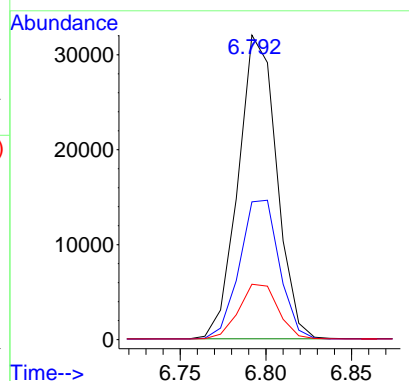
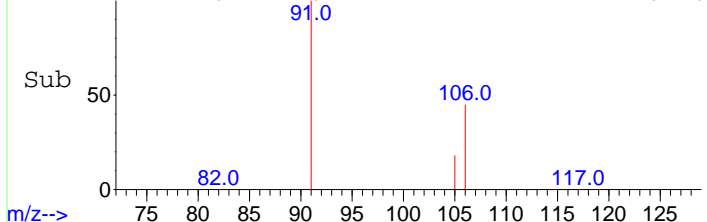
#17
 o-Xylene
 Concen: 77.91 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00171.D
 Acq: 1 May 2016 5:06 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	47.4	35.4	53.2
105	18.6	14.0	21.0

Abundance Scan 573 (6.792 min): 64GCMS00171.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00171.D\DATASIM.MS (-551)



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00172.D
 Acq On : 1 May 2016 5:18 pm
 Operator : dlm
 Sample : STD20160501-05 \ 5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

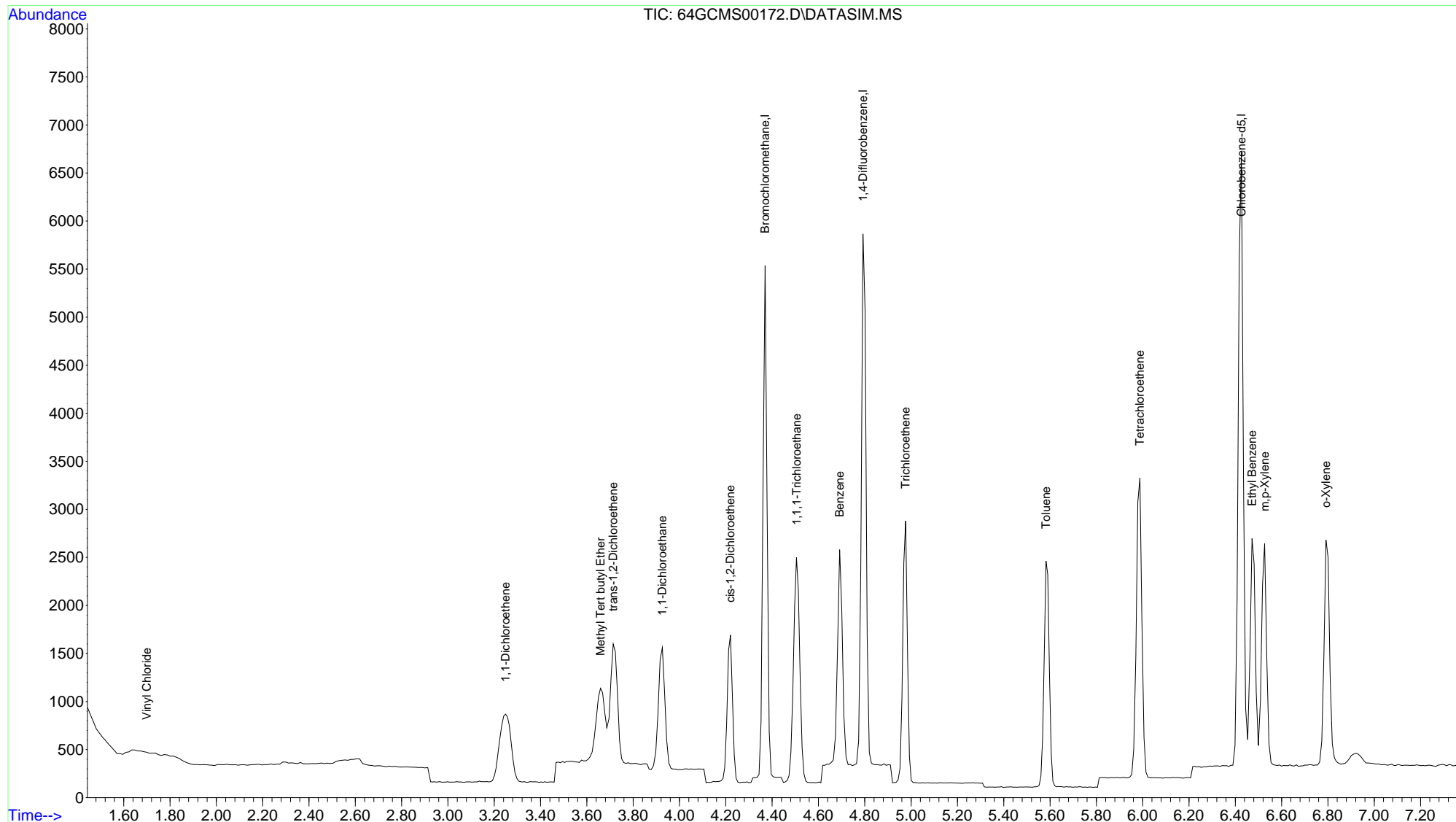
Quant Time: May 01 18:00:10 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.369	49	2285	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	5426	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	5181	10.00	ppbv	0.00
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.699	62	739m	4.82	ppbv	
3) 1,1-Dichloroethene	3.249	61	1266	4.79	ppbv #	88
4) Methyl Tert butyl Ether	3.659	73	1628	4.34	ppbv #	83
5) trans-1,2-Dichloroethene	3.714	61	1177	5.02	ppbv #	81
6) 1,1-Dichloroethane	3.926	63	1545m	5.03	ppbv	
7) cis-1,2-Dichloroethene	4.220	61	1050	4.73	ppbv #	82
8) 1,1,1-Trichloroethane	4.505	97	2091m	4.69	ppbv	
10) Benzene	4.691	78	2194	5.05	ppbv #	85
11) Trichloroethene	4.976	130	1301	4.87	ppbv	89
13) Toluene	5.583	91	2333	4.34	ppbv	96
14) Tetrachloroethene	5.988	166	1717	4.63	ppbv	95
15) Ethyl Benzene	6.472	91	2700	4.07	ppbv	96
16) m,p-Xylene	6.527	91	1954	3.63	ppbv	94
17) o-Xylene	6.792	91	2147	3.67	ppbv	94

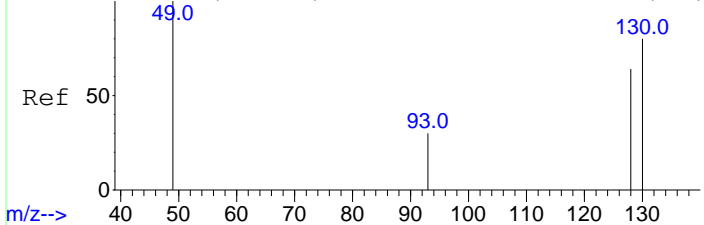
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00172.D
 Acq On : 1 May 2016 5:18 pm
 Operator : dlm
 Sample : STD20160501-05 \ 5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:00:10 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



Abundance Scan 285 (4.369 min): 64GCMS00163.D\DATASIM.MS (-281)

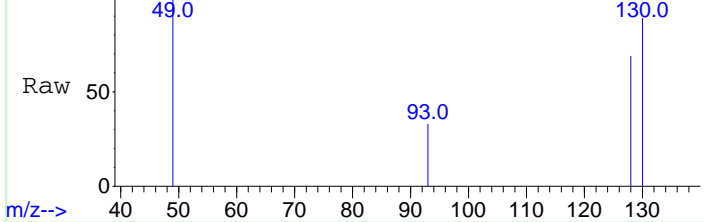


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.369 min Scan# 285
Delta R.T. -0.001 min
Lab File: 64GCMS00172.D
Acq: 1 May 2016 5:18 pm

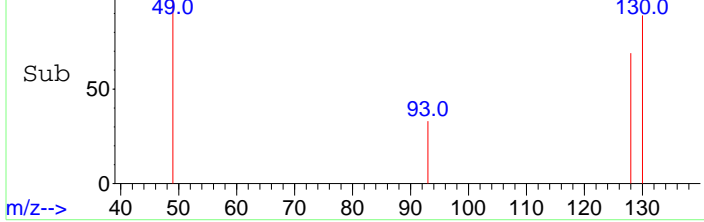
Tgt Ion: 49 Resp: 2285

Ion	Ratio	Lower	Upper
49	100		
130	87.7	46.3	69.5#
128	68.0	35.7	53.5#
93	31.1	17.6	26.4#

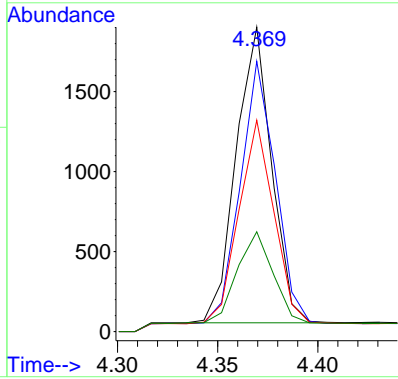
m/z-->



Abundance Scan 285 (4.369 min): 64GCMS00172.D\DATASIM.MS (-277)

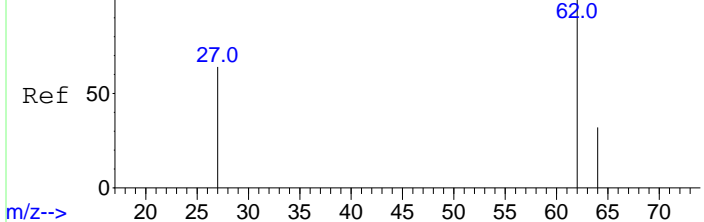


m/z-->



Time-->

Abundance Scan 19 (1.673 min): 64GCMS00163.D\DATASIM.MS (-8) (-)

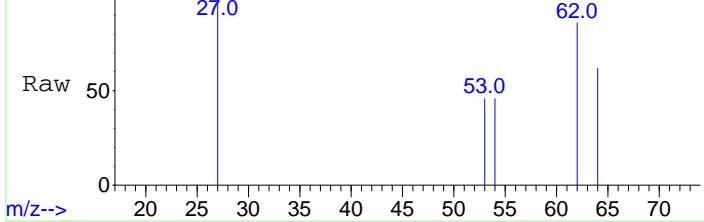


#2
Vinyl Chloride
Concen: 4.82 ppbv m
RT: 1.699 min Scan# 21
Delta R.T. 0.013 min
Lab File: 64GCMS00172.D
Acq: 1 May 2016 5:18 pm

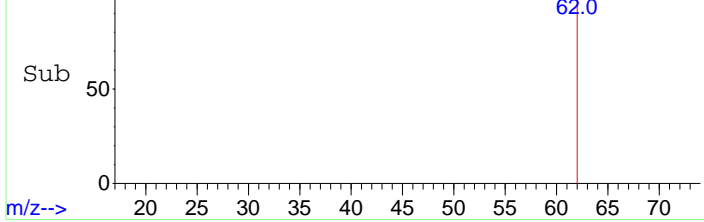
Tgt Ion: 62 Resp: 739

Ion	Ratio	Lower	Upper
62	100		
64	0.5	23.7	35.5#
27	0.0	38.0	57.0#

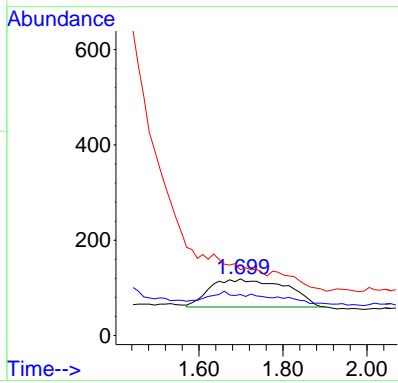
Abundance Scan 21 (1.699 min): 64GCMS00172.D\DATASIM.MS



Abundance Scan 21 (1.699 min): 64GCMS00172.D\DATASIM.MS (-1) (-)



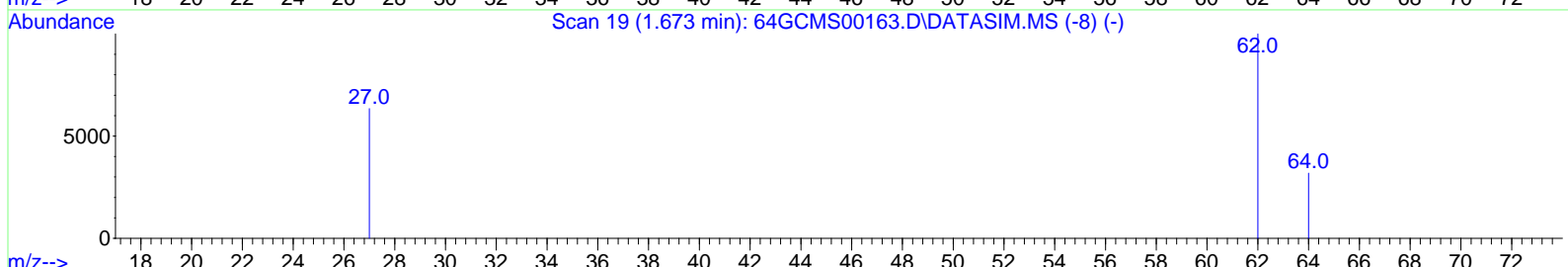
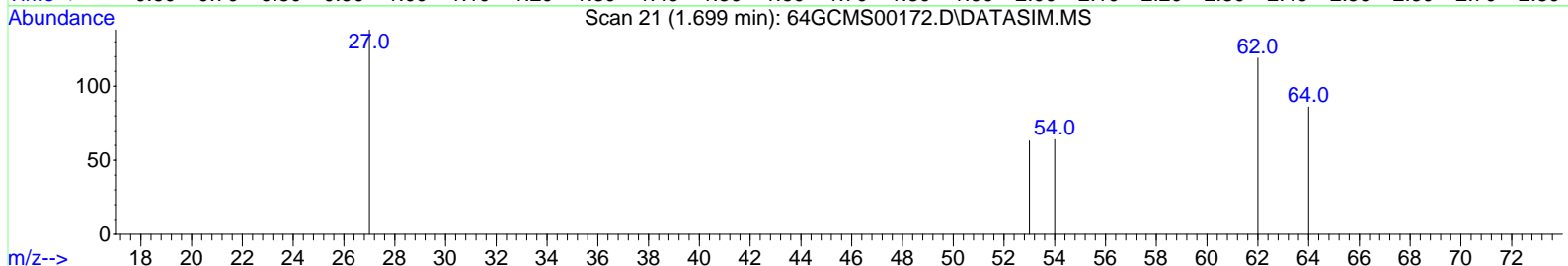
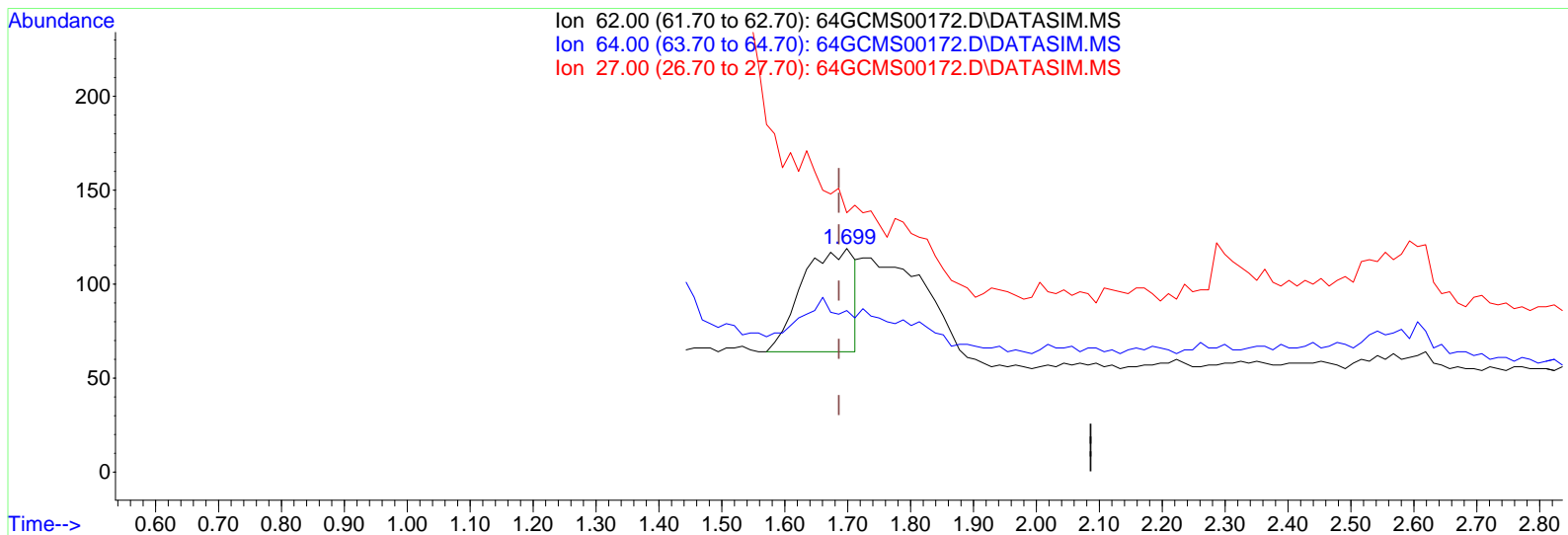
m/z-->



Time-->

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00172.D
 Acq On : 1 May 2016 5:18 pm
 Operator : dlm
 Sample : STD20160501-05 \ 5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:48 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



TIC: 64GCMS00172.D\DATASIM.MS

(2) Vinyl Chloride

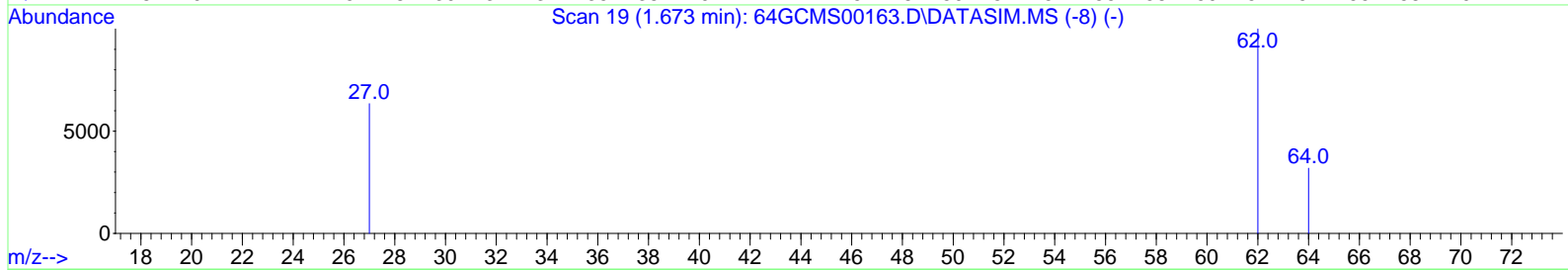
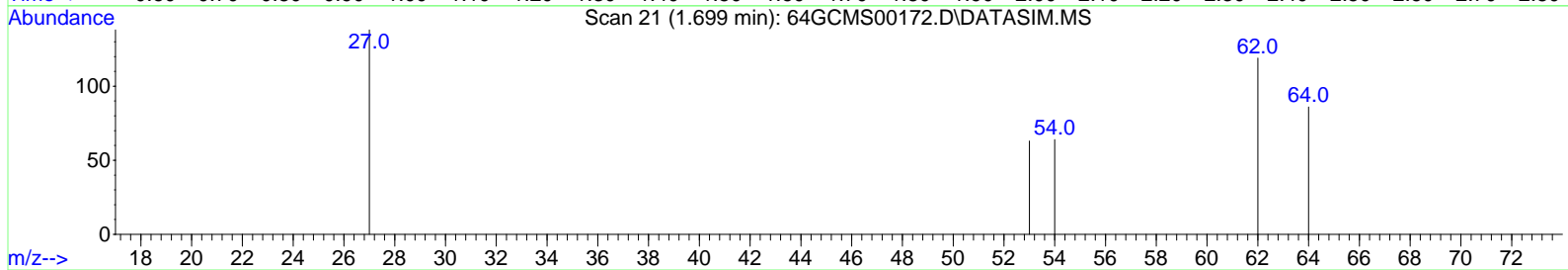
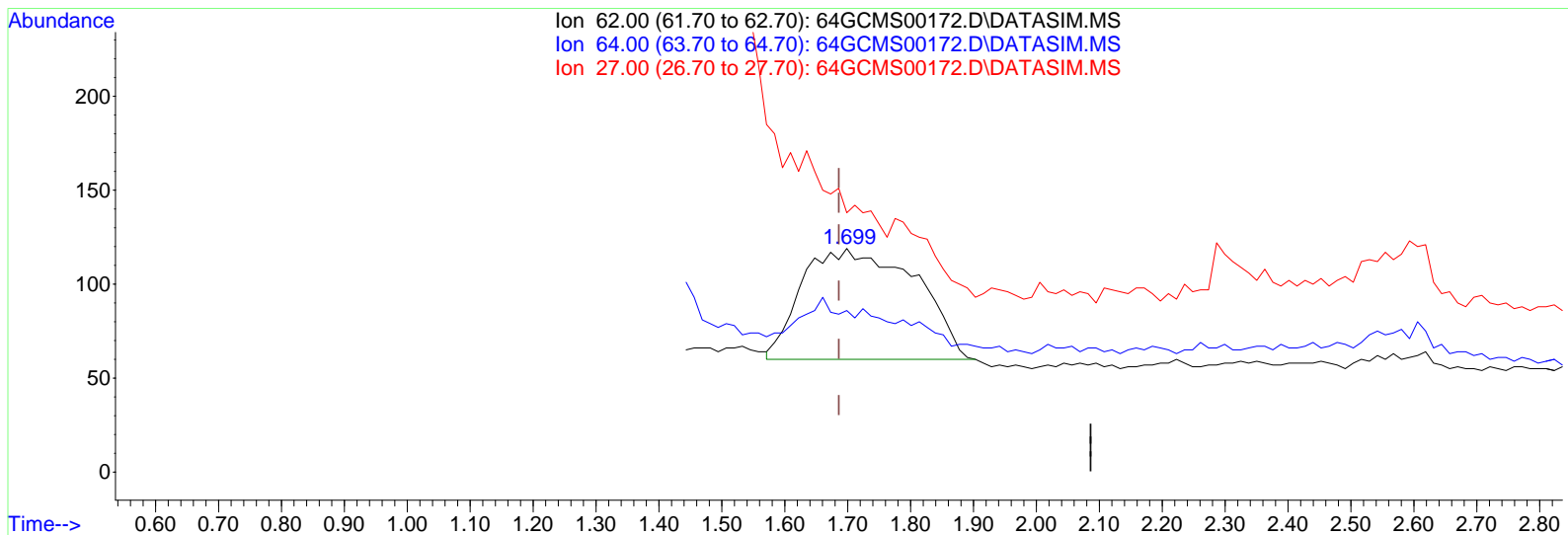
1.699min (+ 0.013) 2.08 ppbv

response 319

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	1.25#
27.00	47.50	0.00#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00172.D
 Acq On : 1 May 2016 5:18 pm
 Operator : dlm
 Sample : STD20160501-05 \ 5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:48 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



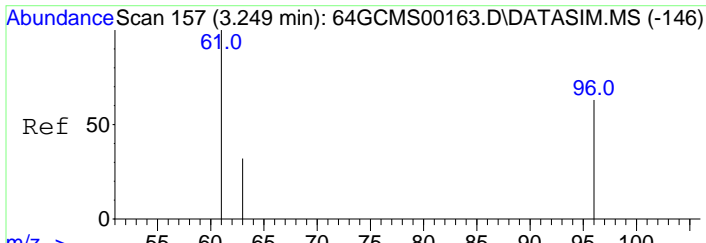
TIC: 64GCMS00172.D\DATASIM.MS

(2) Vinyl Chloride

1.699min (+ 0.013) 4.82 ppbv m

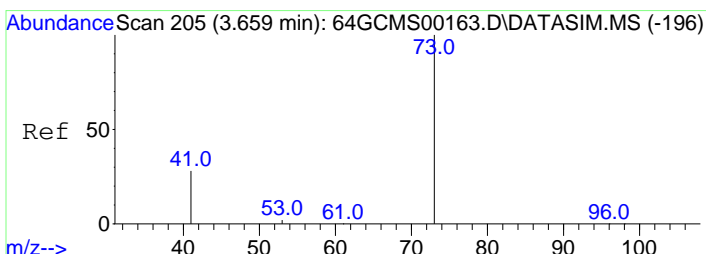
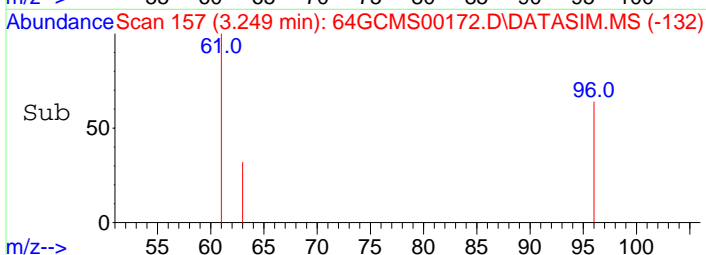
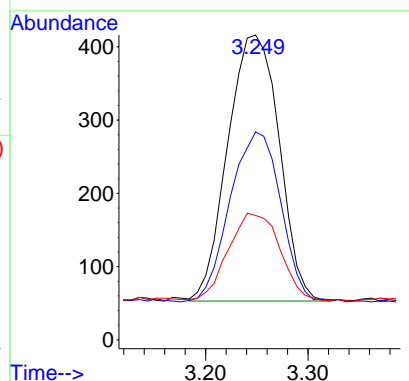
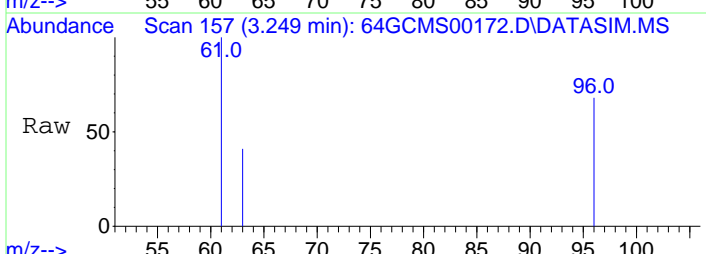
response 739

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	0.54#
27.00	47.50	0.00#
0.00	0.00	0.00



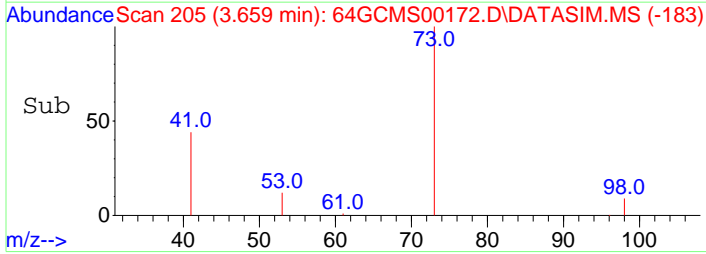
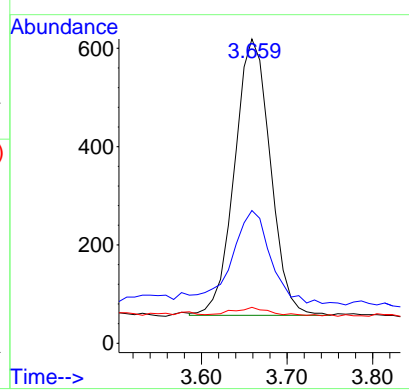
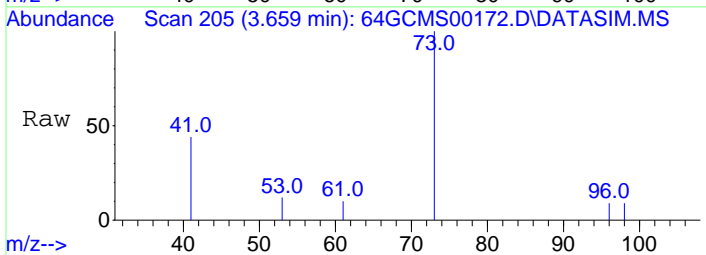
#3
 1,1-Dichloroethene
 Concen: 4.79 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. -0.000 min
 Lab File: 64GCMS00172.D
 Acq: 1 May 2016 5:18 pm

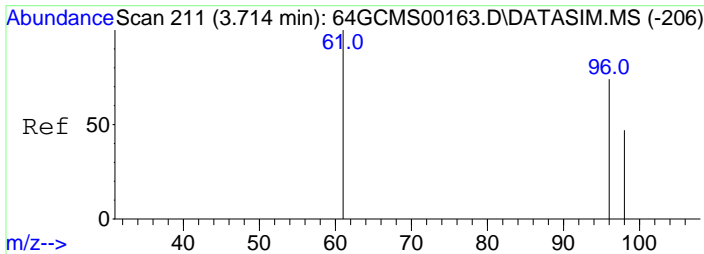
Tgt Ion	Resp	Lower	Upper
61	100		
96	62.7	40.9	61.3#
63	32.5	24.3	36.5



#4
 Methyl Tert butyl Ether
 Concen: 4.34 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 64GCMS00172.D
 Acq: 1 May 2016 5:18 pm

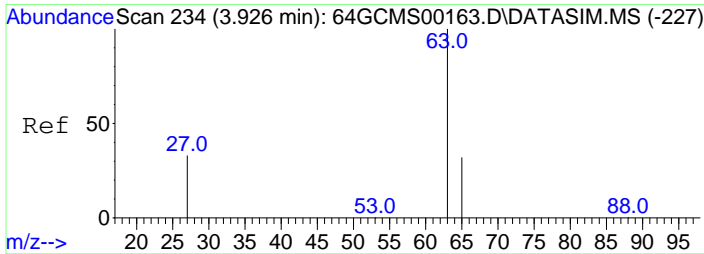
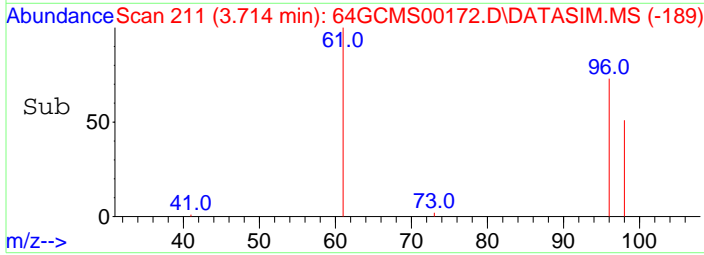
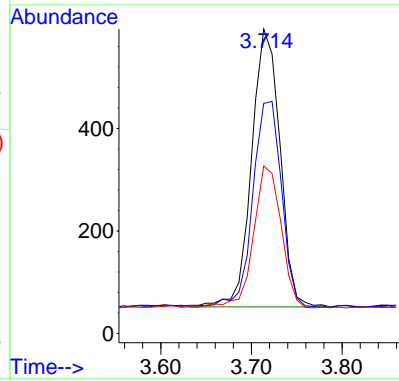
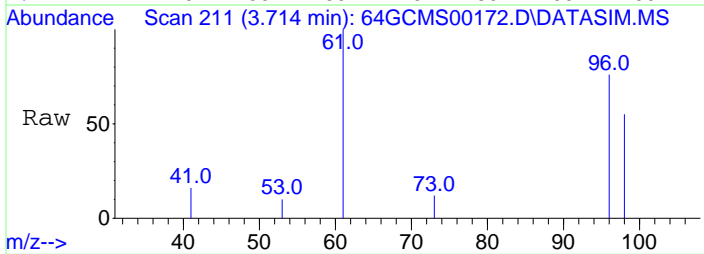
Tgt Ion	Resp	Lower	Upper
73	100		
41	35.0	20.6	30.8#
53	1.6	1.2	1.8





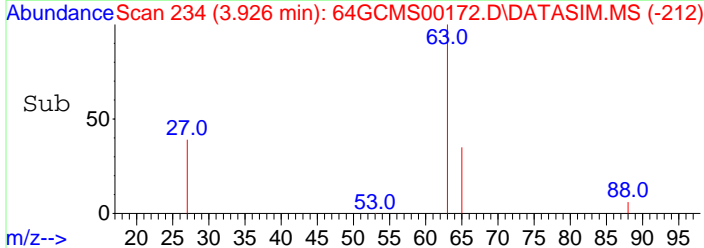
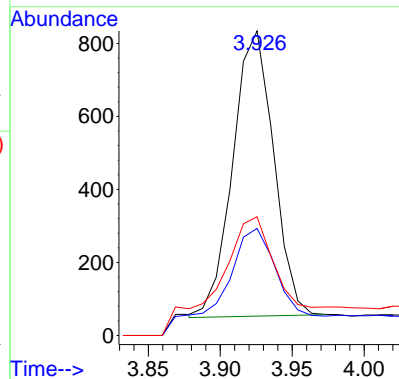
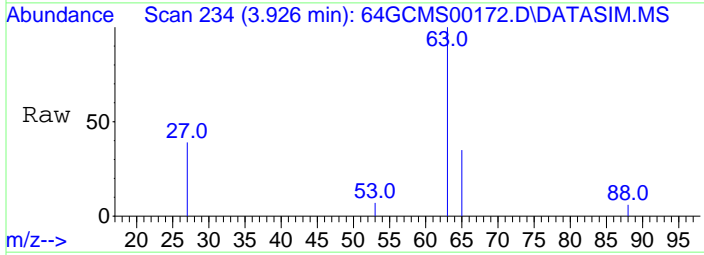
#5
 trans-1,2-Dichloroethene
 Concen: 5.02 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. -0.000 min
 Lab File: 64GCMS00172.D
 Acq: 1 May 2016 5:18 pm

Tgt Ion	Resp	Lower	Upper
61	100		
96	74.1	47.8	71.6#
98	49.1	30.6	46.0#



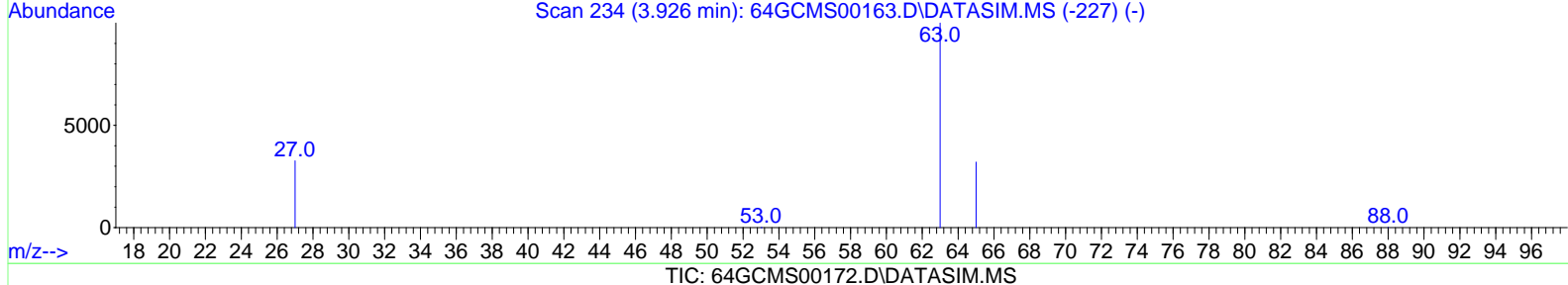
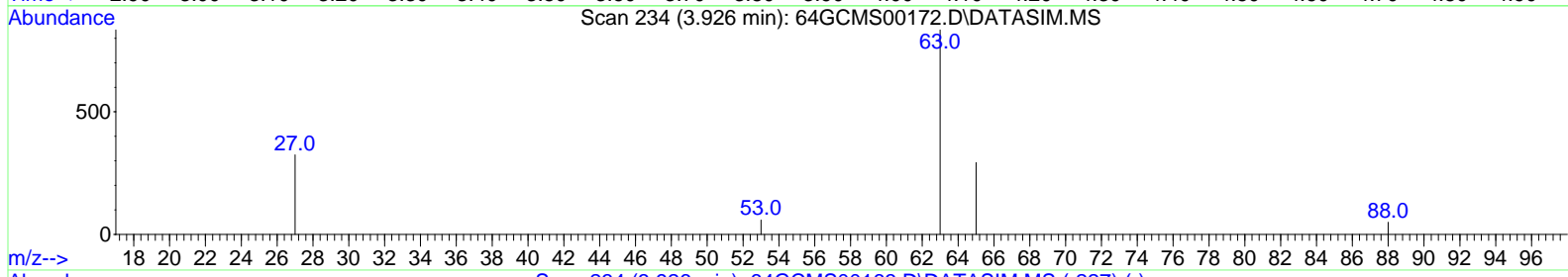
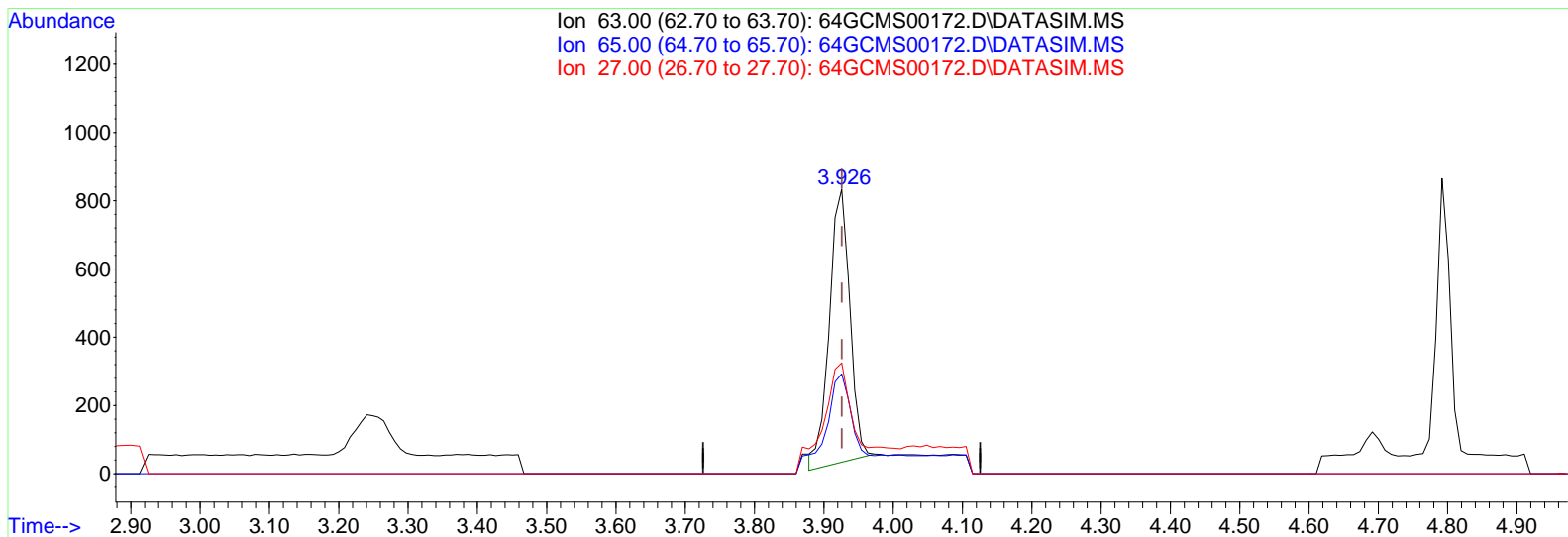
#6
 1,1-Dichloroethane
 Concen: 5.03 ppbv m
 RT: 3.926 min Scan# 234
 Delta R.T. -0.000 min
 Lab File: 64GCMS00172.D
 Acq: 1 May 2016 5:18 pm

Tgt Ion	Resp	Lower	Upper
63	100		
65	31.2	24.8	37.2
27	42.8	21.1	31.7#



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00172.D
 Acq On : 1 May 2016 5:18 pm
 Operator : dlm
 Sample : STD20160501-05 \ 5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:48 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



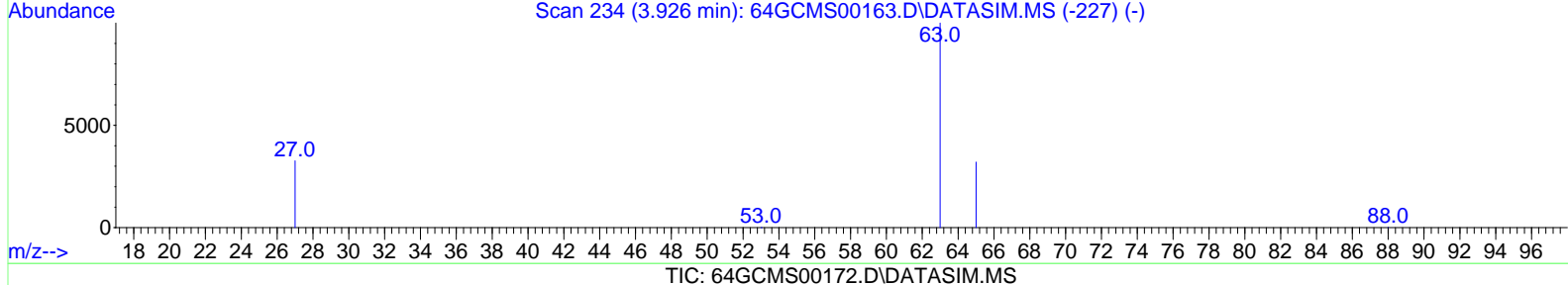
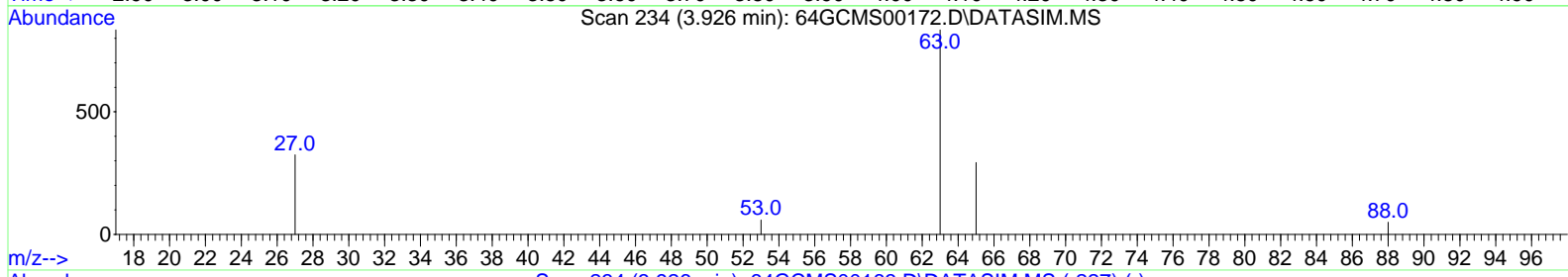
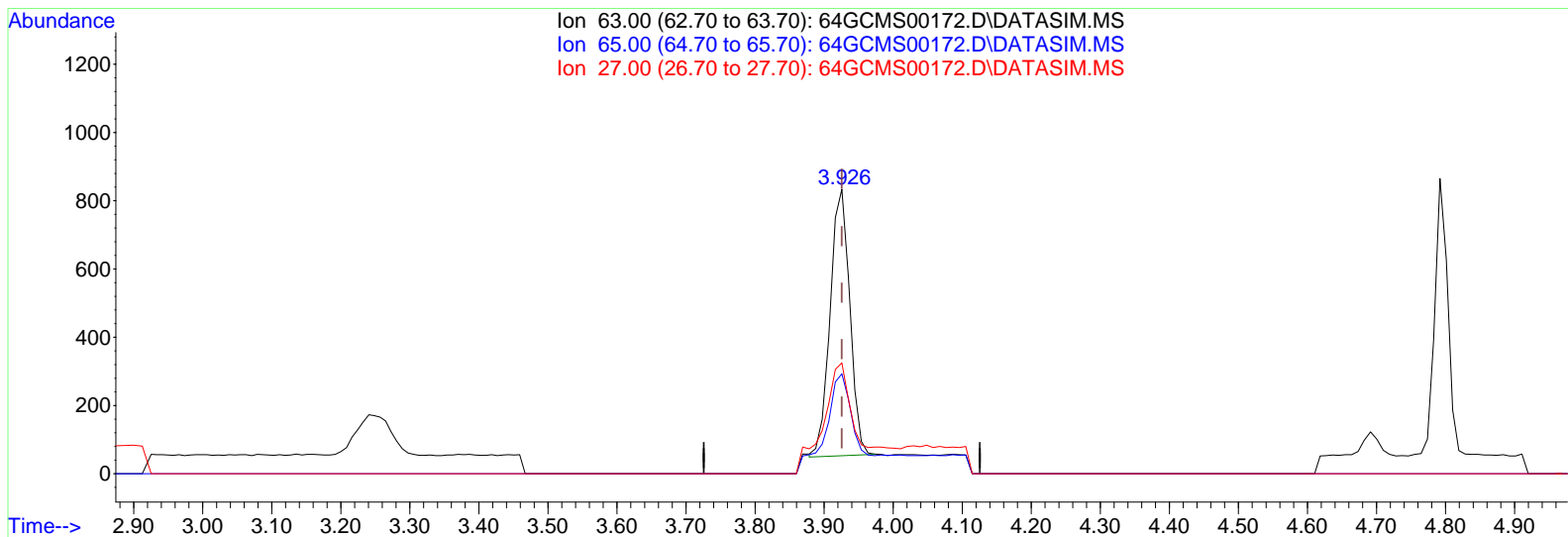
(6) 1,1-Dichloroethane

3.926min (-0.000) 5.38 ppbv

response	1653	
Ion	Exp%	Act%
63.00	100.00	100.00
65.00	31.00	29.16
27.00	26.40	39.99#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00172.D
 Acq On : 1 May 2016 5:18 pm
 Operator : dlm
 Sample : STD20160501-05 \ 5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

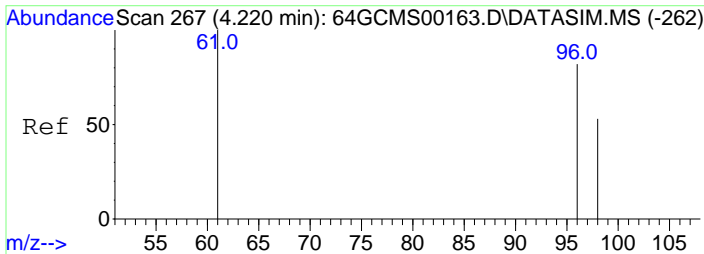
Quant Time: May 01 17:53:48 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



(6) 1,1-Dichloroethane

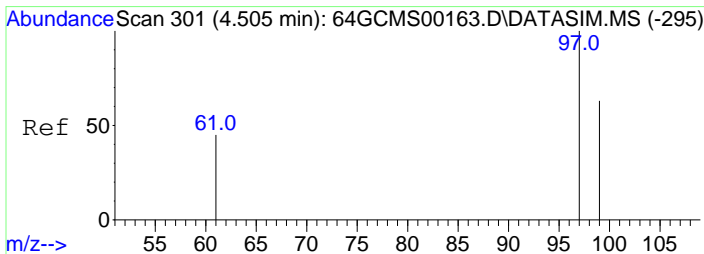
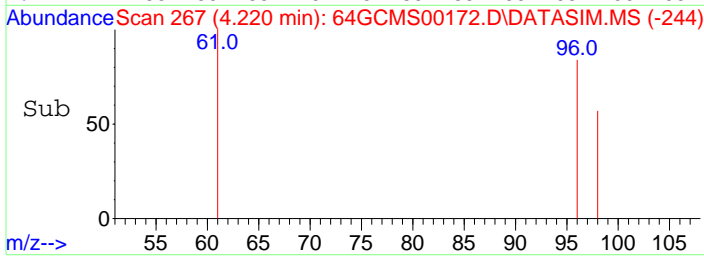
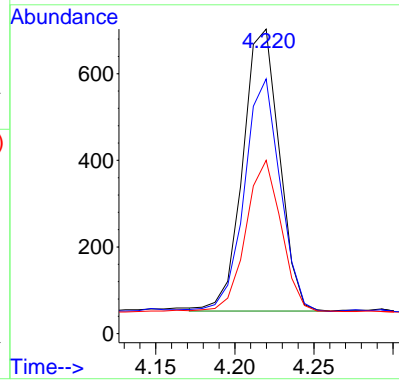
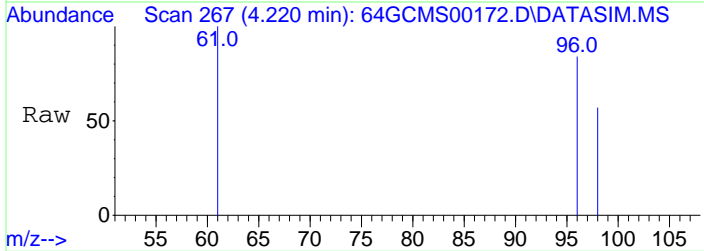
3.926min (-0.000) 5.03 ppbv m

response	1545	
Ion	Exp%	Act%
63.00	100.00	100.00
65.00	31.00	31.20
27.00	26.40	42.78#
0.00	0.00	0.00



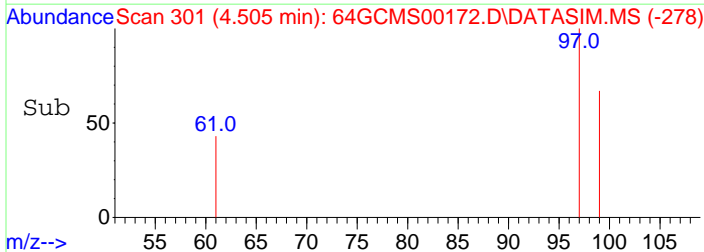
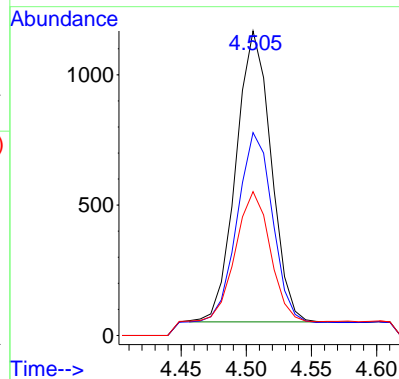
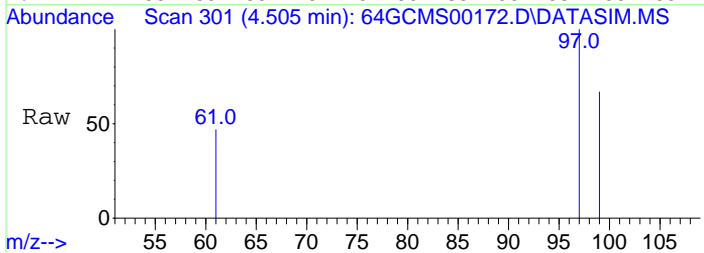
#7
 cis-1,2-Dichloroethene
 Concen: 4.73 ppbv
 RT: 4.220 min Scan# 267
 Delta R.T. -0.000 min
 Lab File: 64GCMS00172.D
 Acq: 1 May 2016 5:18 pm

Tgt Ion:	61	Resp:	1050
Ion Ratio	Lower	Upper	
61	100		
96	80.8	52.0	78.0#
98	51.0	33.4	50.2#



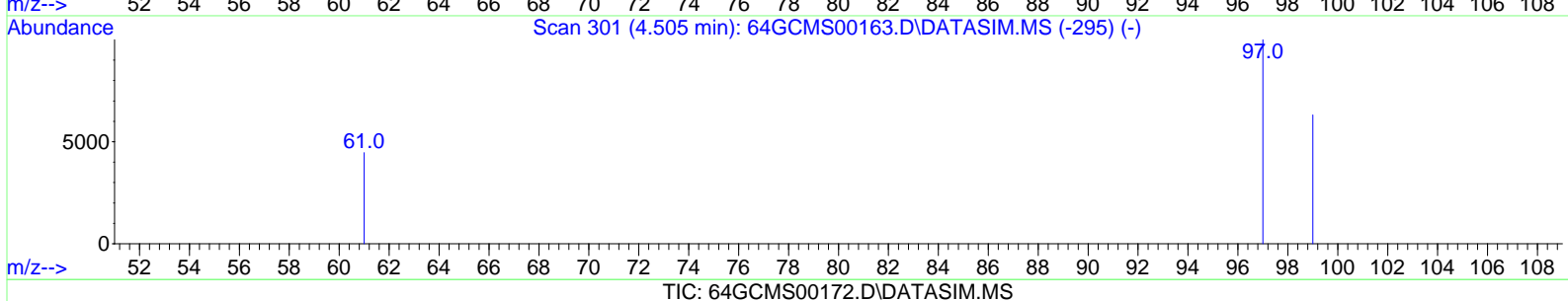
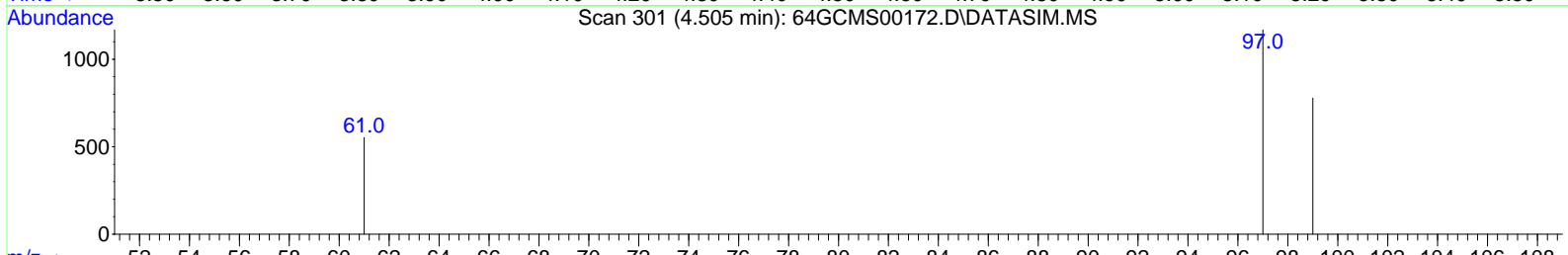
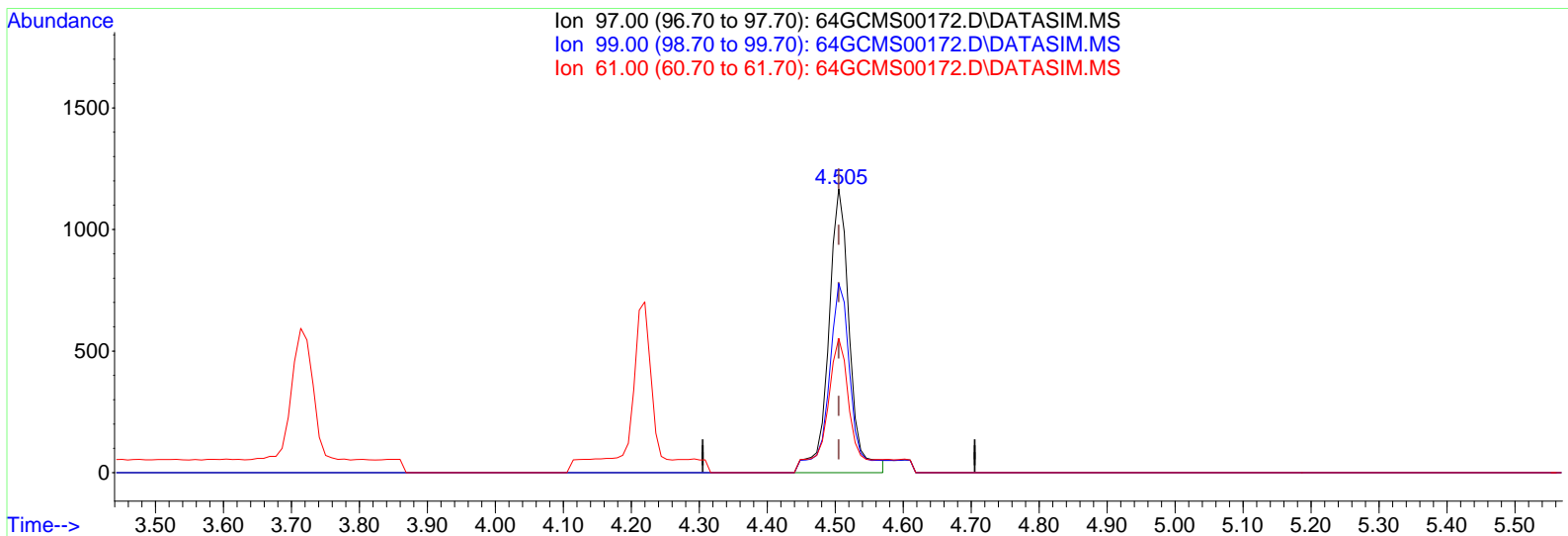
#8
 1,1,1-Trichloroethane
 Concen: 4.69 ppbv m
 RT: 4.505 min Scan# 301
 Delta R.T. -0.000 min
 Lab File: 64GCMS00172.D
 Acq: 1 May 2016 5:18 pm

Tgt Ion:	97	Resp:	2091
Ion Ratio	Lower	Upper	
97	100		
99	65.5	51.5	77.3
61	44.3	38.6	58.0



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00172.D
 Acq On : 1 May 2016 5:18 pm
 Operator : dlm
 Sample : STD20160501-05 \ 5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:48 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



(8) 1,1,1-Trichloroethane

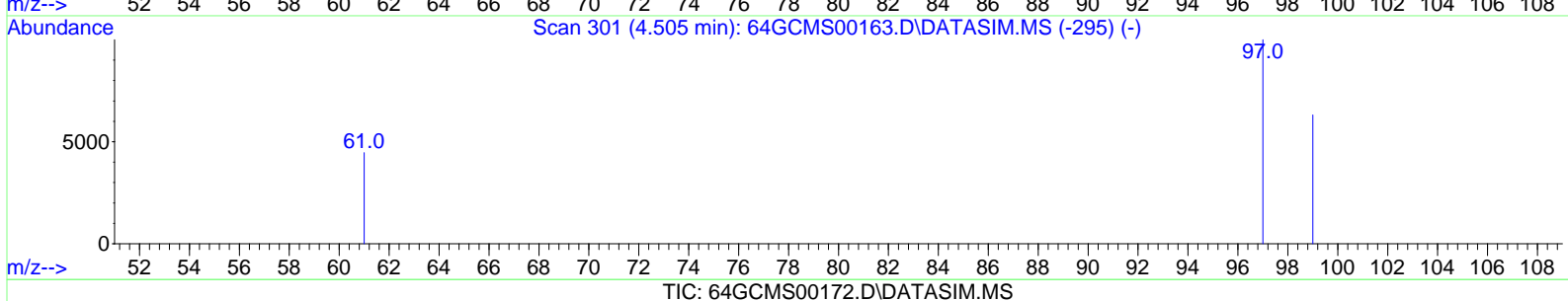
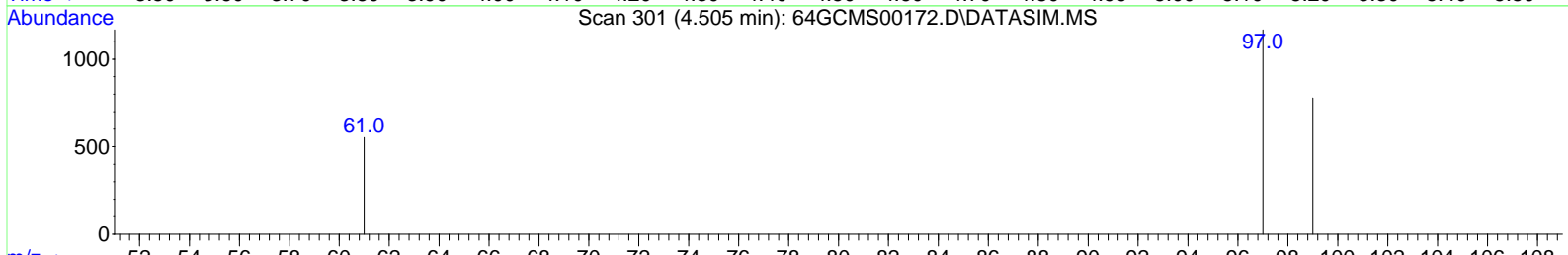
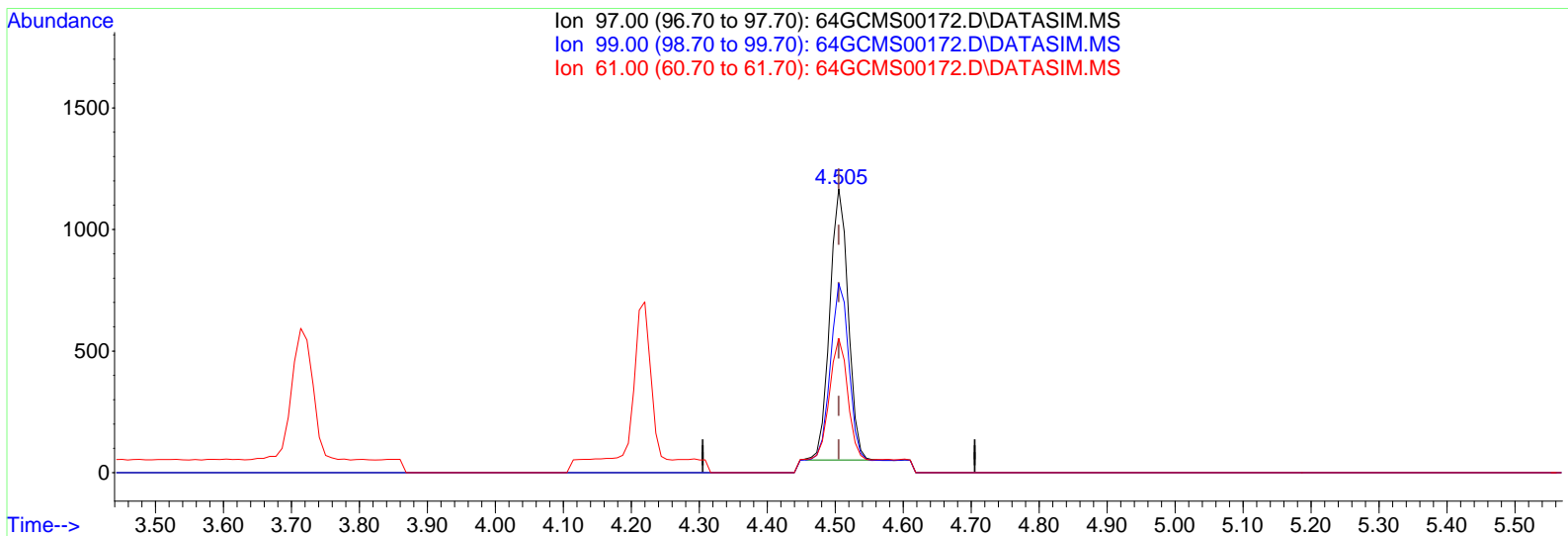
4.505min (-0.000) 5.62 ppbv

response 2510

Ion	Exp%	Act%
97.00	100.00	100.00
99.00	64.40	54.54
61.00	48.30	36.89#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00172.D
 Acq On : 1 May 2016 5:18 pm
 Operator : dlm
 Sample : STD20160501-05 \ 5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:48 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

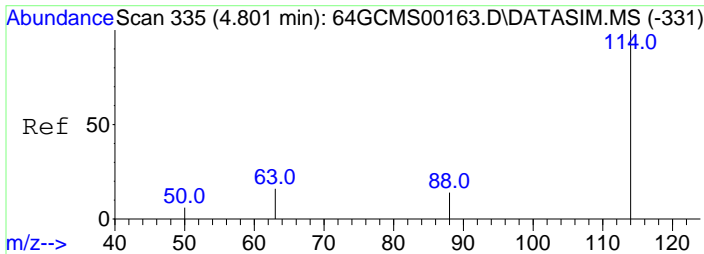


(8) 1,1,1-Trichloroethane

4.505min (-0.000) 4.69 ppbv m

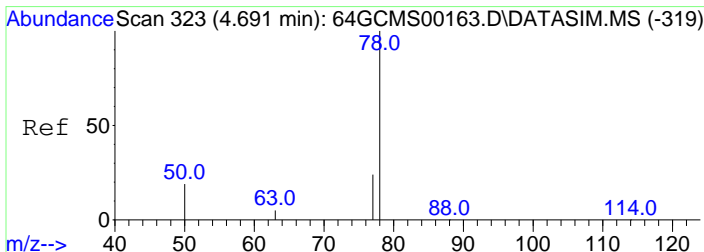
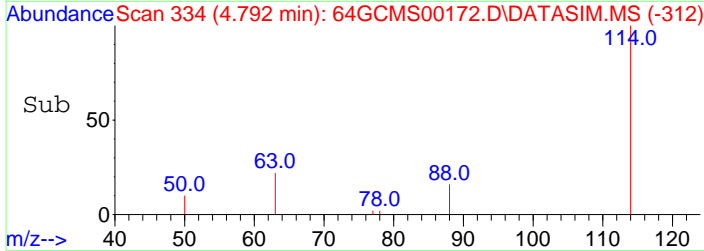
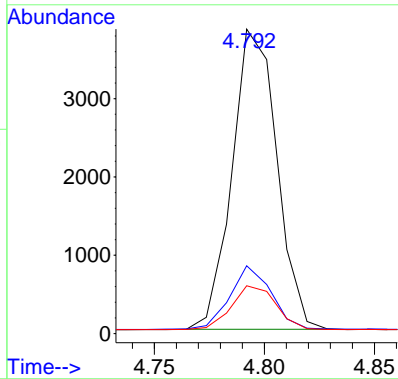
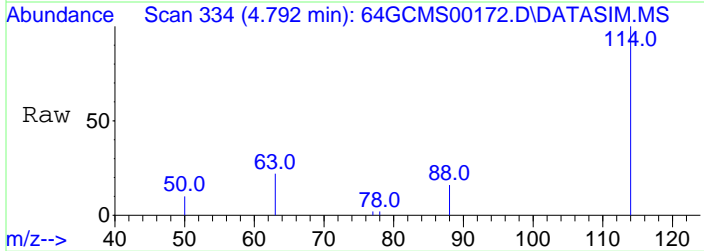
response 2091

Ion	Exp%	Act%
97.00	100.00	100.00
99.00	64.40	65.47
61.00	48.30	44.29
0.00	0.00	0.00



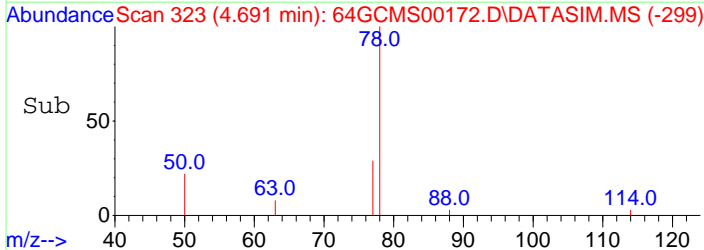
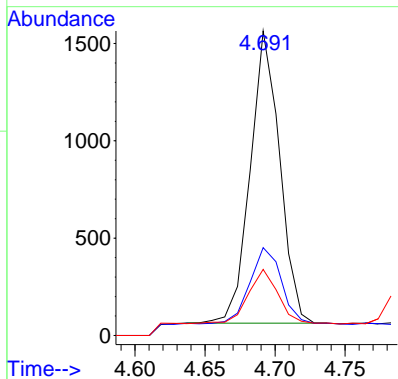
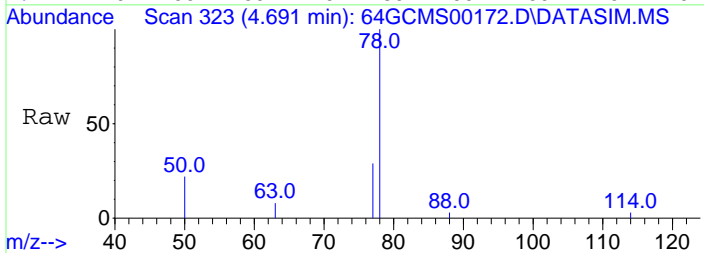
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00172.D
 Acq: 1 May 2016 5:18 pm

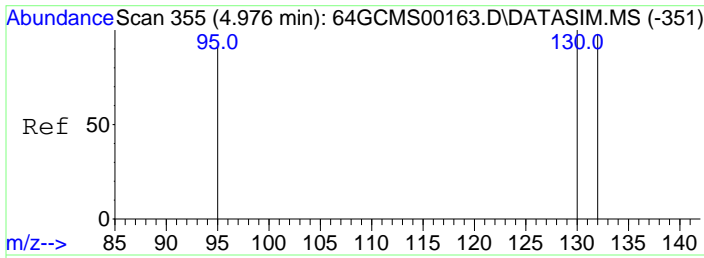
Tgt Ion	Resp	Lower	Upper
114	100		
63	19.2	19.2	28.8
88	14.4	13.7	20.5



#10
 Benzene
 Concen: 5.05 ppbv
 RT: 4.691 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00172.D
 Acq: 1 May 2016 5:18 pm

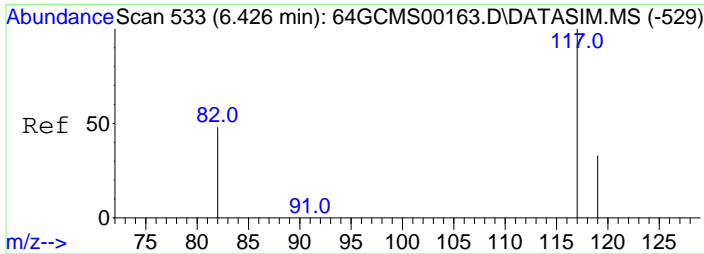
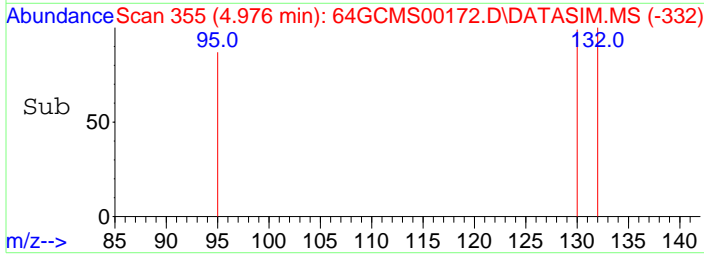
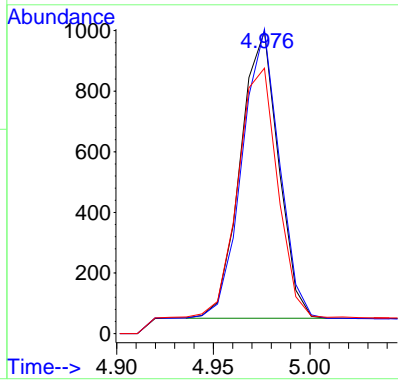
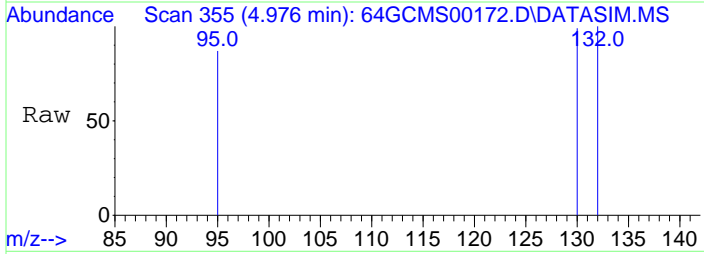
Tgt Ion	Resp	Lower	Upper
78	100		
77	31.1	18.2	27.4#
50	26.7	16.6	24.8#





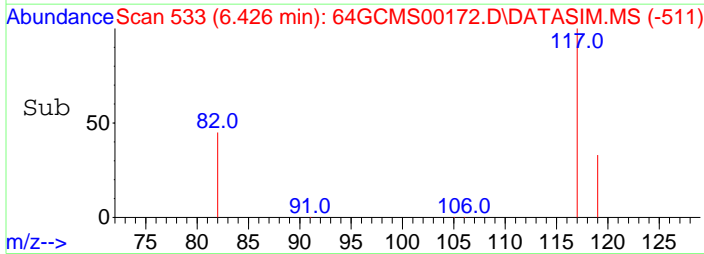
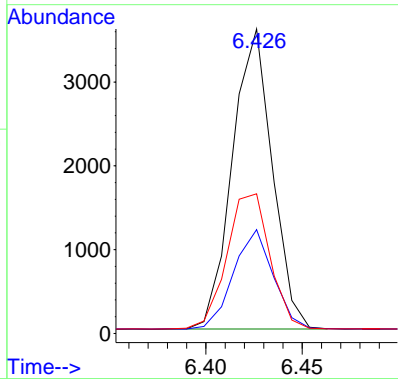
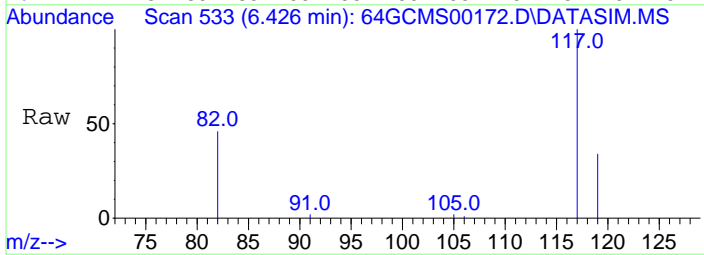
#11
 Trichloroethene
 Concen: 4.87 ppbv
 RT: 4.976 min Scan# 355
 Delta R.T. -0.000 min
 Lab File: 64GCMS00172.D
 Acq: 1 May 2016 5:18 pm

Tgt Ion	Resp	Lower	Upper
130	100		
132	104.6	76.9	115.3
95	89.5	81.5	122.3

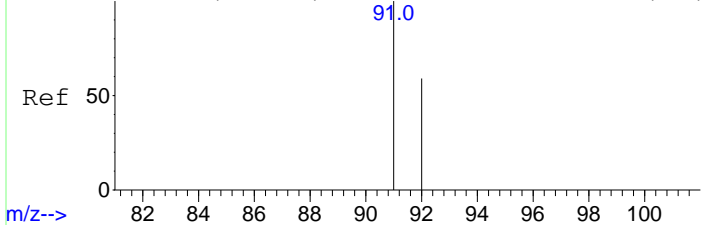


#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00172.D
 Acq: 1 May 2016 5:18 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.9	25.8	38.6
82	48.6	45.6	68.4

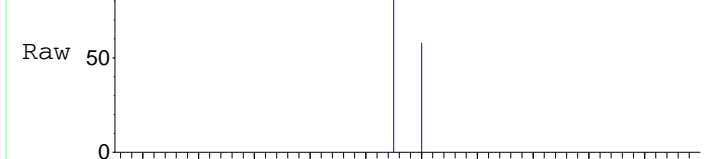


Abundance Scan 434 (5.590 min): 64GCMS00163.D\DATASIM.MS (-428)



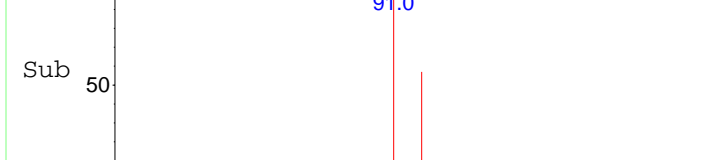
m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00172.D\DATASIM.MS



m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00172.D\DATASIM.MS (-406)

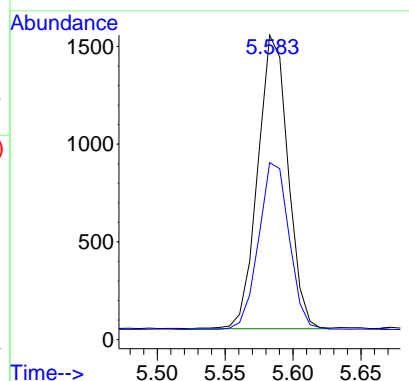


m/z-->

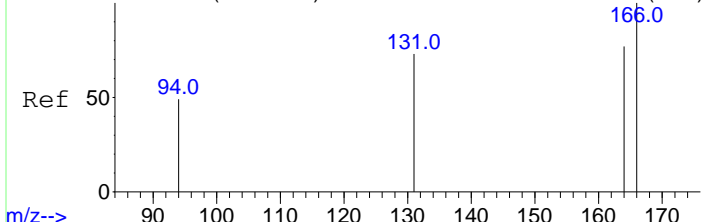
#13
Toluene
Concen: 4.34 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00172.D
Acq: 1 May 2016 5:18 pm

Tgt Ion: 91 Resp: 2333

Ion	Ratio	Lower	Upper
91	100		
92	57.1	48.0	72.0

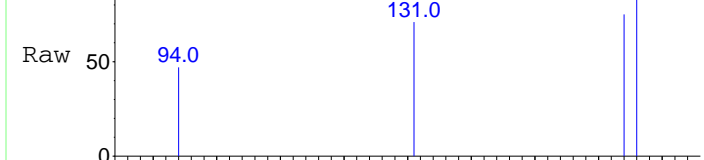


Abundance Scan 484 (5.988 min): 64GCMS00163.D\DATASIM.MS (-479)



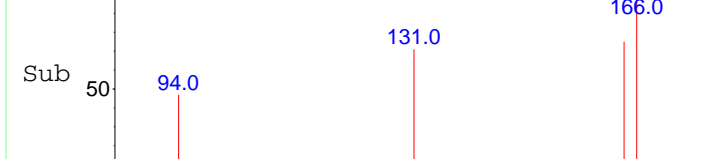
m/z-->

Abundance Scan 484 (5.988 min): 64GCMS00172.D\DATASIM.MS



m/z-->

Abundance Scan 484 (5.988 min): 64GCMS00172.D\DATASIM.MS (-461)

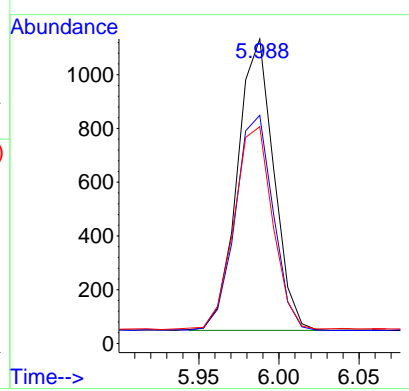


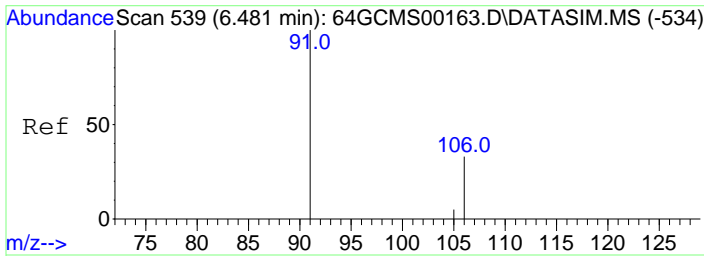
m/z-->

#14
Tetrachloroethene
Concen: 4.63 ppbv
RT: 5.988 min Scan# 484
Delta R.T. -0.000 min
Lab File: 64GCMS00172.D
Acq: 1 May 2016 5:18 pm

Tgt Ion: 166 Resp: 1717

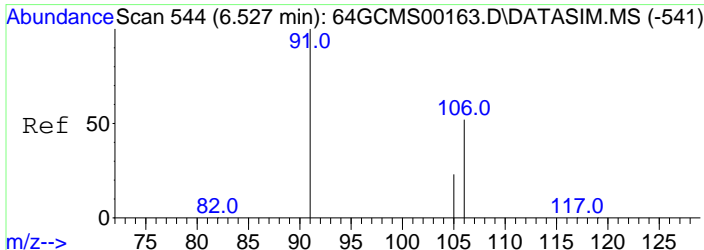
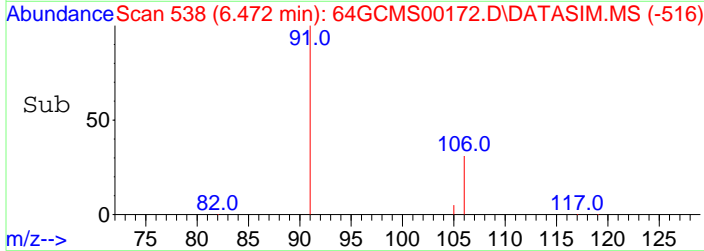
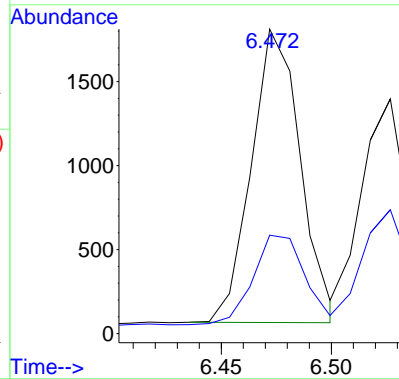
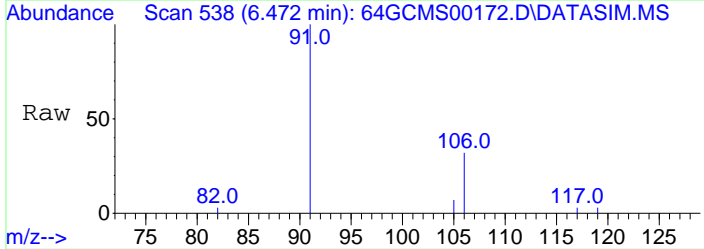
Ion	Ratio	Lower	Upper
166	100		
164	76.5	63.4	95.0
131	73.2	63.4	95.0





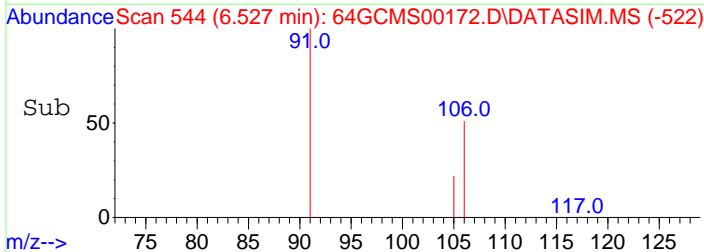
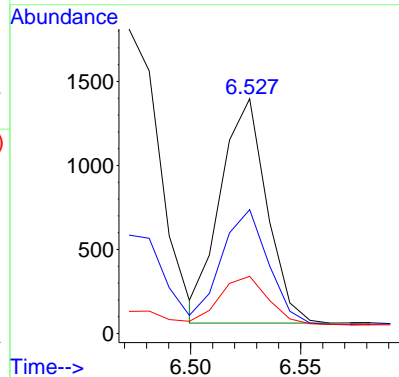
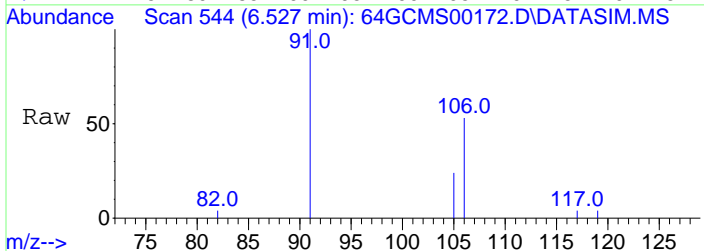
#15
Ethyl Benzene
Concen: 4.07 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00172.D
Acq: 1 May 2016 5:18 pm

Tgt Ion: 91 Resp: 2700
Ion Ratio Lower Upper
91 100
106 32.4 24.2 36.2

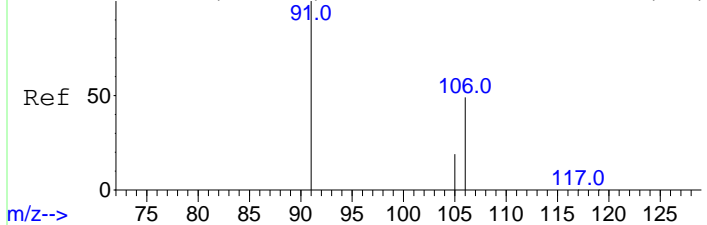


#16
m,p-Xylene
Concen: 3.63 ppbv
RT: 6.527 min Scan# 544
Delta R.T. -0.000 min
Lab File: 64GCMS00172.D
Acq: 1 May 2016 5:18 pm

Tgt Ion: 91 Resp: 1954
Ion Ratio Lower Upper
91 100
106 52.2 37.7 56.5
105 22.6 17.0 25.4



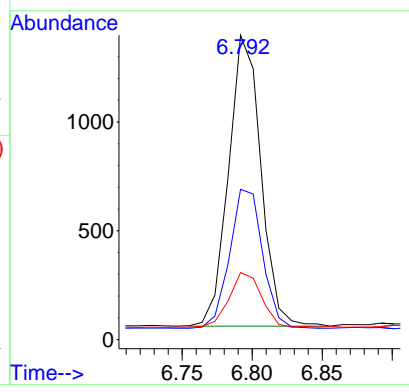
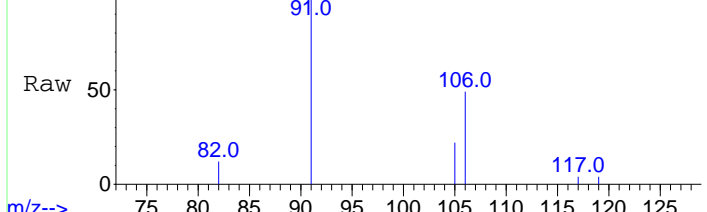
Abundance Scan 574 (6.801 min): 64GCMS00163.D\DATASIM.MS (-569)



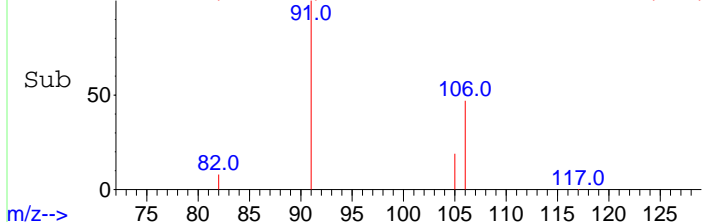
#17
 o-Xylene
 Concen: 3.67 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00172.D
 Acq: 1 May 2016 5:18 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	48.7	35.4	53.2
105	18.9	14.0	21.0

Abundance Scan 573 (6.792 min): 64GCMS00172.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00172.D\DATASIM.MS (-551)



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

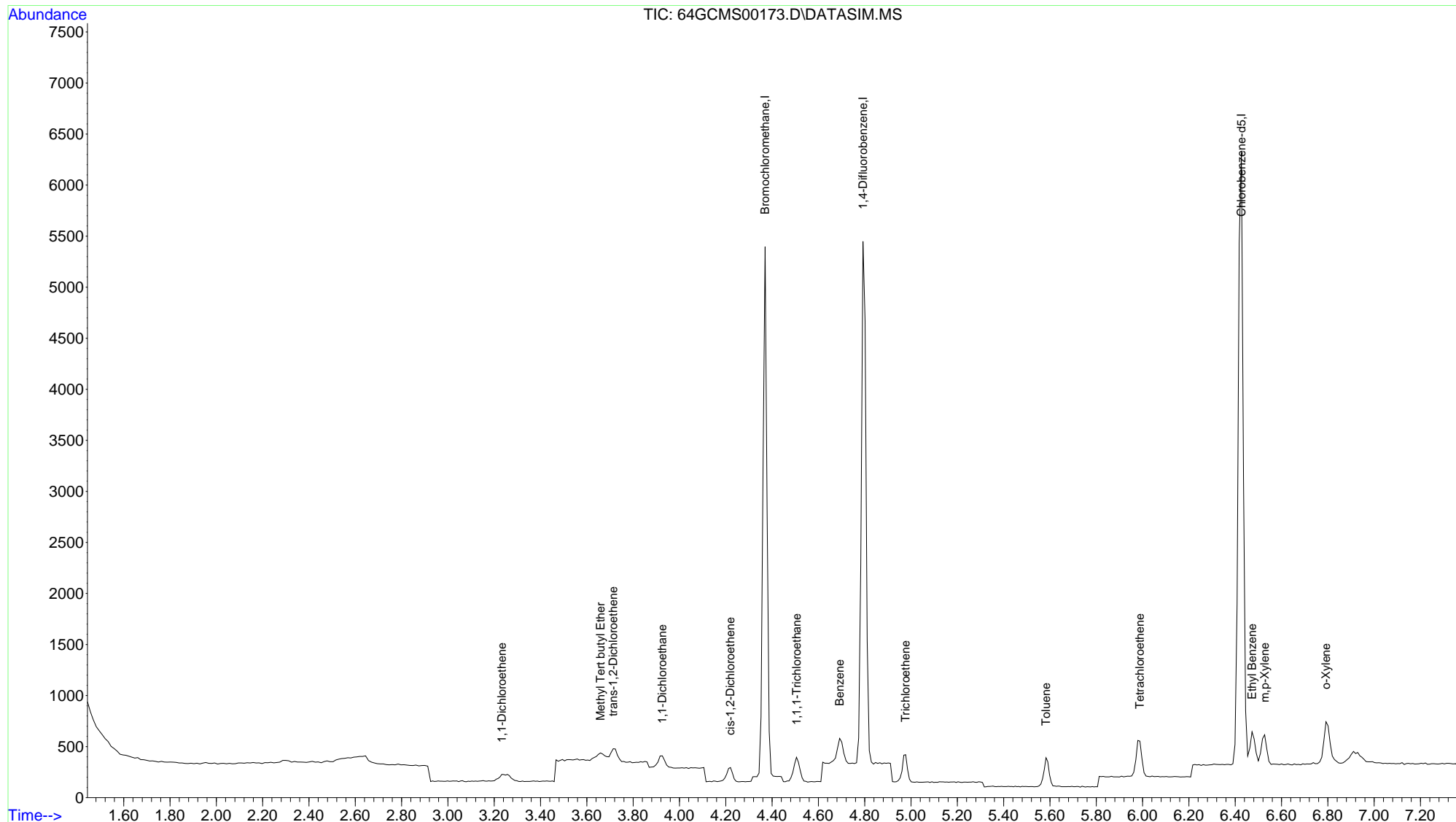
Quant Time: May 01 18:06:05 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2246	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	5008	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.427	117	4906	10.00	ppbv	0.00
Target Compounds						
						Qvalue
3) 1,1-Dichloroethene	3.233	61	119m	0.46	ppbv	
4) Methyl Tert butyl Ether	3.659	73	161	0.44	ppbv	# 82
5) trans-1,2-Dichloroethene	3.714	61	104m	0.45	ppbv	
6) 1,1-Dichloroethane	3.926	63	166	0.55	ppbv	# 10
7) cis-1,2-Dichloroethene	4.220	61	116	0.53	ppbv	# 32
8) 1,1,1-Trichloroethane	4.505	97	220m	0.50	ppbv	
10) Benzene	4.692	78	263m	0.66	ppbv	
11) Trichloroethene	4.977	130	153m	0.62	ppbv	
13) Toluene	5.583	91	285	0.56	ppbv	94
14) Tetrachloroethene	5.988	166	208	0.59	ppbv	93
15) Ethyl Benzene	6.472	91	360	0.57	ppbv	93
16) m,p-Xylene	6.527	91	260	0.51	ppbv	92
17) o-Xylene	6.792	91	347	0.63	ppbv	99

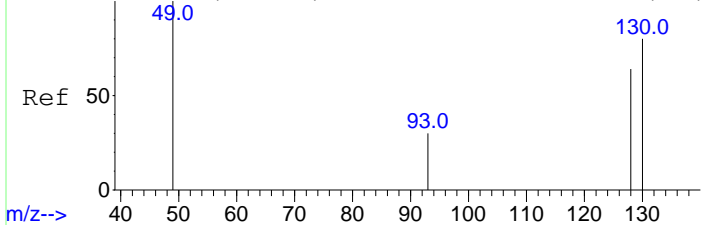
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:06:05 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



Abundance Scan 285 (4.369 min): 64GCMS00163.D\DATASIM.MS (-281)

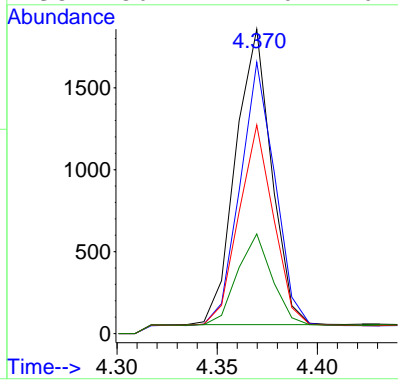
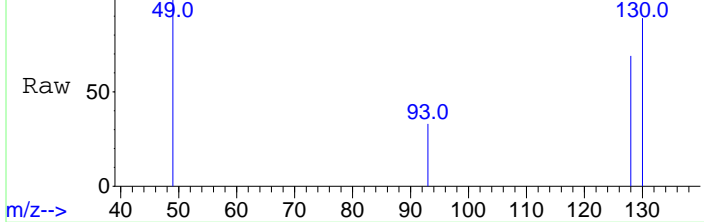


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00173.D
Acq: 1 May 2016 5:31 pm

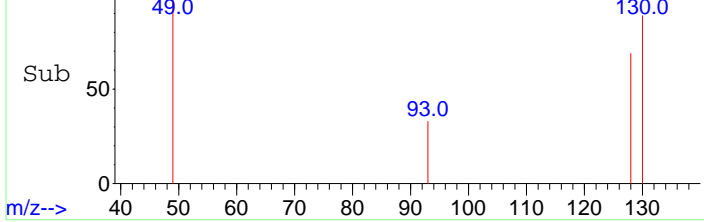
Tgt Ion: 49 Resp: 2246

Ion	Ratio	Lower	Upper
49	100		
130	86.6	46.3	69.5#
128	65.7	35.7	53.5#
93	30.1	17.6	26.4#

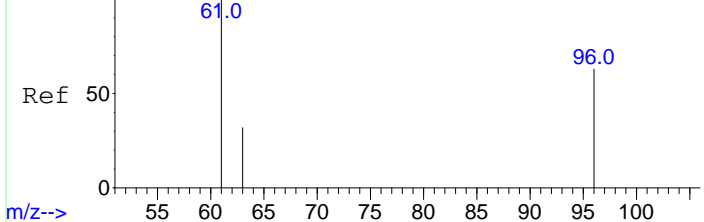
Abundance Scan 285 (4.370 min): 64GCMS00173.D\DATASIM.MS



Abundance Scan 285 (4.370 min): 64GCMS00173.D\DATASIM.MS (-277)



Abundance Scan 157 (3.249 min): 64GCMS00163.D\DATASIM.MS (-146)

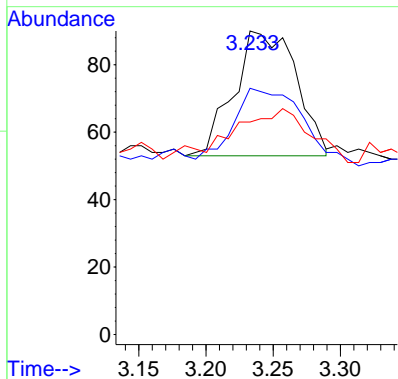
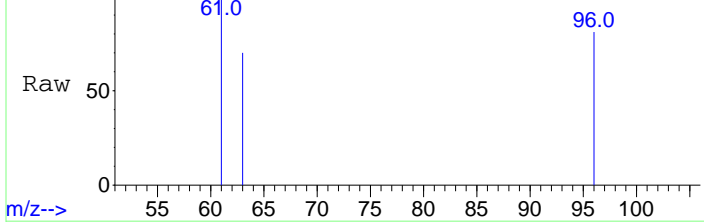


#3
1,1-Dichloroethene
Concen: 0.46 ppbv m
RT: 3.233 min Scan# 155
Delta R.T. -0.016 min
Lab File: 64GCMS00173.D
Acq: 1 May 2016 5:31 pm

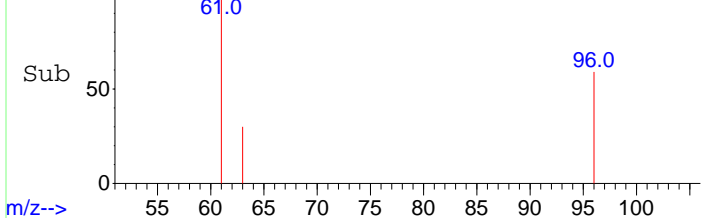
Tgt Ion: 61 Resp: 119

Ion	Ratio	Lower	Upper
61	100		
96	70.6	40.9	61.3#
63	0.0	24.3	36.5#

Abundance Scan 155 (3.233 min): 64GCMS00173.D\DATASIM.MS

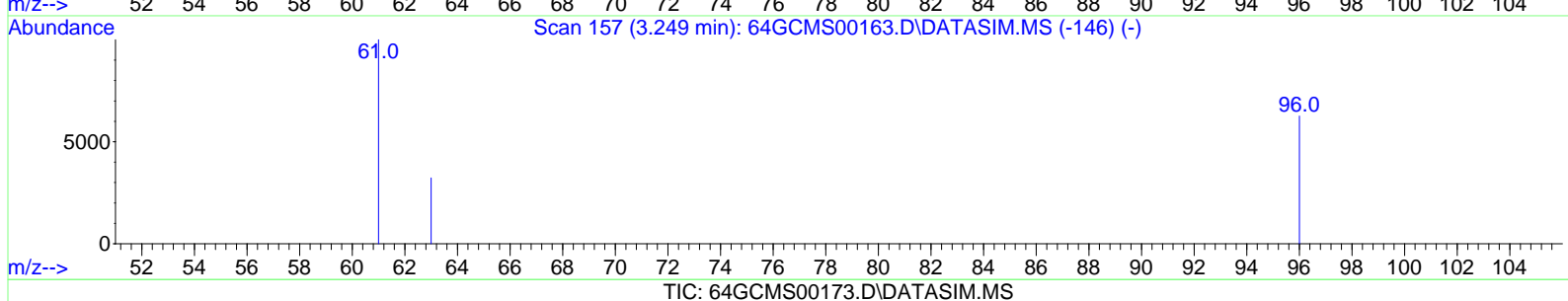
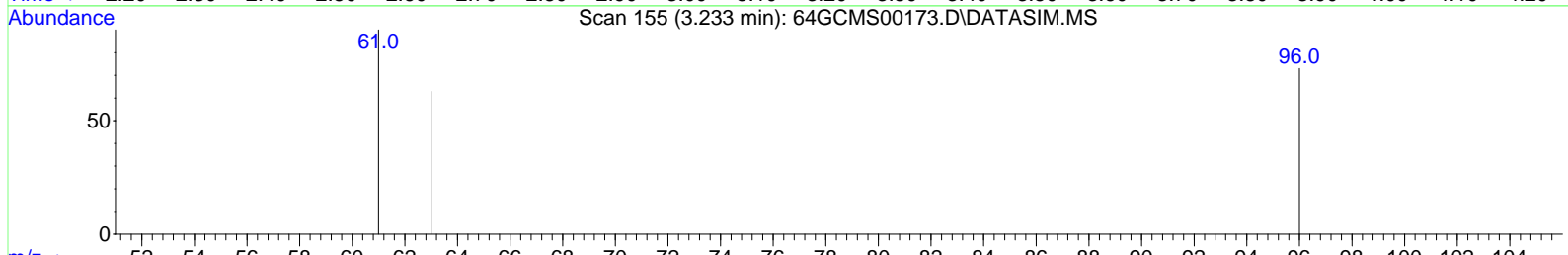
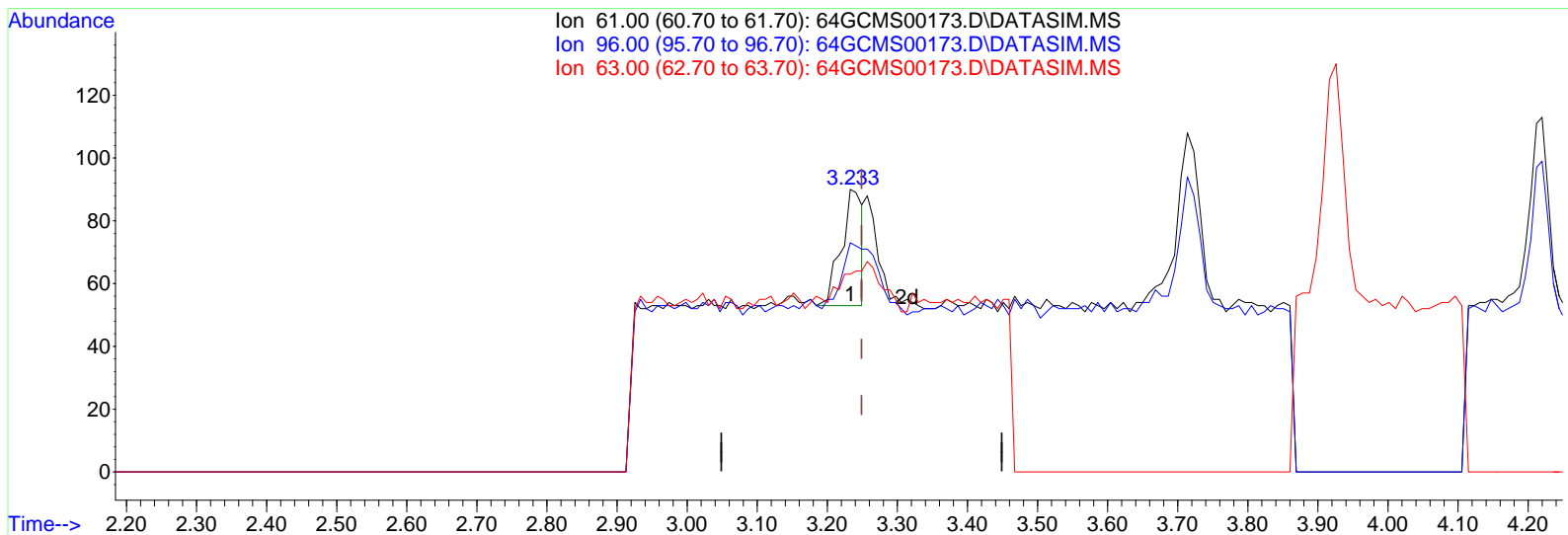


Abundance Scan 155 (3.233 min): 64GCMS00173.D\DATASIM.MS (-132)



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



(3) 1,1-Dichloroethene

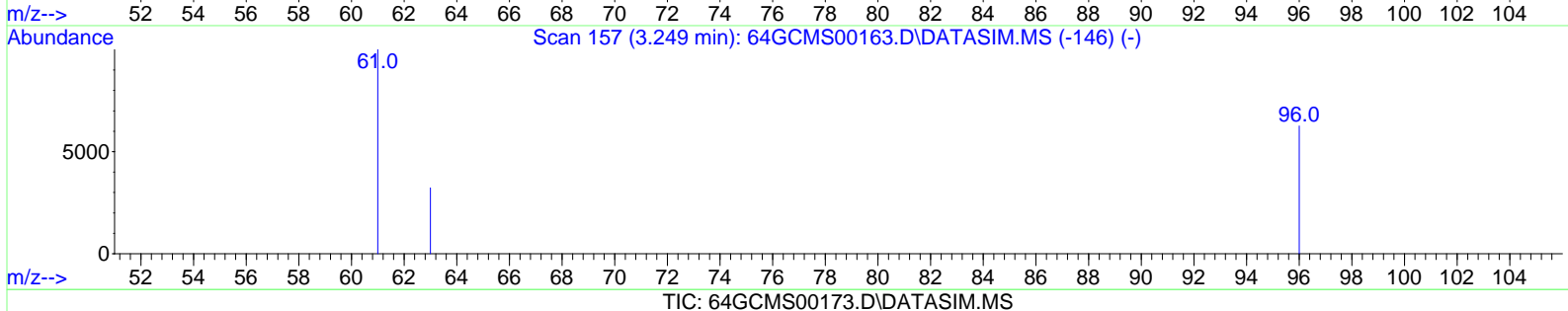
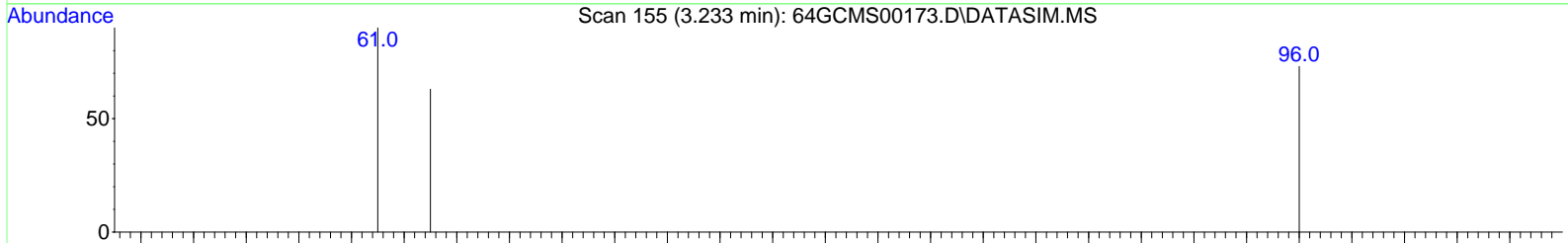
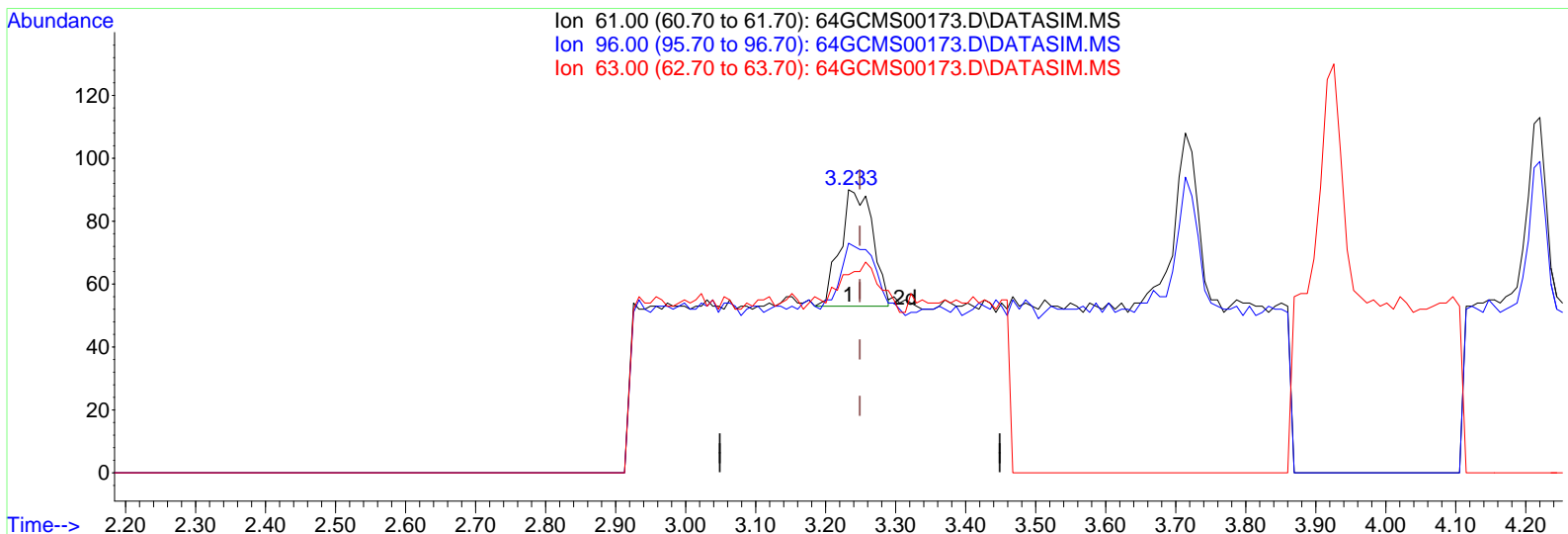
3.233min (-0.016) 0.29 ppbv

response 76

Ion	Exp%	Act%
61.00	100.00	100.00
96.00	51.10	110.53#
63.00	30.40	0.00#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



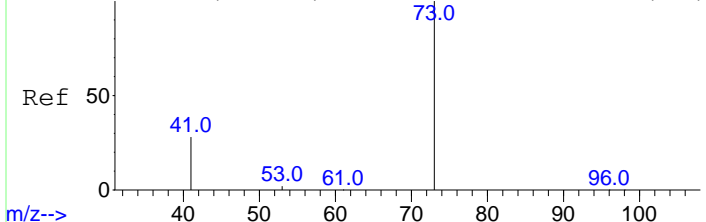
(3) 1,1-Dichloroethene

3.233min (-0.016) 0.46 ppbv m

response 119

Ion	Exp%	Act%
61.00	100.00	100.00
96.00	51.10	70.59#
63.00	30.40	0.00#
0.00	0.00	0.00

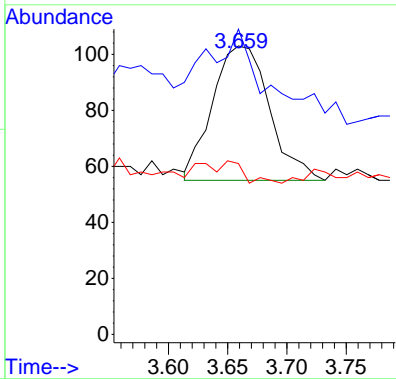
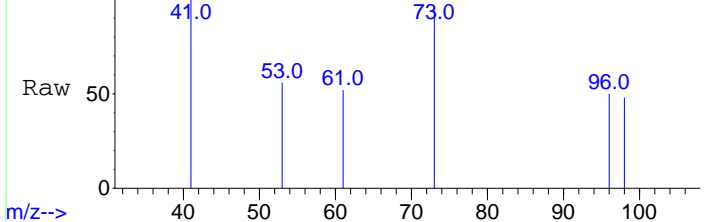
Abundance Scan 205 (3.659 min): 64GCMS00163.D\DATASIM.MS (-196)



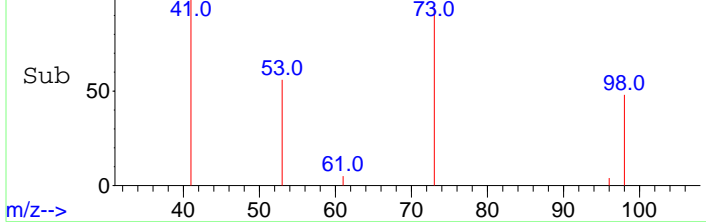
#4
 Methyl Tert butyl Ether
 Concen: 0.44 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. 0.000 min
 Lab File: 64GCMS00173.D
 Acq: 1 May 2016 5:31 pm

Tgt Ion	Resp	Lower	Upper
73	100		
41	16.1	20.6	30.8#
53	0.0	1.2	1.8#

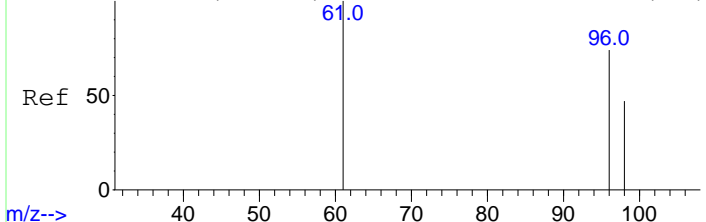
Abundance Scan 205 (3.659 min): 64GCMS00173.D\DATASIM.MS



Abundance Scan 205 (3.659 min): 64GCMS00173.D\DATASIM.MS (-183)



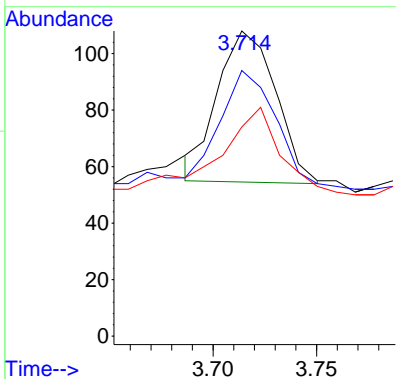
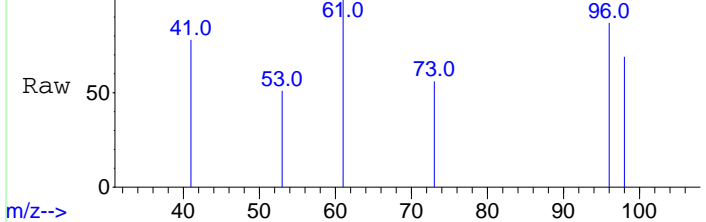
Abundance Scan 211 (3.714 min): 64GCMS00163.D\DATASIM.MS (-206)



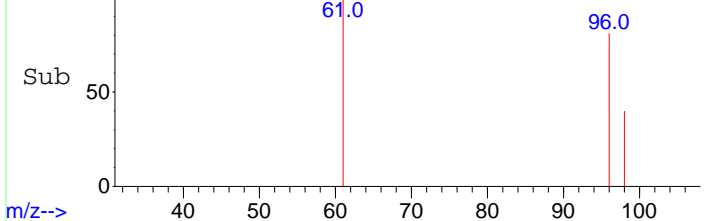
#5
 trans-1,2-Dichloroethene
 Concen: 0.45 ppbv m
 RT: 3.714 min Scan# 211
 Delta R.T. 0.000 min
 Lab File: 64GCMS00173.D
 Acq: 1 May 2016 5:31 pm

Tgt Ion	Resp	Lower	Upper
61	100		
96	77.9	47.8	71.6#
98	55.8	30.6	46.0#

Abundance Scan 211 (3.714 min): 64GCMS00173.D\DATASIM.MS

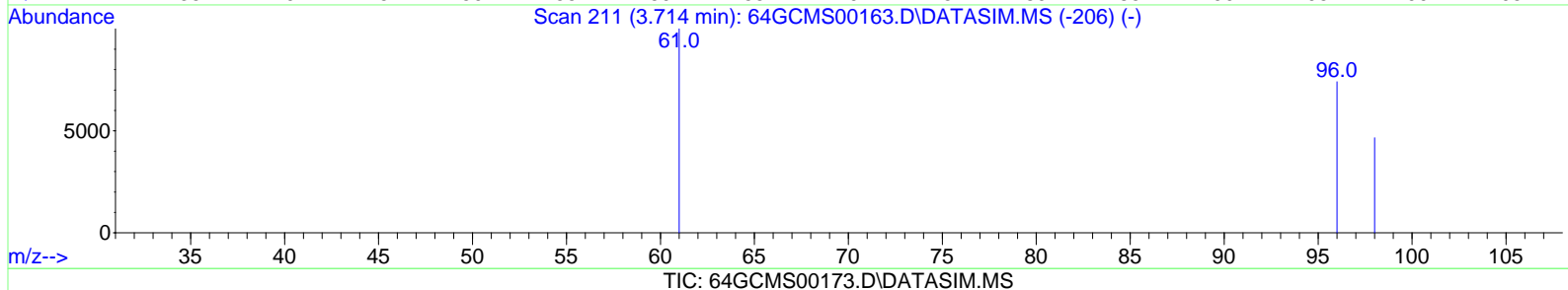
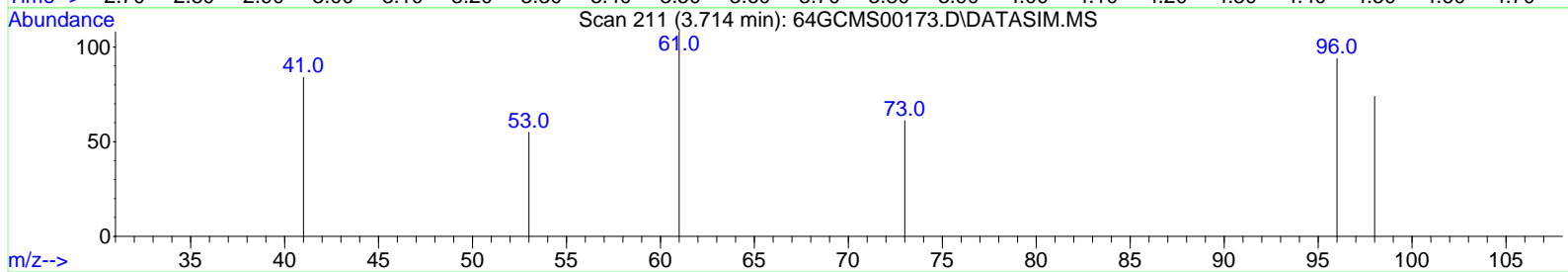
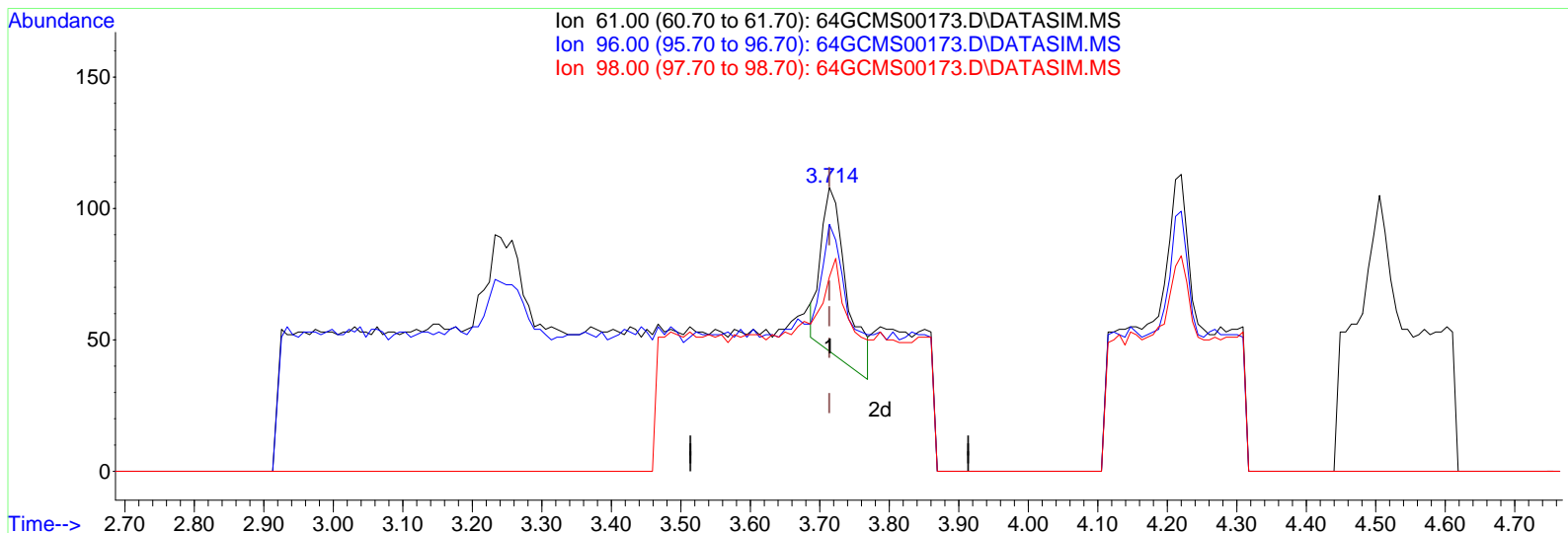


Abundance Scan 211 (3.714 min): 64GCMS00173.D\DATASIM.MS (-189)



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



(5) trans-1,2-Dichloroethene

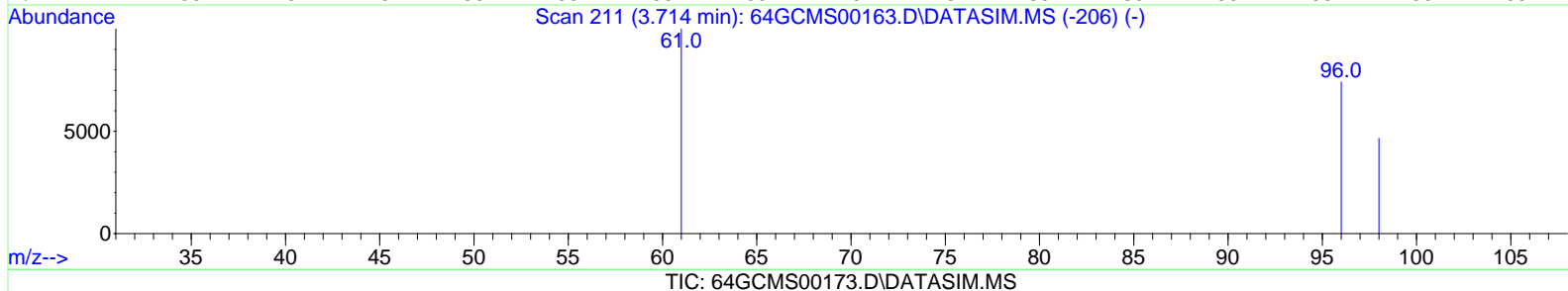
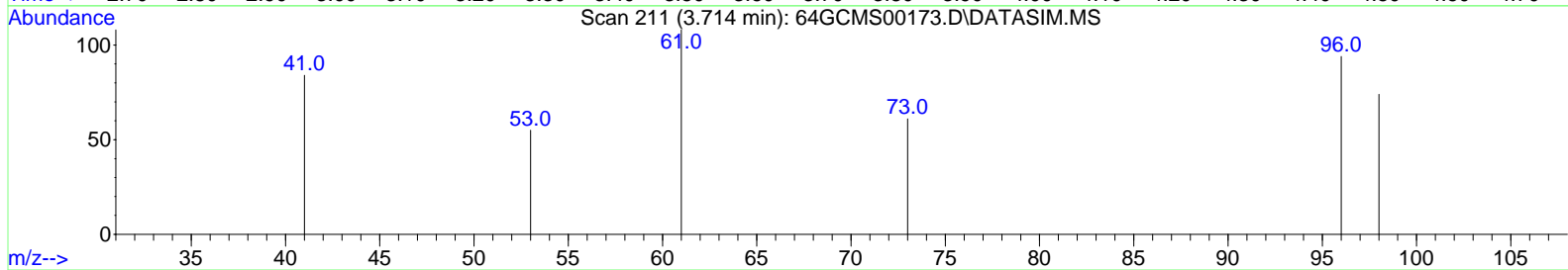
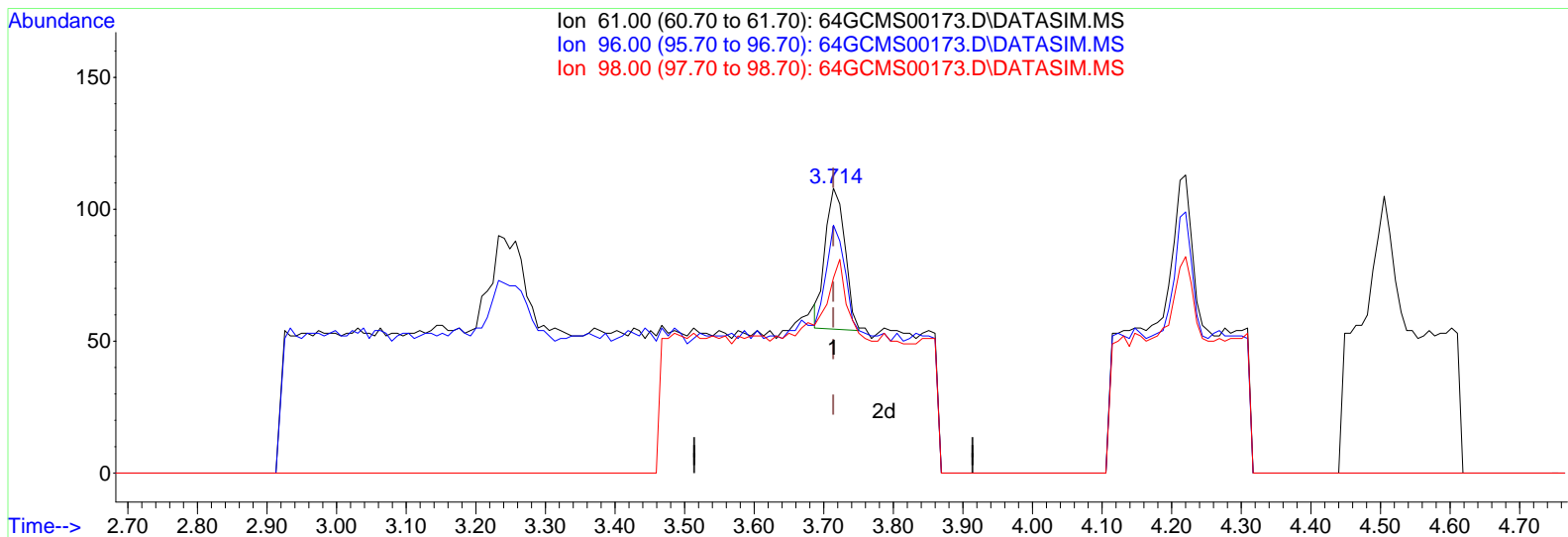
3.714min (+ 0.000) 0.69 ppbv

response 159

Ion	Exp%	Act%
61.00	100.00	100.00
96.00	59.70	50.94
98.00	38.30	36.48
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



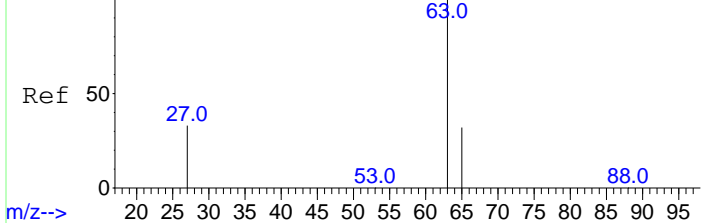
(5) trans-1,2-Dichloroethene

3.714min (+ 0.000) 0.45 ppbv m

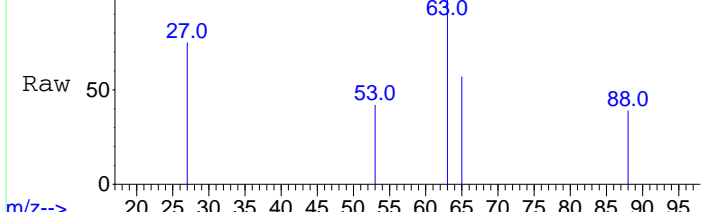
response 104

Ion	Exp%	Act%
61.00	100.00	100.00
96.00	59.70	77.88#
98.00	38.30	55.77#
0.00	0.00	0.00

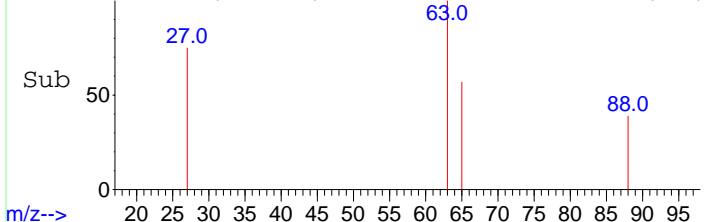
Abundance Scan 234 (3.926 min): 64GCMS00163.D\DATASIM.MS (-227)



m/z-->



Abundance Scan 234 (3.926 min): 64GCMS00173.D\DATASIM.MS

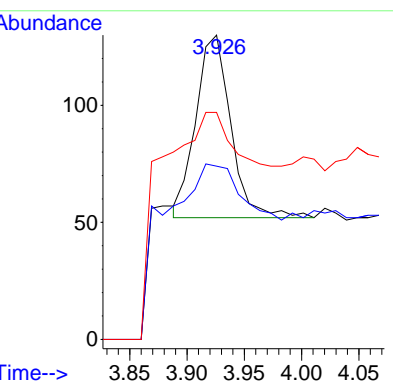


m/z-->

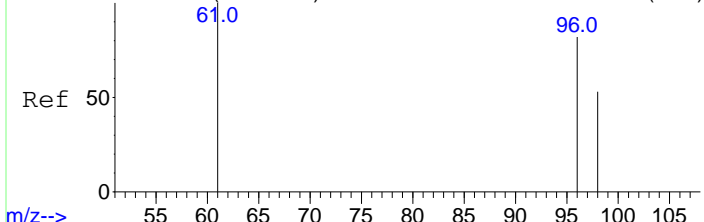
#6
1,1-Dichloroethane
Concen: 0.55 ppbv
RT: 3.926 min Scan# 234
Delta R.T. 0.000 min
Lab File: 64GCMS00173.D
Acq: 1 May 2016 5:31 pm

Tgt Ion: 63 Resp: 166

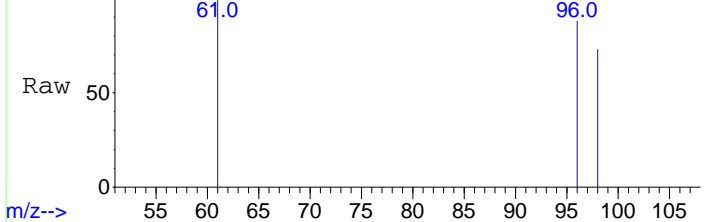
Ion	Ratio	Lower	Upper
63	100		
65	122.3	24.8	37.2#
27	26.5	21.1	31.7



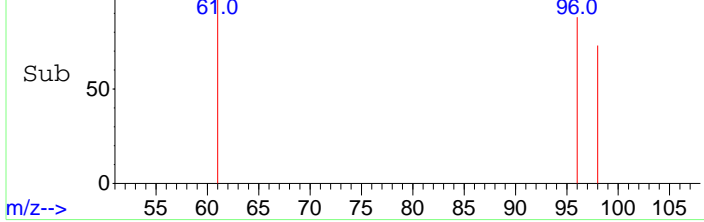
Abundance Scan 267 (4.220 min): 64GCMS00163.D\DATASIM.MS (-262)



m/z-->



Abundance Scan 267 (4.220 min): 64GCMS00173.D\DATASIM.MS (-244)

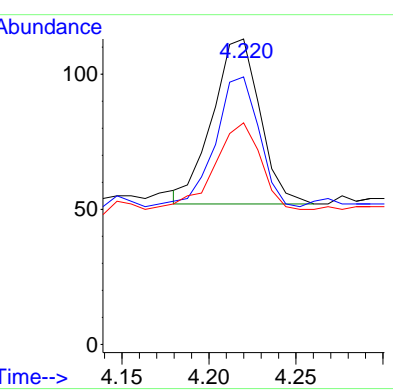


m/z-->

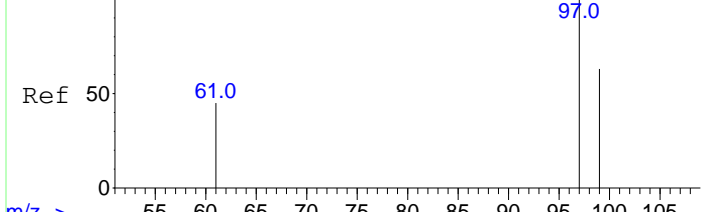
#7
cis-1,2-Dichloroethene
Concen: 0.53 ppbv
RT: 4.220 min Scan# 267
Delta R.T. 0.000 min
Lab File: 64GCMS00173.D
Acq: 1 May 2016 5:31 pm

Tgt Ion: 61 Resp: 116

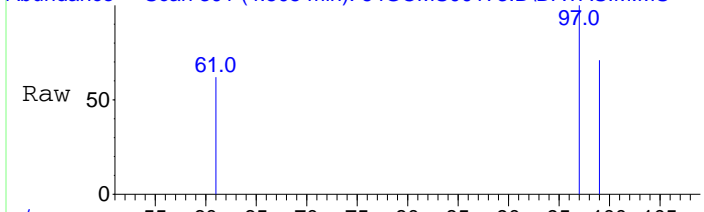
Ion	Ratio	Lower	Upper
61	100		
96	119.0	52.0	78.0#
98	84.5	33.4	50.2#



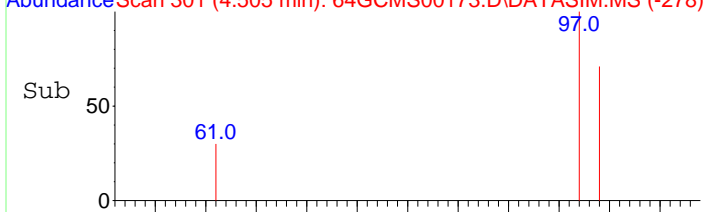
Abundance Scan 301 (4.505 min): 64GCMS00163.D\DATASIM.MS (-295)



m/z-->



Abundance Scan 301 (4.505 min): 64GCMS00173.D\DATASIM.MS (-278)

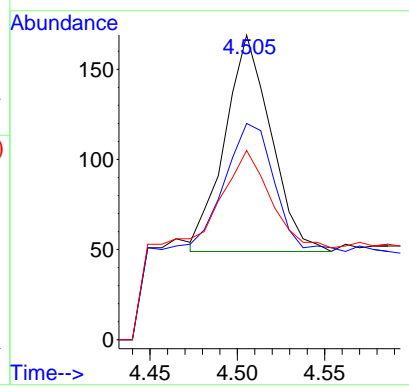


m/z-->

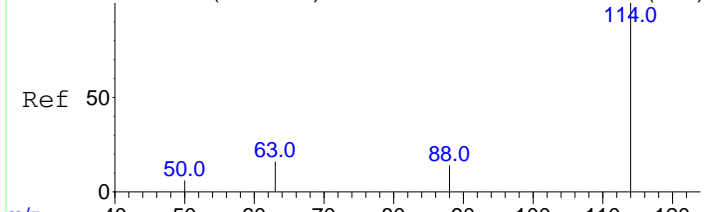
#8
1,1,1-Trichloroethane
Concen: 0.50 ppbv m
RT: 4.505 min Scan# 301
Delta R.T. 0.000 min
Lab File: 64GCMS00173.D
Acq: 1 May 2016 5:31 pm

Tgt Ion: 97 Resp: 220

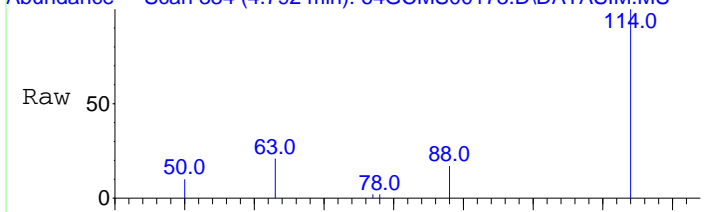
Ion	Ratio	Lower	Upper
97	100		
99	97.3	51.5	77.3#
61	85.0	38.6	58.0#



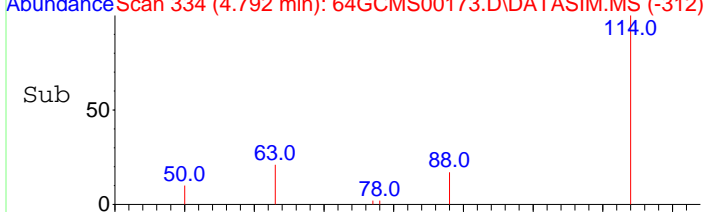
Abundance Scan 335 (4.801 min): 64GCMS00163.D\DATASIM.MS (-331)



m/z-->



Abundance Scan 334 (4.792 min): 64GCMS00173.D\DATASIM.MS (-312)

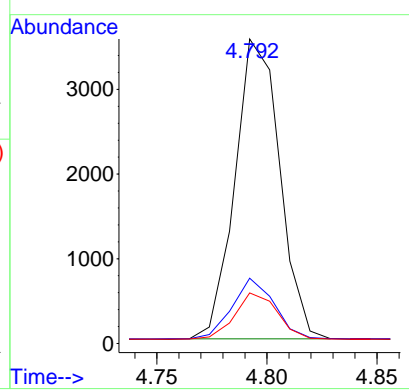


m/z-->

#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. 0.000 min
Lab File: 64GCMS00173.D
Acq: 1 May 2016 5:31 pm

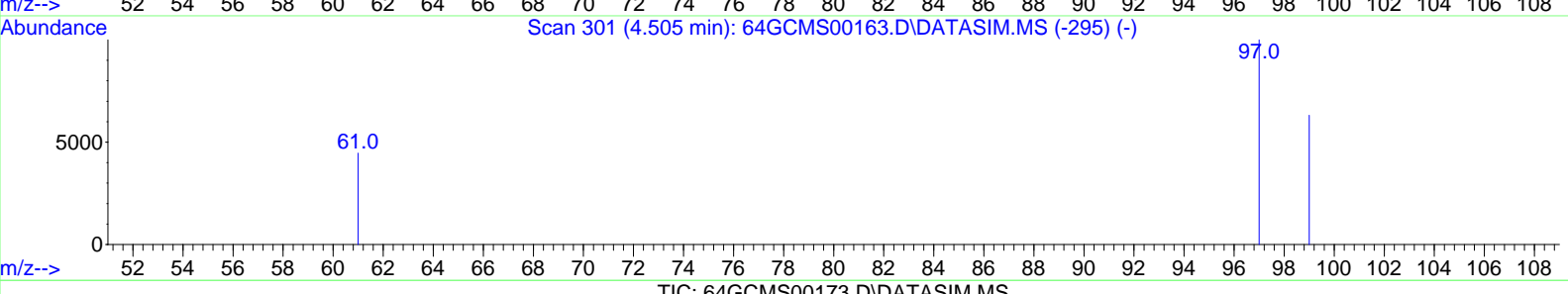
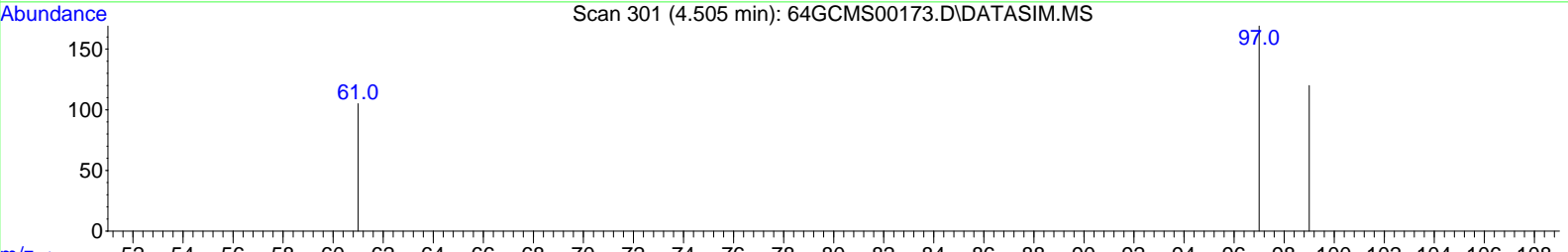
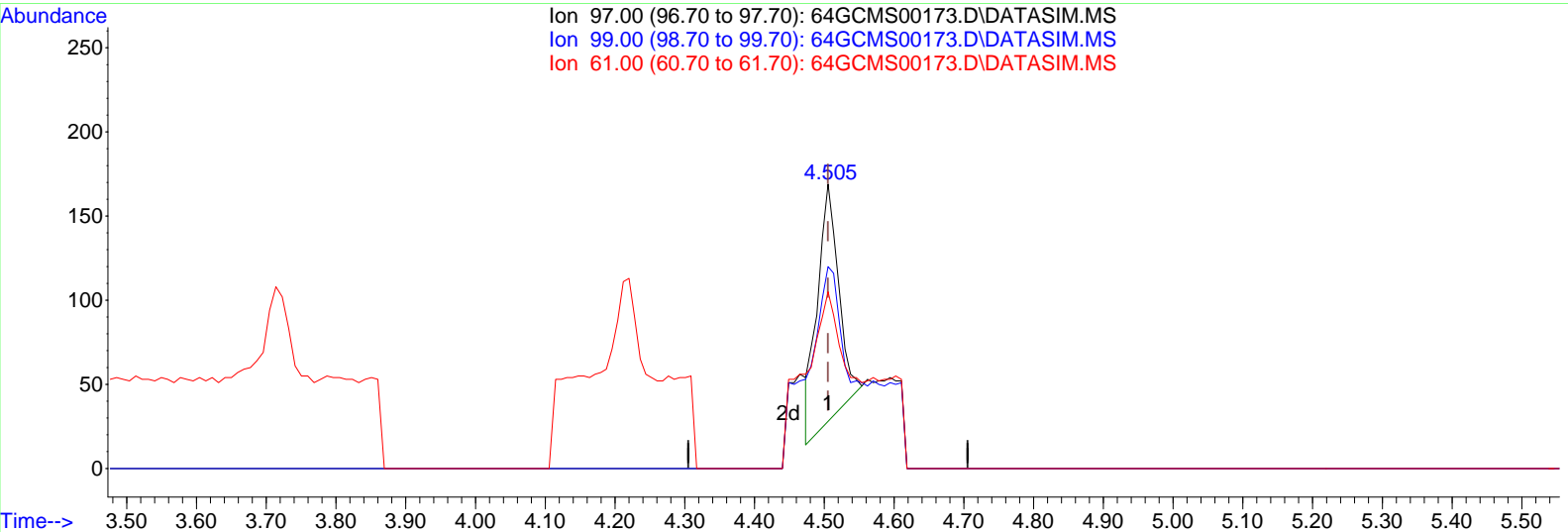
Tgt Ion: 114 Resp: 5008

Ion	Ratio	Lower	Upper
114	100		
63	19.0	19.2	28.8#
88	14.8	13.7	20.5



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



(8) 1,1,1-Trichloroethane

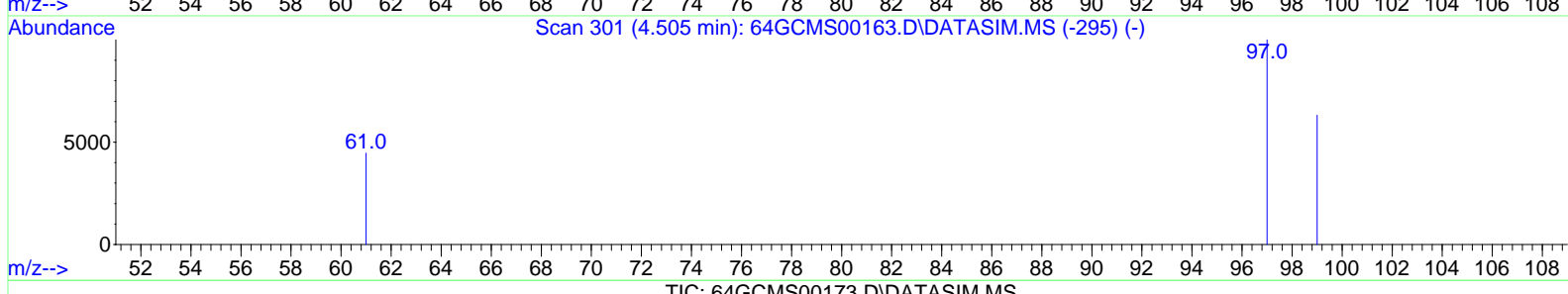
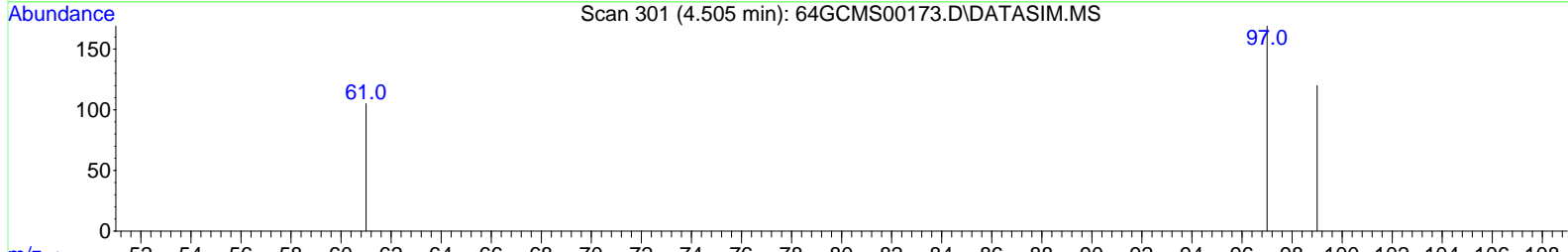
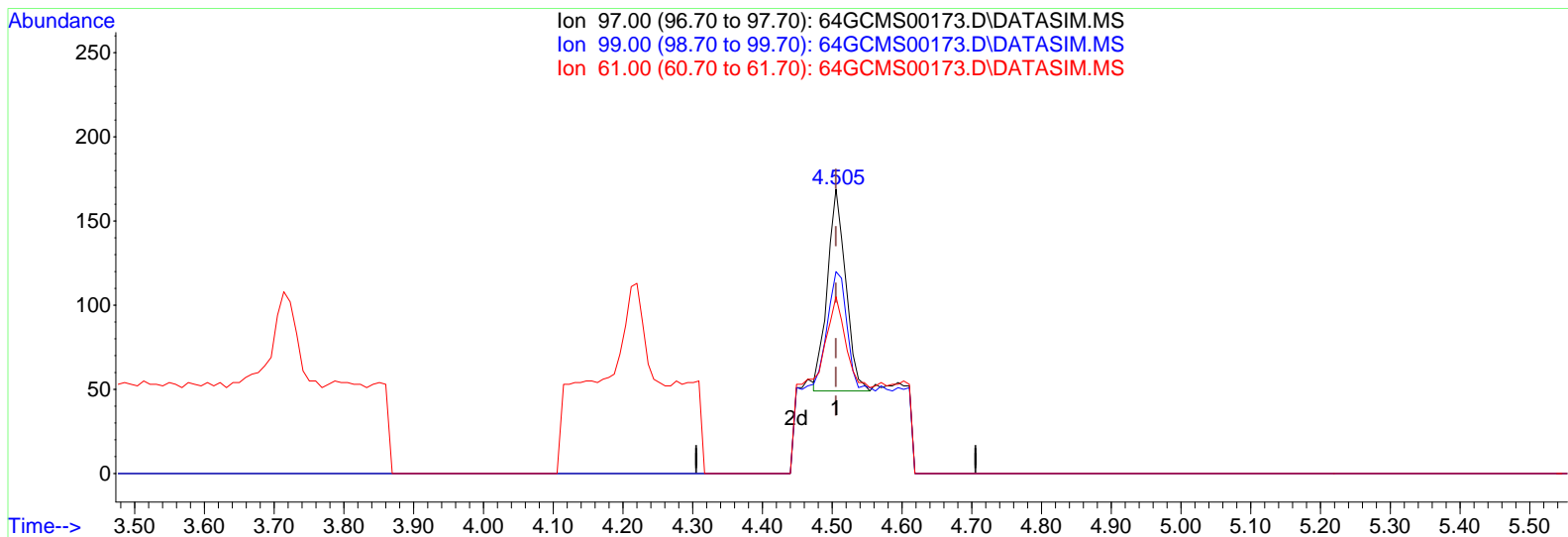
4.505min (+ 0.000) 0.70 ppbv

response 305

Ion	Exp%	Act%
97.00	100.00	100.00
99.00	64.40	70.16
61.00	48.30	61.31#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



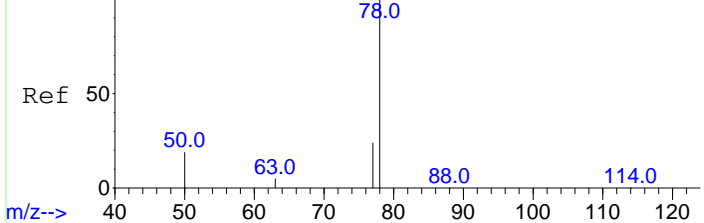
(8) 1,1,1-Trichloroethane

4.505min (+ 0.000) 0.50 ppbv m

response 220

Ion	Exp%	Act%
97.00	100.00	100.00
99.00	64.40	97.27#
61.00	48.30	85.00#
0.00	0.00	0.00

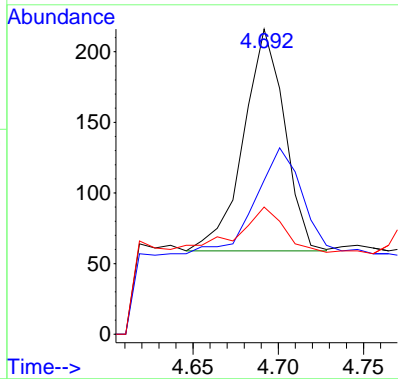
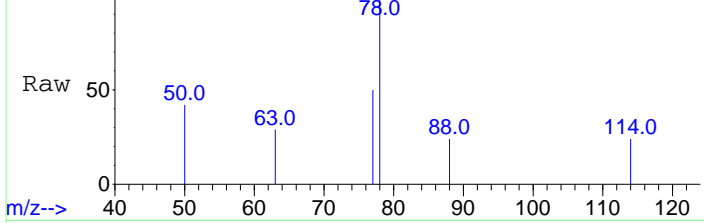
Abundance Scan 323 (4.691 min): 64GCMS00163.D\DATASIM.MS (-319)



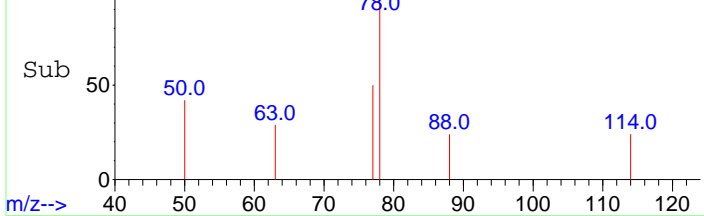
#10
Benzene
Concen: 0.66 ppbv m
RT: 4.692 min Scan# 323
Delta R.T. 0.000 min
Lab File: 64GCMS00173.D
Acq: 1 May 2016 5:31 pm

Tgt Ion:	Resp:	Lower	Upper
78	100		
77	77.6	18.2	27.4#
50	78.7	16.6	24.8#

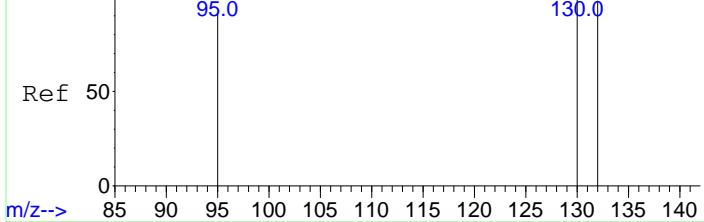
Abundance Scan 323 (4.692 min): 64GCMS00173.D\DATASIM.MS



Abundance Scan 323 (4.692 min): 64GCMS00173.D\DATASIM.MS (-299)



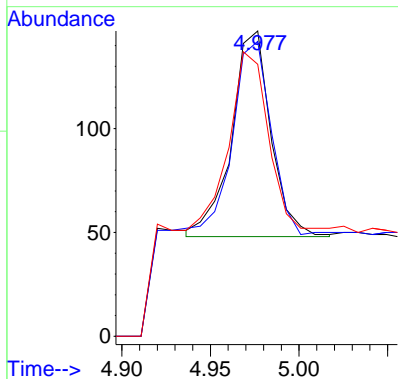
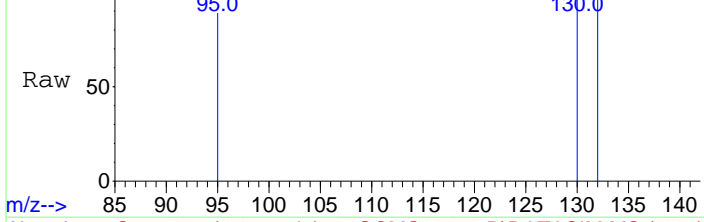
Abundance Scan 355 (4.976 min): 64GCMS00163.D\DATASIM.MS (-351)



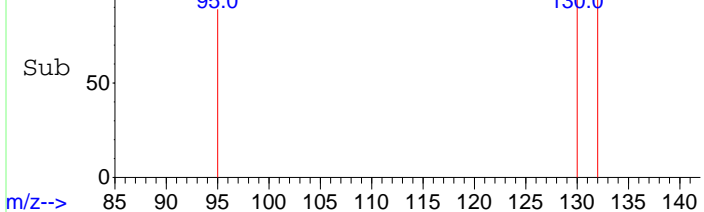
#11
Trichloroethene
Concen: 0.62 ppbv m
RT: 4.977 min Scan# 355
Delta R.T. 0.000 min
Lab File: 64GCMS00173.D
Acq: 1 May 2016 5:31 pm

Tgt Ion:	Resp:	Lower	Upper
130	100		
132	137.3	76.9	115.3#
95	133.3	81.5	122.3#

Abundance Scan 355 (4.977 min): 64GCMS00173.D\DATASIM.MS

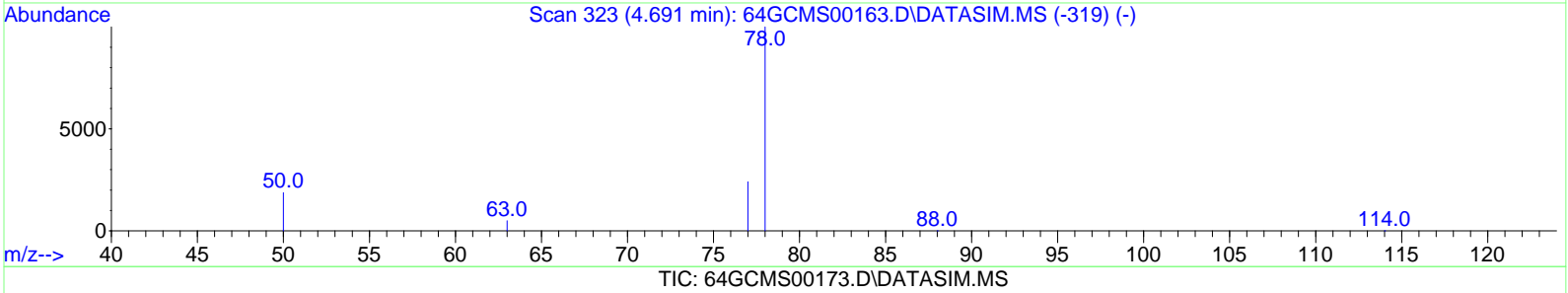
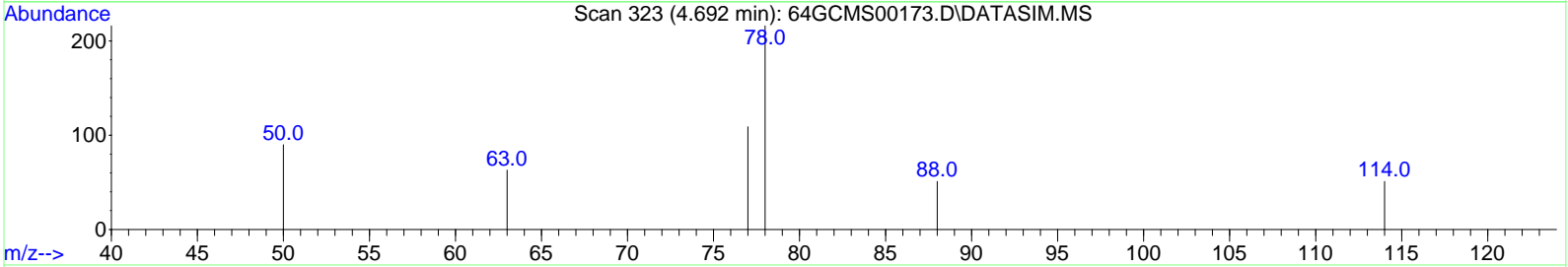
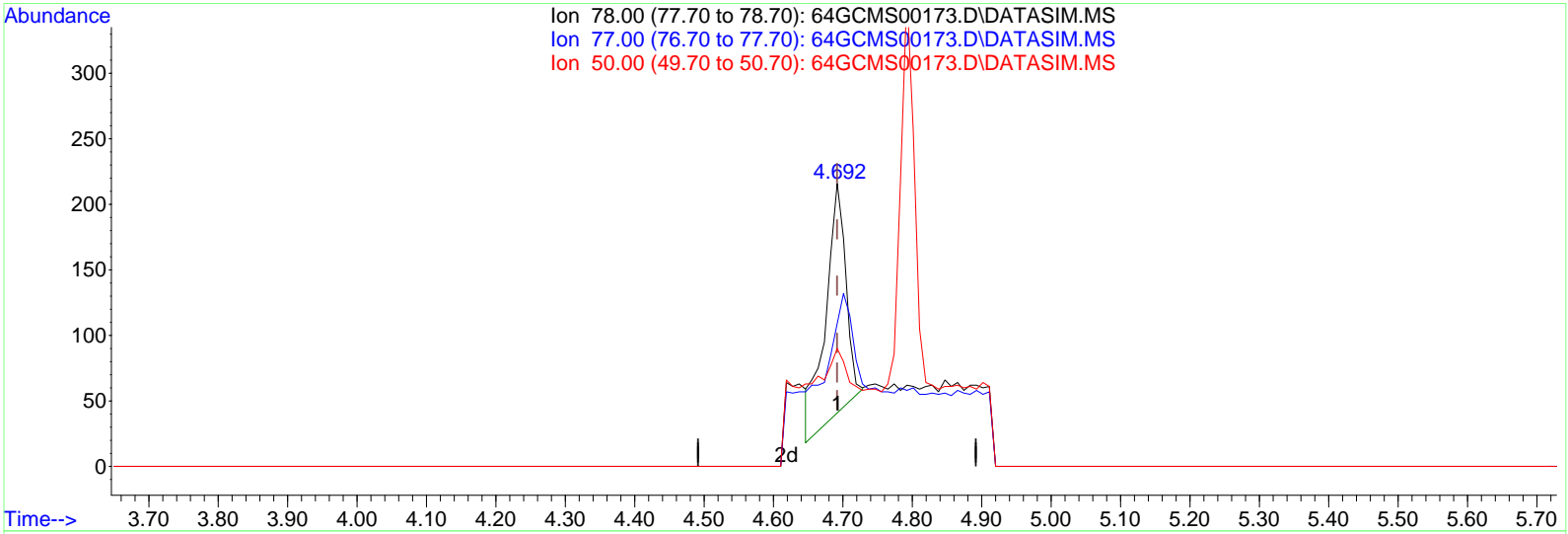


Abundance Scan 355 (4.977 min): 64GCMS00173.D\DATASIM.MS (-332)



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



(10) Benzene

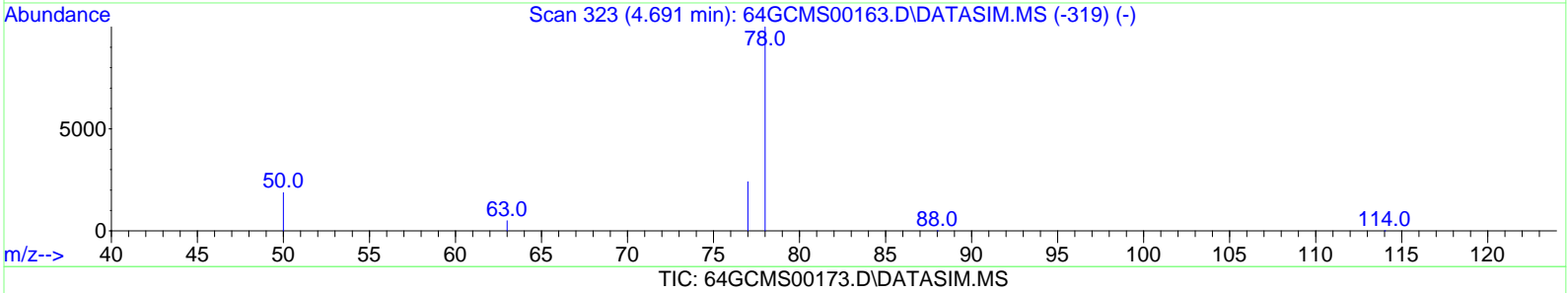
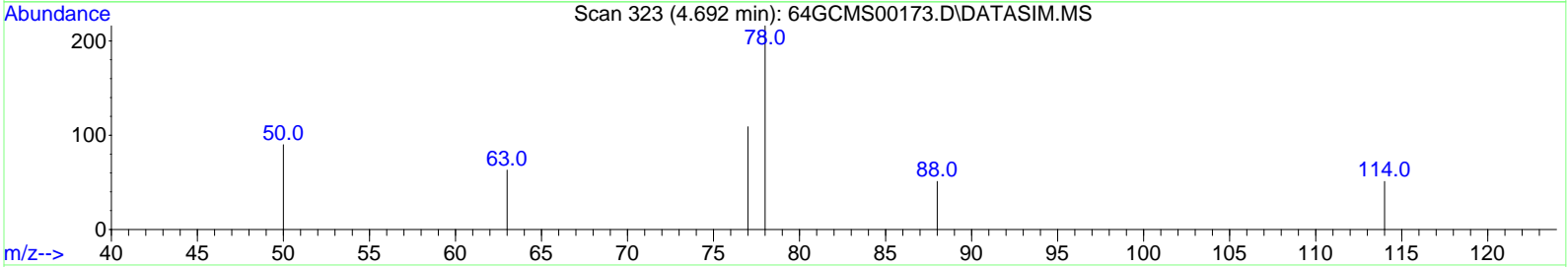
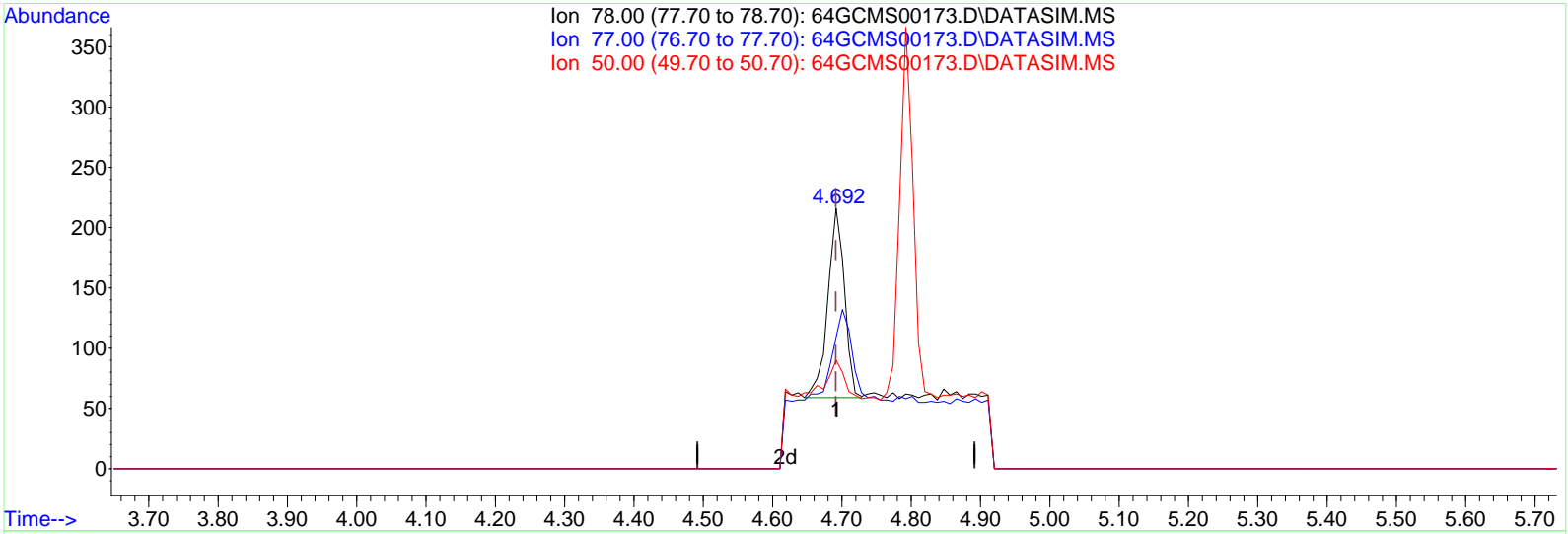
4.692min (+ 0.000) 0.91 ppbv

response 364

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	56.04#
50.00	20.70	56.87#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



(10) Benzene

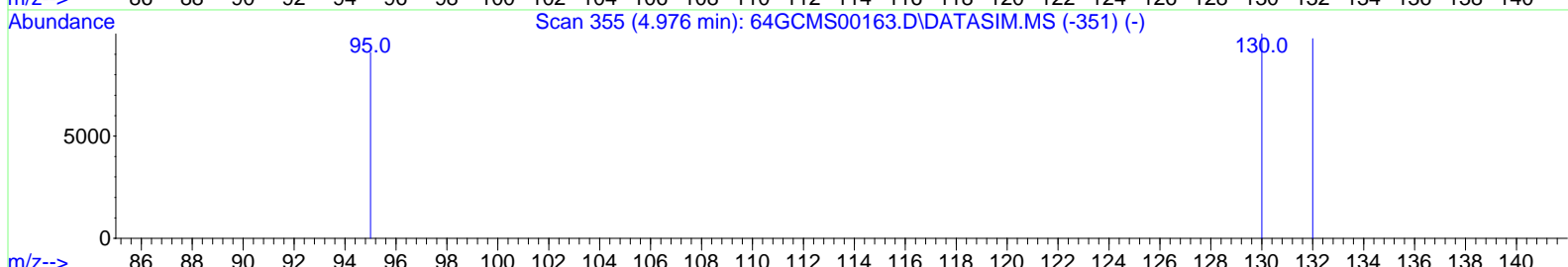
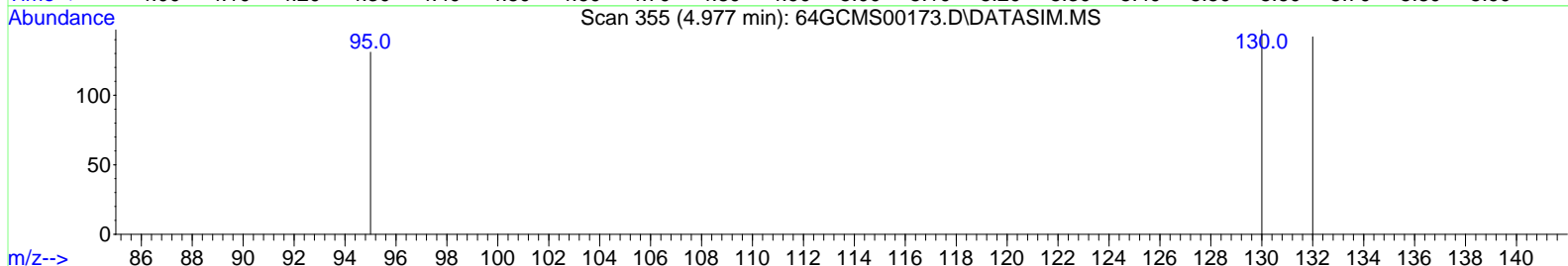
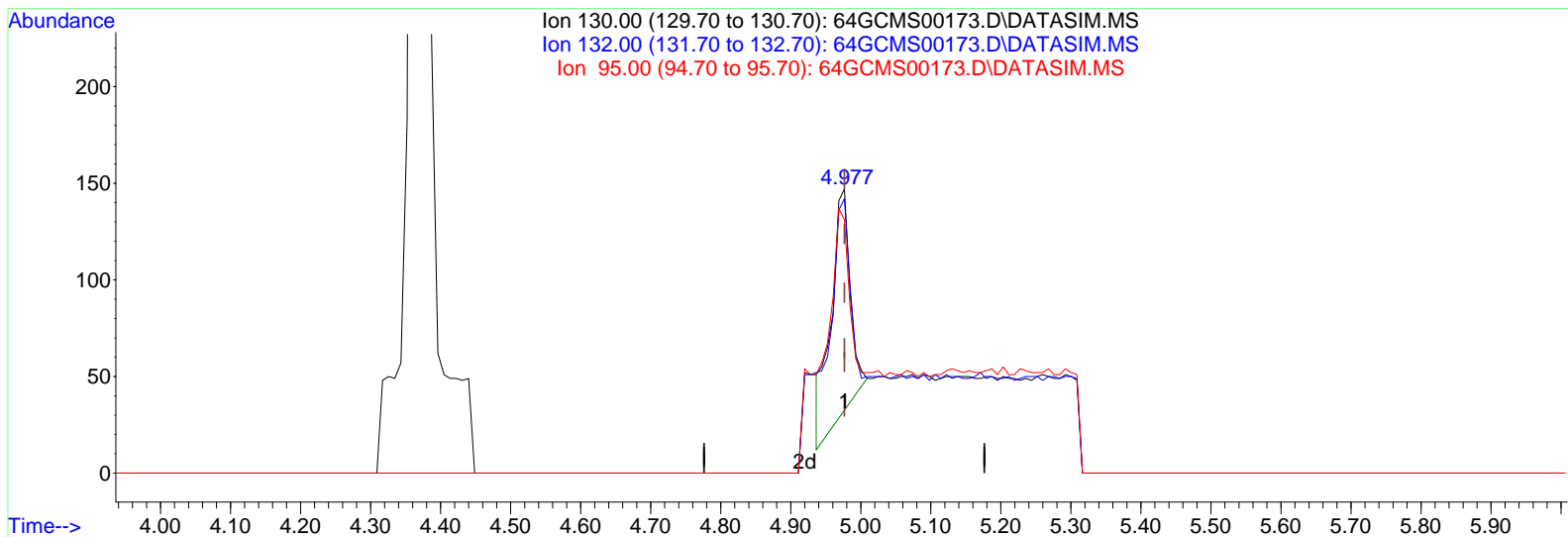
4.692min (+ 0.000) 0.66 ppbv m

response 263

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	77.57#
50.00	20.70	78.71#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



(11) Trichloroethene

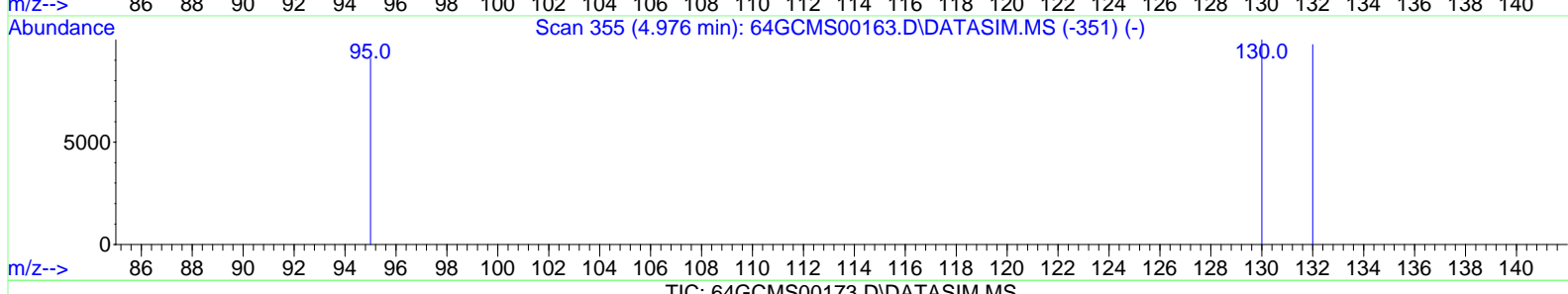
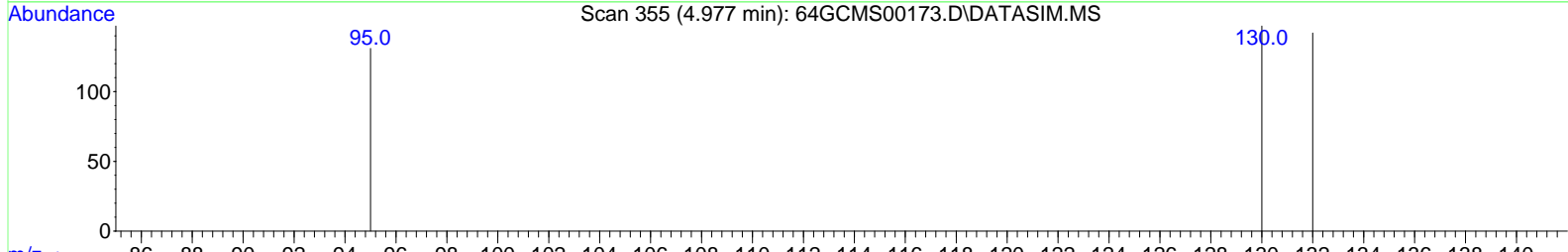
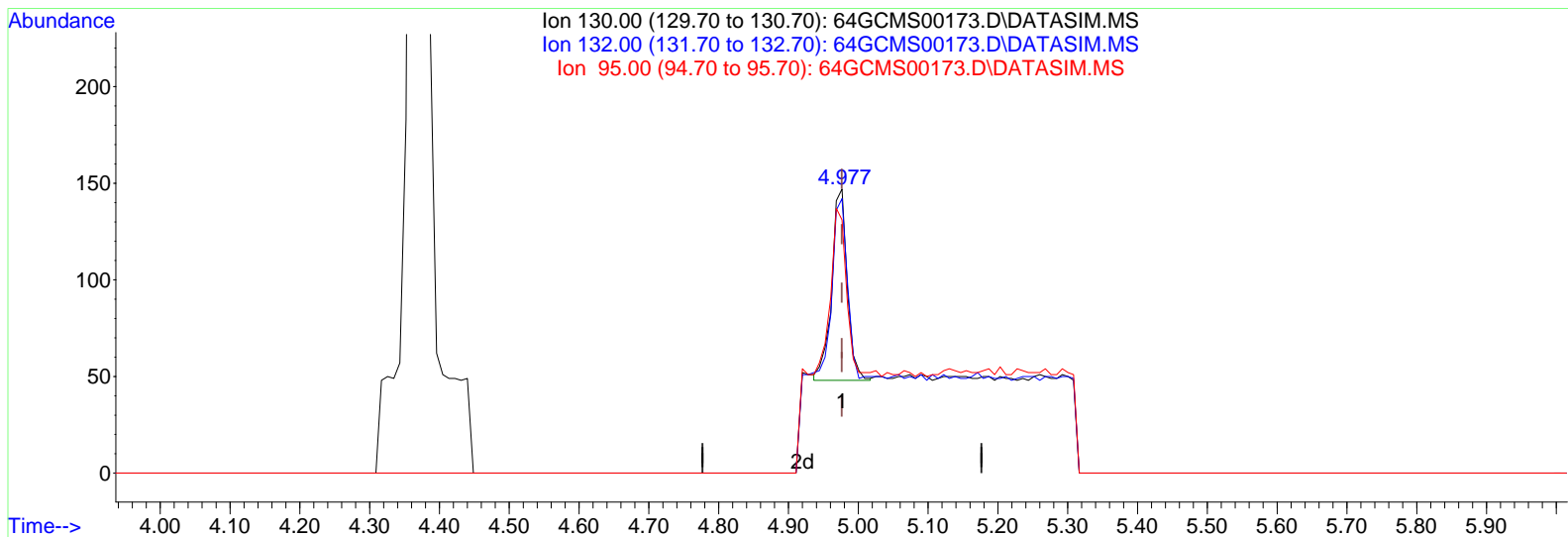
4.977min (+ 0.000) 0.93 ppbv

response 229

Ion	Exp%	Act%
130.00	100.00	100.00
132.00	96.10	91.70
95.00	101.90	89.08
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00173.D
 Acq On : 1 May 2016 5:31 pm
 Operator : dlm
 Sample : STD20160501-06 \ 0.5 ppbv ICAL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:53:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



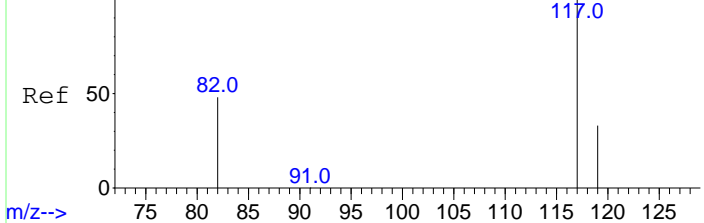
(11) Trichloroethene

4.977min (+ 0.000) 0.62 ppbv m

response 153

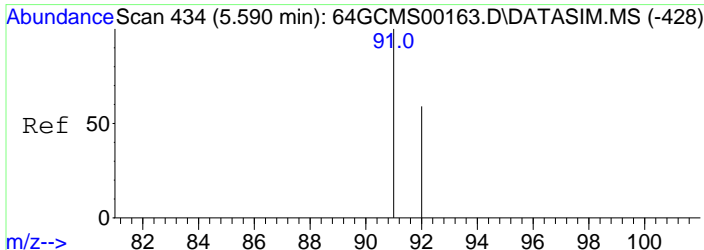
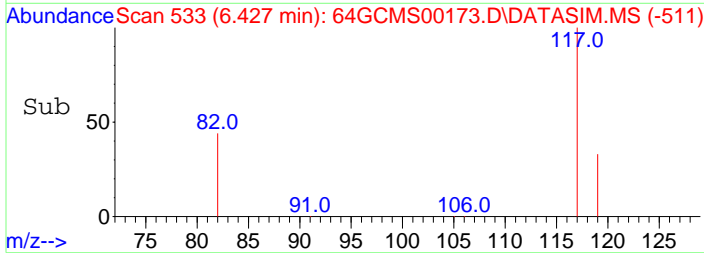
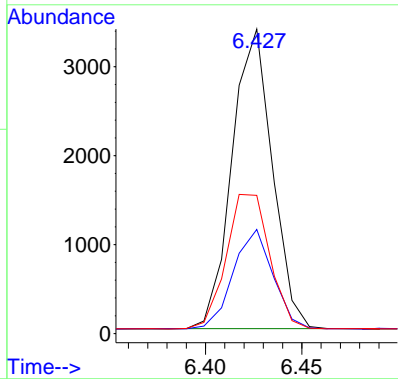
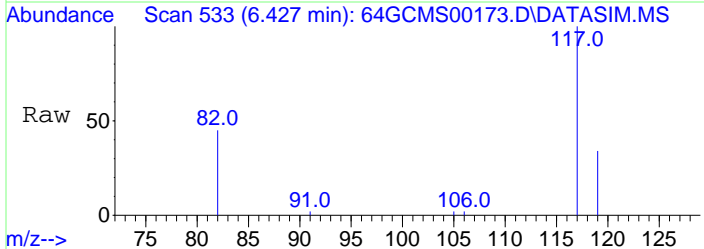
Ion	Exp%	Act%
130.00	100.00	100.00
132.00	96.10	137.25#
95.00	101.90	133.33#
0.00	0.00	0.00

Abundance Scan 533 (6.426 min): 64GCMS00163.D\DATASIM.MS (-529)



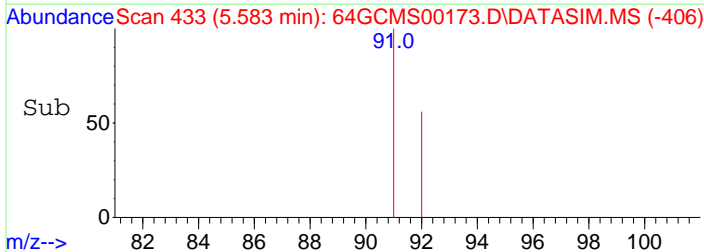
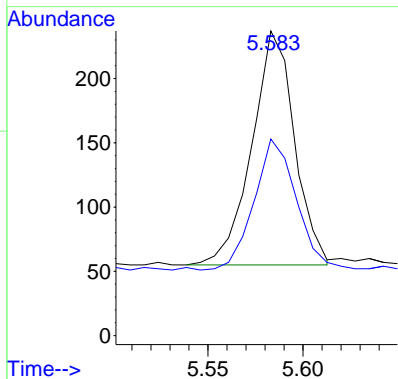
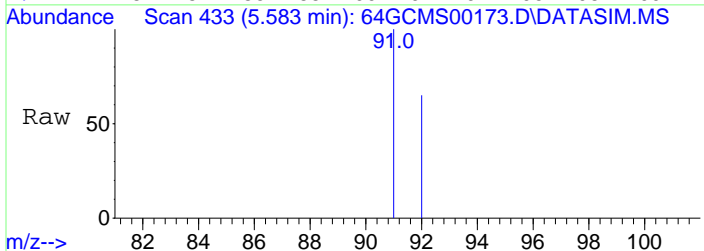
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.427 min Scan# 533
 Delta R.T. 0.000 min
 Lab File: 64GCMS00173.D
 Acq: 1 May 2016 5:31 pm

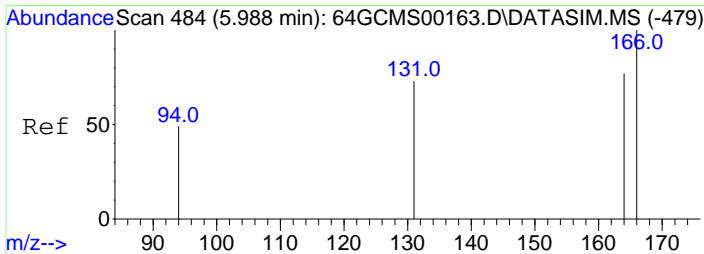
Tgt Ion	Resp	Lower	Upper
117	100		
119	32.5	25.8	38.6
82	48.7	45.6	68.4



#13
 Toluene
 Concen: 0.56 ppbv
 RT: 5.583 min Scan# 433
 Delta R.T. 0.000 min
 Lab File: 64GCMS00173.D
 Acq: 1 May 2016 5:31 pm

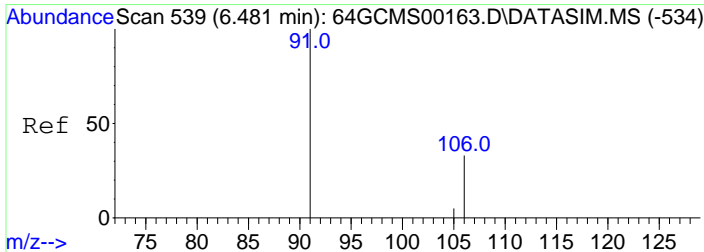
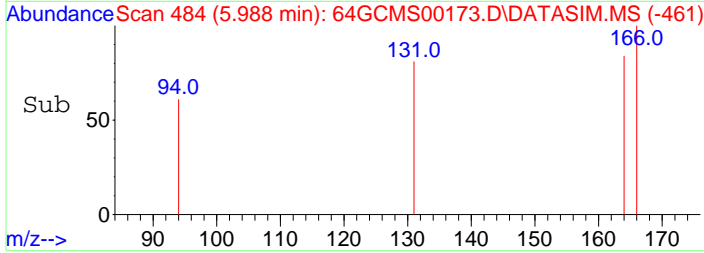
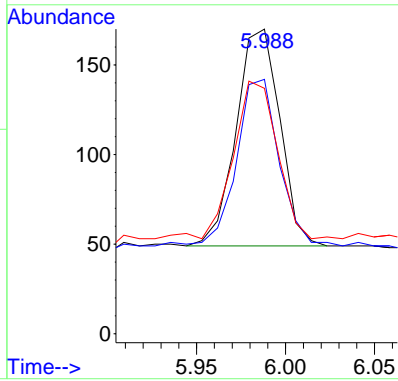
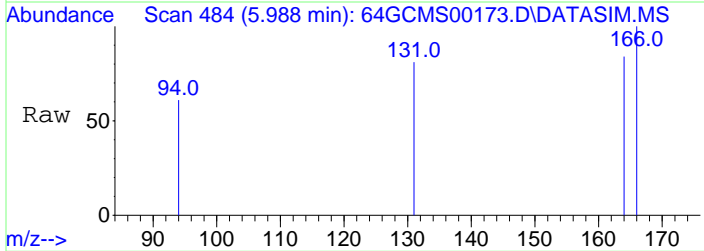
Tgt Ion	Resp	Lower	Upper
91	100		
92	55.8	48.0	72.0





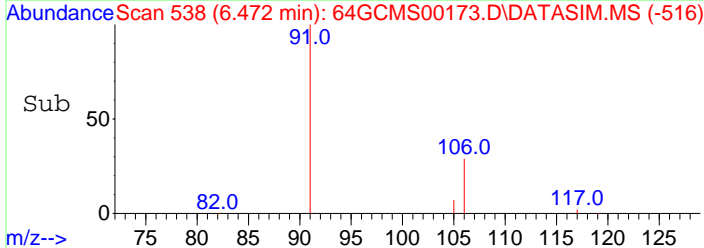
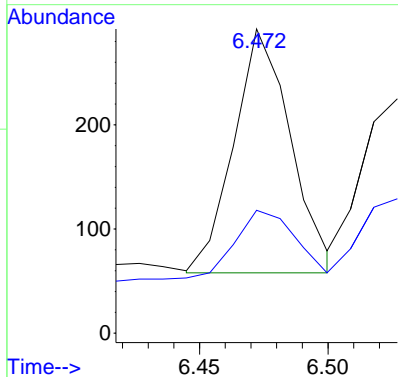
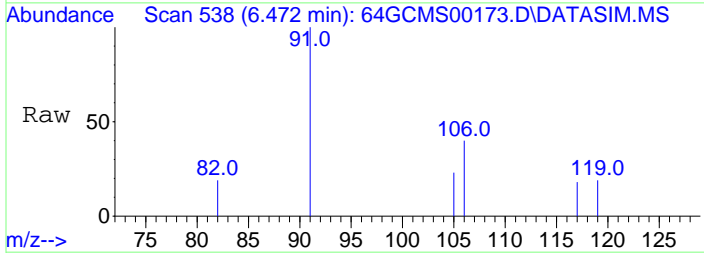
#14
Tetrachloroethene
Concen: 0.59 ppbv
RT: 5.988 min Scan# 484
Delta R.T. 0.000 min
Lab File: 64GCMS00173.D
Acq: 1 May 2016 5:31 pm

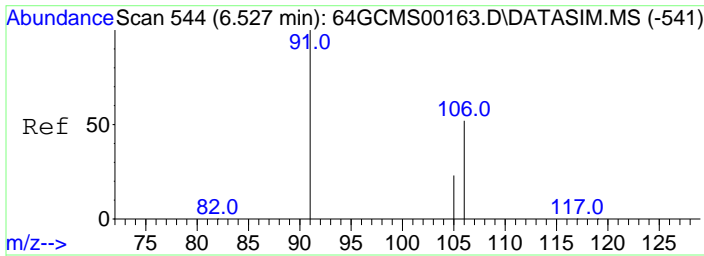
Tgt Ion	Resp	Lower	Upper
166	100		
164	74.0	63.4	95.0
131	71.6	63.4	95.0



#15
Ethyl Benzene
Concen: 0.57 ppbv
RT: 6.472 min Scan# 538
Delta R.T. 0.000 min
Lab File: 64GCMS00173.D
Acq: 1 May 2016 5:31 pm

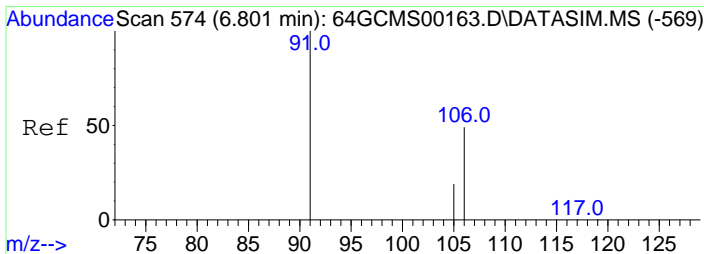
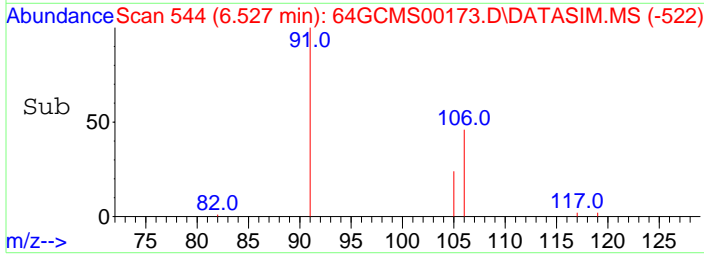
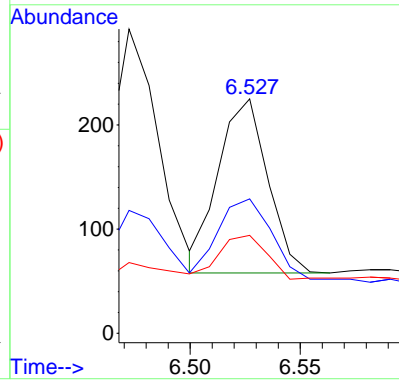
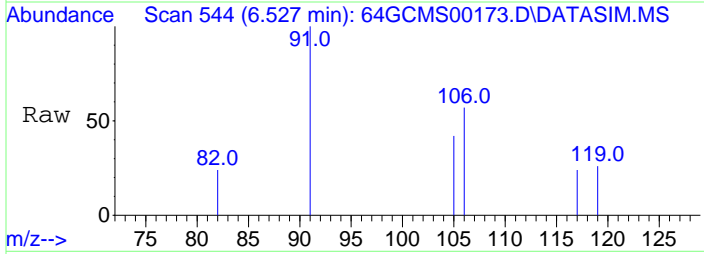
Tgt Ion	Resp	Lower	Upper
91	100		
106	33.9	24.2	36.2





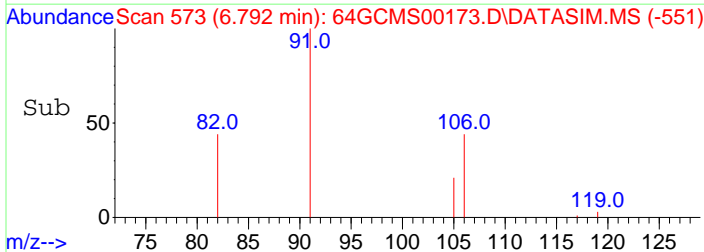
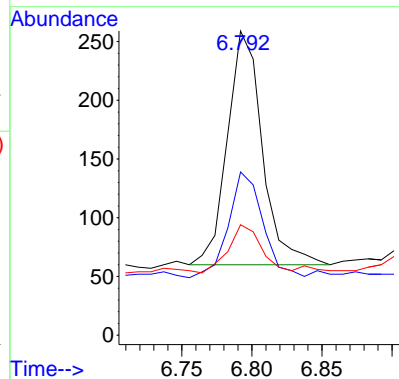
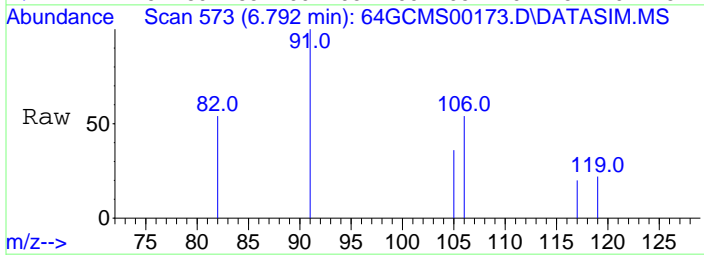
#16
 m,p-Xylene
 Concen: 0.51 ppbv
 RT: 6.527 min Scan# 544
 Delta R.T. 0.000 min
 Lab File: 64GCMS00173.D
 Acq: 1 May 2016 5:31 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	53.5	37.7	56.5
105	23.8	17.0	25.4



#17
 o-Xylene
 Concen: 0.63 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. 0.000 min
 Lab File: 64GCMS00173.D
 Acq: 1 May 2016 5:31 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	44.4	35.4	53.2
105	19.3	14.0	21.0



INITIAL CALIBRATION VERIFICATION

Data File 64GCMS00174
 Standard Number STD20160501-07
 Standard Name 500 ppbv STD
 Loop Size 5 mL

Sample Multiplier: Units Date Analyzed	1 ppbv 5/1/2016	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %
Vinyl Chloride	501.30	500.00	100	70-130
1,1-Dichloroethene	487.59	500.00	98	70-130
Methyl Tert Butyl Ether	499.45	500.00	100	70-130
trans-1,2-Dichloroethene	533.91	520.00	103	70-130
1,1-Dichloroethane	504.45	510.00	99	70-130
cis-1,2-Dichloroethene	506.10	515.00	98	70-130
1,1,1-Trichloroethane	481.45	497.50	97	70-130
Benzene	502.65	505.00	100	70-130
Trichloroethene	468.70	500.00	94	70-130
Toluene	508.47	507.50	100	70-130
Tetrachloroethene	446.09	502.50	89	70-130
Ethyl Benzene	550.14	512.50	107	70-130
m,p-Xylene	539.21	505.00	107	70-130
o-Xylene	496.68	502.50	99	70-130

Secondary Standard Cylinder # CC-143609

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00174.D
 Acq On : 1 May 2016 5:52 pm
 Operator : dlm
 Sample : STD20160501-07 \ 500 ppbv ICVL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

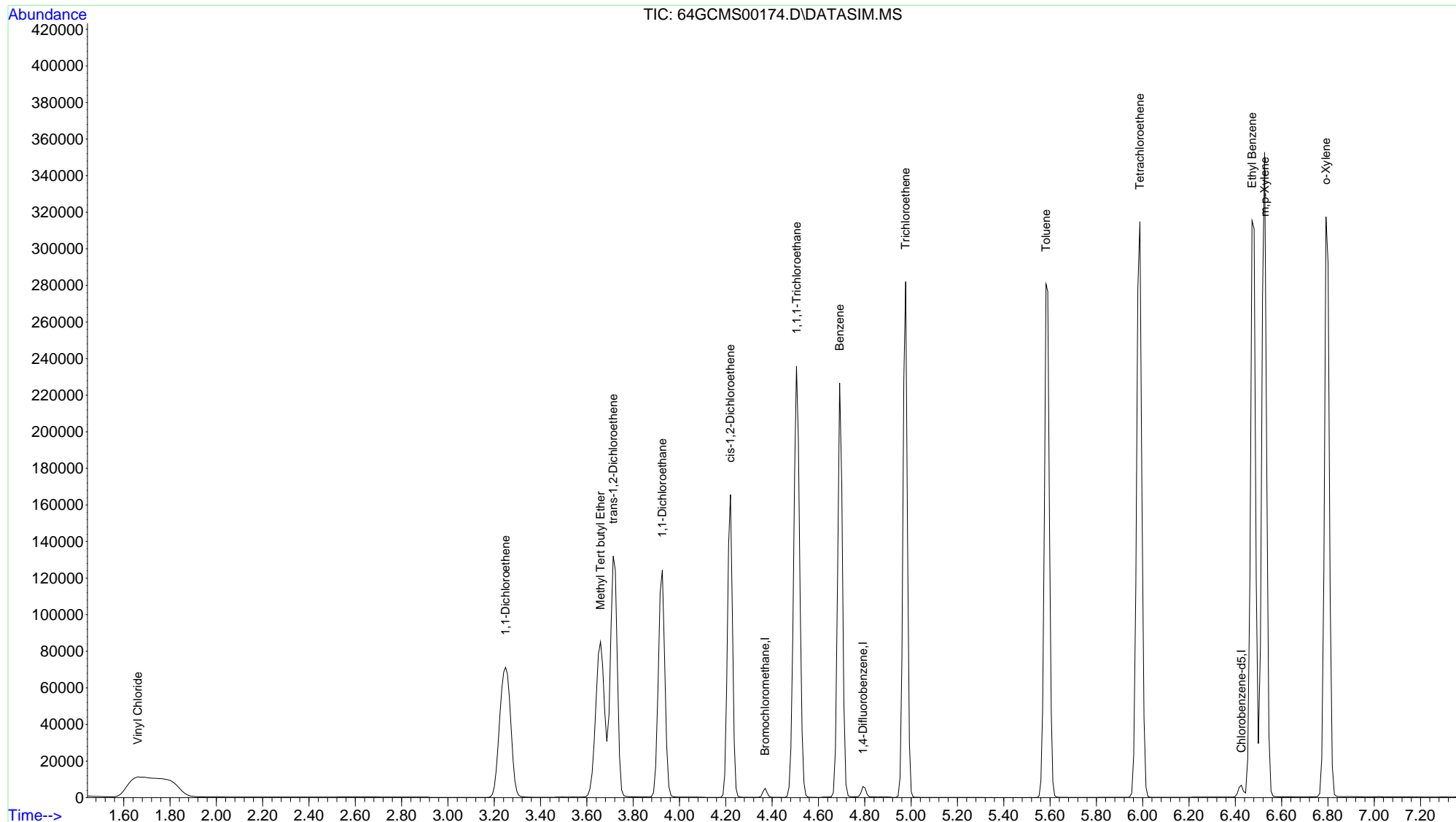
Quant Time: May 01 17:54:08 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Bromochloromethane	4.370	49	2178	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.792	114	5624	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.426	117	5199	10.00	ppbv		0.00
Target Compounds							
							Qvalue
2) Vinyl Chloride	1.660	62	73205	501.30	ppbv	#	73
3) 1,1-Dichloroethene	3.249	61	122922	487.59	ppbv	#	89
4) Methyl Tert butyl Ether	3.659	73	178549	499.45	ppbv		95
5) trans-1,2-Dichloroethene	3.714	61	119395	533.91	ppbv	#	81
6) 1,1-Dichloroethane	3.926	63	147782	504.45	ppbv	#	93
7) cis-1,2-Dichloroethene	4.220	61	107106	506.10	ppbv	#	81
8) 1,1,1-Trichloroethane	4.505	97	204808	481.45	ppbv		97
10) Benzene	4.692	78	226201	502.65	ppbv		96
11) Trichloroethene	4.977	130	129718	468.70	ppbv		94
13) Toluene	5.583	91	274393	508.47	ppbv		97
14) Tetrachloroethene	5.988	166	166116	446.09	ppbv		96
15) Ethyl Benzene	6.472	91	366327	550.14	ppbv		97
16) m,p-Xylene	6.527	91	291241	539.21	ppbv		96
17) o-Xylene	6.792	91	291528	496.68	ppbv		96

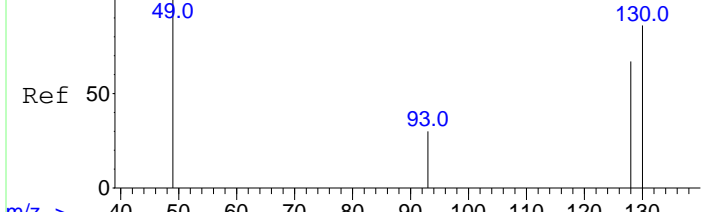
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00174.D
 Acq On : 1 May 2016 5:52 pm
 Operator : dlm
 Sample : STD20160501-07 \ 500 ppbv ICVL
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:54:08 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

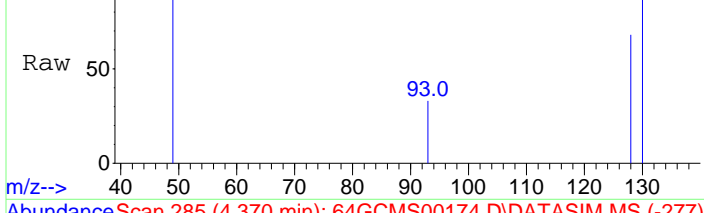


Abundance Scan 285 (4.370 min): 64GCMS00170.D\DATASIM.MS (-281)



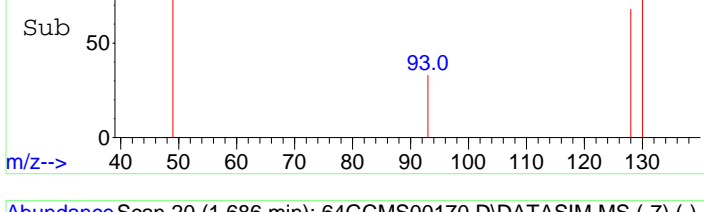
m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00174.D\DATASIM.MS



m/z-->

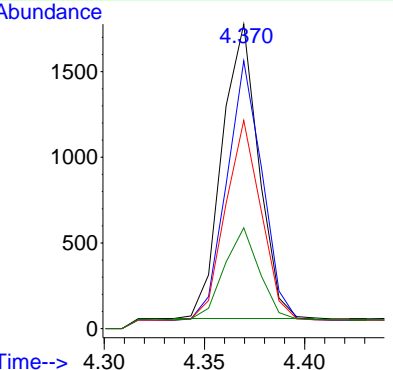
Abundance Scan 285 (4.370 min): 64GCMS00174.D\DATASIM.MS (-277)



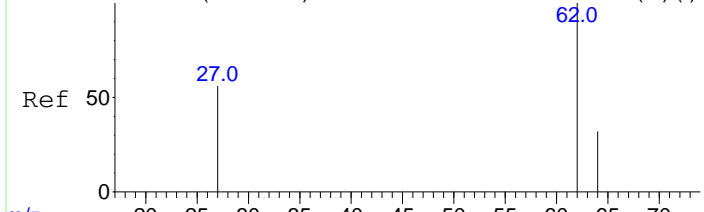
m/z-->

#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00174.D
Acq: 1 May 2016 5:52 pm

Tgt Ion	Resp	Lower	Upper
49	100		
130	85.5	46.3	69.5#
128	66.0	35.7	53.5#
93	30.2	17.6	26.4#

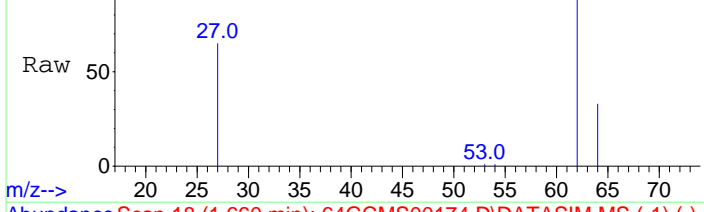


Abundance Scan 20 (1.686 min): 64GCMS00170.D\DATASIM.MS (-7) (-)



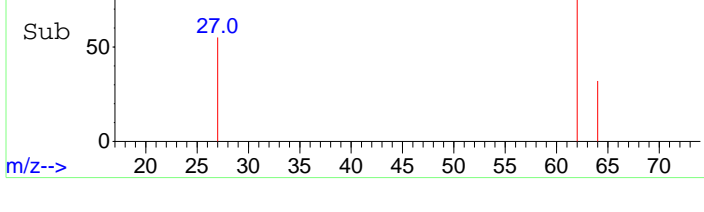
m/z-->

Abundance Scan 18 (1.660 min): 64GCMS00174.D\DATASIM.MS



m/z-->

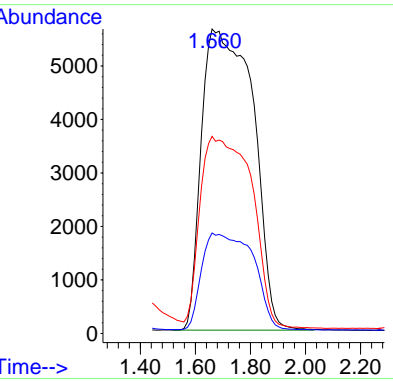
Abundance Scan 18 (1.660 min): 64GCMS00174.D\DATASIM.MS (-1) (-)

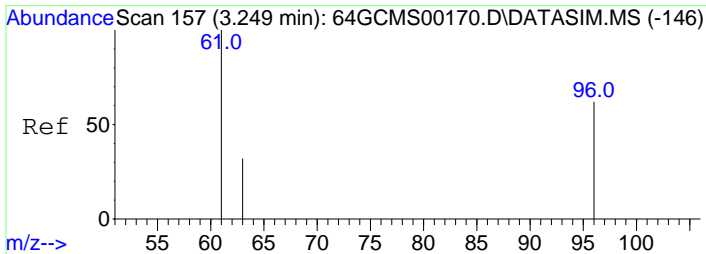


m/z-->

#2
Vinyl Chloride
Concen: 501.30 ppbv
RT: 1.660 min Scan# 18
Delta R.T. -0.026 min
Lab File: 64GCMS00174.D
Acq: 1 May 2016 5:52 pm

Tgt Ion	Resp	Lower	Upper
62	100		
64	32.0	23.7	35.5
27	20.0	38.0	57.0#

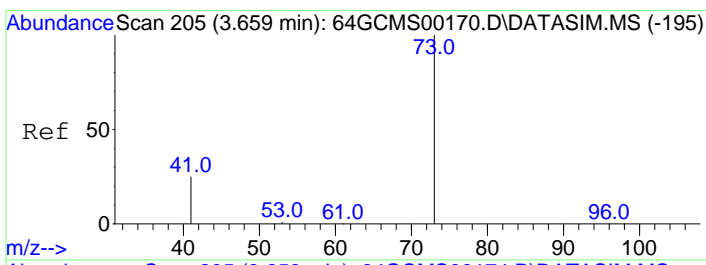
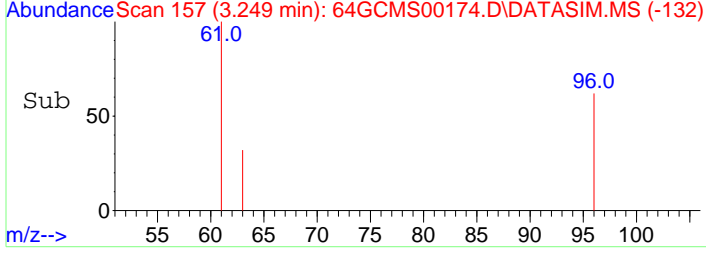
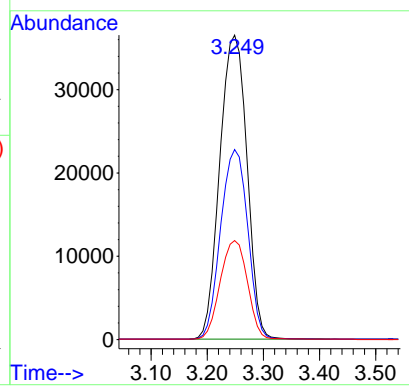
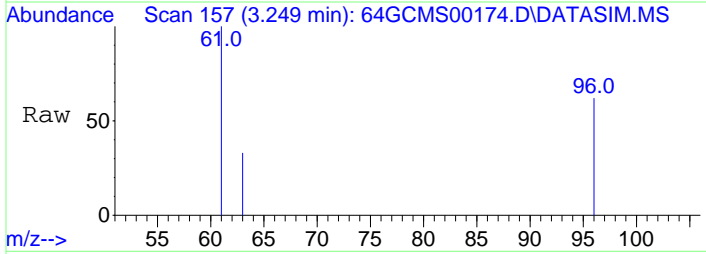




#3
 1,1-Dichloroethene
 Concen: 487.59 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. -0.000 min
 Lab File: 64GCMS00174.D
 Acq: 1 May 2016 5:52 pm

Tgt Ion: 61 Resp: 122922

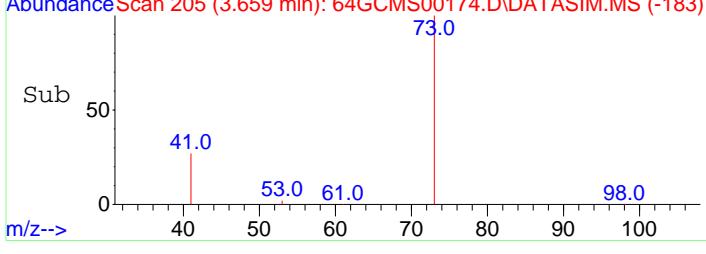
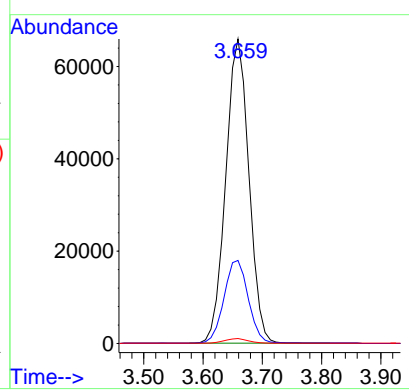
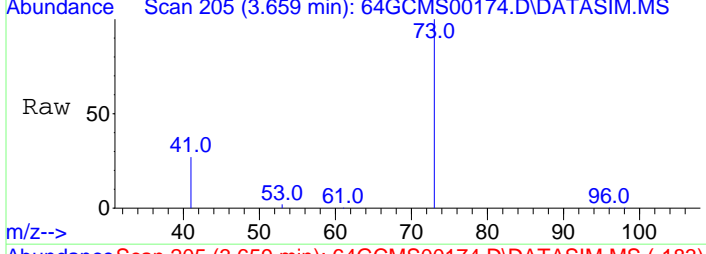
Ion	Ratio	Lower	Upper
61	100		
96	62.1	40.9	61.3#
63	32.4	24.3	36.5

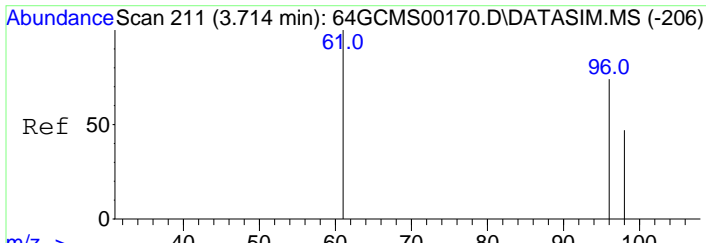


#4
 Methyl Tert butyl Ether
 Concen: 499.45 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 64GCMS00174.D
 Acq: 1 May 2016 5:52 pm

Tgt Ion: 73 Resp: 178549

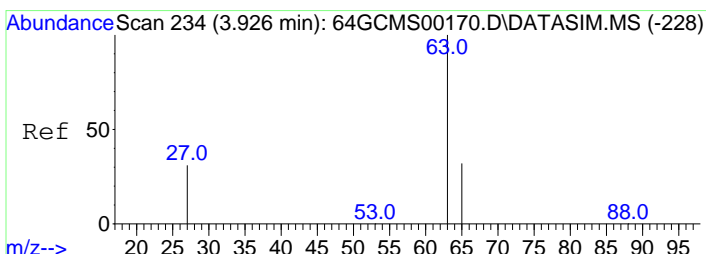
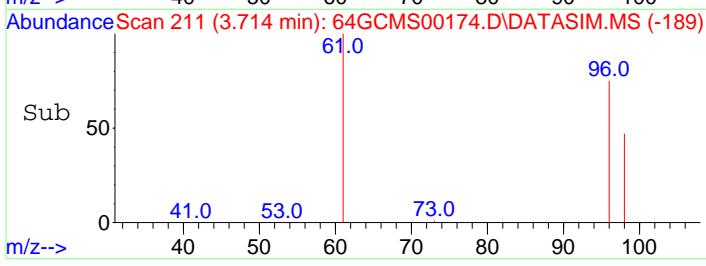
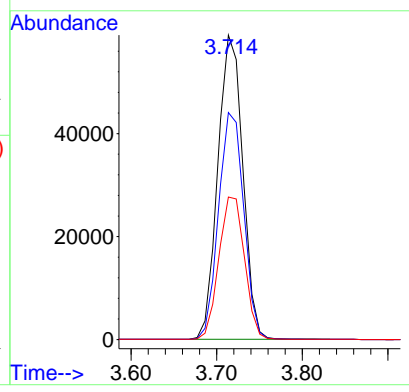
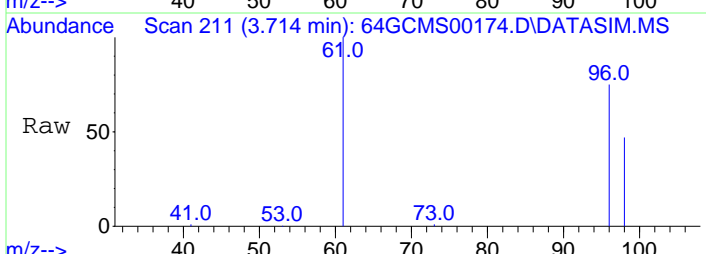
Ion	Ratio	Lower	Upper
73	100		
41	28.4	20.6	30.8
53	1.5	1.2	1.8





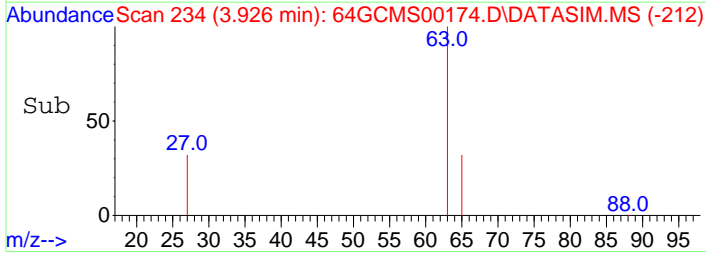
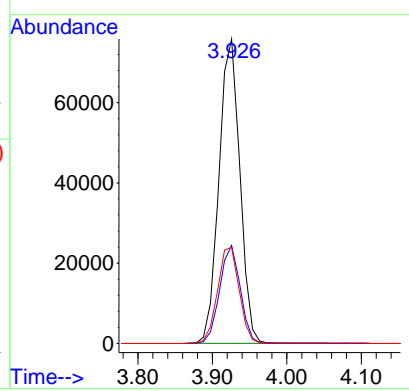
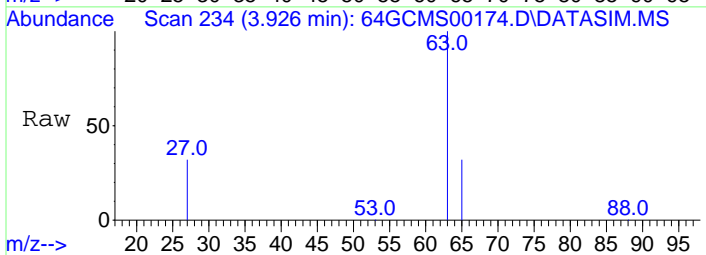
#5
 trans-1,2-Dichloroethene
 Concen: 533.91 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. -0.000 min
 Lab File: 64GCMS00174.D
 Acq: 1 May 2016 5:52 pm

Tgt Ion	Resp	Lower	Upper
61	119395		
61	100		
96	75.4	47.8	71.6#
98	48.1	30.6	46.0#

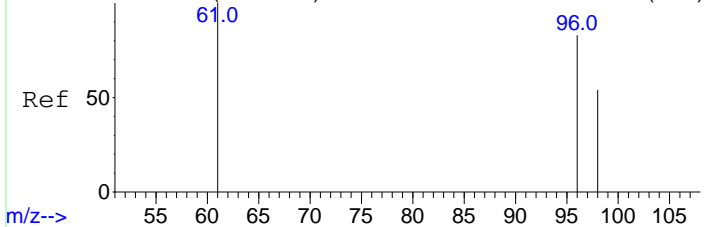


#6
 1,1-Dichloroethane
 Concen: 504.45 ppbv
 RT: 3.926 min Scan# 234
 Delta R.T. -0.000 min
 Lab File: 64GCMS00174.D
 Acq: 1 May 2016 5:52 pm

Tgt Ion	Resp	Lower	Upper
63	147782		
63	100		
65	31.9	24.8	37.2
27	32.7	21.1	31.7#



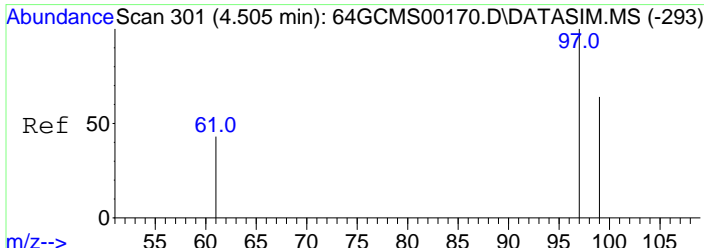
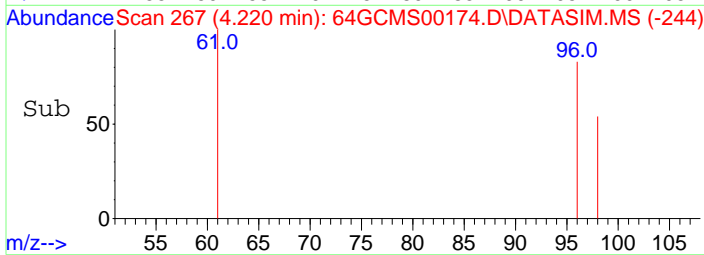
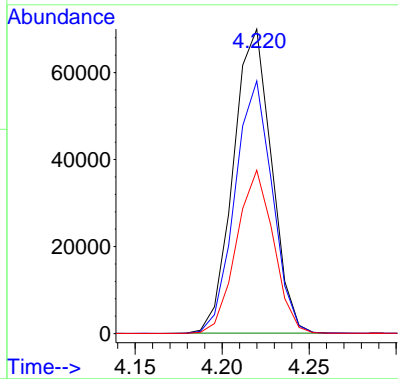
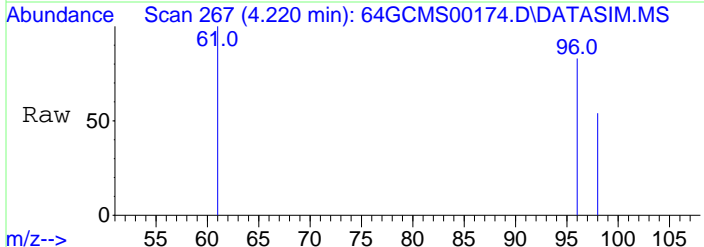
Abundance Scan 267 (4.220 min): 64GCMS00170.D\DATASIM.MS (-262)



#7
cis-1,2-Dichloroethene
Concen: 506.10 ppbv
RT: 4.220 min Scan# 267
Delta R.T. -0.000 min
Lab File: 64GCMS00174.D
Acq: 1 May 2016 5:52 pm

Tgt Ion: 61 Resp: 107106

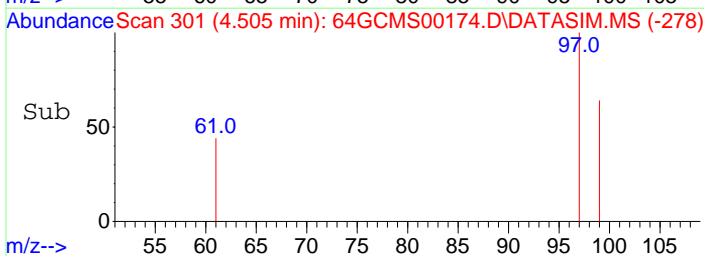
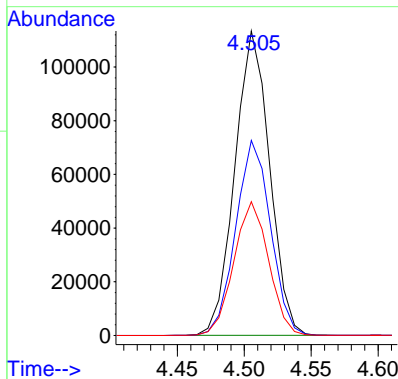
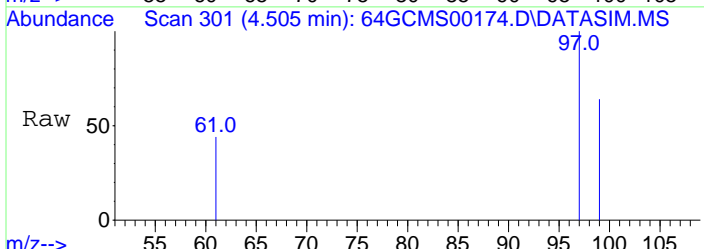
Ion	Ratio	Lower	Upper
61	100		
96	81.2	52.0	78.0#
98	51.9	33.4	50.2#

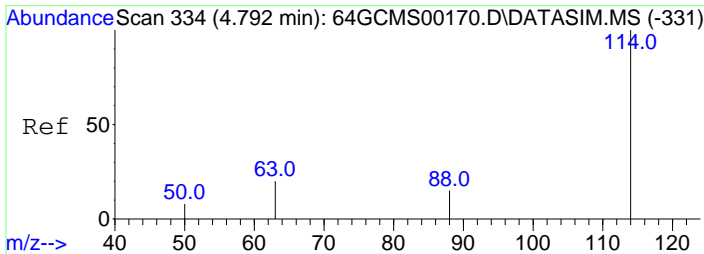


#8
1,1,1-Trichloroethane
Concen: 481.45 ppbv
RT: 4.505 min Scan# 301
Delta R.T. -0.000 min
Lab File: 64GCMS00174.D
Acq: 1 May 2016 5:52 pm

Tgt Ion: 97 Resp: 204808

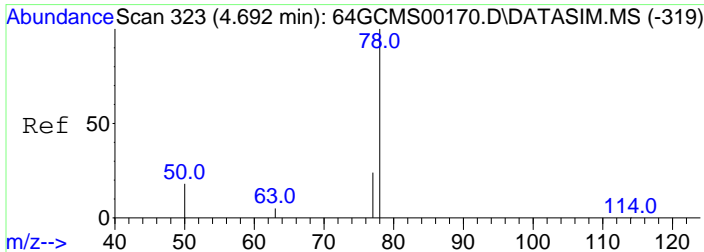
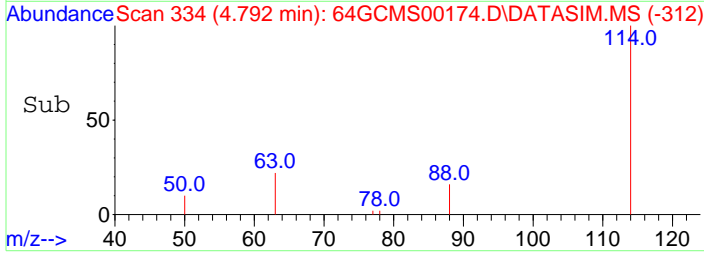
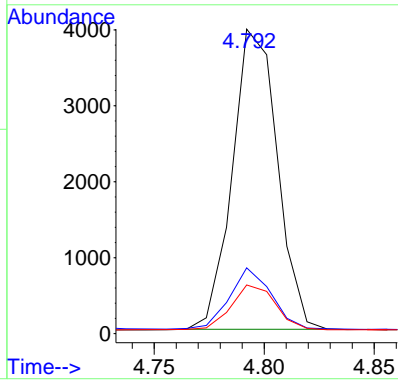
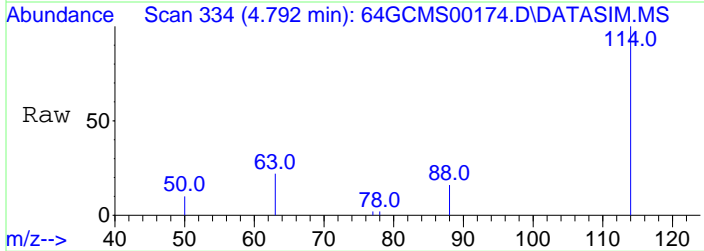
Ion	Ratio	Lower	Upper
97	100		
99	64.2	51.5	77.3
61	44.5	38.6	58.0





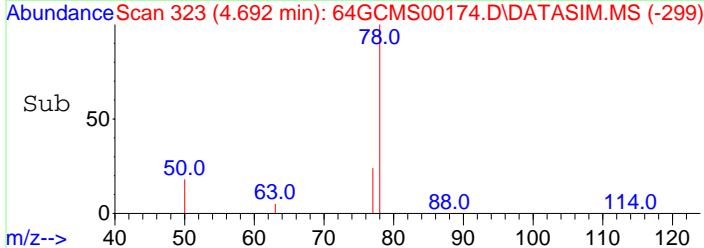
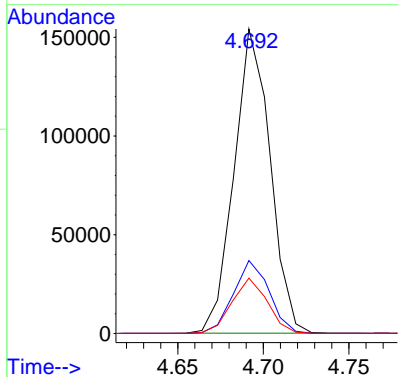
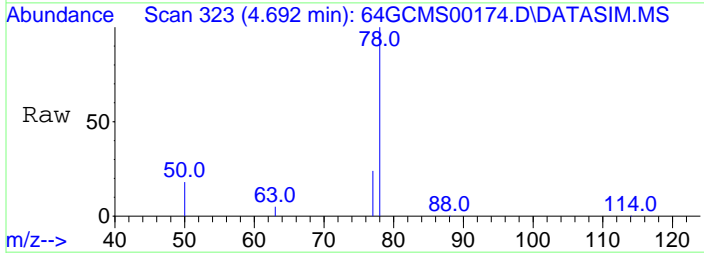
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00174.D
 Acq: 1 May 2016 5:52 pm

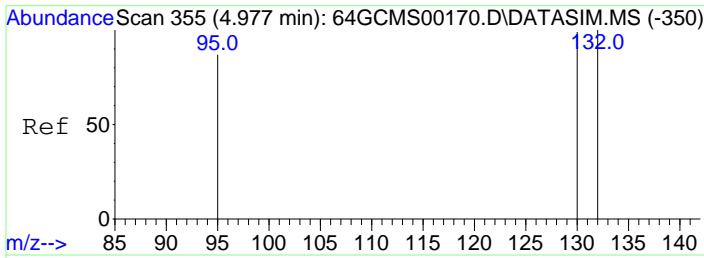
Tgt Ion	Resp	Lower	Upper
114	5624		
114	100		
63	18.9	19.2	28.8#
88	14.7	13.7	20.5



#10
 Benzene
 Concen: 502.65 ppbv
 RT: 4.692 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00174.D
 Acq: 1 May 2016 5:52 pm

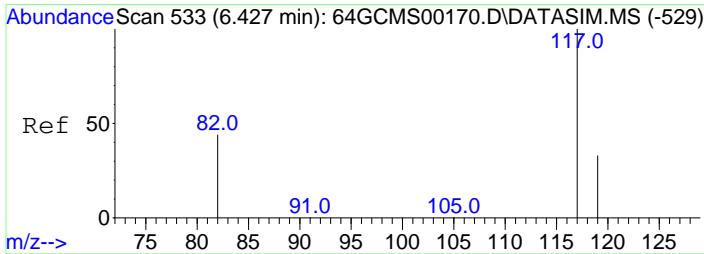
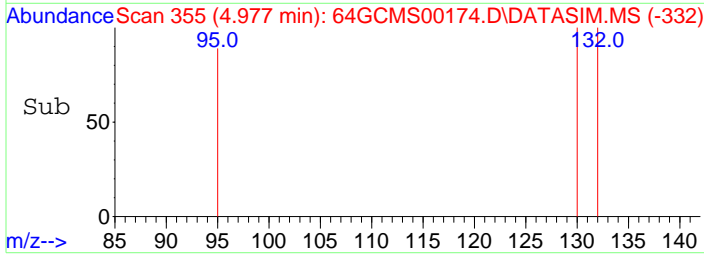
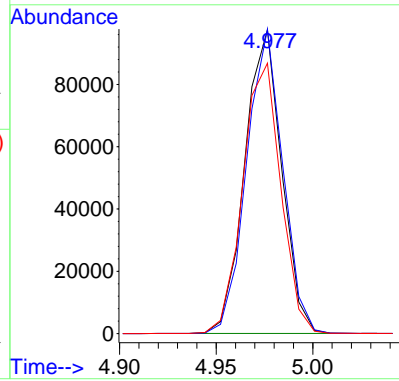
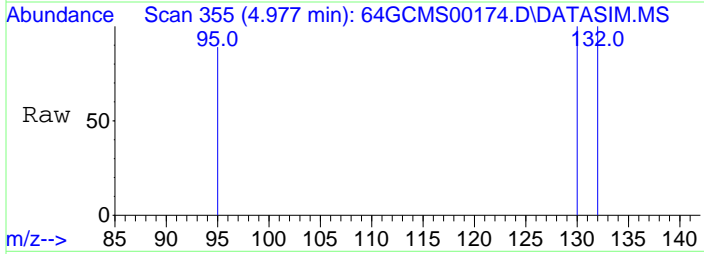
Tgt Ion	Resp	Lower	Upper
78	226201		
78	100		
77	23.7	18.2	27.4
50	17.8	16.6	24.8





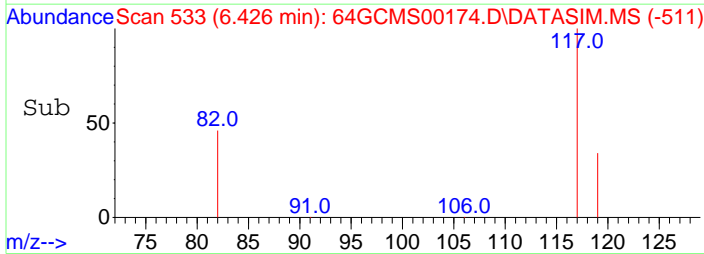
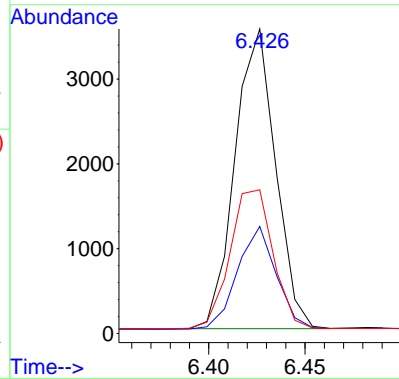
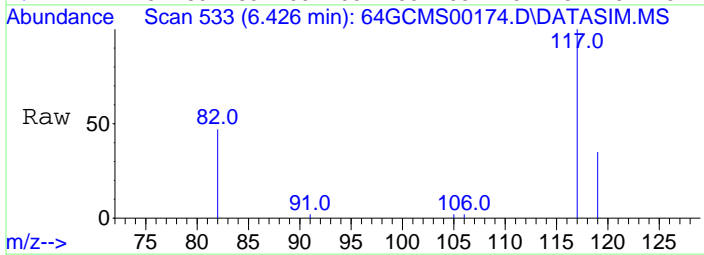
#11
 Trichloroethene
 Concen: 468.70 ppbv
 RT: 4.977 min Scan# 355
 Delta R.T. -0.000 min
 Lab File: 64GCMS00174.D
 Acq: 1 May 2016 5:52 pm

Tgt Ion	Resp	Lower	Upper
130	129718		
130	100		
132	97.8	76.9	115.3
95	91.5	81.5	122.3

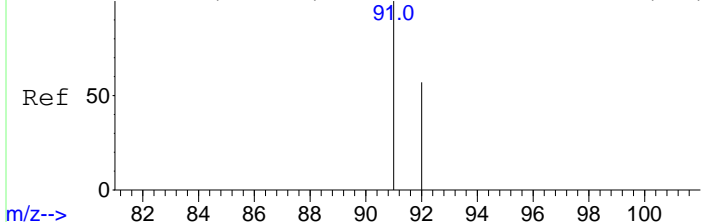


#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00174.D
 Acq: 1 May 2016 5:52 pm

Tgt Ion	Resp	Lower	Upper
117	5199		
117	100		
119	32.6	25.8	38.6
82	49.3	45.6	68.4

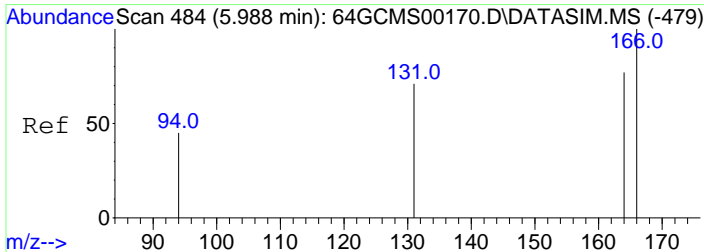
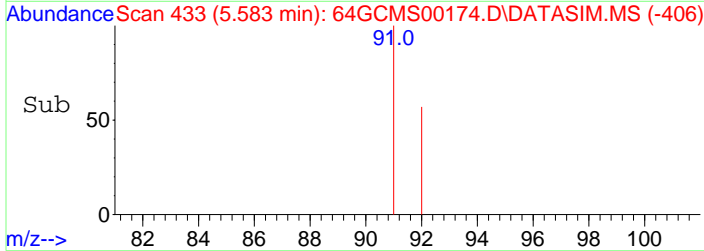
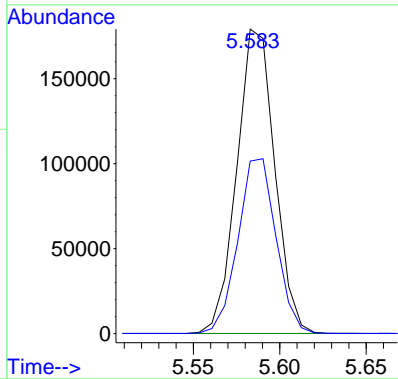
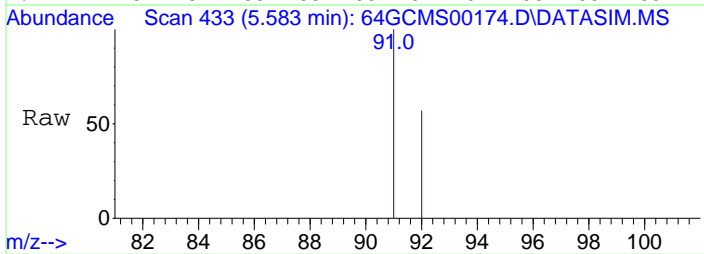


Abundance Scan 433 (5.583 min): 64GCMS00170.D\DATASIM.MS (-428)



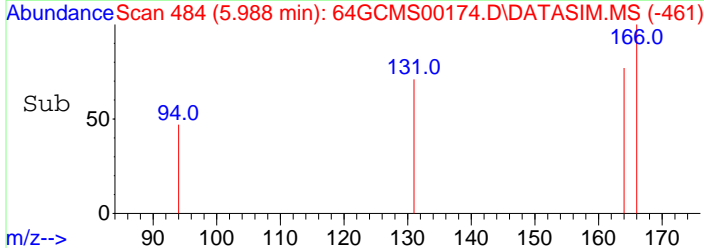
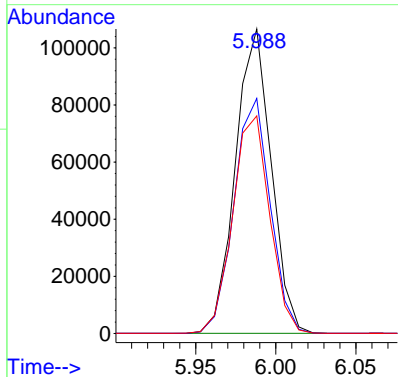
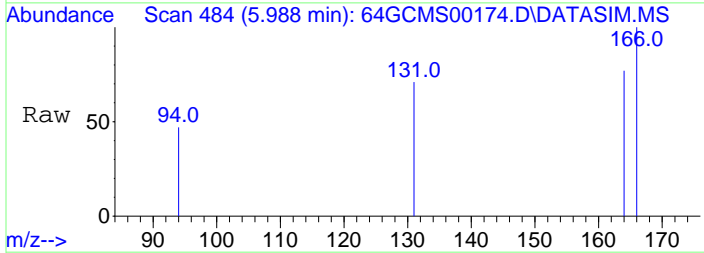
#13
 Toluene
 Concen: 508.47 ppbv
 RT: 5.583 min Scan# 433
 Delta R.T. -0.000 min
 Lab File: 64GCMS00174.D
 Acq: 1 May 2016 5:52 pm

Tgt Ion	Resp	Lower	Upper
91	100		
92	57.8	48.0	72.0

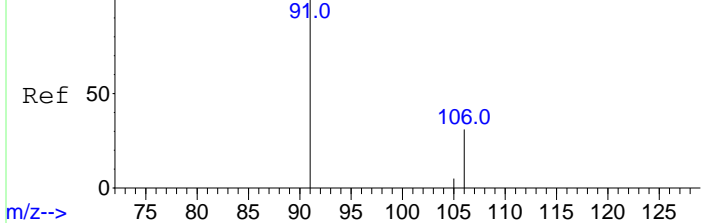


#14
 Tetrachloroethene
 Concen: 446.09 ppbv
 RT: 5.988 min Scan# 484
 Delta R.T. -0.000 min
 Lab File: 64GCMS00174.D
 Acq: 1 May 2016 5:52 pm

Tgt Ion	Resp	Lower	Upper
166	100		
164	78.3	63.4	95.0
131	73.8	63.4	95.0

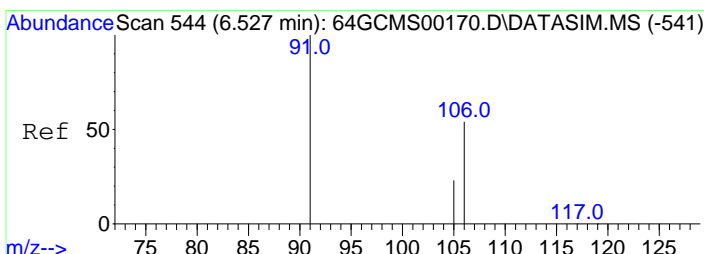
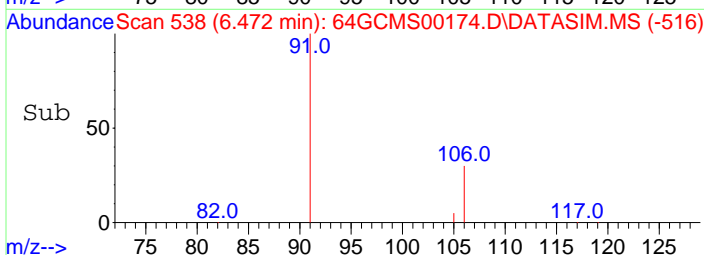
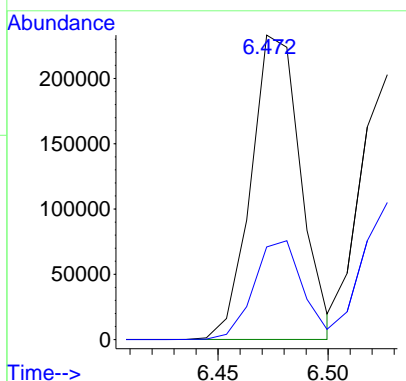
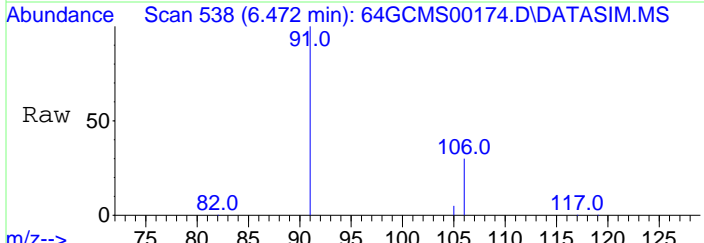


Abundance Scan 538 (6.472 min): 64GCMS00170.D\DATASIM.MS (-534)



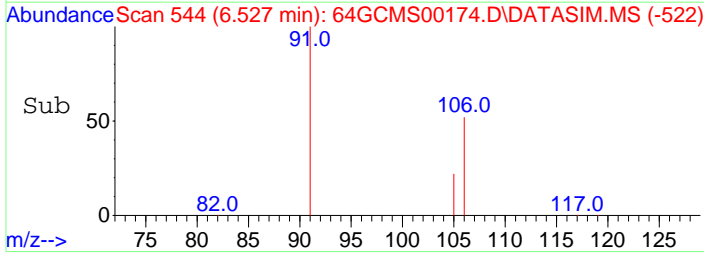
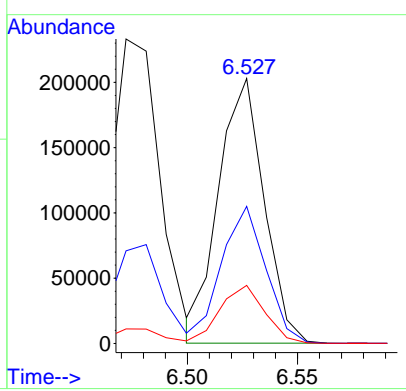
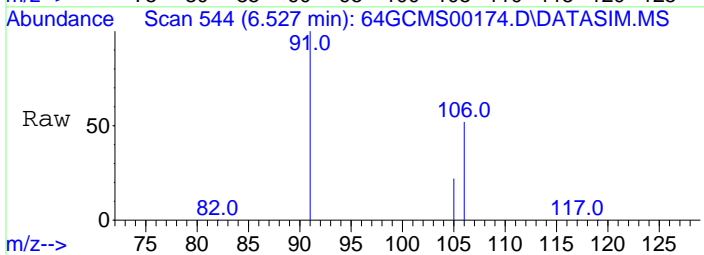
#15
Ethyl Benzene
Concen: 550.14 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00174.D
Acq: 1 May 2016 5:52 pm

Tgt Ion: 91 Resp: 366327
Ion Ratio Lower Upper
91 100
106 32.1 24.2 36.2

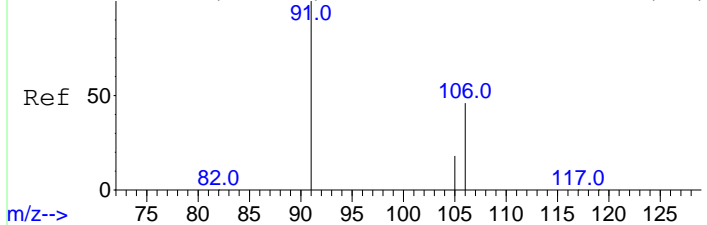


#16
m,p-Xylene
Concen: 539.21 ppbv
RT: 6.527 min Scan# 544
Delta R.T. -0.000 min
Lab File: 64GCMS00174.D
Acq: 1 May 2016 5:52 pm

Tgt Ion: 91 Resp: 291241
Ion Ratio Lower Upper
91 100
106 50.7 37.7 56.5
105 21.7 17.0 25.4



Abundance Scan 573 (6.792 min): 64GCMS00170.D\DATASIM.MS (-569)



#17

o-Xylene

Concen: 496.68 ppbv

RT: 6.792 min Scan# 573

Delta R.T. -0.000 min

Lab File: 64GCMS00174.D

Acq: 1 May 2016 5:52 pm

Tgt Ion: 91 Resp: 291528

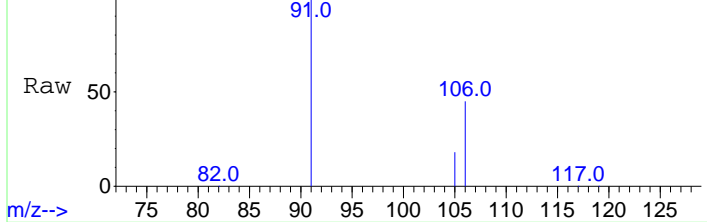
Ion Ratio Lower Upper

91 100

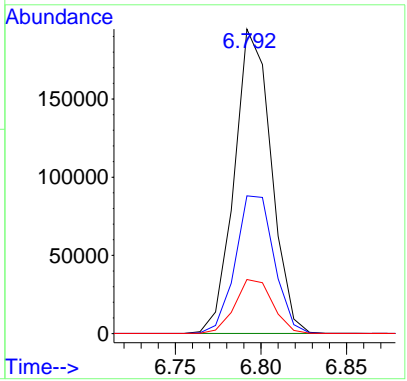
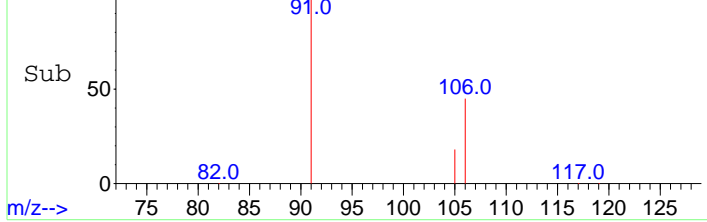
106 47.7 35.4 53.2

105 18.3 14.0 21.0

Abundance Scan 573 (6.792 min): 64GCMS00174.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00174.D\DATASIM.MS (-551)



LABORATORY CONTROL SAMPLE

Data File 64GCMS00177
 Standard Number 20160501-LCS
 Standard Name 500 ppbv STD
 Loop Size 5 mL

Sample Multiplier: Units Date Analyzed	1 ppbv 5/1/2016	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %
Vinyl Chloride	519.04	500.00	104	70-130
1,1-Dichloroethene	501.37	500.00	100	70-130
Methyl Tert Butyl Ether	509.26	500.00	102	70-130
trans-1,2-Dichloroethene	554.42	520.00	107	70-130
1,1-Dichloroethane	523.28	510.00	103	70-130
cis-1,2-Dichloroethene	515.21	515.00	100	70-130
1,1,1-Trichloroethane	496.69	497.50	100	70-130
Benzene	528.46	505.00	105	70-130
Trichloroethene	487.48	500.00	97	70-130
Toluene	524.91	507.50	103	70-130
Tetrachloroethene	461.41	502.50	92	70-130
Ethyl Benzene	574.00	512.50	112	70-130
m,p-Xylene	558.00	505.00	110	70-130
o-Xylene	512.60	502.50	102	70-130

Secondary Standard Cylinder # CC-143609

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00177.D
 Acq On : 1 May 2016 6:33 pm
 Operator : dlm
 Sample : 20160501-LCS \ 500 ppbv LCS
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

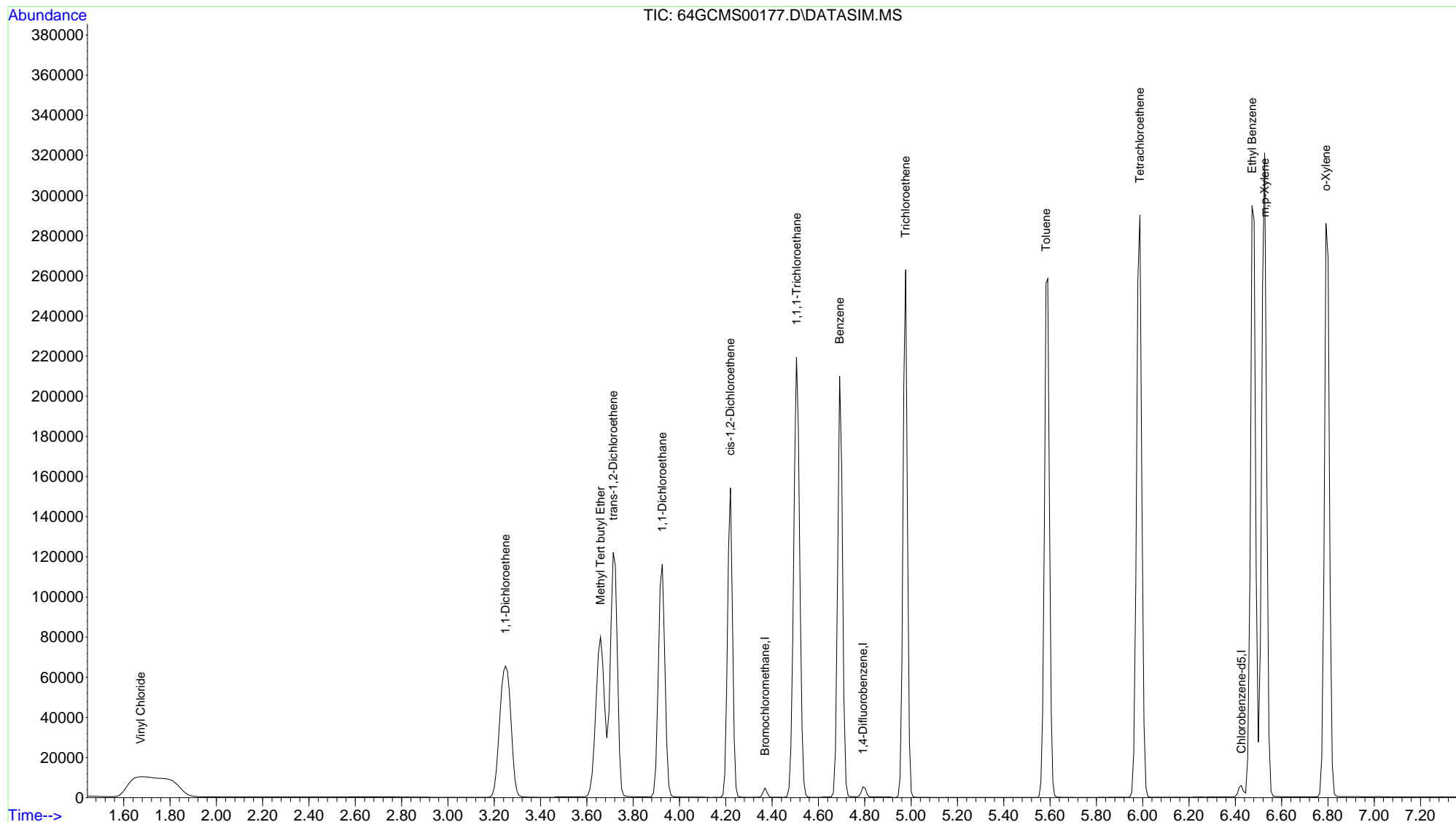
Quant Time: May 01 18:25:54 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	1977	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	4972	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.426	117	4616	10.00	ppbv	0.00
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.673	62	68800m	519.04	ppbv	
3) 1,1-Dichloroethene	3.249	61	114731	501.37	ppbv	# 89
4) Methyl Tert butyl Ether	3.659	73	165252	509.26	ppbv	94
5) trans-1,2-Dichloroethene	3.714	61	112539	554.42	ppbv	# 82
6) 1,1-Dichloroethane	3.926	63	139151	523.28	ppbv	# 93
7) cis-1,2-Dichloroethene	4.220	61	98972	515.21	ppbv	# 82
8) 1,1,1-Trichloroethane	4.505	97	191789	496.69	ppbv	97
10) Benzene	4.692	78	210248	528.46	ppbv	96
11) Trichloroethene	4.977	130	119276	487.48	ppbv	94
13) Toluene	5.583	91	251499	524.91	ppbv	97
14) Tetrachloroethene	5.988	166	152552	461.41	ppbv	96
15) Ethyl Benzene	6.472	91	339351	574.00	ppbv	97
16) m,p-Xylene	6.527	91	267594	558.00	ppbv	96
17) o-Xylene	6.792	91	267130	512.60	ppbv	96

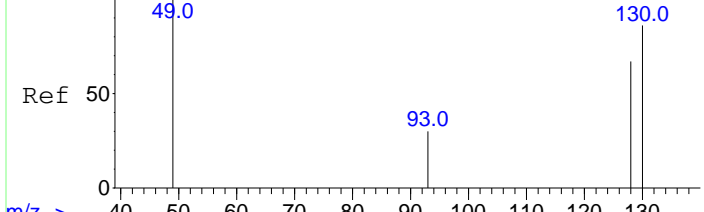
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00177.D
 Acq On : 1 May 2016 6:33 pm
 Operator : dlm
 Sample : 20160501-LCS \ 500 ppbv LCS
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:25:54 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

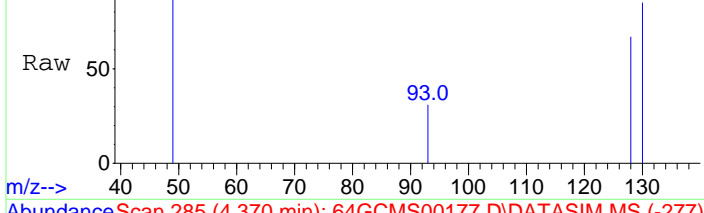


Abundance Scan 285 (4.370 min): 64GCMS00170.D\DATASIM.MS (-281)



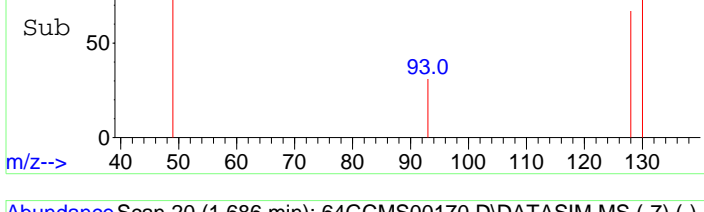
m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00177.D\DATASIM.MS



m/z-->

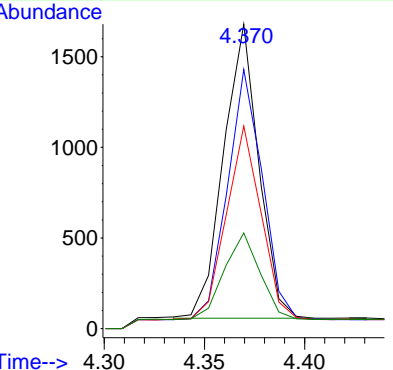
Abundance Scan 285 (4.370 min): 64GCMS00177.D\DATASIM.MS (-277)



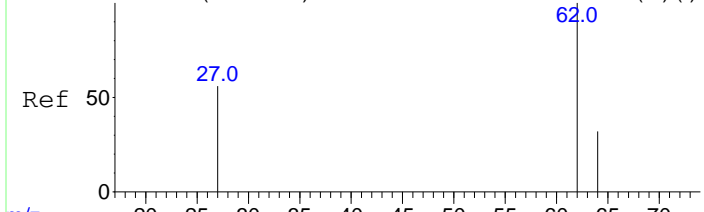
m/z-->

#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00177.D
Acq: 1 May 2016 6:33 pm

Tgt Ion	Resp	Lower	Upper
49	100		
130	84.5	46.3	69.5#
128	64.8	35.7	53.5#
93	30.2	17.6	26.4#

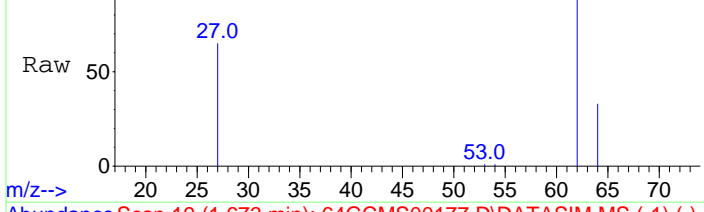


Abundance Scan 20 (1.686 min): 64GCMS00170.D\DATASIM.MS (-7) (-)



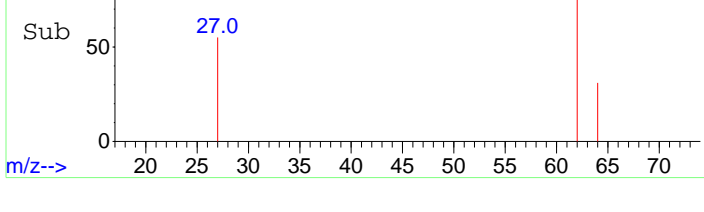
m/z-->

Abundance Scan 19 (1.673 min): 64GCMS00177.D\DATASIM.MS



m/z-->

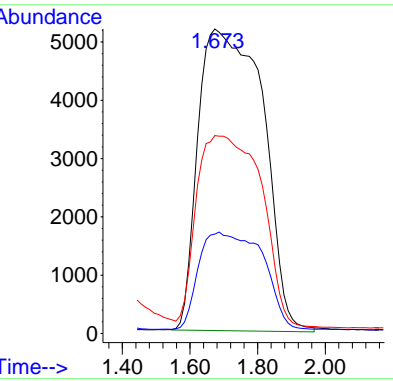
Abundance Scan 19 (1.673 min): 64GCMS00177.D\DATASIM.MS (-1) (-)



m/z-->

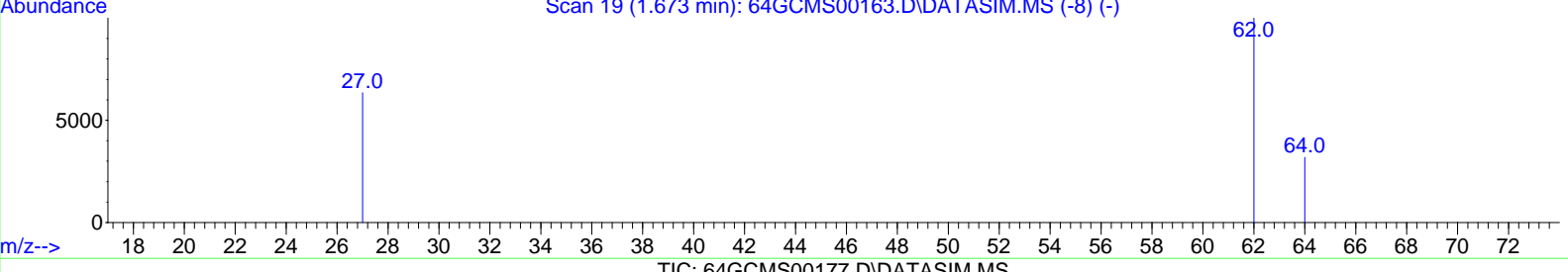
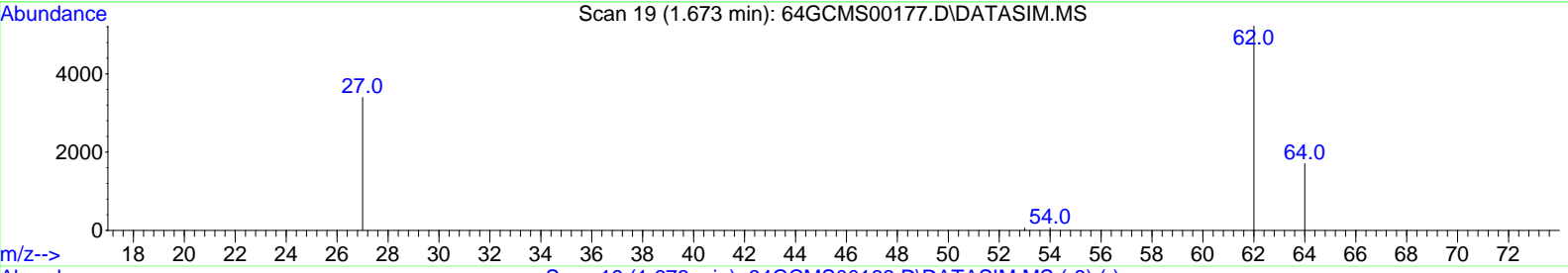
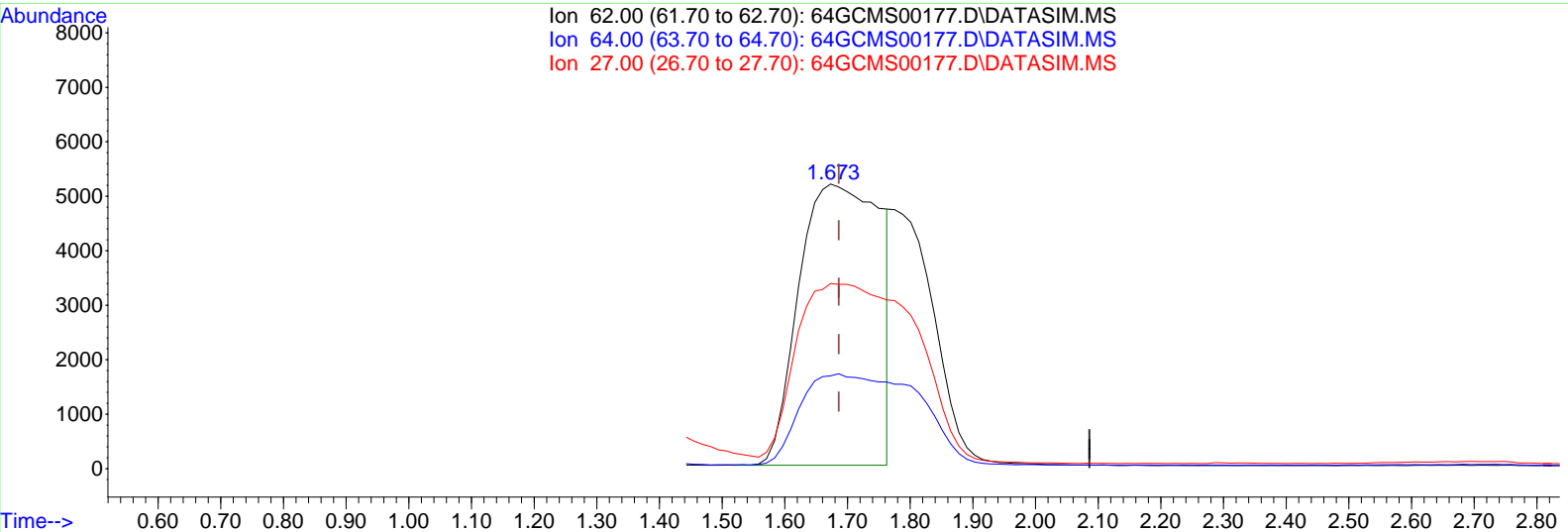
#2
Vinyl Chloride
Concen: 519.04 ppbv m
RT: 1.673 min Scan# 19
Delta R.T. -0.013 min
Lab File: 64GCMS00177.D
Acq: 1 May 2016 6:33 pm

Tgt Ion	Resp	Lower	Upper
62	100		
64	31.8	23.7	35.5
27	63.7	38.0	57.0#



Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00177.D
 Acq On : 1 May 2016 6:33 pm
 Operator : dlm
 Sample : 20160501-LCS \ 500 ppbv LCS
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:54:36 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration



(2) Vinyl Chloride

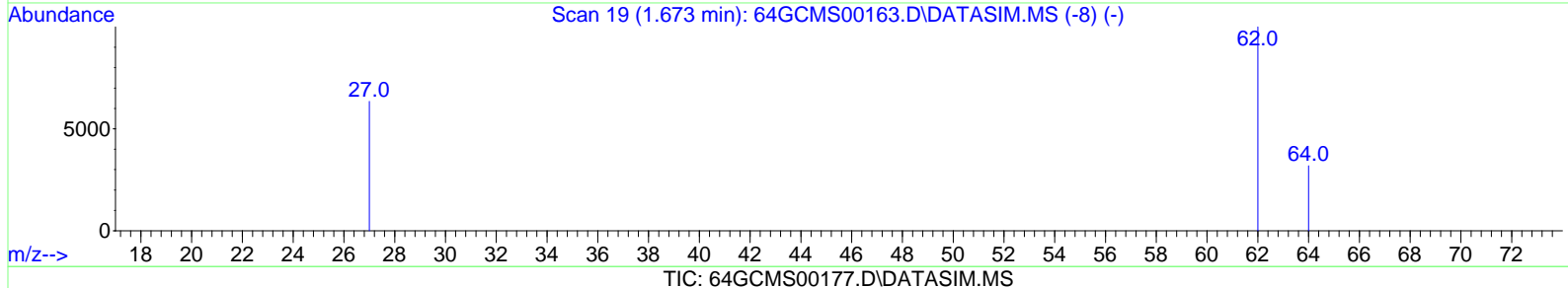
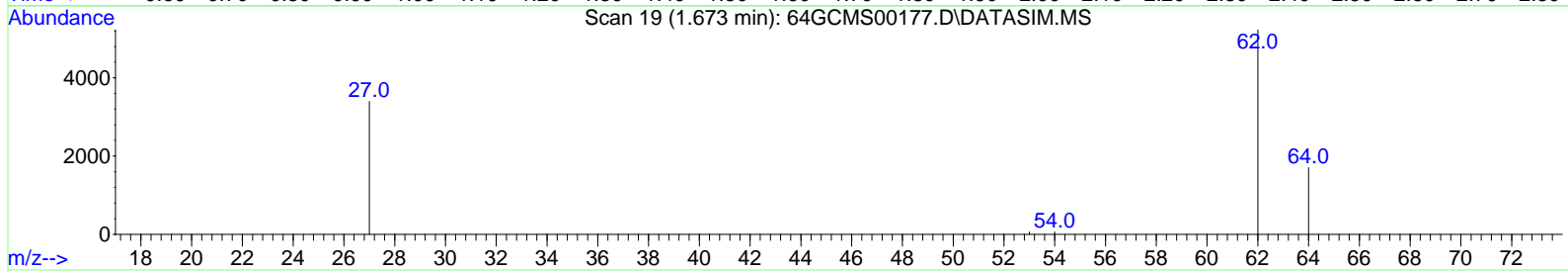
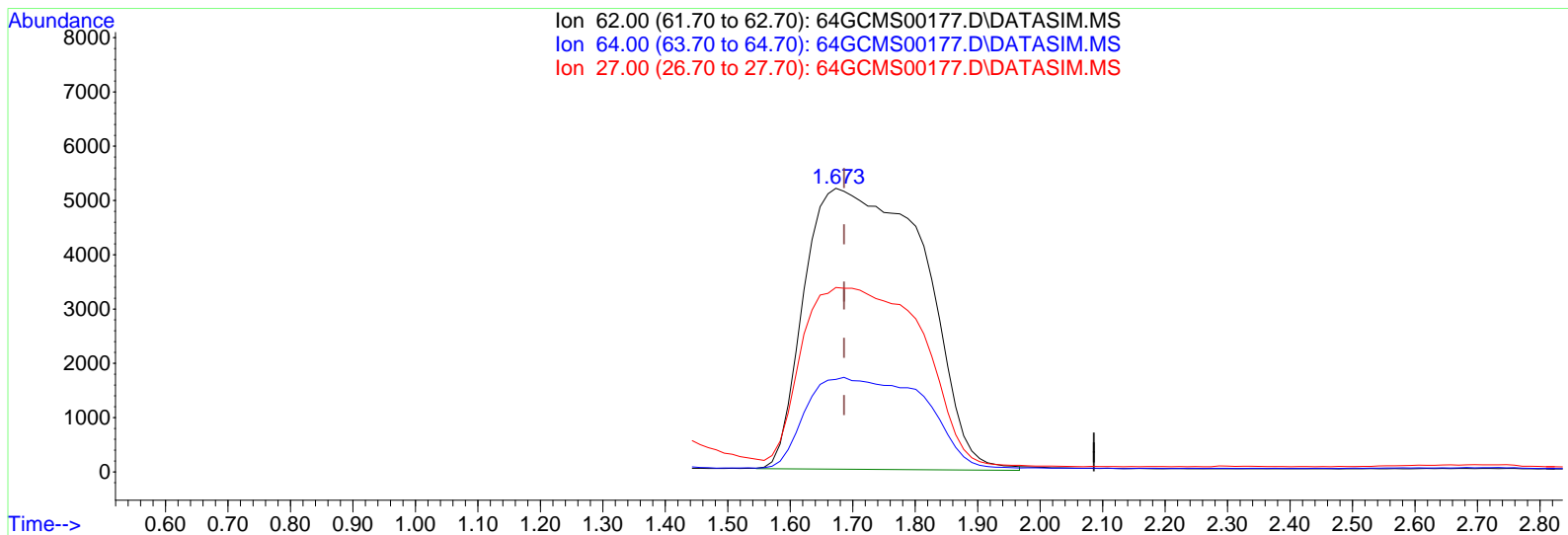
1.673min (-0.013) 350.58 ppbv

response 46470

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	47.09#
27.00	47.50	94.29#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160501\
 Data File : 64GCMS00177.D
 Acq On : 1 May 2016 6:33 pm
 Operator : dlm
 Sample : 20160501-LCS \ 500 ppbv LCS
 Misc : 5 mL \ 1 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:54:36 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 17:48:43 2016
 Response via : Initial Calibration

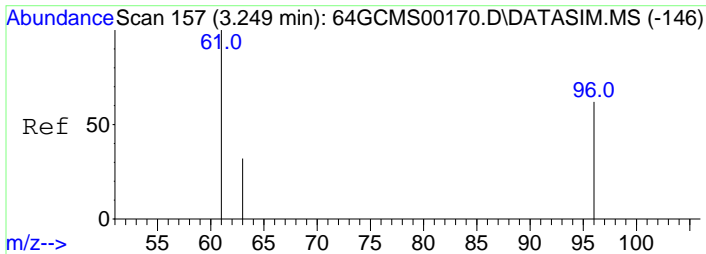


(2) Vinyl Chloride

1.673min (-0.013) 519.04 ppbv m

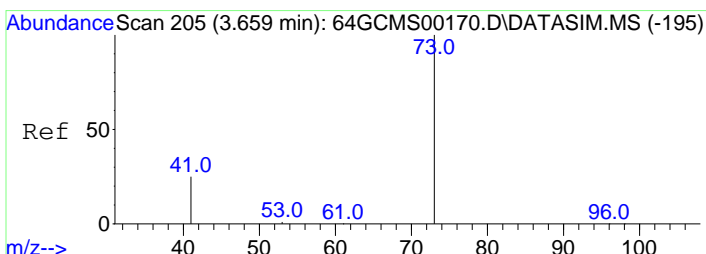
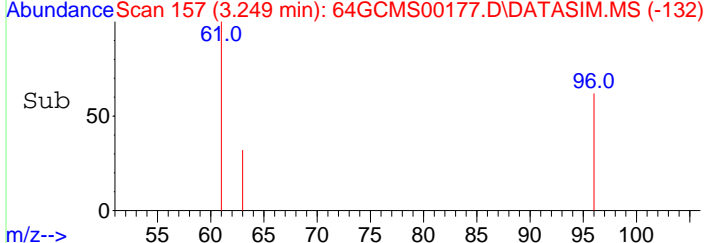
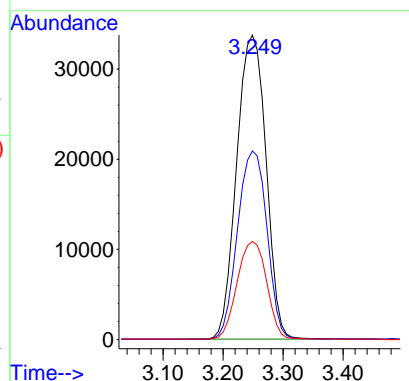
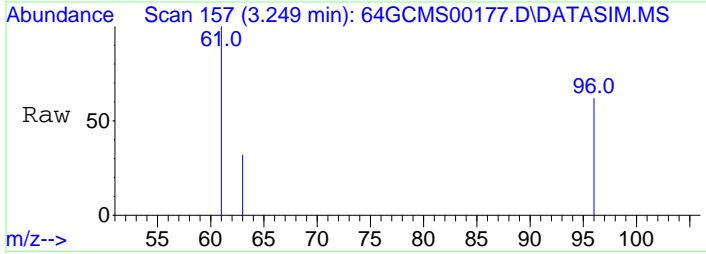
response 68800

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	31.81
27.00	47.50	63.69#
0.00	0.00	0.00



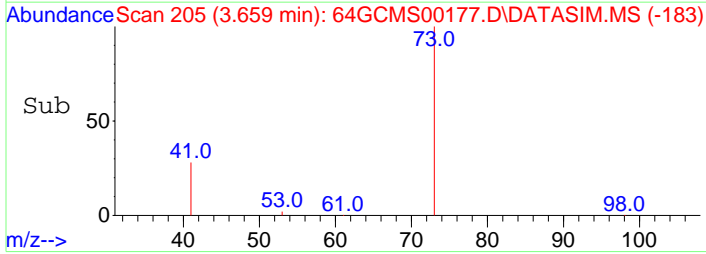
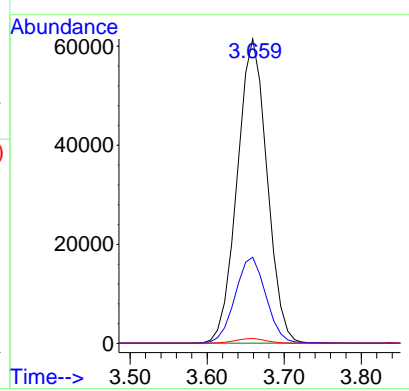
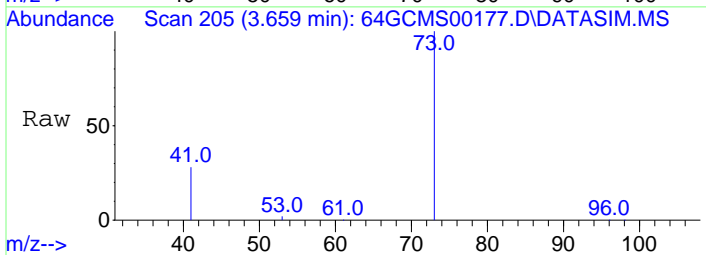
#3
 1,1-Dichloroethene
 Concen: 501.37 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. -0.000 min
 Lab File: 64GCMS00177.D
 Acq: 1 May 2016 6:33 pm

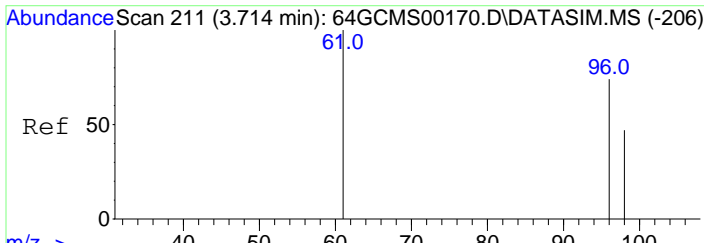
Tgt Ion	Resp	Lower	Upper
61	114731		
96	62.0	40.9	61.3#
63	32.2	24.3	36.5



#4
 Methyl Tert butyl Ether
 Concen: 509.26 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 64GCMS00177.D
 Acq: 1 May 2016 6:33 pm

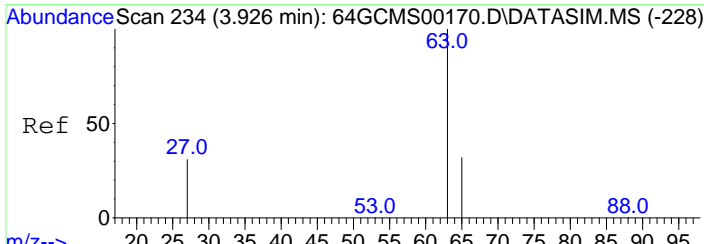
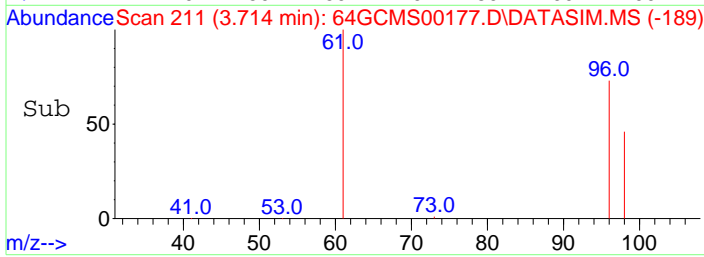
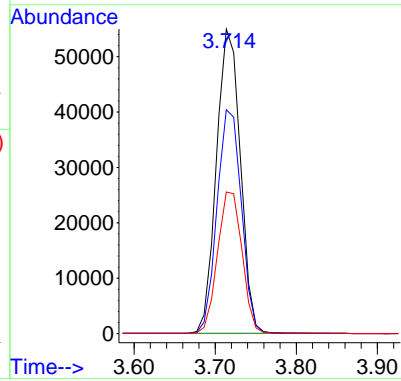
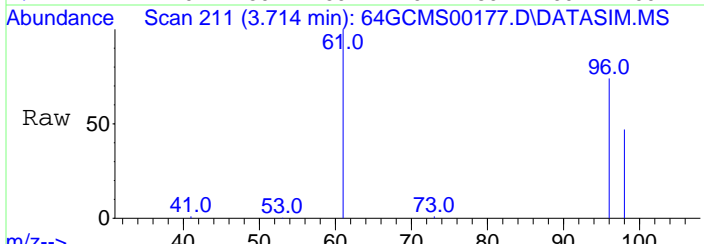
Tgt Ion	Resp	Lower	Upper
73	165252		
41	29.1	20.6	30.8
53	1.6	1.2	1.8





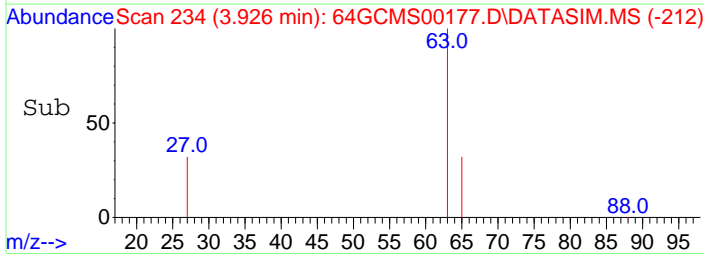
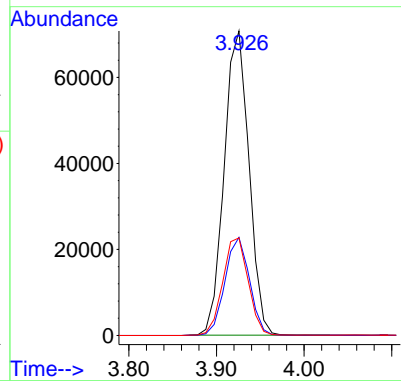
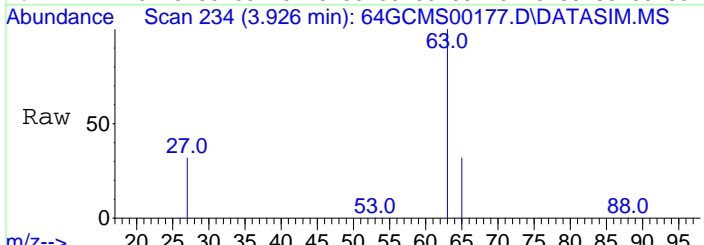
#5
 trans-1,2-Dichloroethene
 Concen: 554.42 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. -0.000 min
 Lab File: 64GCMS00177.D
 Acq: 1 May 2016 6:33 pm

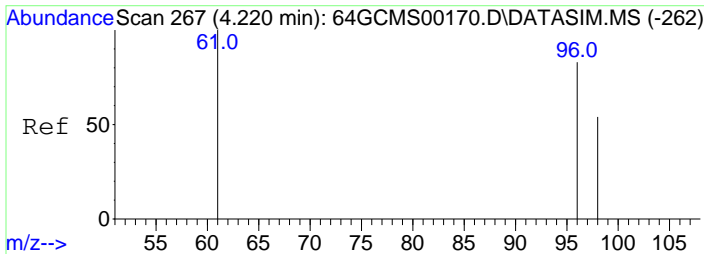
Tgt Ion	Resp	Lower	Upper
61	112539		
61	100		
96	74.8	47.8	71.6#
98	47.6	30.6	46.0#



#6
 1,1-Dichloroethane
 Concen: 523.28 ppbv
 RT: 3.926 min Scan# 234
 Delta R.T. -0.000 min
 Lab File: 64GCMS00177.D
 Acq: 1 May 2016 6:33 pm

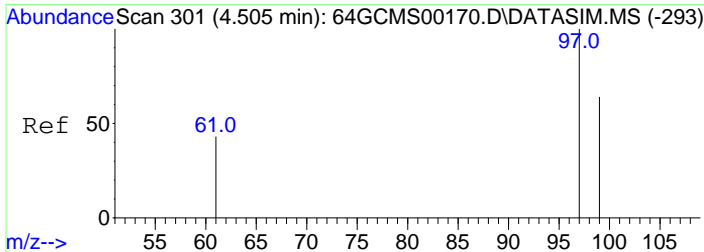
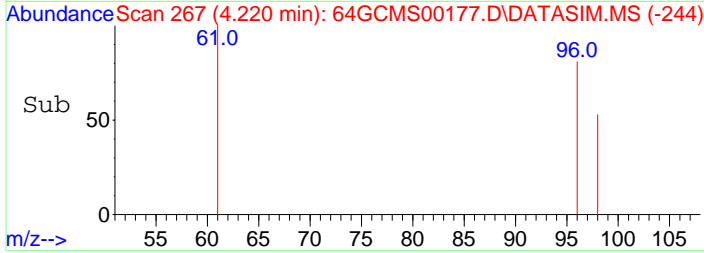
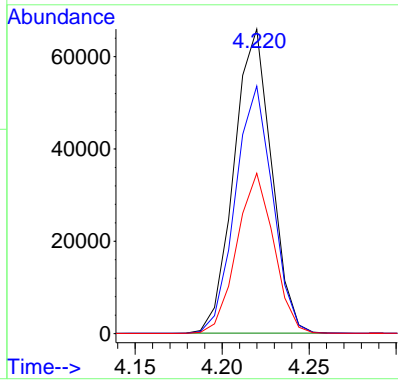
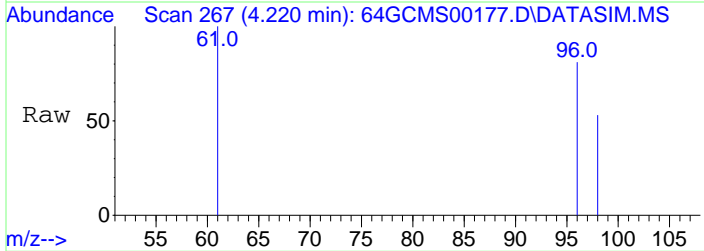
Tgt Ion	Resp	Lower	Upper
63	139151		
63	100		
65	32.0	24.8	37.2
27	33.1	21.1	31.7#





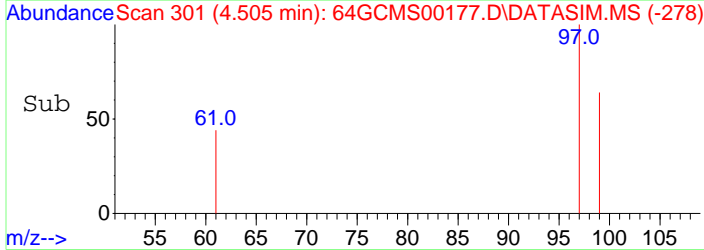
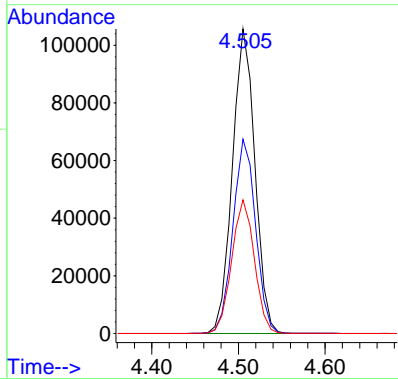
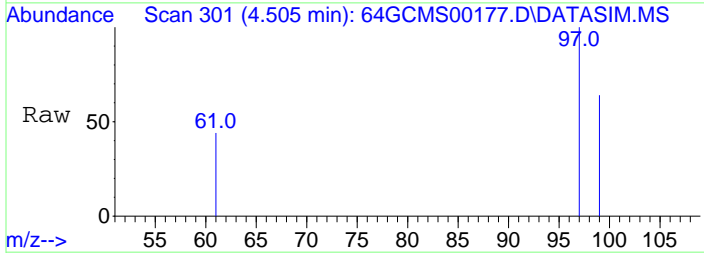
#7
 cis-1,2-Dichloroethene
 Concen: 515.21 ppbv
 RT: 4.220 min Scan# 267
 Delta R.T. -0.000 min
 Lab File: 64GCMS00177.D
 Acq: 1 May 2016 6:33 pm

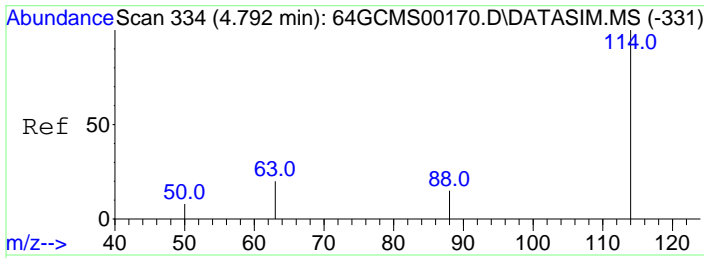
Tgt Ion:	61	Resp:	98972
Ion Ratio	Lower	Upper	
61	100		
96	80.6	52.0	78.0#
98	51.6	33.4	50.2#



#8
 1,1,1-Trichloroethane
 Concen: 496.69 ppbv
 RT: 4.505 min Scan# 301
 Delta R.T. -0.000 min
 Lab File: 64GCMS00177.D
 Acq: 1 May 2016 6:33 pm

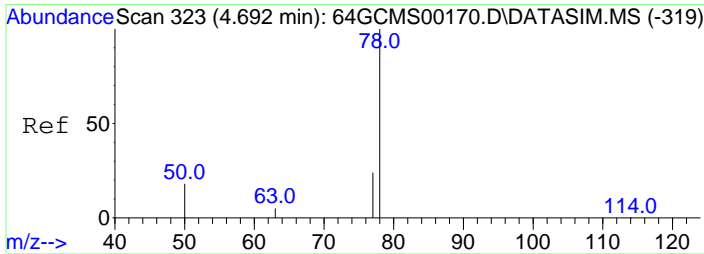
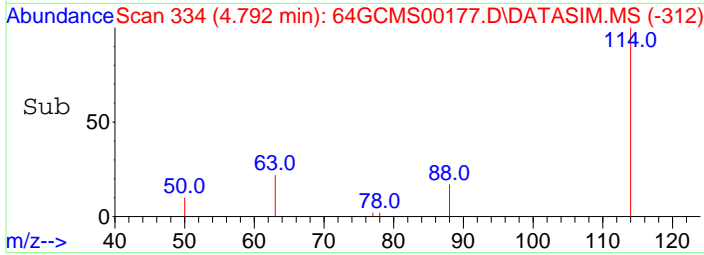
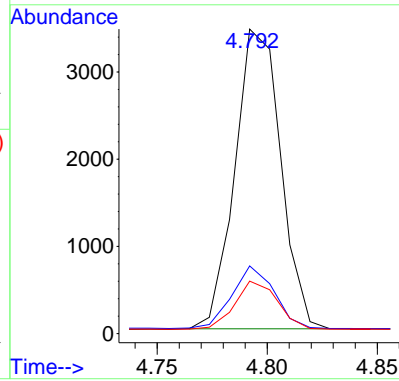
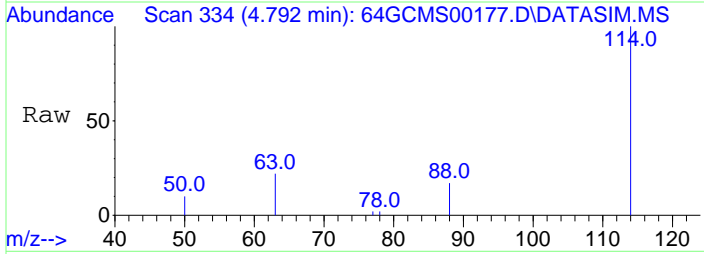
Tgt Ion:	97	Resp:	191789
Ion Ratio	Lower	Upper	
97	100		
99	63.7	51.5	77.3
61	43.8	38.6	58.0





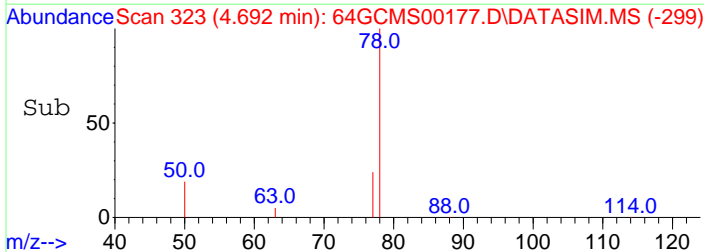
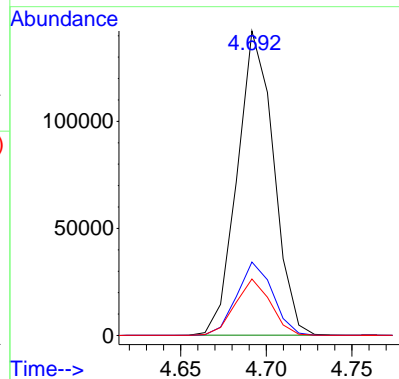
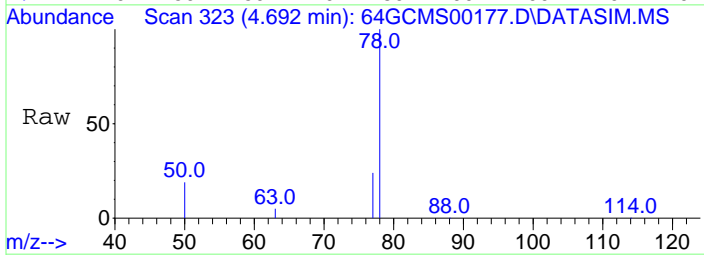
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00177.D
 Acq: 1 May 2016 6:33 pm

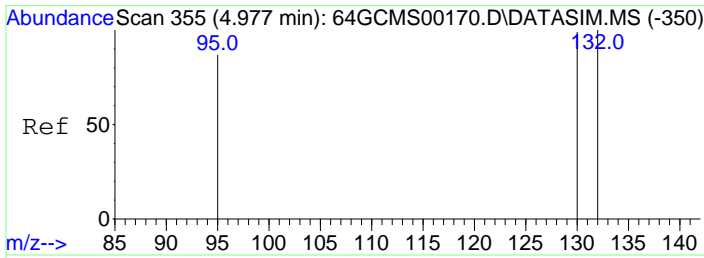
Tgt Ion	Resp	Lower	Upper
114	100		
63	19.1	19.2	28.8#
88	14.8	13.7	20.5



#10
 Benzene
 Concen: 528.46 ppbv
 RT: 4.692 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00177.D
 Acq: 1 May 2016 6:33 pm

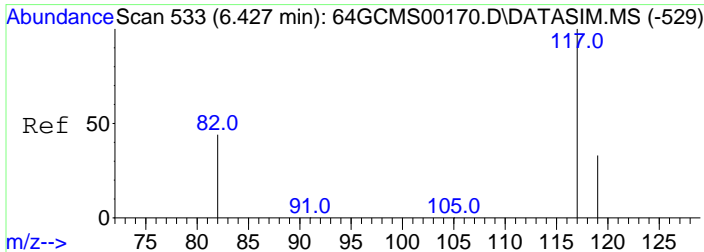
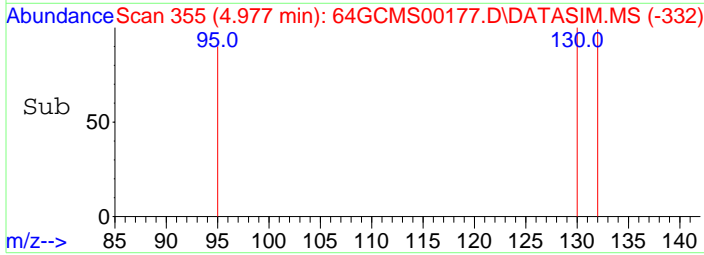
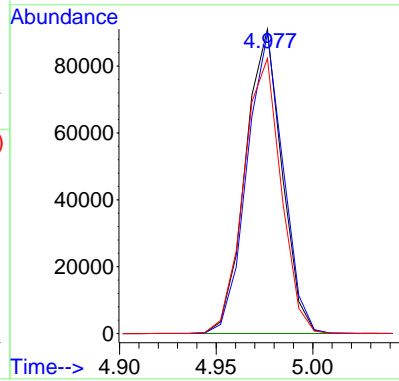
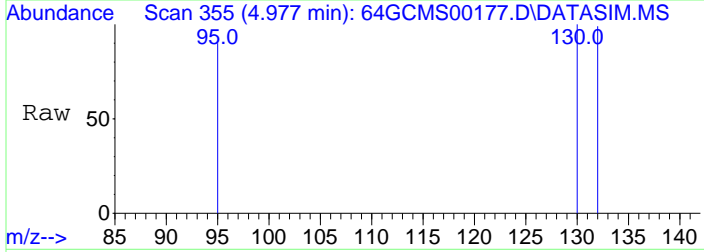
Tgt Ion	Resp	Lower	Upper
78	100		
77	23.8	18.2	27.4
50	17.9	16.6	24.8





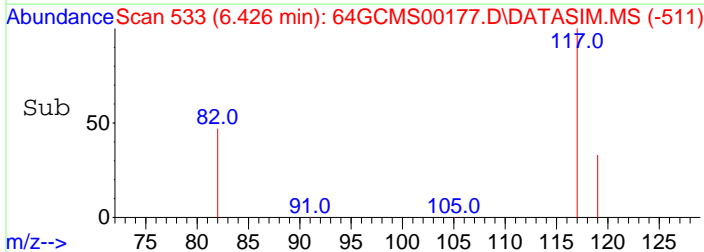
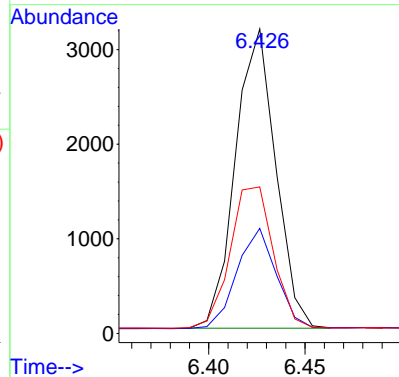
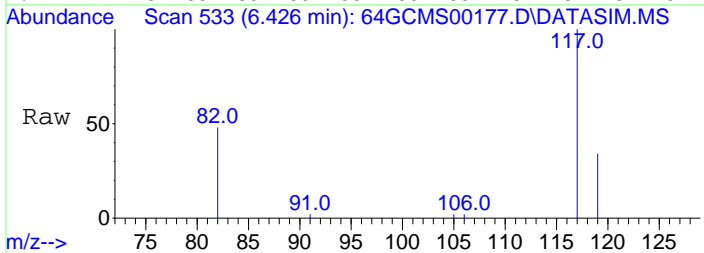
#11
 Trichloroethene
 Concen: 487.48 ppbv
 RT: 4.977 min Scan# 355
 Delta R.T. -0.000 min
 Lab File: 64GCMS00177.D
 Acq: 1 May 2016 6:33 pm

Tgt Ion	Resp	Lower	Upper
130	119276		
130	100		
132	97.6	76.9	115.3
95	92.4	81.5	122.3

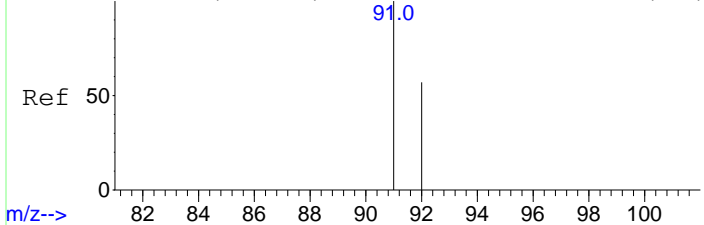


#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00177.D
 Acq: 1 May 2016 6:33 pm

Tgt Ion	Resp	Lower	Upper
117	4616		
117	100		
119	32.6	25.8	38.6
82	50.7	45.6	68.4

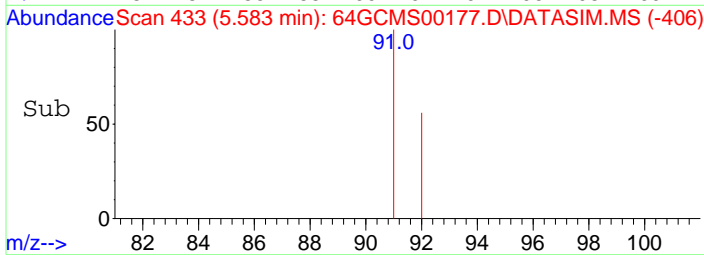
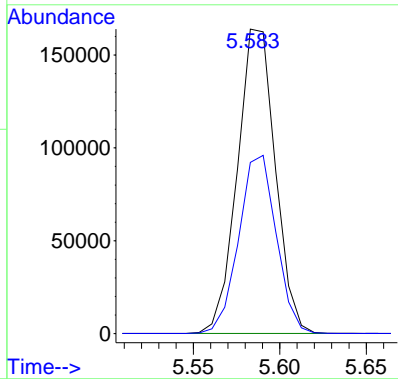
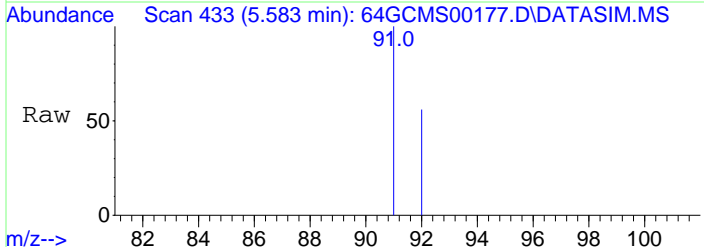


Abundance Scan 433 (5.583 min): 64GCMS00170.D\DATASIM.MS (-428)

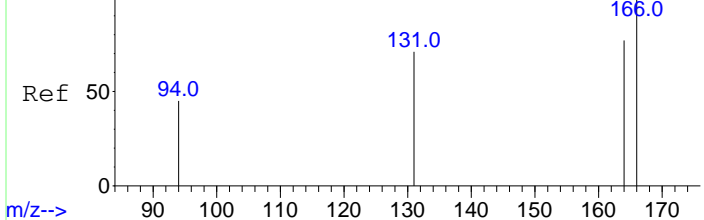


#13
Toluene
Concen: 524.91 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00177.D
Acq: 1 May 2016 6:33 pm

Tgt Ion	Resp	Lower	Upper
91	100		
92	57.8	48.0	72.0

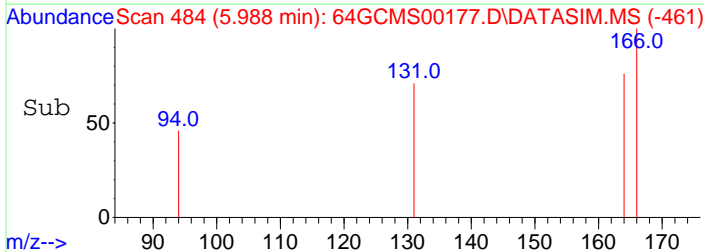
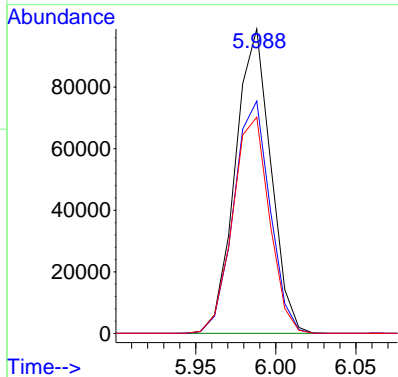
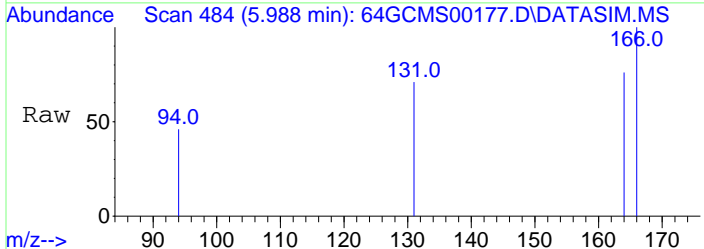


Abundance Scan 484 (5.988 min): 64GCMS00170.D\DATASIM.MS (-479)

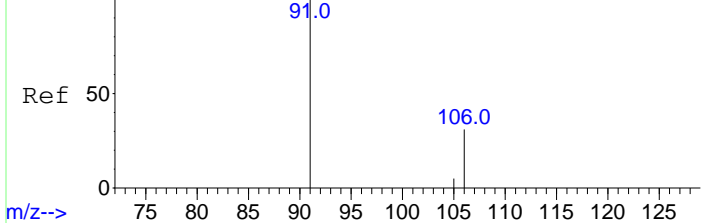


#14
Tetrachloroethene
Concen: 461.41 ppbv
RT: 5.988 min Scan# 484
Delta R.T. -0.000 min
Lab File: 64GCMS00177.D
Acq: 1 May 2016 6:33 pm

Tgt Ion	Resp	Lower	Upper
166	100		
164	77.9	63.4	95.0
131	73.4	63.4	95.0

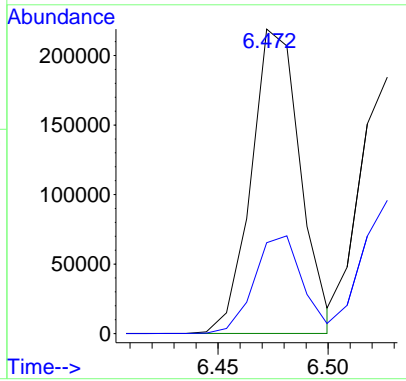
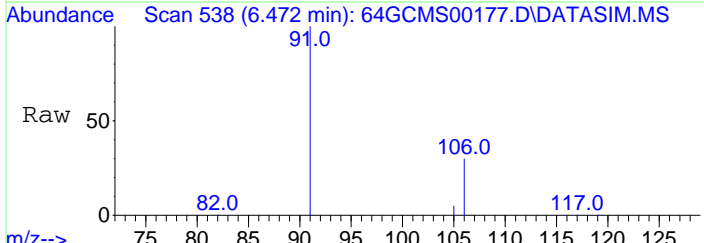


Abundance Scan 538 (6.472 min): 64GCMS00170.D\DATASIM.MS (-534)

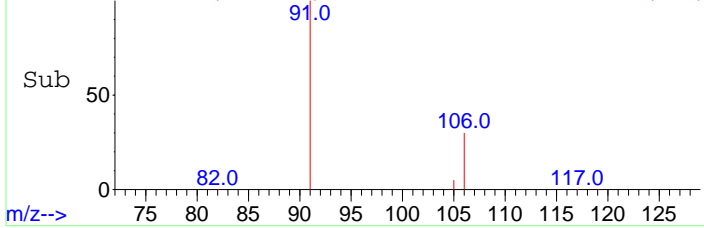


#15
Ethyl Benzene
Concen: 574.00 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00177.D
Acq: 1 May 2016 6:33 pm

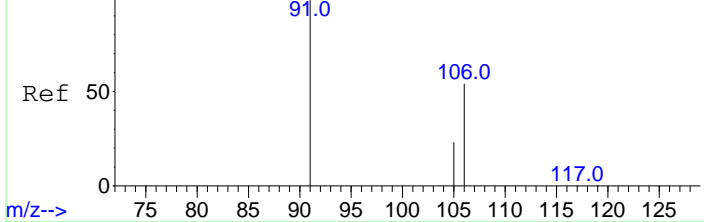
Tgt Ion	Resp	Lower	Upper
91	339351	100	100
106	31.8	24.2	36.2



Abundance Scan 538 (6.472 min): 64GCMS00177.D\DATASIM.MS (-516)

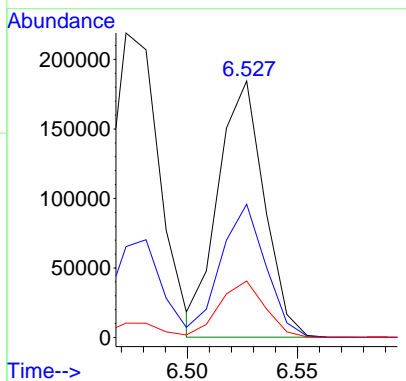
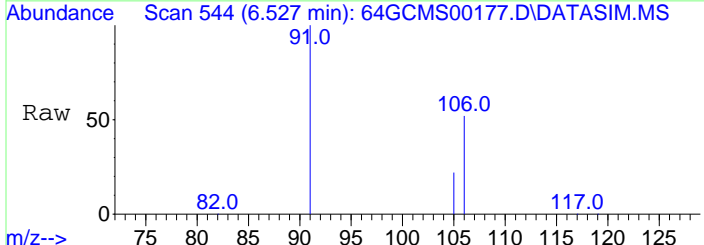


Abundance Scan 544 (6.527 min): 64GCMS00170.D\DATASIM.MS (-541)

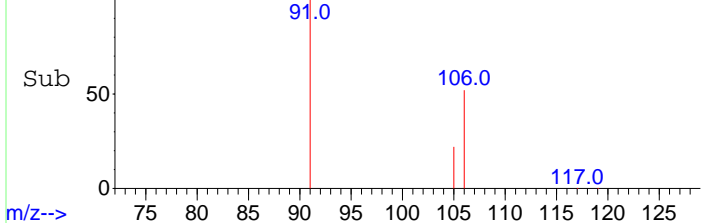


#16
m,p-Xylene
Concen: 558.00 ppbv
RT: 6.527 min Scan# 544
Delta R.T. -0.000 min
Lab File: 64GCMS00177.D
Acq: 1 May 2016 6:33 pm

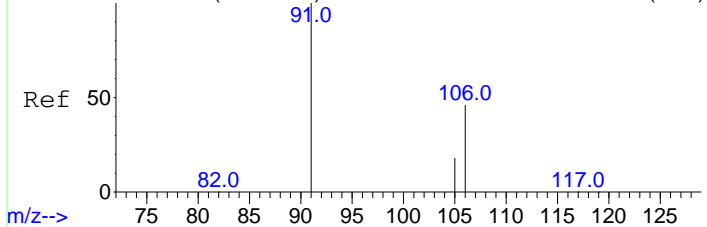
Tgt Ion	Resp	Lower	Upper
91	267594	100	100
106	50.6	37.7	56.5
105	21.6	17.0	25.4



Abundance Scan 544 (6.527 min): 64GCMS00177.D\DATASIM.MS (-522)



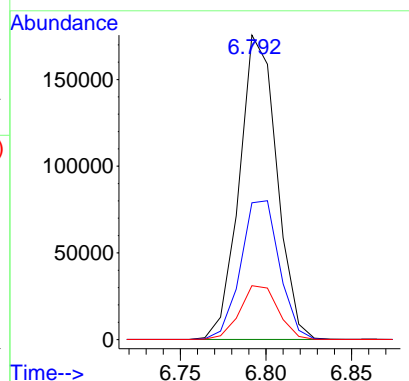
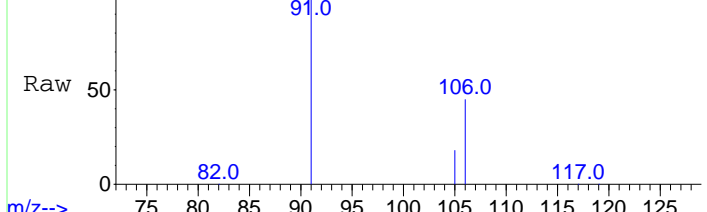
Abundance Scan 573 (6.792 min): 64GCMS00170.D\DATASIM.MS (-569)



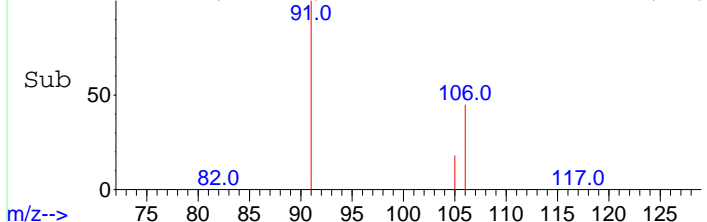
#17
o-Xylene
Concen: 512.60 ppbv
RT: 6.792 min Scan# 573
Delta R.T. -0.000 min
Lab File: 64GCMS00177.D
Acq: 1 May 2016 6:33 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	47.4	35.4	53.2
105	18.2	14.0	21.0

Abundance Scan 573 (6.792 min): 64GCMS00177.D\DATASIM.MS



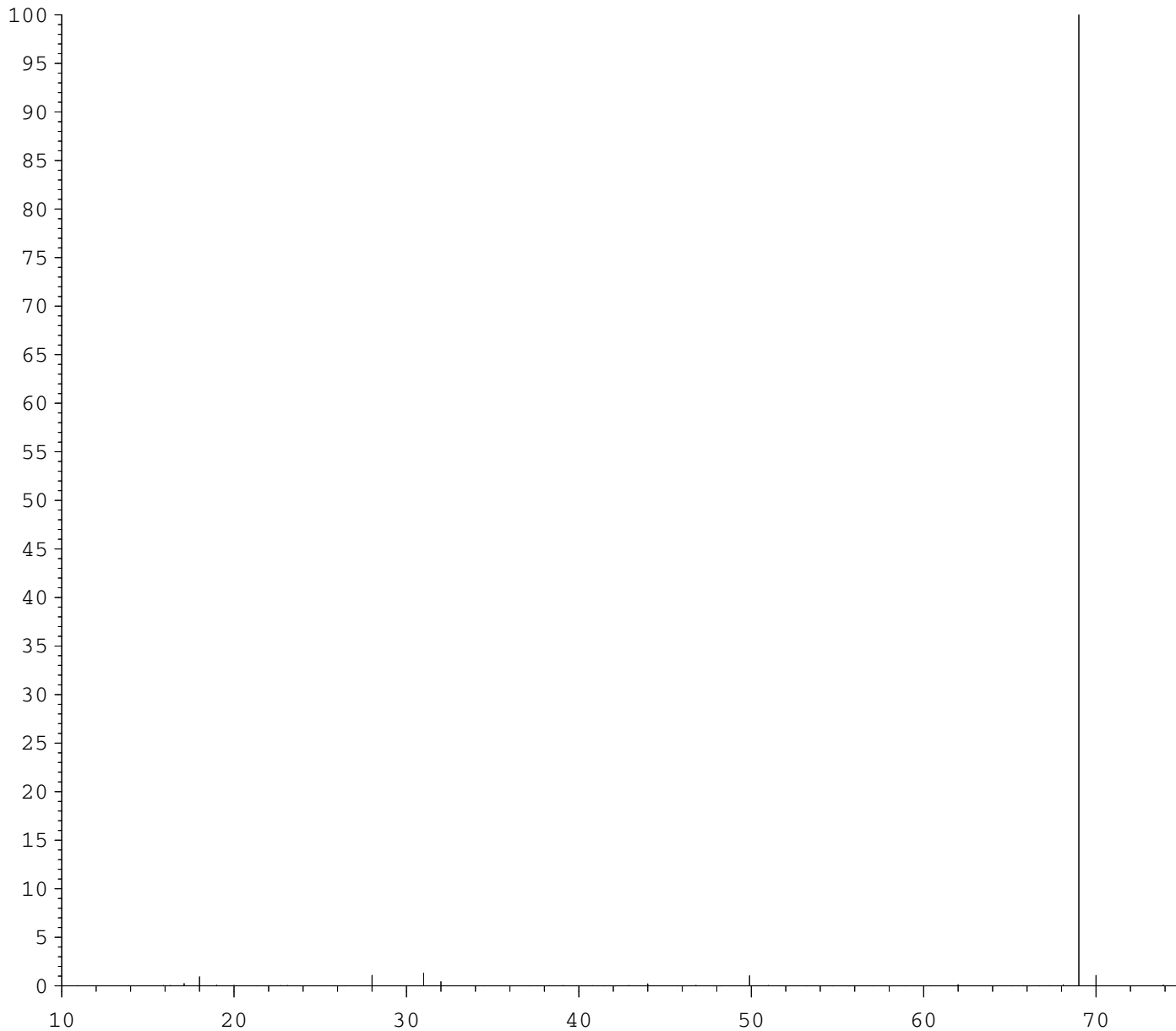
Abundance Scan 573 (6.792 min): 64GCMS00177.D\DATASIM.MS (-551)



Instrument: EPA 2871
 Tue May 03 06:40:06 2016

C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
 77 peaks Base: 69.00 Abundance: 525056

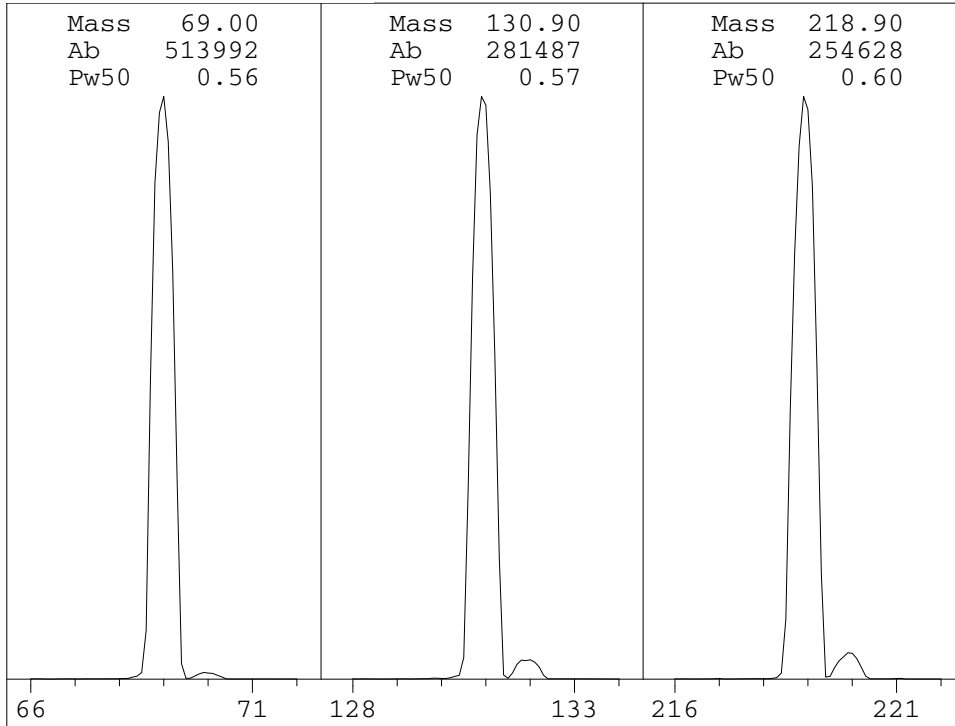


Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	525056	100.00	70.00	5672	1.08
18.00	4939	0.94	19.00	395	8.00
28.00	5712	1.09	29.20	117	2.05

Current Params used: bfb.u

Relative abundances:

18/69 = 0.94	Water%	(counts=4939)
28/69 = 1.09	Nitrogen%	(counts=5712)
32/69 = 0.44	Oxygen%	(counts=2332)
44/69 = 0.21	Carbon Dioxide%	(counts=1090)
28/18 = 115.65	Nitrogen/Water%	

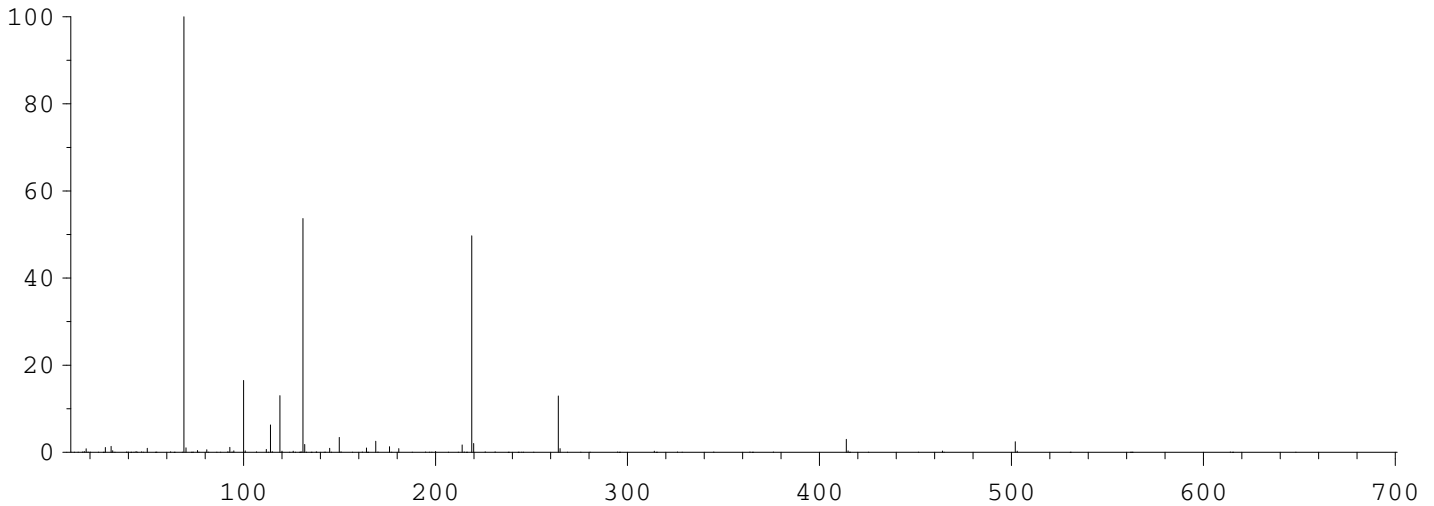


Ion Pol Pos MassGain -721
 MassOffs -41
 Emission 34.6 AmuGain 1910
 EIEnrgy 69.9 AmuOffs 123.38
 Filament 2 Wid219 0.010
 DC Pol Pos
 Repeller 19.90
 IonFcus 73.1 HEDEnab On
 EntLens 0.0 EMVolts 1306
 EntOffs Var

 Samples 8
 PFTBA Open Averages 3
 Stepsize 0.10

Temperatures and Pressures:
 MS Source 230 TurboSpd 100
 MS Quad 150 HiVac 9.84e06

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
 125 peaks Base: 69.00 Abundance: 487040



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	487040	100.00	70.00	4937	1.01
131.00	261504	53.69	131.90	8853	3.39
218.90	242176	49.72	219.90	9866	4.07

Air/Water Check: H2O~0.83% N2~1.11% O2~0.36% CO2~0.18% N2/H2O~133.61%

Column(1) Flow: 1.5 Column(2): -1.79769e+308 ml/min. Interface Temp: 200

Ramp Criteria:

Ion Focus Maximum 90 volts using ion 69; EM Gain 423359
 Repeller Maximum 20 volts using ion 131; Gain Factor 4.23

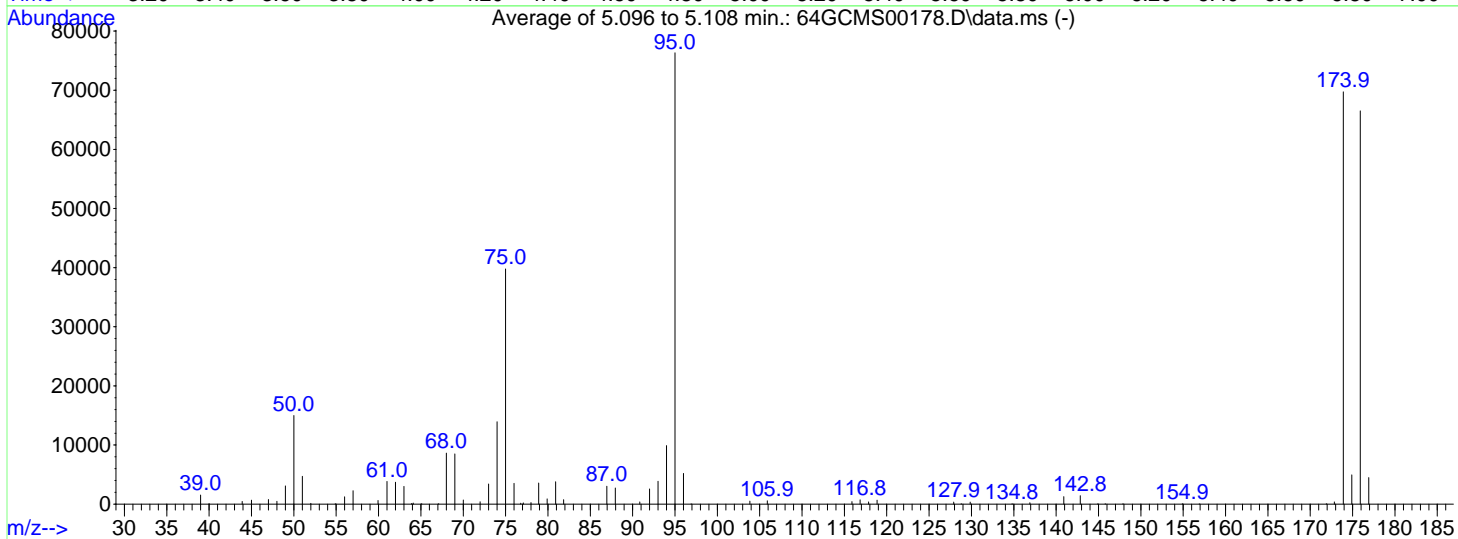
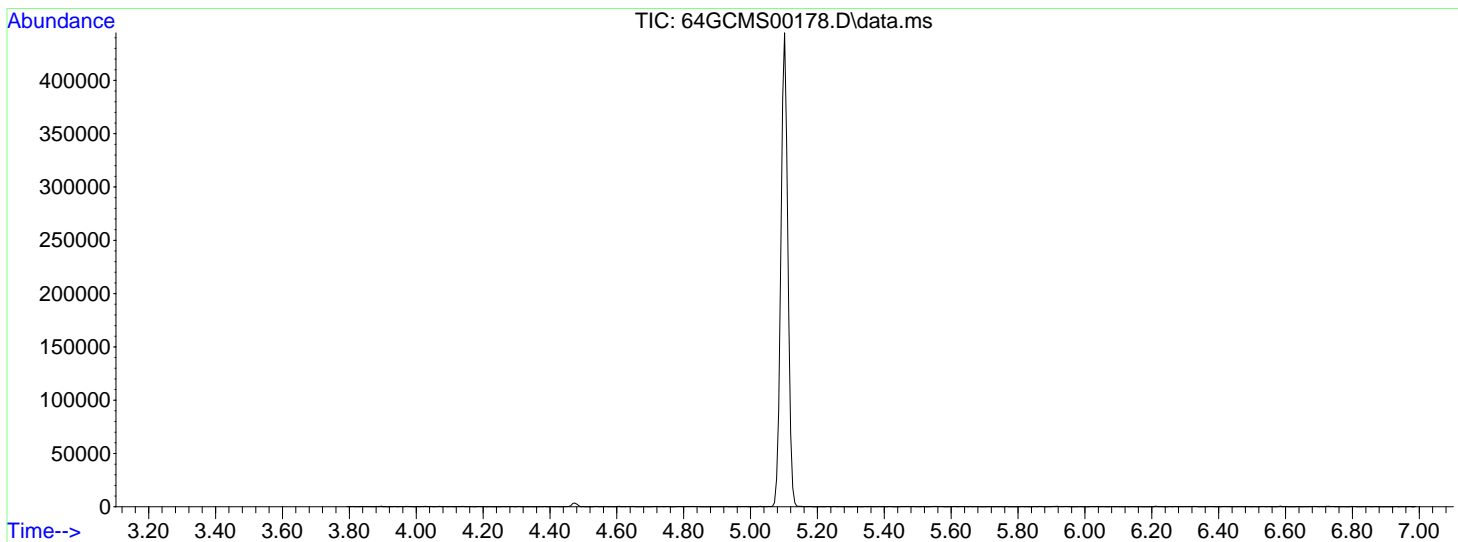
MassGain Values(Samples): -711(3) -698(2) -681(1) -608(0) -556(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	123.4	123.4	123.4	123.4	123.4	123.4	123.4
Entrance Lens Offset:	12.8	12.5	15.6	15.6	20.1	23.6	23.6
Target Abund(%):	1.0	100.0	48.0	44.0	2.4	2.0	2.0
Actual Tune Abund(%):	0.9	100.0	53.7	49.7	3.0	2.5	

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00178.D
 Acq On : 3 May 2016 5:46 am
 Operator : dlm
 Sample : BFB \ 1 ppmv
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 Last Update : Sun May 01 19:36:10 2016



AutoFind: Scans 217, 218, 219; Background Corrected with Scan 210

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.7	14999	PASS
75	95	30	66	52.1	39787	PASS
95	95	100	100	100.0	76328	PASS
96	95	5	9	6.8	5210	PASS
173	174	0.00	2	0.5	371	PASS
174	95	50	120	91.3	69717	PASS
175	174	4	9	7.1	4942	PASS
176	174	93	101	95.4	66504	PASS
177	176	5	9	6.7	4485	PASS

GC/MS QA-QC Check Report

Tune File: D:\msdchem\1\data\20160503\64GCMS00178.D

Tune Time: 3 May 2016 5:46 am

Daily Calibration File: D:\msdchem\1\data\20160503\64GCMS00179.D

File	Sample	2070	5466	4979
		Internal Standard Responses		
64GCMS00179.D	STD2016050	2070	5466	4979
64GCMS00180.D	STD2016050	2095	4602	4476
64GCMS00181.D	STD2016050	2005	4145	4137
64GCMS00182.D	20160503-M	1941	3920	3854
64GCMS00183.D	20160503-L	1930	4773	4389
64GCMS00184.D	4430 \ Uni	1964	3927	3710
64GCMS00185.D	4431 \ Uni	1957	3781	3578
64GCMS00186.D	4432 \ Uni	1923	3689	4470
64GCMS00187.D	4433 \ Uni	2011	3676	3500
64GCMS00188.D	GM-SG-05 \	2329	4362	4561
64GCMS00189.D	GM-SG-01 \	1950	3631	4237
64GCMS00190.D	4434 \ Uni	2123	4131	5336
64GCMS00191.D	51077 \ Un	2127	3755	3793
64GCMS00192.D	51077 \ Un	2088	3656	3725
64GCMS00193.D	51078 \ Un	2144	4856	3749
64GCMS00194.D	51079 \ Un	2134	4441	3643
64GCMS00195.D	GM-SG-09 \	2126	3794	5273
64GCMS00196.D	51080 \ Un	2099	3522	3343

(fails) - fails 24hr time check * - fails criteria

Created: Tue May 03 19:24:45 2016 EPA 3064

Method Path : C:\msdchem\1\methods\
Method File : LOOP2016_0501.M
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
Last Update : Tue May 03 08:37:26 2016
Response Via : Initial Calibration

CC Data File: 64GCMS00179.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%
1 I	Bromochloromethane	1.000	1.000	0.0	83
2	Vinyl Chloride	0.651	0.661	-1.5	82
3	1,1-Dichloroethene	1.144	1.138	0.5	81
4	Methyl Tert butyl Ether	1.641	1.618	1.4	78
5	trans-1,2-Dichloroethene	1.018	1.035	-1.7	81
6	1,1-Dichloroethane	1.348	1.304	3.3	82
7	cis-1,2-Dichloroethene	0.972	0.946	2.7	80
8	1,1,1-Trichloroethane	1.960	1.873	4.4	83
9 I	1,4-Difluorobenzene	1.000	1.000	0.0	82
10	Benzene	0.798	0.763	4.4	80
11	Trichloroethene	0.495	0.445	10.1	80
12 I	Chlorobenzene-d5	1.000	1.000	0.0	81
13	Toluene	1.038	1.030	0.7	79
14	Tetrachloroethene	0.716	0.623	13.0	80
15	Ethyl Benzene	1.281	1.320	-3.1	79
16	m,p-Xylene	1.039	1.102	-6.1	80
17	o-Xylene	1.127	1.120	0.6	80

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00179.D
 Acq On : 3 May 2016 5:59 am
 Operator : dlm
 Sample : STD20160503-01 \ 500 ppbv CCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

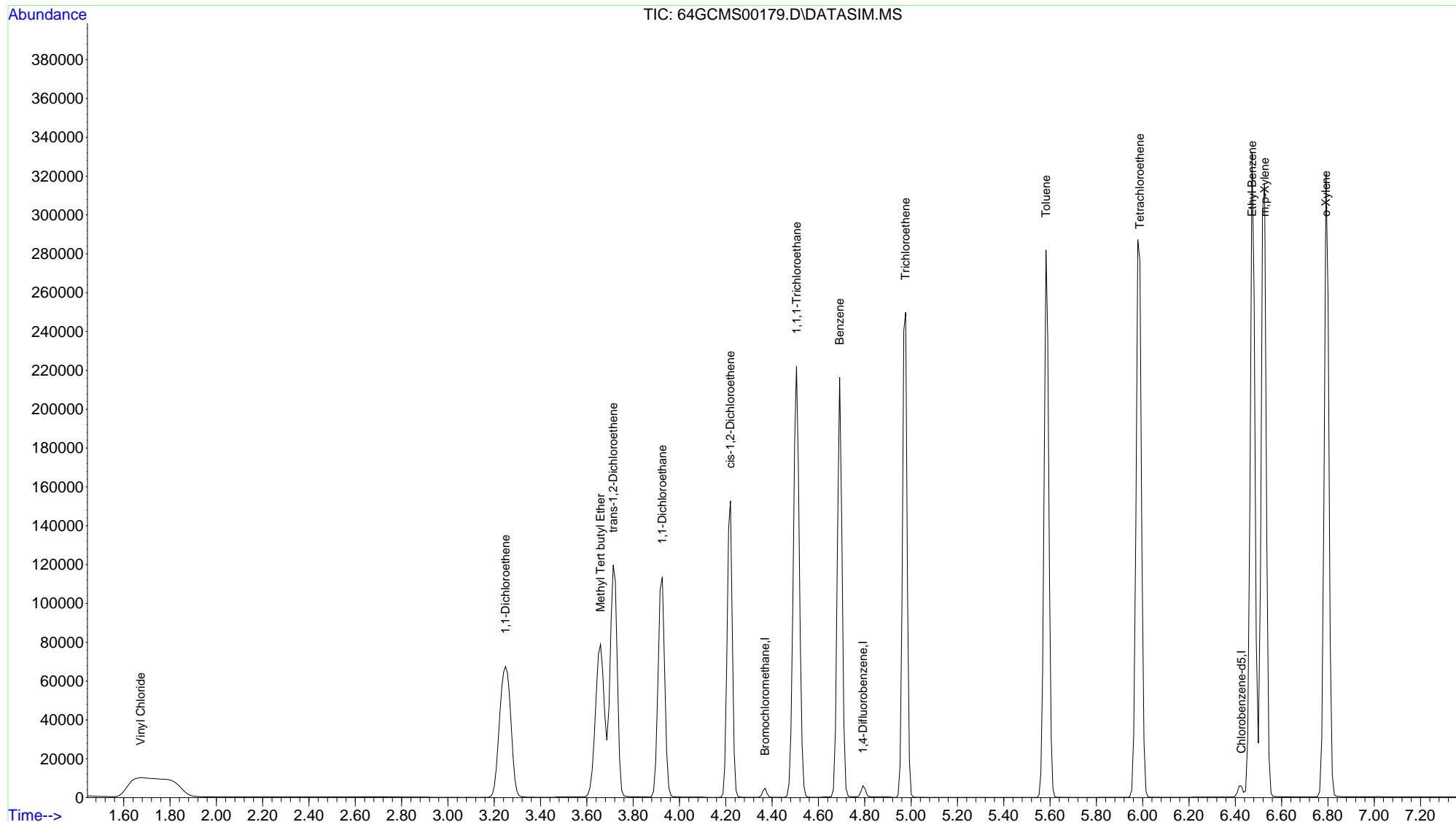
Quant Time: May 03 06:08:32 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 19:36:10 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Bromochloromethane	4.370	49	2070	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.792	114	5466	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.426	117	4979	10.00	ppbv		0.00
Target Compounds							
							Qvalue
2) Vinyl Chloride	1.673	62	69439m	515.16	ppbv		
3) 1,1-Dichloroethene	3.249	61	118959	502.24	ppbv	#	89
4) Methyl Tert butyl Ether	3.659	73	168297	495.34	ppbv		96
5) trans-1,2-Dichloroethene	3.714	61	110870	526.07	ppbv	#	81
6) 1,1-Dichloroethane	3.926	63	137632	493.26	ppbv	#	93
7) cis-1,2-Dichloroethene	4.220	61	100834	501.32	ppbv	#	81
8) 1,1,1-Trichloroethane	4.505	97	194824	480.17	ppbv		97
10) Benzene	4.691	78	213660	490.09	ppbv		96
11) Trichloroethene	4.977	130	122189	451.82	ppbv		94
13) Toluene	5.583	91	260320	503.71	ppbv		97
14) Tetrachloroethene	5.988	166	156603	439.13	ppbv		96
15) Ethyl Benzene	6.472	91	353363	554.12	ppbv		96
16) m,p-Xylene	6.527	91	279874	541.06	ppbv		96
17) o-Xylene	6.792	91	281568	501.81	ppbv		96

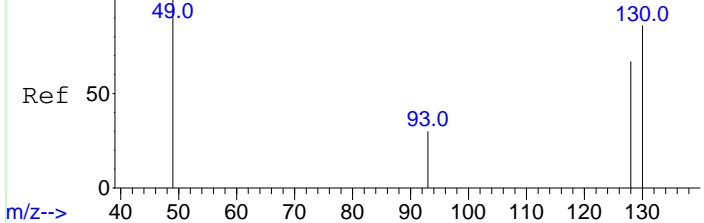
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00179.D
 Acq On : 3 May 2016 5:59 am
 Operator : dlm
 Sample : STD20160503-01 \ 500 ppbv CCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 06:08:32 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 19:36:10 2016
 Response via : Initial Calibration



Abundance Scan 285 (4.370 min): 64GCMS00170.D\DATASIM.MS (-281)



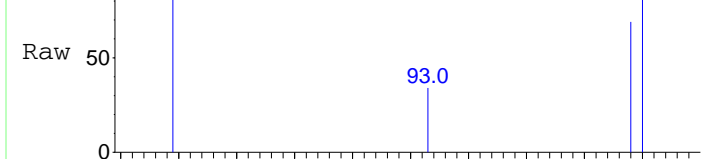
#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00179.D
Acq: 3 May 2016 5:59 am

Tgt Ion: 49 Resp: 2070

Ion	Ratio	Lower	Upper
49	100		
130	85.0	46.3	69.5#
128	66.2	35.7	53.5#
93	31.3	17.6	26.4#

m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00179.D\DATASIM.MS

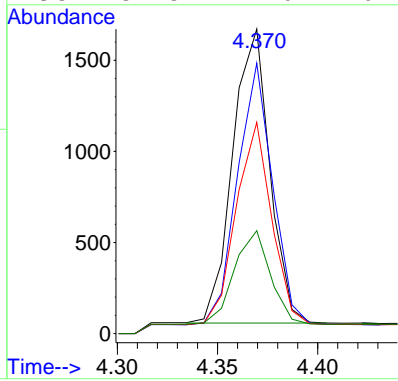


m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00179.D\DATASIM.MS (-277)



m/z-->

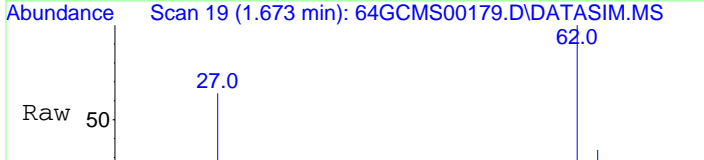


Abundance Scan 20 (1.686 min): 64GCMS00170.D\DATASIM.MS (-7) (-)



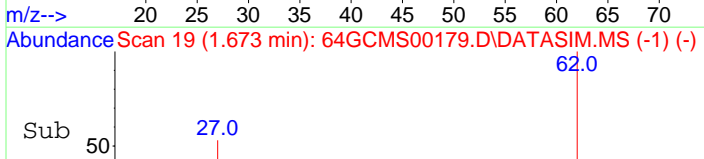
m/z-->

Abundance Scan 19 (1.673 min): 64GCMS00179.D\DATASIM.MS



m/z-->

Abundance Scan 19 (1.673 min): 64GCMS00179.D\DATASIM.MS (-1) (-)

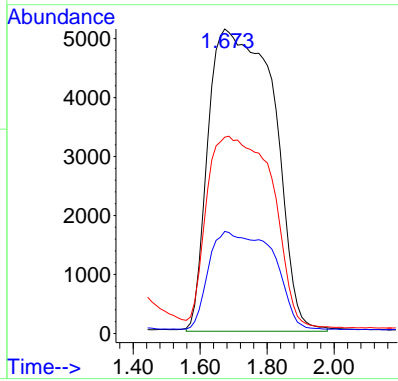


m/z-->

#2
Vinyl Chloride
Concen: 515.16 ppbv m
RT: 1.673 min Scan# 19
Delta R.T. -0.013 min
Lab File: 64GCMS00179.D
Acq: 3 May 2016 5:59 am

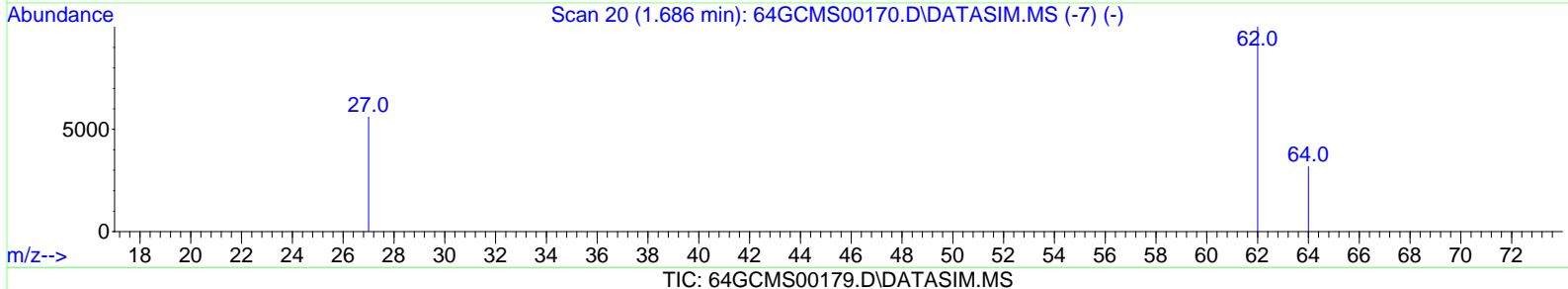
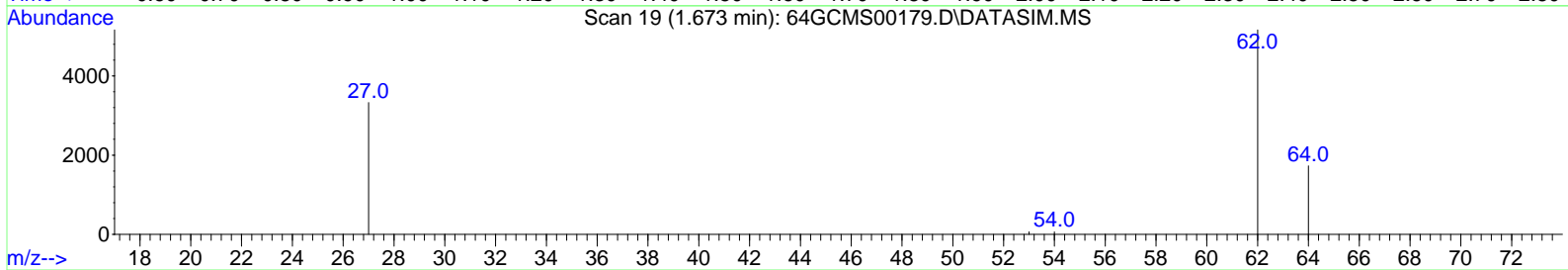
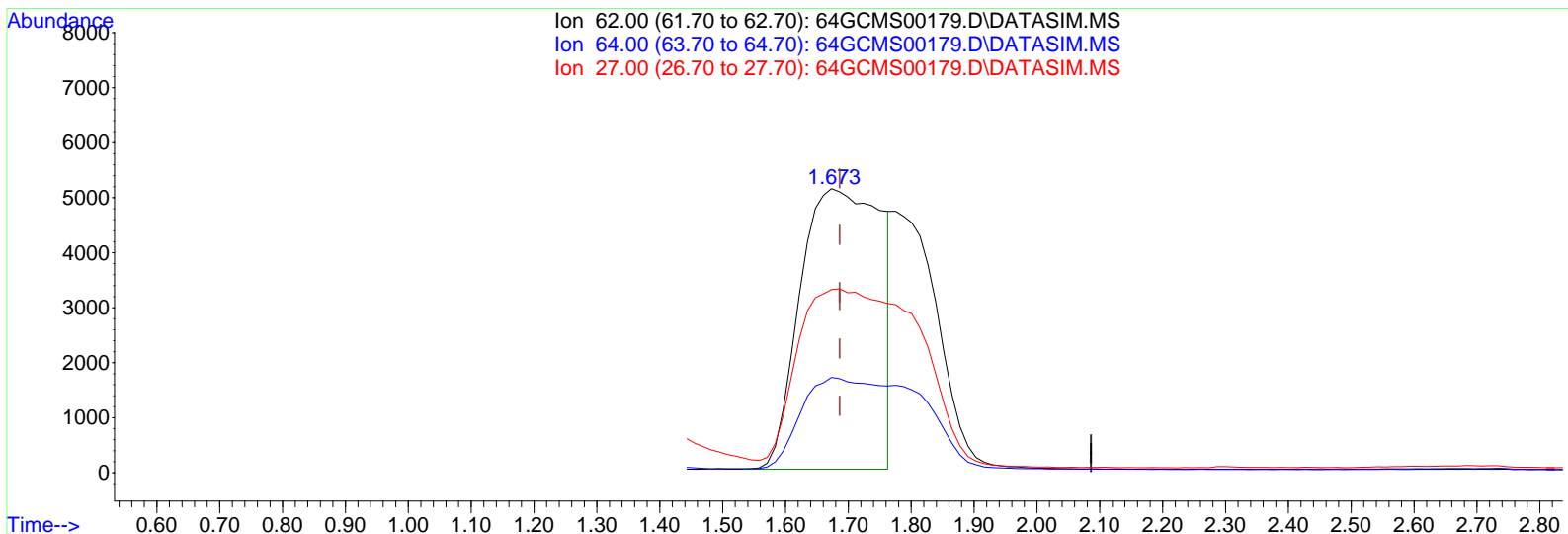
Tgt Ion: 62 Resp: 69439

Ion	Ratio	Lower	Upper
62	100		
64	21.0	23.7	35.5#
27	63.2	38.0	57.0#



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00179.D
 Acq On : 3 May 2016 5:59 am
 Operator : dlm
 Sample : STD20160503-01 \ 500 ppbv CCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 06:07:51 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 19:36:10 2016
 Response via : Initial Calibration



(2) Vinyl Chloride

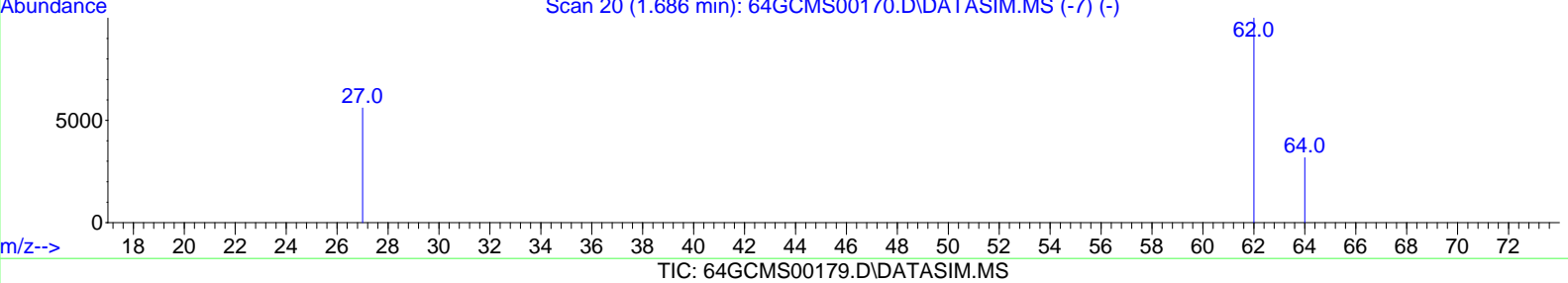
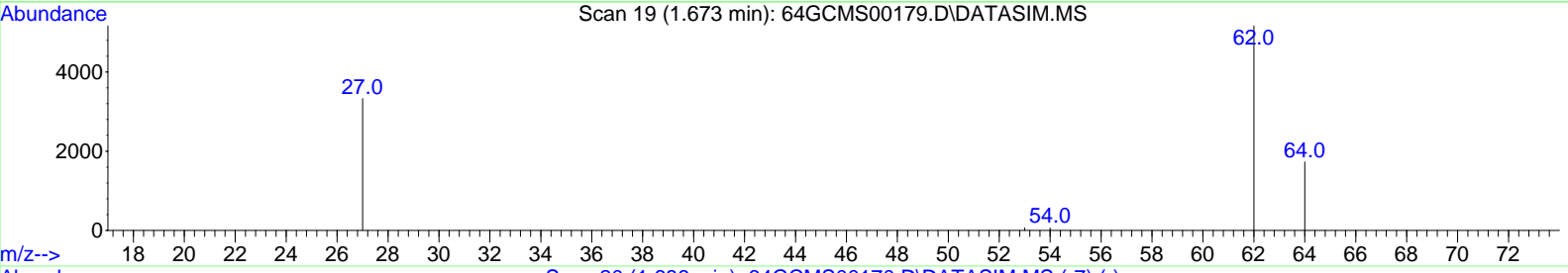
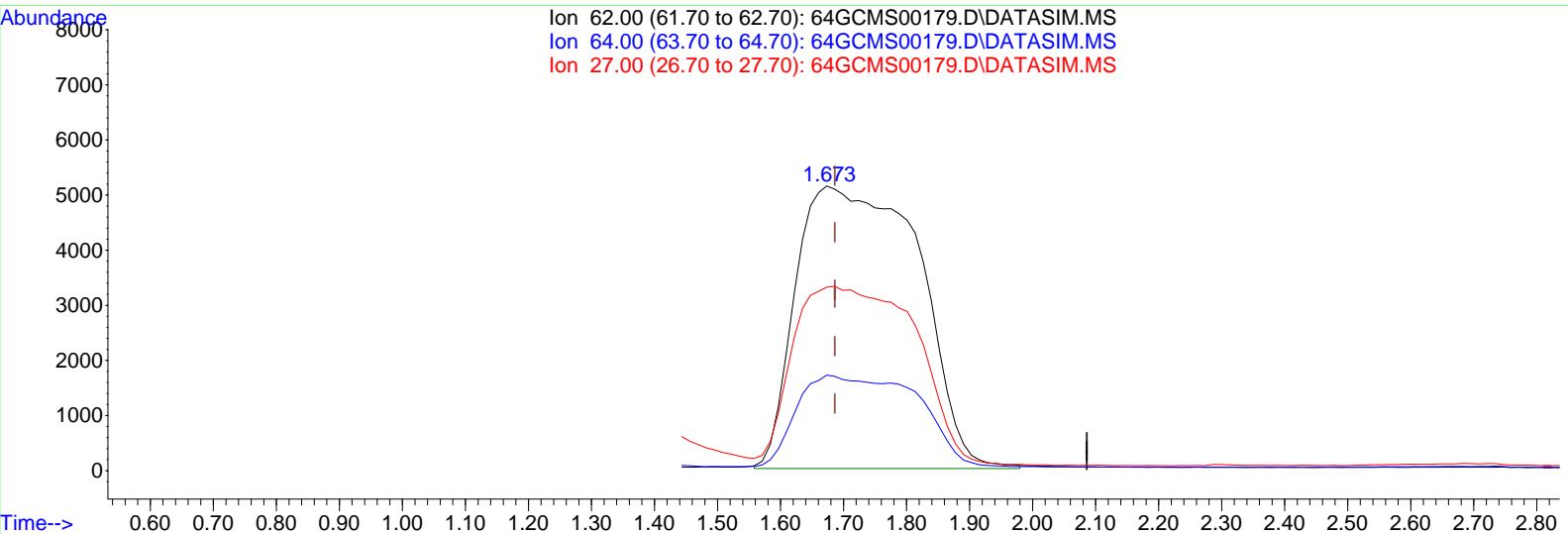
1.673min (-0.013) 339.46 ppbv

response 45756

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	31.80
27.00	47.50	95.91#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00179.D
 Acq On : 3 May 2016 5:59 am
 Operator : dlm
 Sample : STD20160503-01 \ 500 ppbv CCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 06:07:51 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 19:36:10 2016
 Response via : Initial Calibration

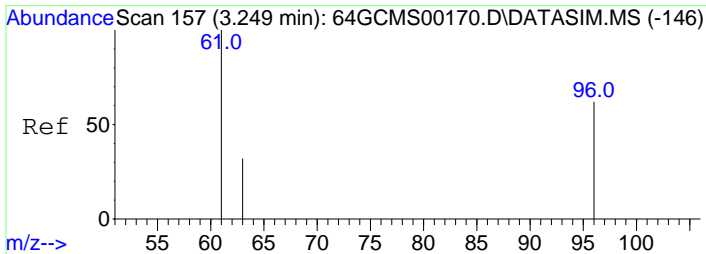


(2) Vinyl Chloride

1.673min (-0.013) 515.16 ppbv m

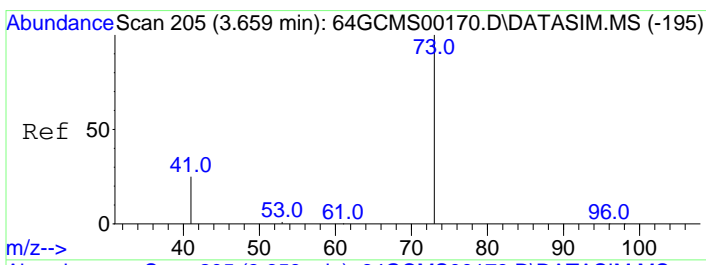
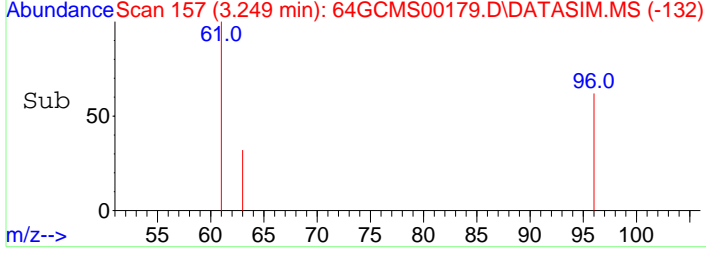
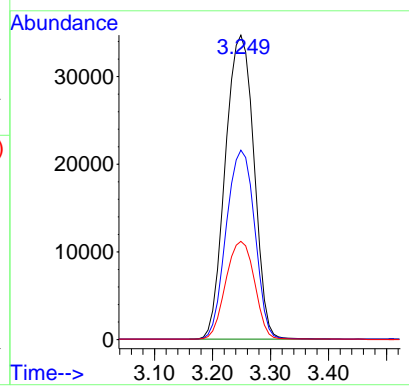
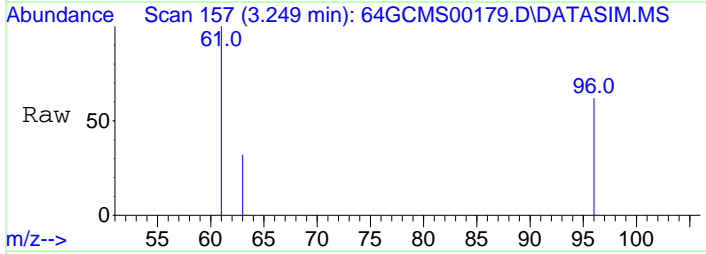
response 69439

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	20.96#
27.00	47.50	63.20#
0.00	0.00	0.00



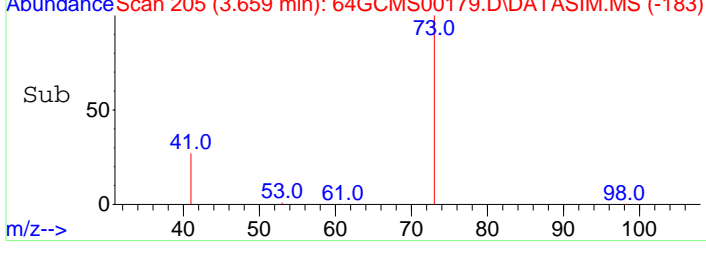
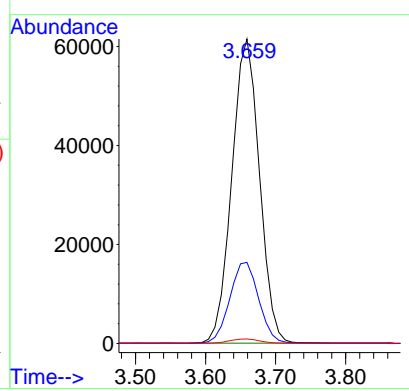
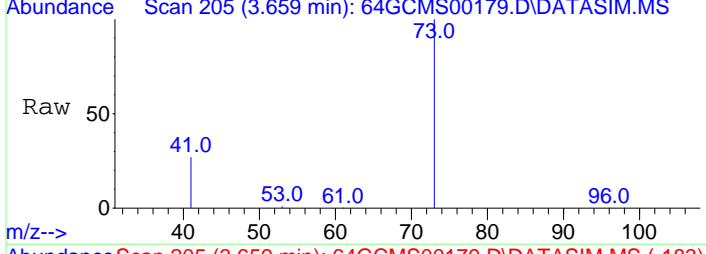
#3
 1,1-Dichloroethene
 Concen: 502.24 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

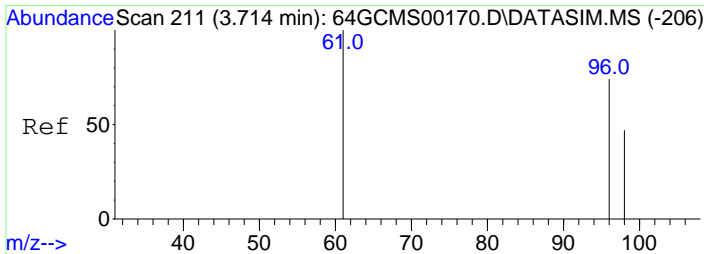
Tgt Ion	Resp	Lower	Upper
61	100		
96	62.0	40.9	61.3#
63	32.2	24.3	36.5



#4
 Methyl Tert butyl Ether
 Concen: 495.34 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

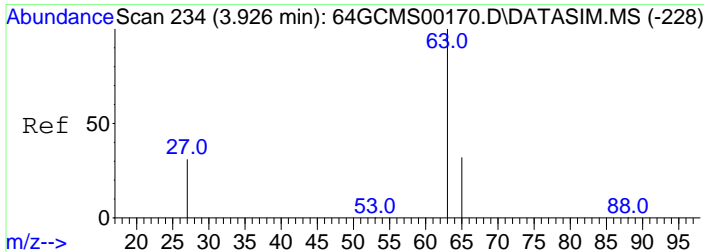
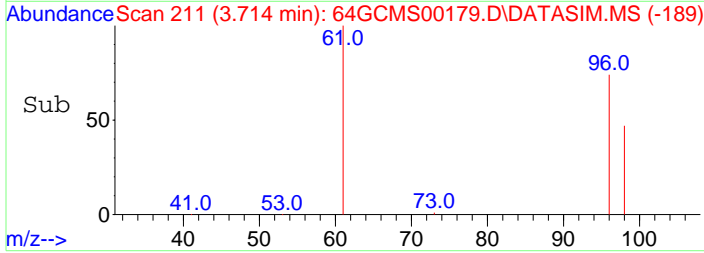
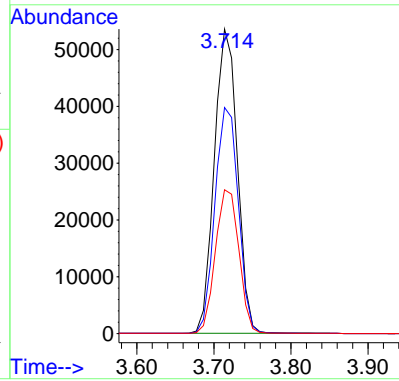
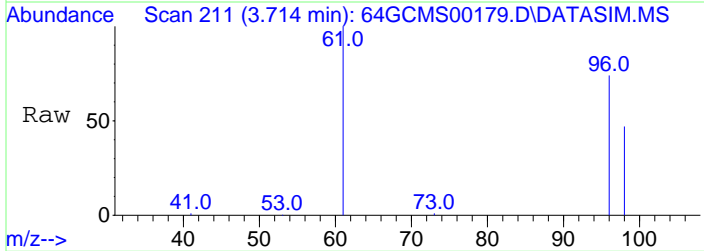
Tgt Ion	Resp	Lower	Upper
73	100		
41	27.8	20.6	30.8
53	1.5	1.2	1.8





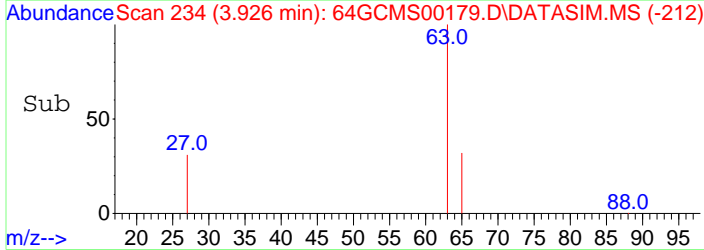
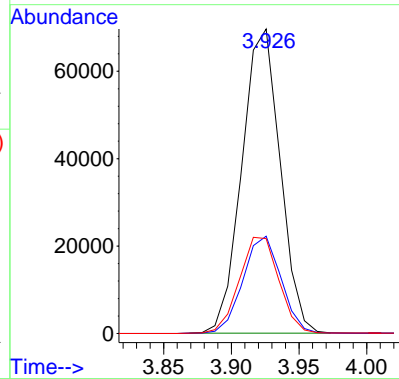
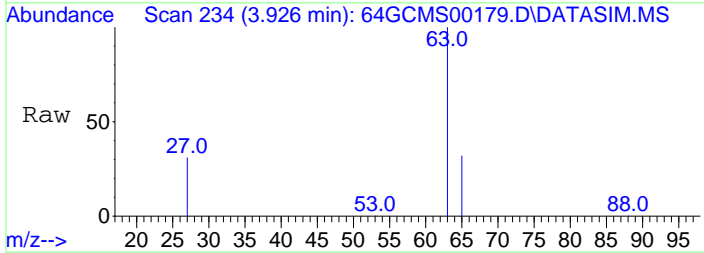
#5
 trans-1,2-Dichloroethene
 Concen: 526.07 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

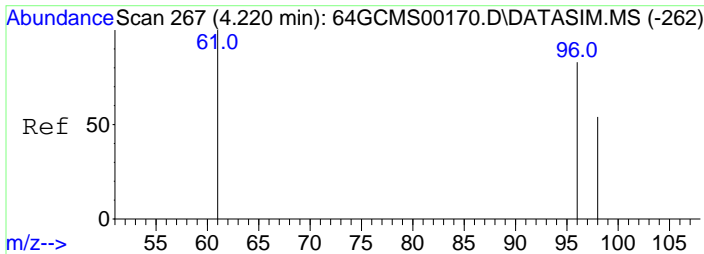
Tgt Ion	Resp	Lower	Upper
61	110870		
61	100		
96	75.7	47.8	71.6#
98	48.2	30.6	46.0#



#6
 1,1-Dichloroethane
 Concen: 493.26 ppbv
 RT: 3.926 min Scan# 234
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

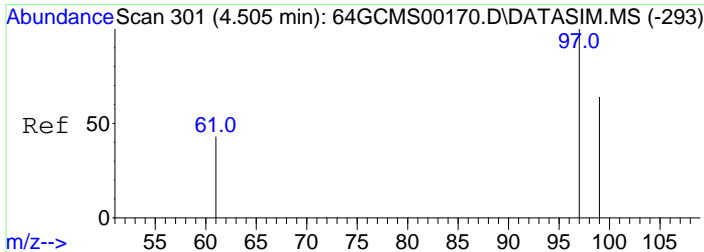
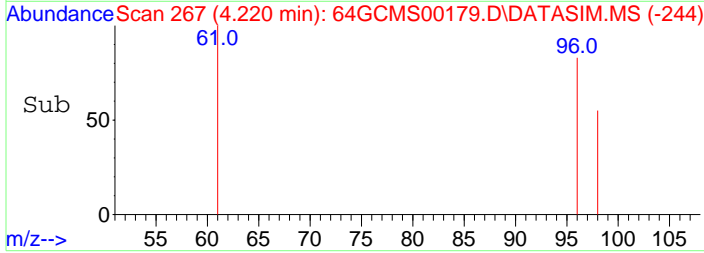
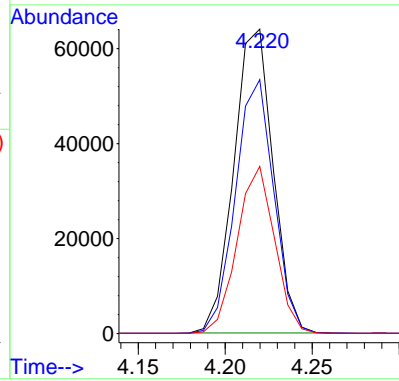
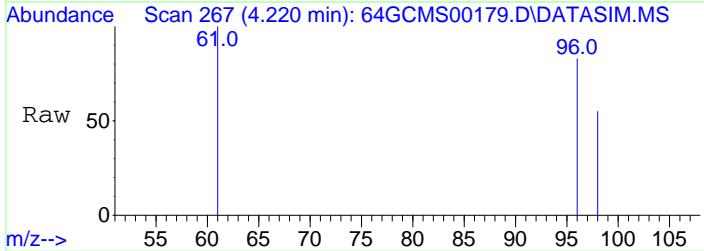
Tgt Ion	Resp	Lower	Upper
63	137632		
63	100		
65	32.0	24.8	37.2
27	33.0	21.1	31.7#





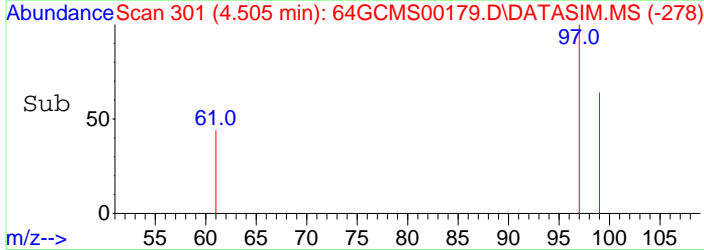
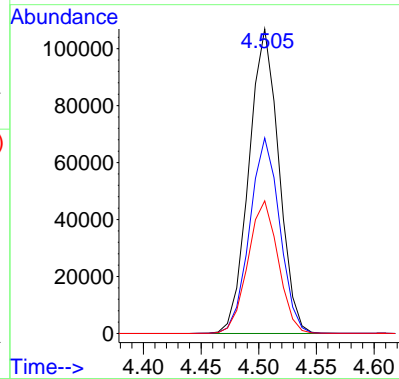
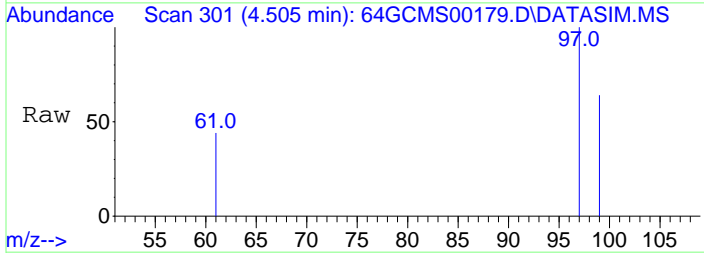
#7
 cis-1,2-Dichloroethene
 Concen: 501.32 ppbv
 RT: 4.220 min Scan# 267
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

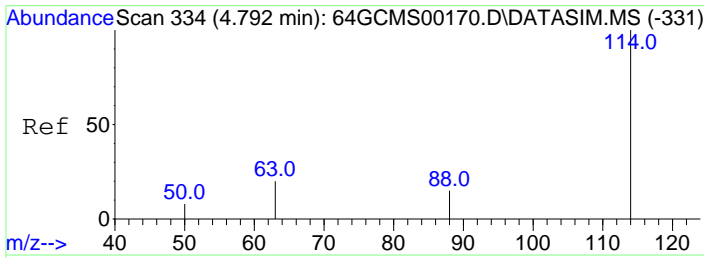
Tgt Ion:	61	Resp:	100834
Ion Ratio	Lower	Upper	
61	100		
96	81.6	52.0	78.0#
98	52.3	33.4	50.2#



#8
 1,1,1-Trichloroethane
 Concen: 480.17 ppbv
 RT: 4.505 min Scan# 301
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

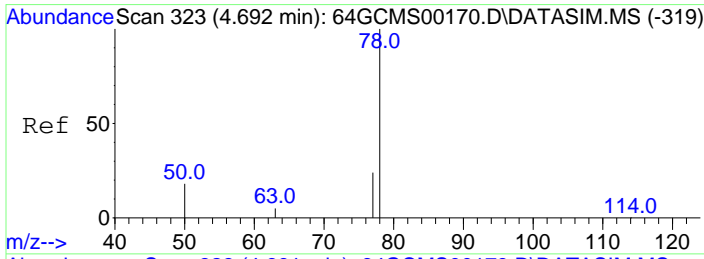
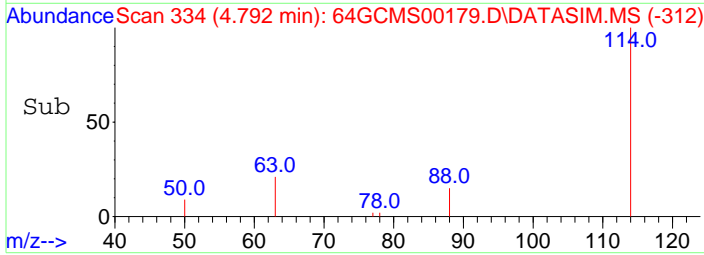
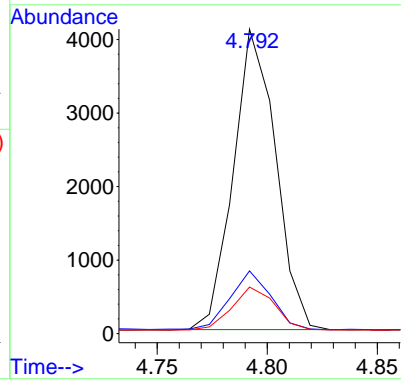
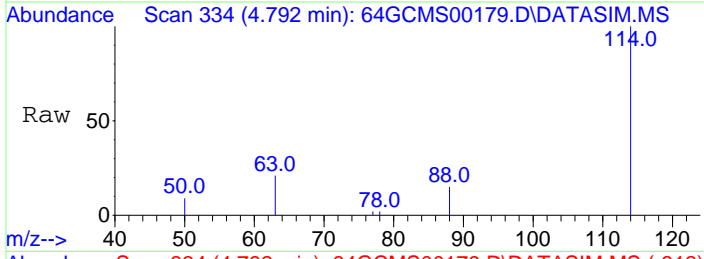
Tgt Ion:	97	Resp:	194824
Ion Ratio	Lower	Upper	
97	100		
99	64.3	51.5	77.3
61	44.1	38.6	58.0





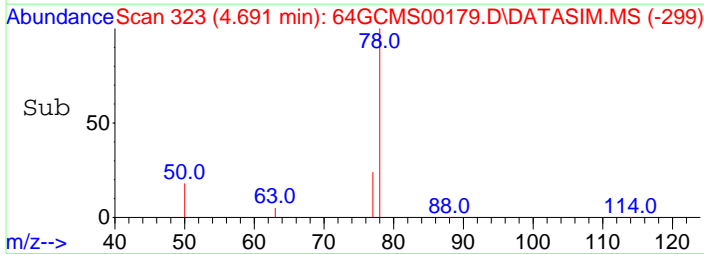
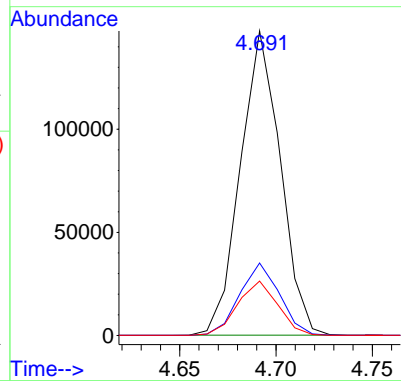
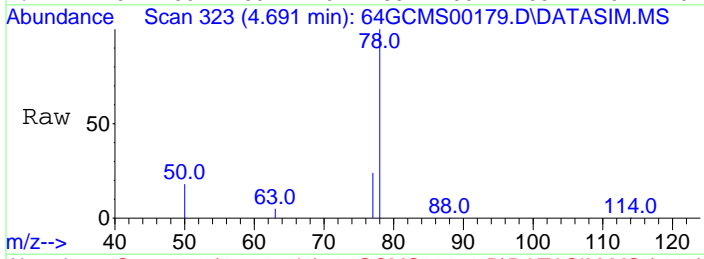
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

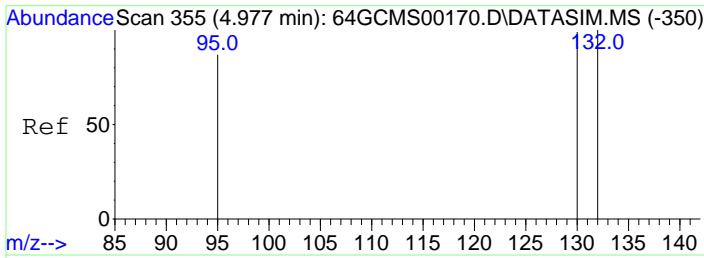
Tgt Ion	Resp	Lower	Upper
114	100		
63	19.0	19.2	28.8#
88	14.4	13.7	20.5



#10
 Benzene
 Concen: 490.09 ppbv
 RT: 4.691 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

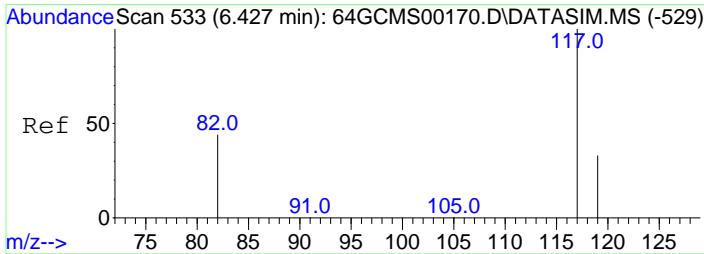
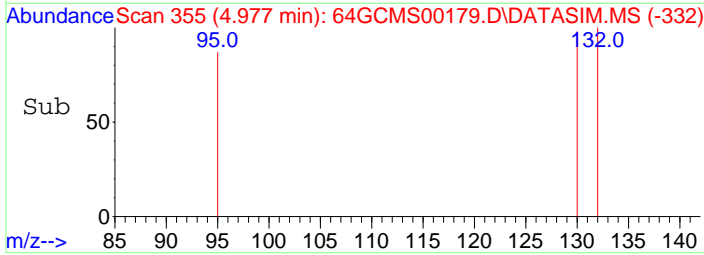
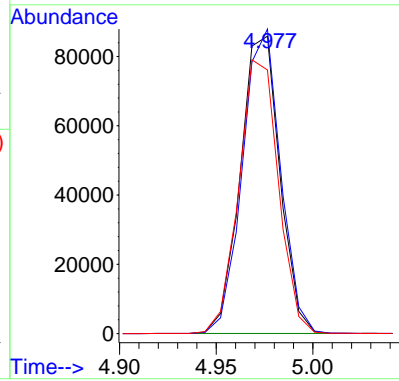
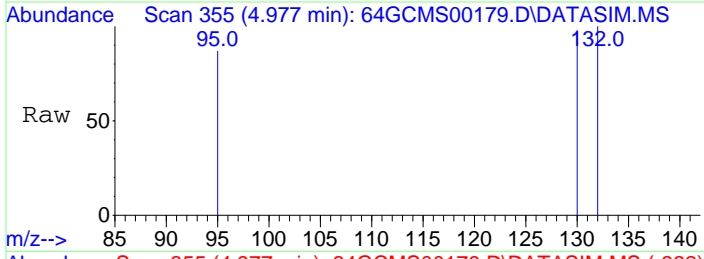
Tgt Ion	Resp	Lower	Upper
78	100		
77	23.7	18.2	27.4
50	17.9	16.6	24.8





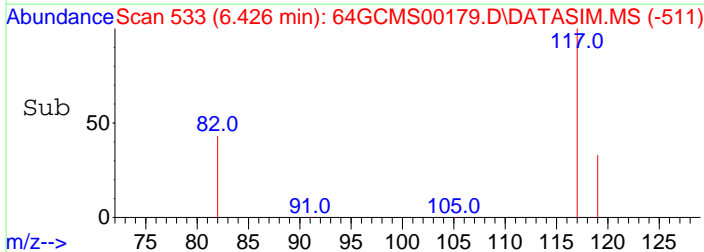
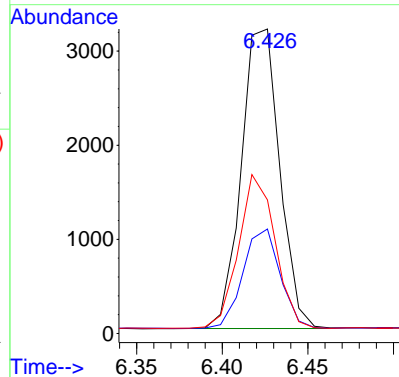
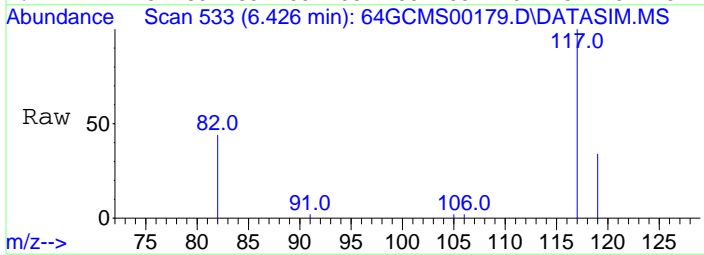
#11
 Trichloroethene
 Concen: 451.82 ppbv
 RT: 4.977 min Scan# 355
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

Tgt Ion	Resp	Lower	Upper
130	100		
132	98.7	76.9	115.3
95	92.2	81.5	122.3

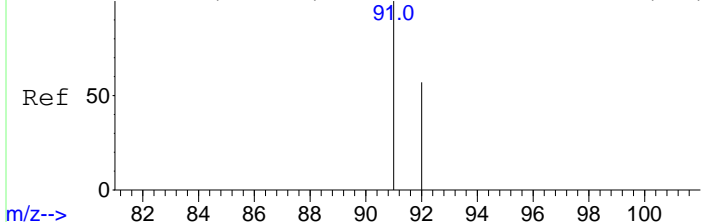


#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.1	25.8	38.6
82	48.7	45.6	68.4

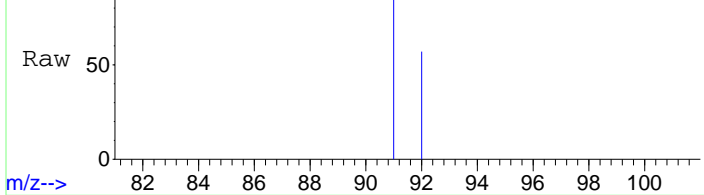


Abundance Scan 433 (5.583 min): 64GCMS00170.D\DATASIM.MS (-428)



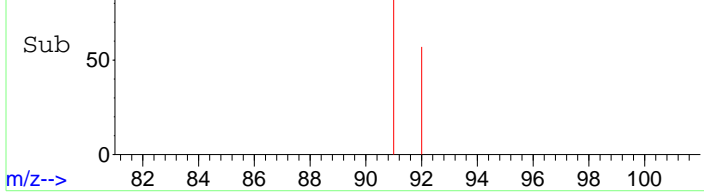
m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00179.D\DATASIM.MS



m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00179.D\DATASIM.MS (-406)

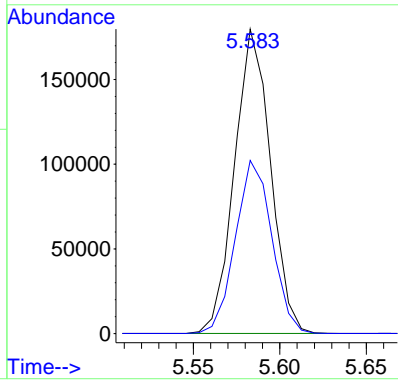


m/z-->

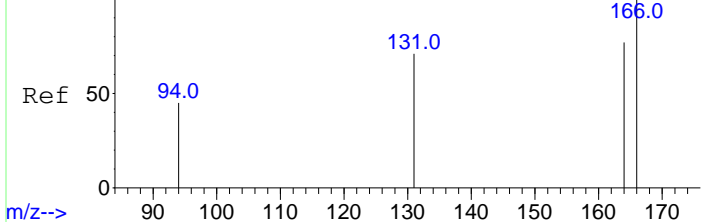
#13

Toluene
Concen: 503.71 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00179.D
Acq: 3 May 2016 5:59 am

Tgt Ion	Resp	Lower	Upper
91	100		
92	57.6	48.0	72.0

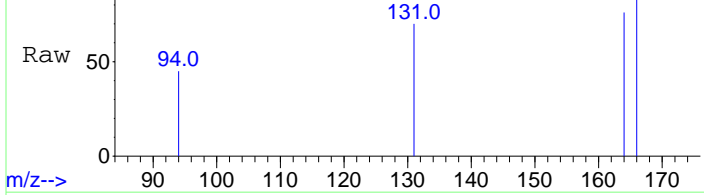


Abundance Scan 484 (5.988 min): 64GCMS00170.D\DATASIM.MS (-479)



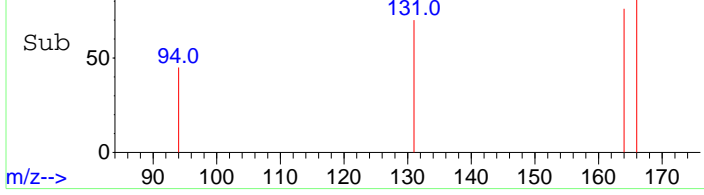
m/z-->

Abundance Scan 484 (5.988 min): 64GCMS00179.D\DATASIM.MS



m/z-->

Abundance Scan 484 (5.988 min): 64GCMS00179.D\DATASIM.MS (-461)

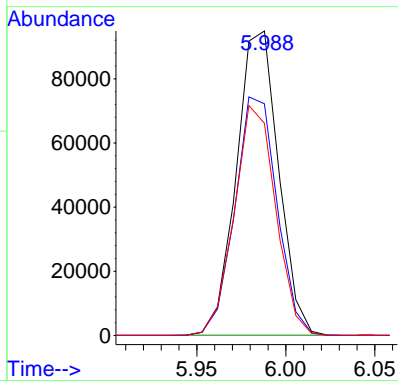


m/z-->

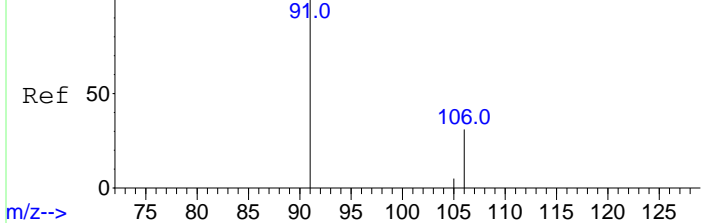
#14

Tetrachloroethene
Concen: 439.13 ppbv
RT: 5.988 min Scan# 484
Delta R.T. -0.000 min
Lab File: 64GCMS00179.D
Acq: 3 May 2016 5:59 am

Tgt Ion	Resp	Lower	Upper
166	100		
164	78.3	63.4	95.0
131	73.8	63.4	95.0

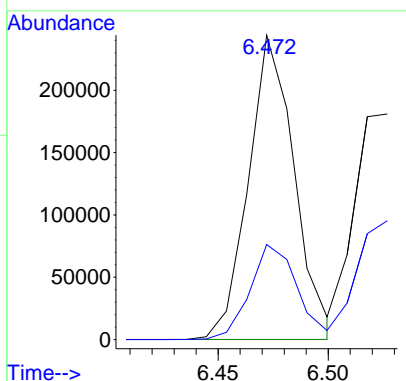
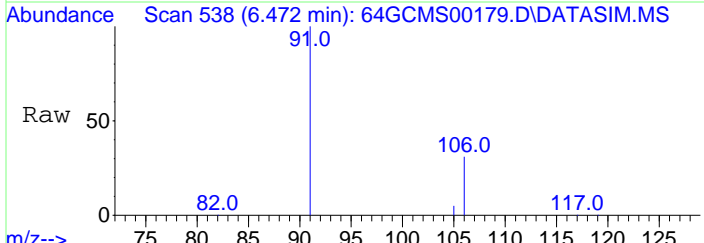


Abundance Scan 538 (6.472 min): 64GCMS00170.D\DATASIM.MS (-534)

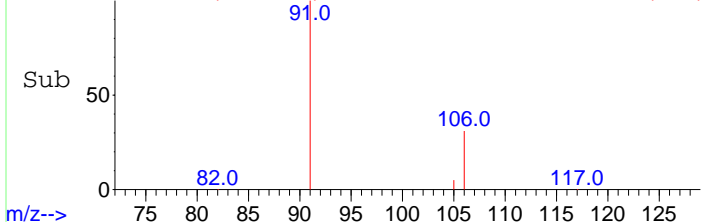


#15
 Ethyl Benzene
 Concen: 554.12 ppbv
 RT: 6.472 min Scan# 538
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

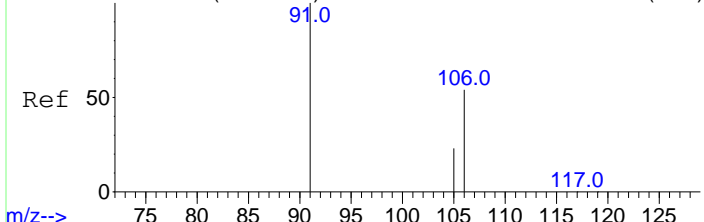
Tgt Ion	Resp	Lower	Upper
91	100		
106	32.2	24.2	36.2



Abundance Scan 538 (6.472 min): 64GCMS00179.D\DATASIM.MS (-516)

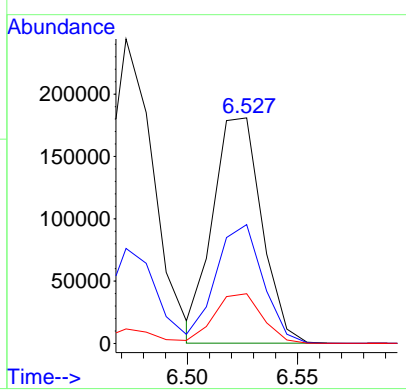
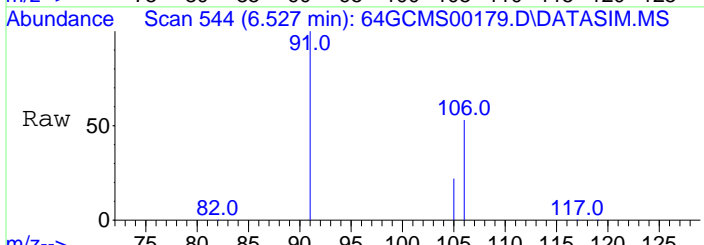


Abundance Scan 544 (6.527 min): 64GCMS00170.D\DATASIM.MS (-541)

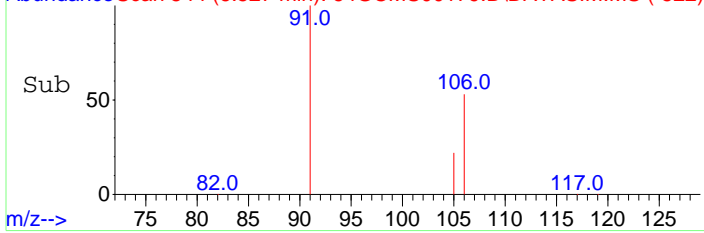


#16
 m,p-Xylene
 Concen: 541.06 ppbv
 RT: 6.527 min Scan# 544
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

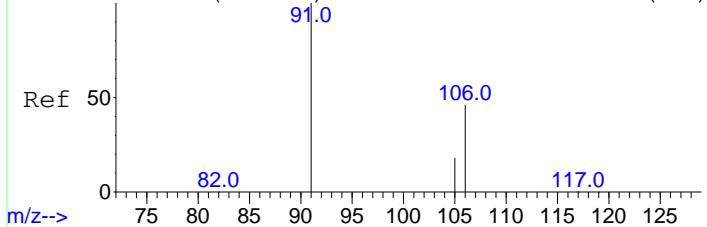
Tgt Ion	Resp	Lower	Upper
91	100		
106	50.7	37.7	56.5
105	21.6	17.0	25.4



Abundance Scan 544 (6.527 min): 64GCMS00179.D\DATASIM.MS (-522)



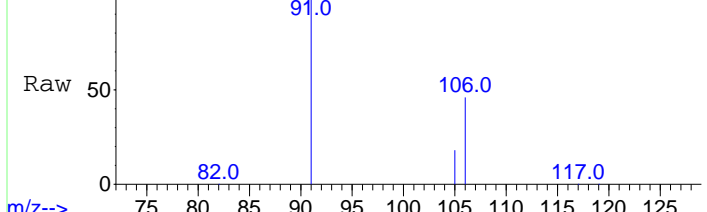
Abundance Scan 573 (6.792 min): 64GCMS00170.D\DATASIM.MS (-569)



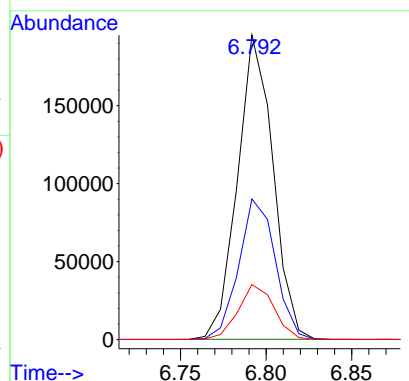
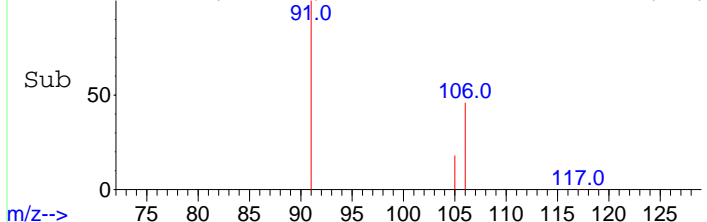
#17
 o-Xylene
 Concen: 501.81 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00179.D
 Acq: 3 May 2016 5:59 am

Tgt Ion	Resp	Lower	Upper
91	281568		
106	47.6	35.4	53.2
105	18.3	14.0	21.0

Abundance Scan 573 (6.792 min): 64GCMS00179.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00179.D\DATASIM.MS (-551)



LOW LEVEL CALIBRATION VERIFICATION

Data File 64GCMS00180
 Standard Number STD20160503-02
 Standard Name 5.0 ppbv STD LLCCV
 Loop Size 5 mL

Sample Multiplier: Units Date Analyzed	1 ppbv 5/3/2016	Primary Source Actual Values ppbv	Percent Difference %D	
Vinyl Chloride	4.68	5.1	-8	
1,1-Dichloroethene	4.74	5.1	-6	
Methyl Tert Butyl Ether	3.86	5.0	-23	
trans-1,2-Dichloroethene	4.72	5.2	-9	
1,1-Dichloroethane	4.76	5.1	-7	
cis-1,2-Dichloroethene	4.52	5.2	-12	
1,1,1-Trichloroethane	4.60	5.0	-8	
Benzene	5.12	5.1	0	
Trichloroethene	4.78	5.0	-5	
Toluene	4.12	5.1	-19	
Tetrachloroethene	4.28	5.1	-15	
Ethyl Benzene	3.72	5.4	-31	
m,p-Xylene	3.20	5.1	-37	
o-Xylene	3.10	5.1	-39	

%D = ± 50%

Primary Standard Cylinder # CC-128244

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00180.D
 Acq On : 3 May 2016 6:13 am
 Operator : dlm
 Sample : STD20160503-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

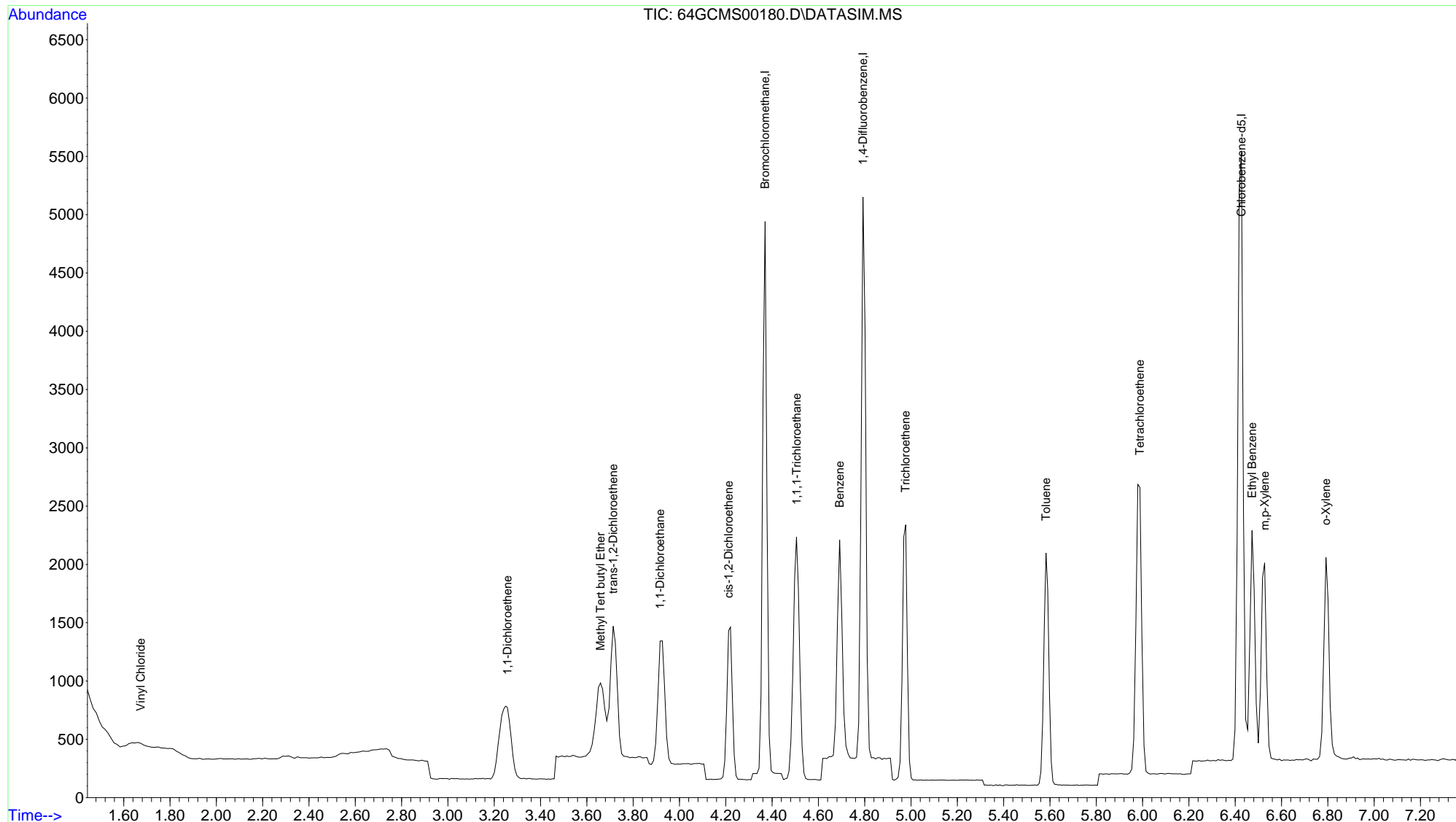
Quant Time: May 03 07:41:08 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Bromochloromethane	4.370	49	2095	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.792	114	4602	10.00	ppbv		0.00
12) Chlorobenzene-d5	6.427	117	4476	10.00	ppbv		0.00
Target Compounds							
							Qvalue
2) Vinyl Chloride	1.673	62	638m	4.68	ppbv		
3) 1,1-Dichloroethene	3.257	61	1136	4.74	ppbv		89
4) Methyl Tert butyl Ether	3.659	73	1327	3.86	ppbv	#	82
5) trans-1,2-Dichloroethene	3.714	61	1006	4.72	ppbv	#	84
6) 1,1-Dichloroethane	3.916	63	1344m	4.76	ppbv		
7) cis-1,2-Dichloroethene	4.212	61	921m	4.52	ppbv		
8) 1,1,1-Trichloroethane	4.505	97	1888	4.60	ppbv		96
10) Benzene	4.692	78	1878m	5.12	ppbv		
11) Trichloroethene	4.977	130	1089	4.78	ppbv		97
13) Toluene	5.583	91	1915	4.12	ppbv		96
14) Tetrachloroethene	5.988	166	1373	4.28	ppbv		97
15) Ethyl Benzene	6.472	91	2133	3.72	ppbv		97
16) m,p-Xylene	6.527	91	1486	3.20	ppbv		96
17) o-Xylene	6.792	91	1565	3.10	ppbv		96

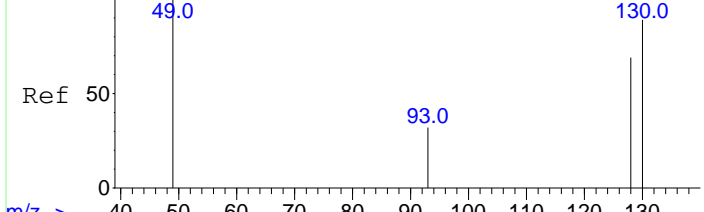
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00180.D
 Acq On : 3 May 2016 6:13 am
 Operator : dlm
 Sample : STD20160503-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:41:08 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

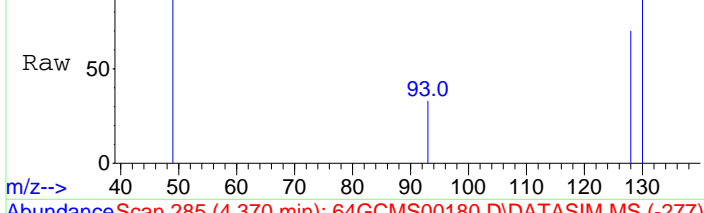


Abundance Scan 285 (4.370 min): 64GCMS00179.D\DATASIM.MS (-281)



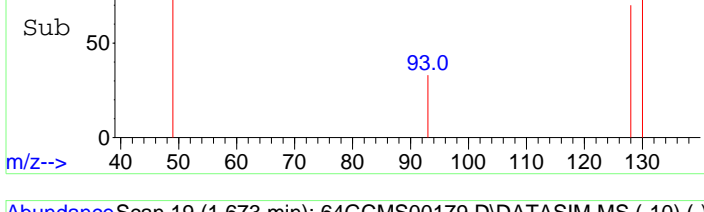
m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00180.D\DATASIM.MS



m/z-->

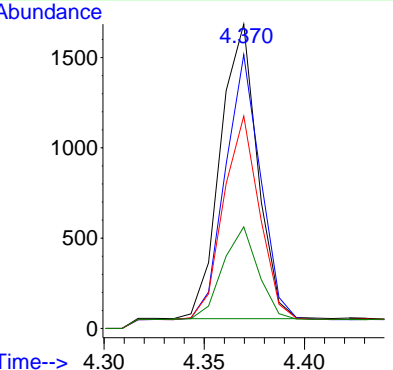
Abundance Scan 285 (4.370 min): 64GCMS00180.D\DATASIM.MS (-277)



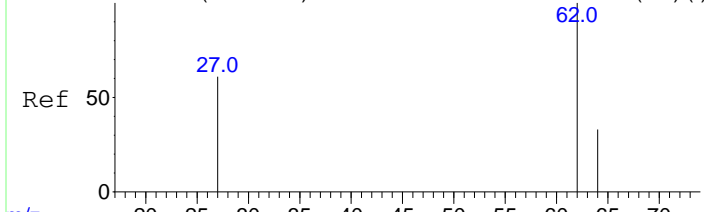
m/z-->

#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00180.D
Acq: 3 May 2016 6:13 am

Tgt Ion	Resp	Lower	Upper
49	100		
130	85.3	46.3	69.5#
128	67.2	35.7	53.5#
93	29.9	17.6	26.4#

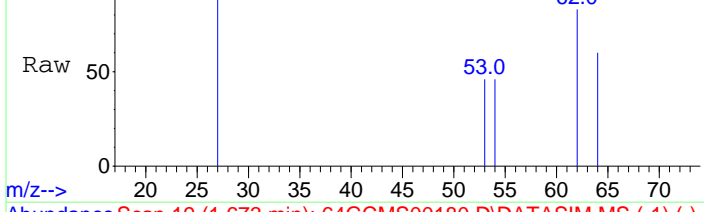


Abundance Scan 19 (1.673 min): 64GCMS00179.D\DATASIM.MS (-10) (-)



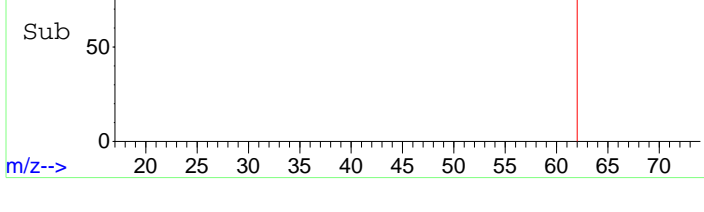
m/z-->

Abundance Scan 19 (1.673 min): 64GCMS00180.D\DATASIM.MS



m/z-->

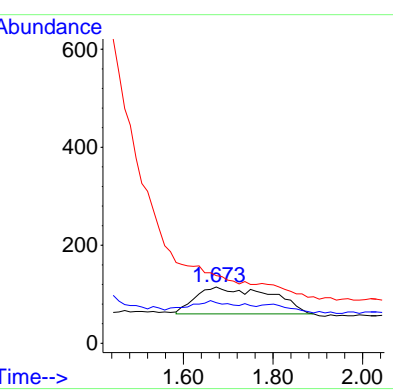
Abundance Scan 19 (1.673 min): 64GCMS00180.D\DATASIM.MS (-1) (-)



m/z-->

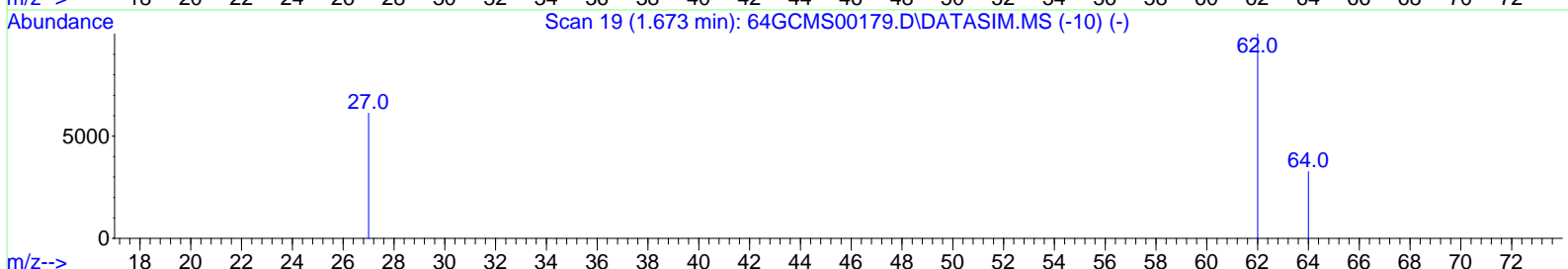
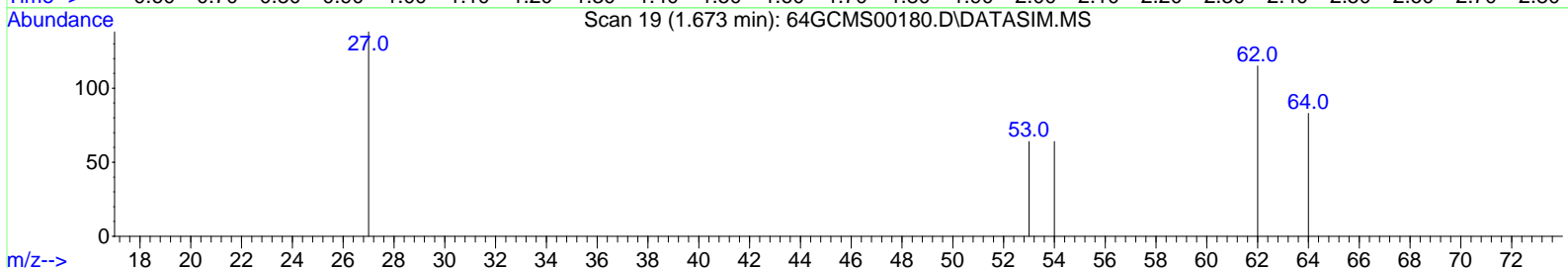
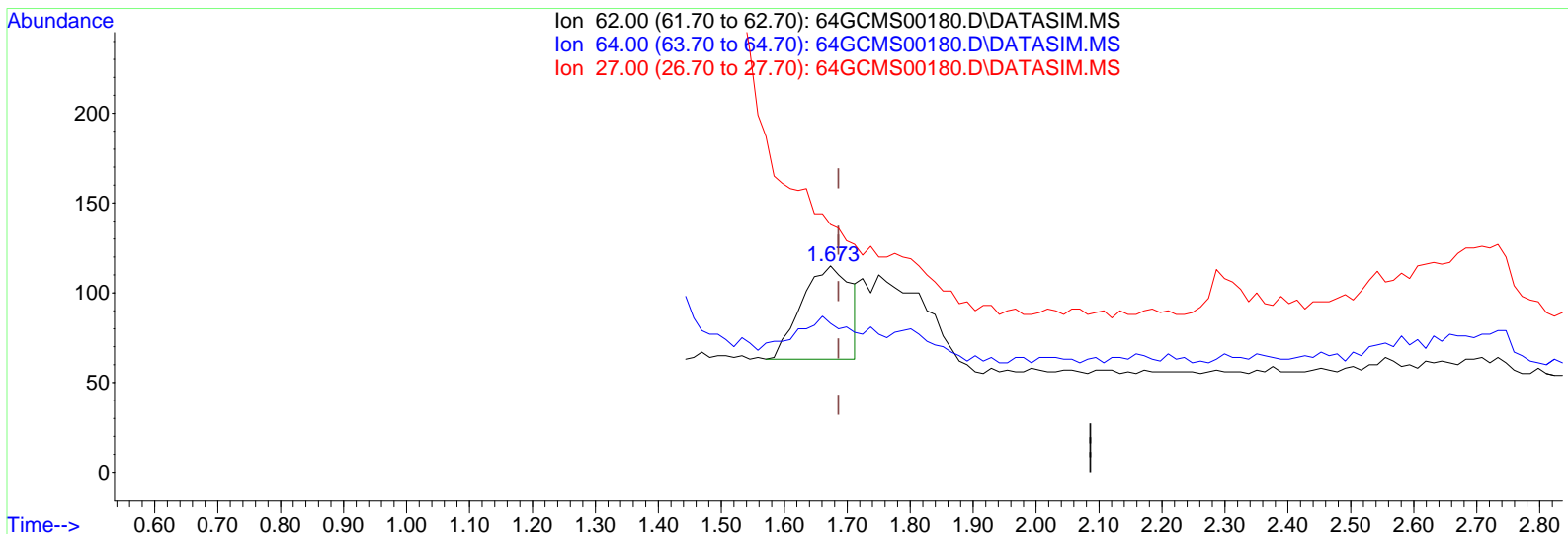
#2
Vinyl Chloride
Concen: 4.68 ppbv m
RT: 1.673 min Scan# 19
Delta R.T. -0.013 min
Lab File: 64GCMS00180.D
Acq: 3 May 2016 6:13 am

Tgt Ion	Resp	Lower	Upper
62	100		
64	16.5	23.7	35.5#
27	0.0	38.0	57.0#



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00180.D
 Acq On : 3 May 2016 6:13 am
 Operator : dlm
 Sample : STD20160503-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:38:50 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



TIC: 64GCMS00180.D\DATASIM.MS

(2) Vinyl Chloride

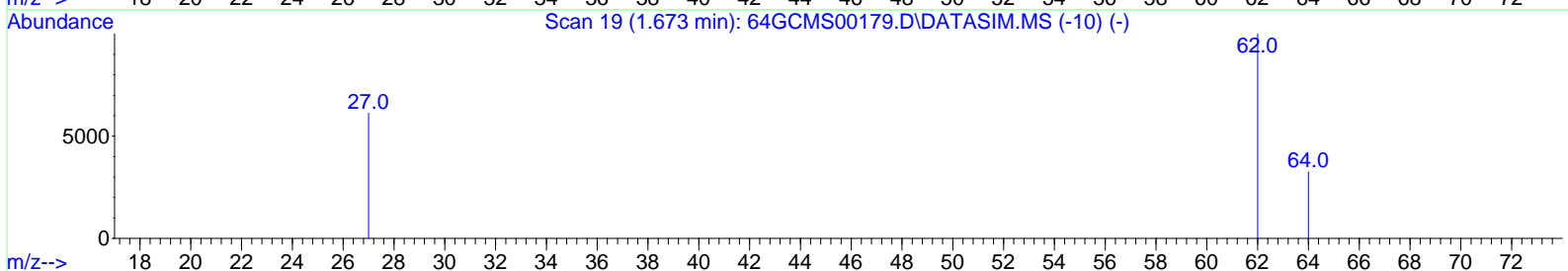
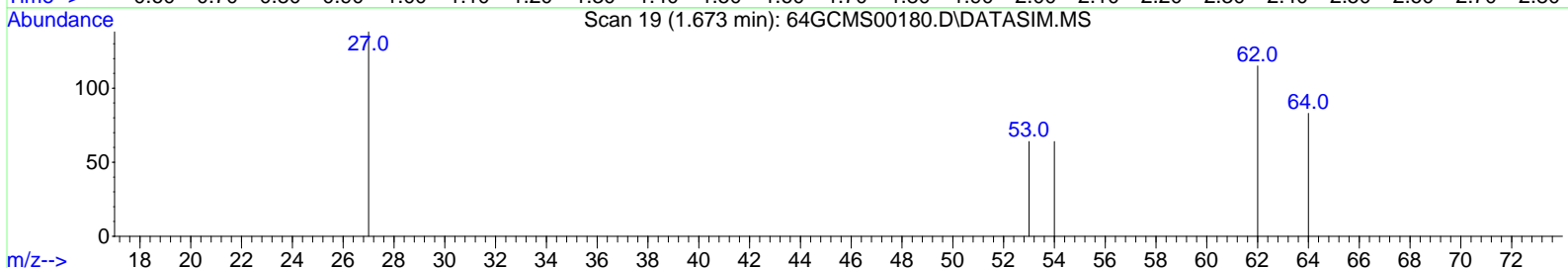
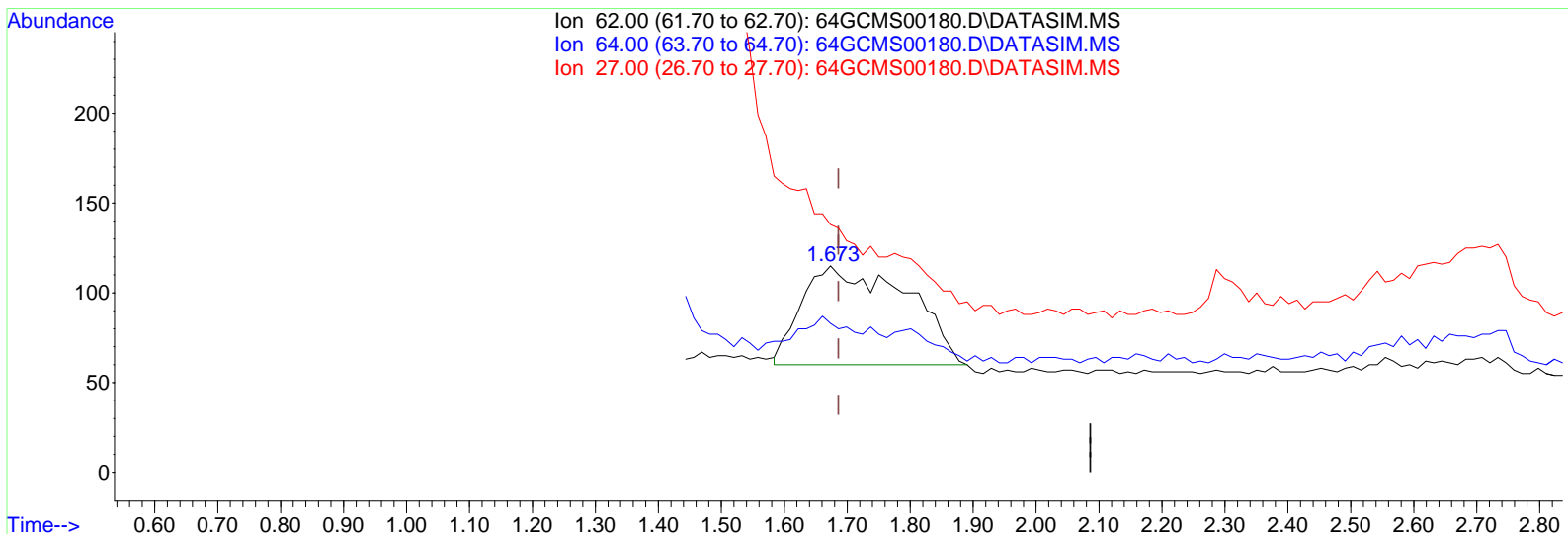
1.673min (-0.013) 2.08 ppbv

response 284

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	36.97#
27.00	47.50	0.00#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00180.D
 Acq On : 3 May 2016 6:13 am
 Operator : dlm
 Sample : STD20160503-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:38:50 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



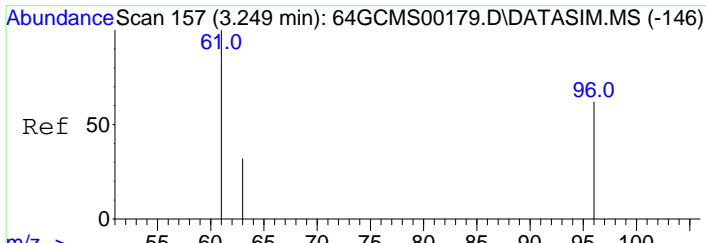
TIC: 64GCMS00180.D\DATASIM.MS

(2) Vinyl Chloride

1.673min (-0.013) 4.68 ppbv m

response 638

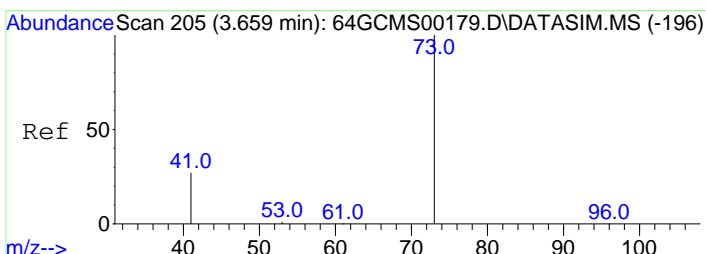
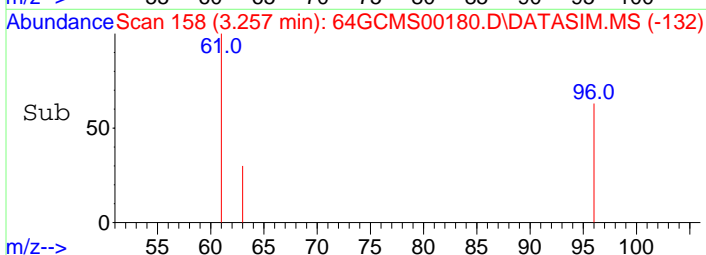
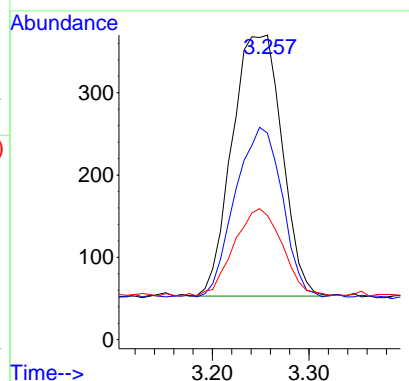
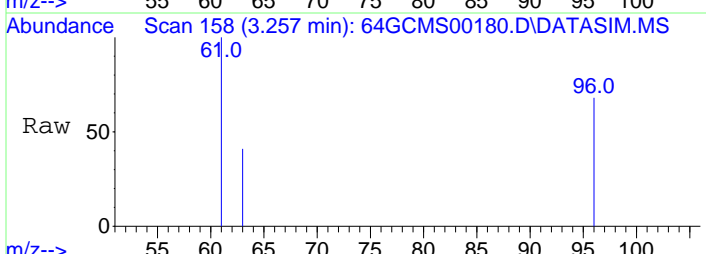
Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	16.46#
27.00	47.50	0.00#
0.00	0.00	0.00



#3
 1,1-Dichloroethene
 Concen: 4.74 ppbv
 RT: 3.257 min Scan# 158
 Delta R.T. 0.008 min
 Lab File: 64GCMS00180.D
 Acq: 3 May 2016 6:13 am

Tgt Ion: 61 Resp: 1136

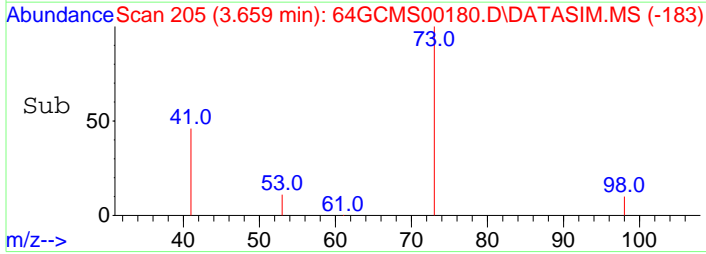
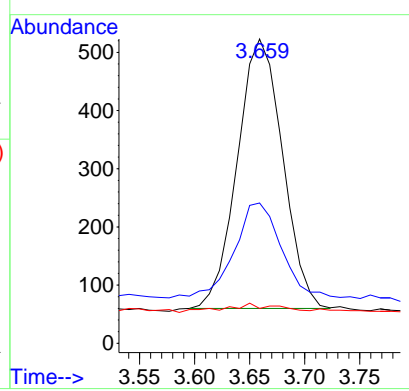
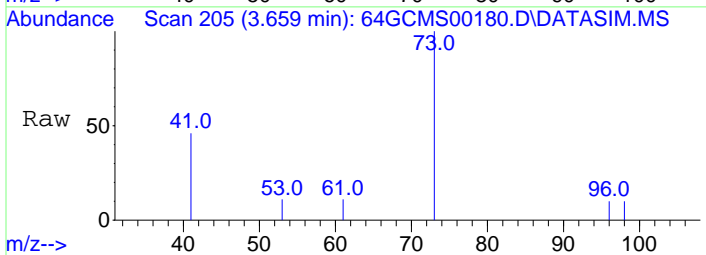
Ion	Ratio	Lower	Upper
61	100		
96	61.0	40.9	61.3
63	33.1	24.3	36.5

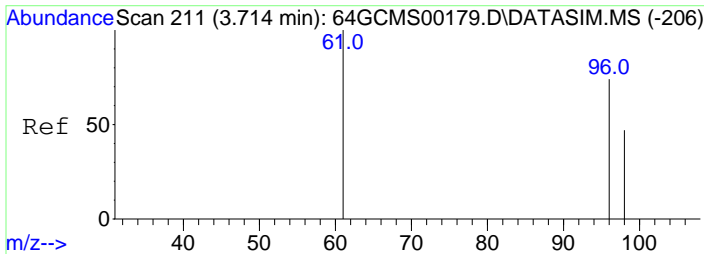


#4
 Methyl Tert butyl Ether
 Concen: 3.86 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. 0.000 min
 Lab File: 64GCMS00180.D
 Acq: 3 May 2016 6:13 am

Tgt Ion: 73 Resp: 1327

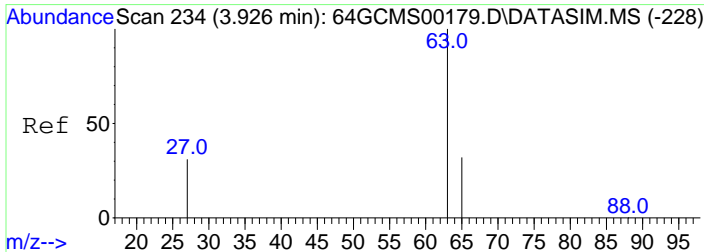
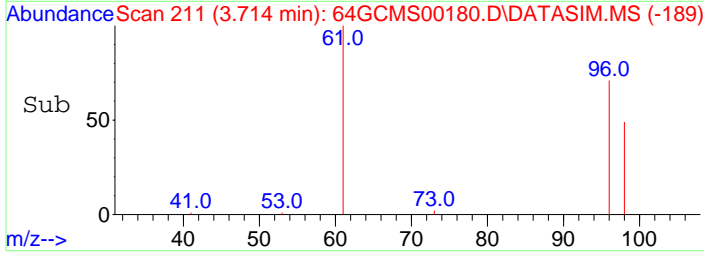
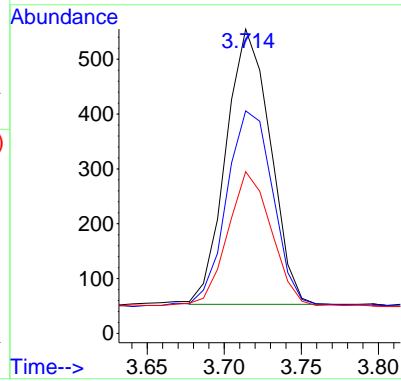
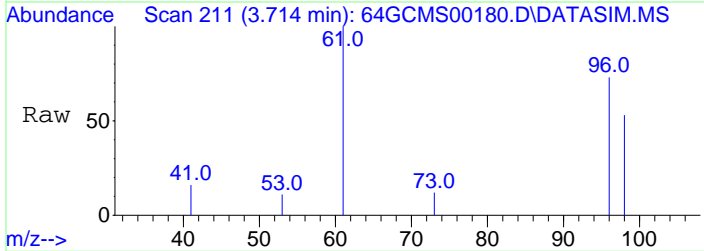
Ion	Ratio	Lower	Upper
73	100		
41	35.4	20.6	30.8#
53	1.0	1.2	1.8#





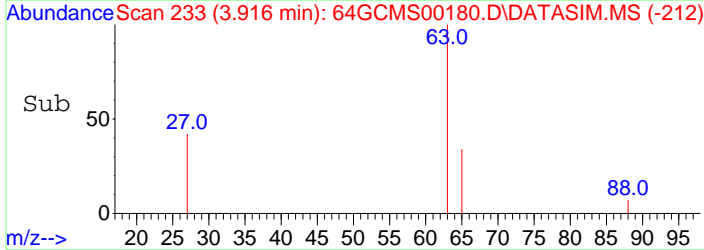
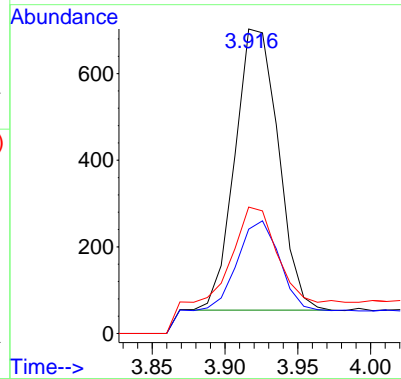
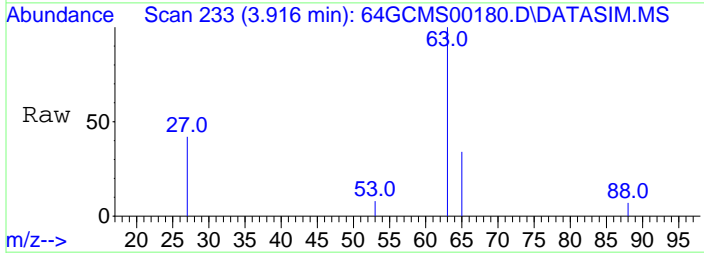
#5
 trans-1,2-Dichloroethene
 Concen: 4.72 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. 0.000 min
 Lab File: 64GCMS00180.D
 Acq: 3 May 2016 6:13 am

Tgt Ion	Resp	Lower	Upper
61	1006		
61	100		
96	73.0	47.8	71.6#
98	47.2	30.6	46.0#



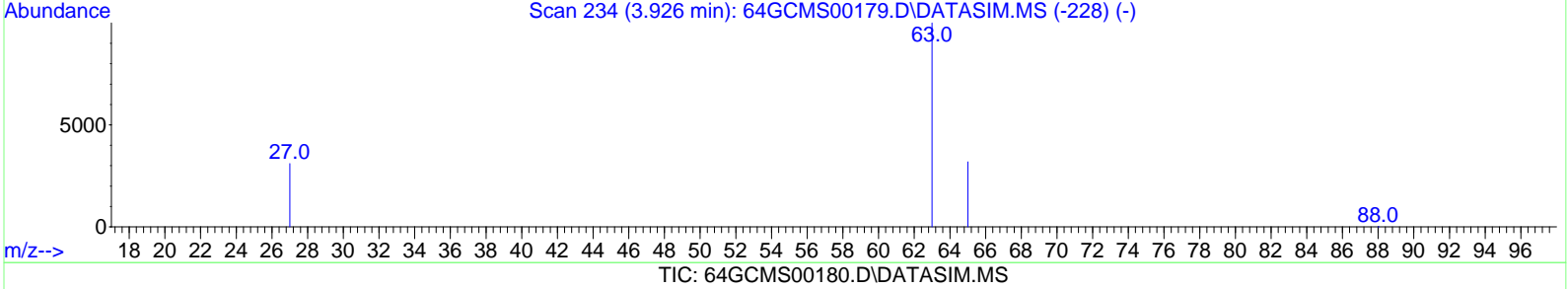
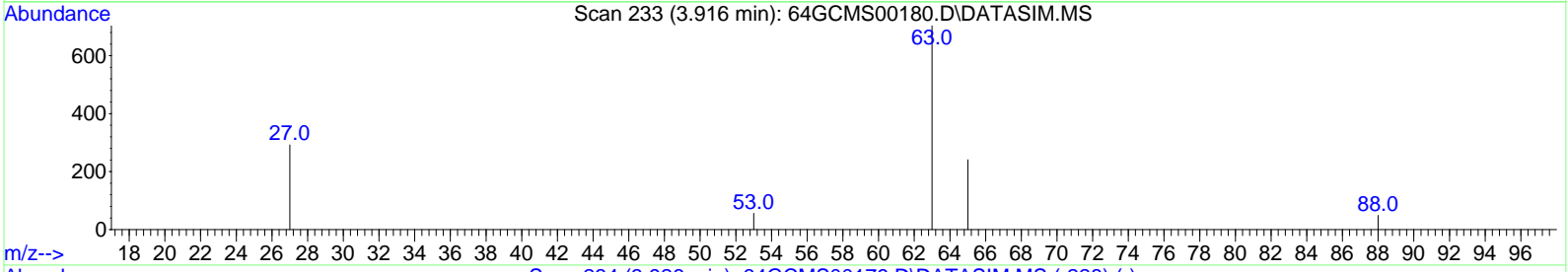
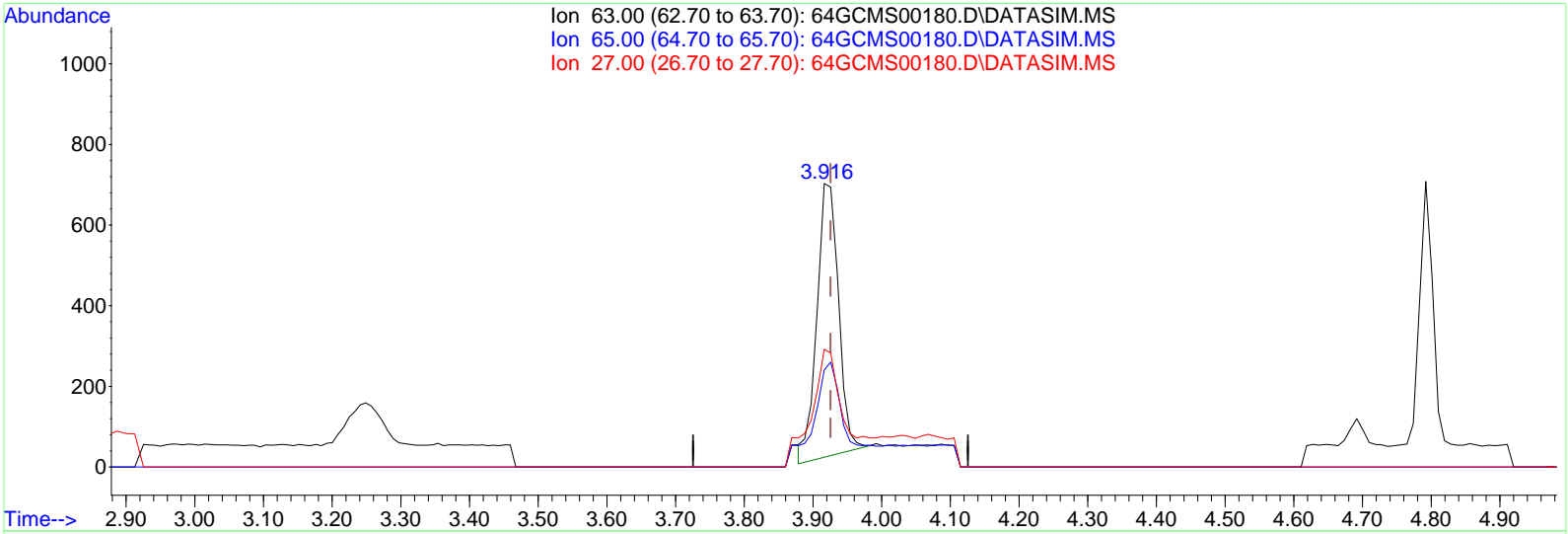
#6
 1,1-Dichloroethane
 Concen: 4.76 ppbv m
 RT: 3.916 min Scan# 233
 Delta R.T. -0.009 min
 Lab File: 64GCMS00180.D
 Acq: 3 May 2016 6:13 am

Tgt Ion	Resp	Lower	Upper
63	1344		
63	100		
65	40.3	24.8	37.2#
27	44.2	21.1	31.7#



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00180.D
 Acq On : 3 May 2016 6:13 am
 Operator : dlm
 Sample : STD20160503-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:38:50 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



(6) 1,1-Dichloroethane

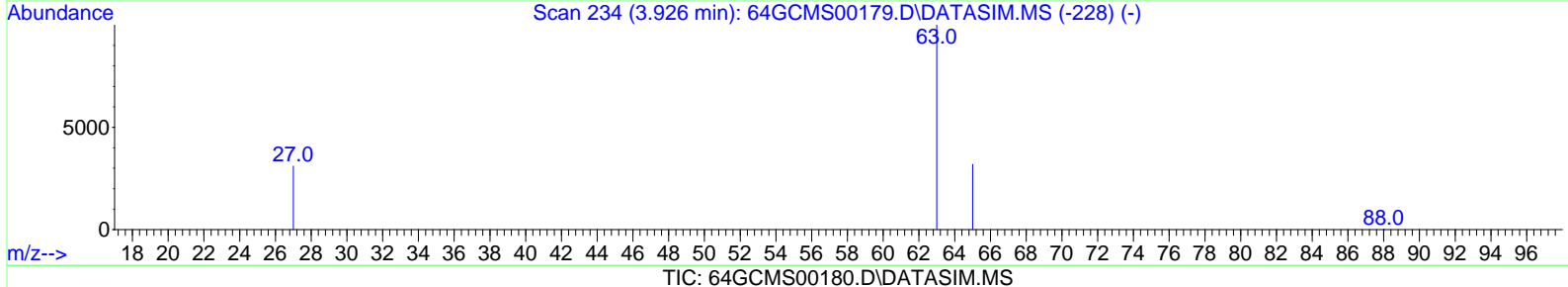
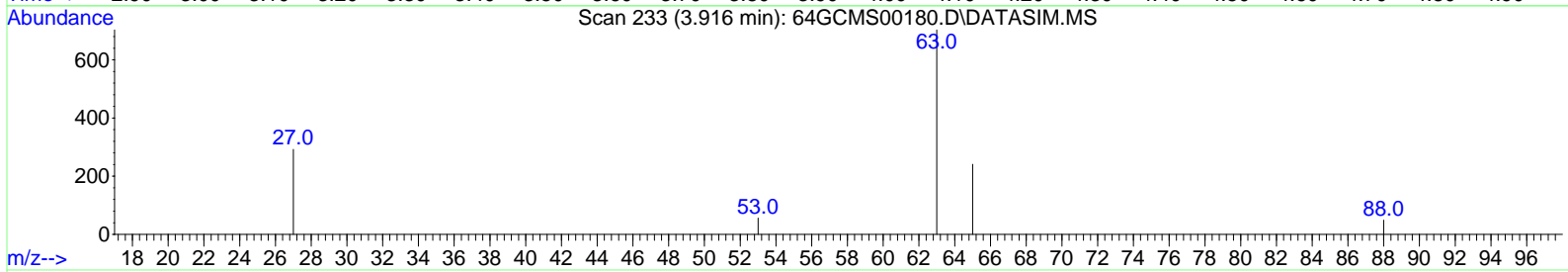
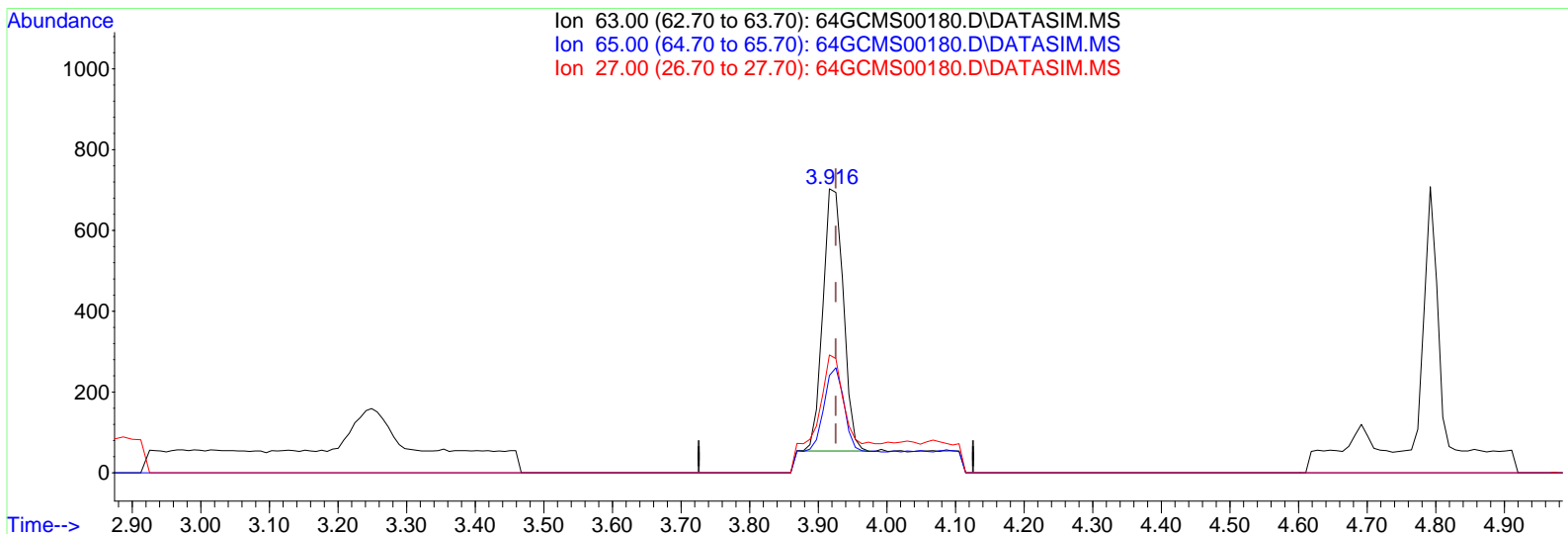
3.916min (-0.009) 5.28 ppbv

response 1490

Ion	Exp%	Act%
63.00	100.00	100.00
65.00	31.00	36.31
27.00	26.40	39.87#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00180.D
 Acq On : 3 May 2016 6:13 am
 Operator : dlm
 Sample : STD20160503-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:38:50 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

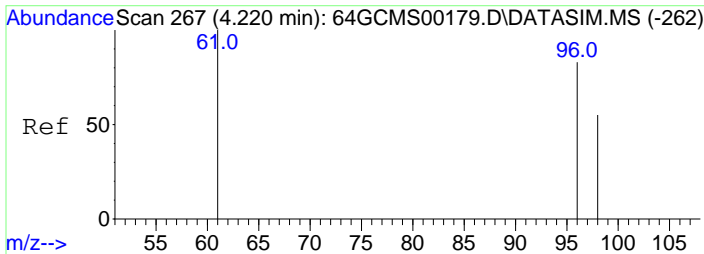


(6) 1,1-Dichloroethane

3.916min (-0.009) 4.76 ppbv m

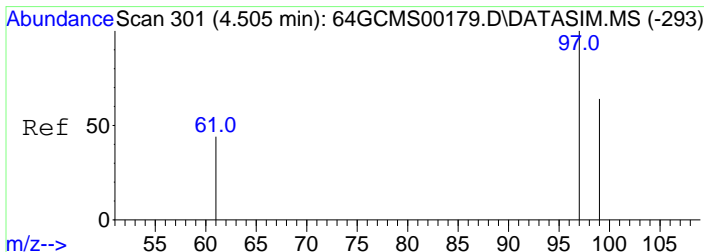
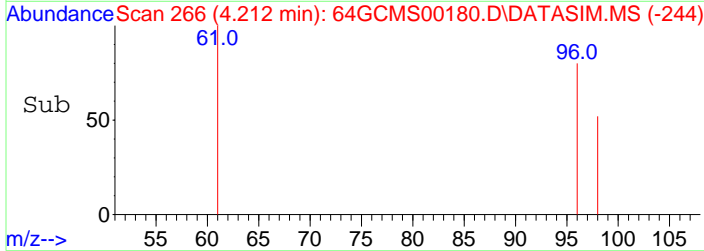
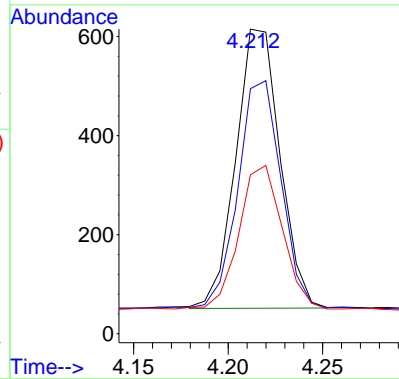
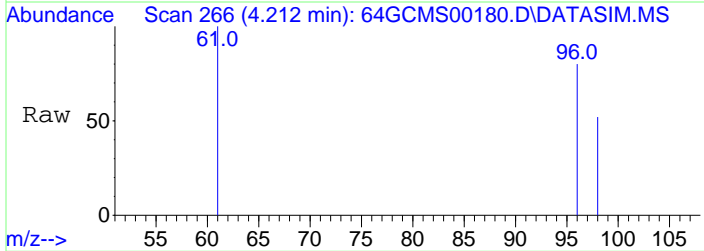
response 1344

Ion	Exp%	Act%
63.00	100.00	100.00
65.00	31.00	40.25#
27.00	26.40	44.20#
0.00	0.00	0.00



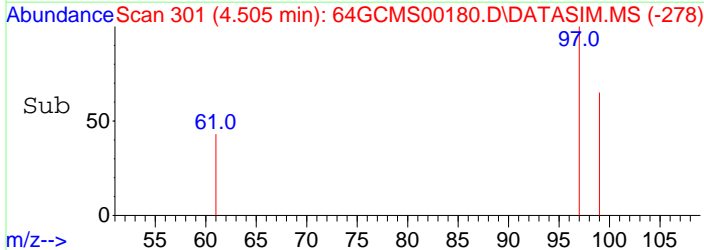
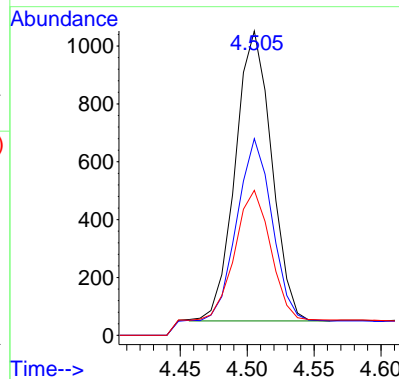
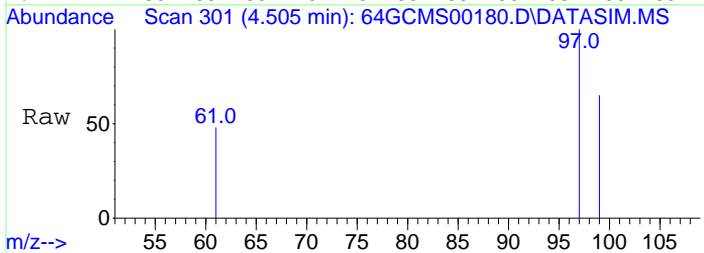
#7
 cis-1,2-Dichloroethene
 Concen: 4.52 ppbv m
 RT: 4.212 min Scan# 266
 Delta R.T. -0.008 min
 Lab File: 64GCMS00180.D
 Acq: 3 May 2016 6:13 am

Tgt Ion	Resp	Lower	Upper
61	100		
96	78.5	52.0	78.0#
98	56.1	33.4	50.2#



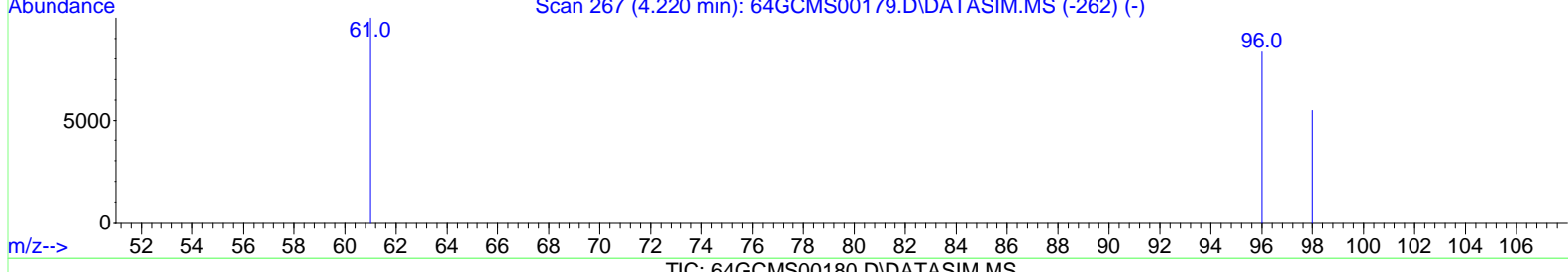
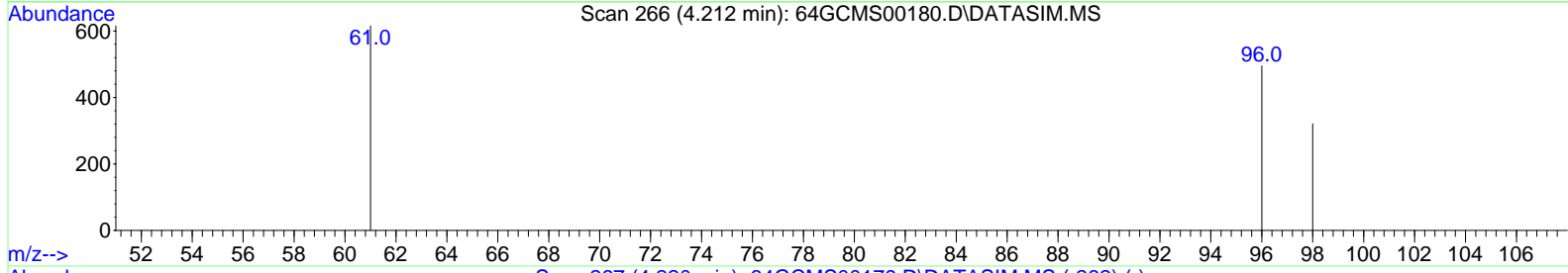
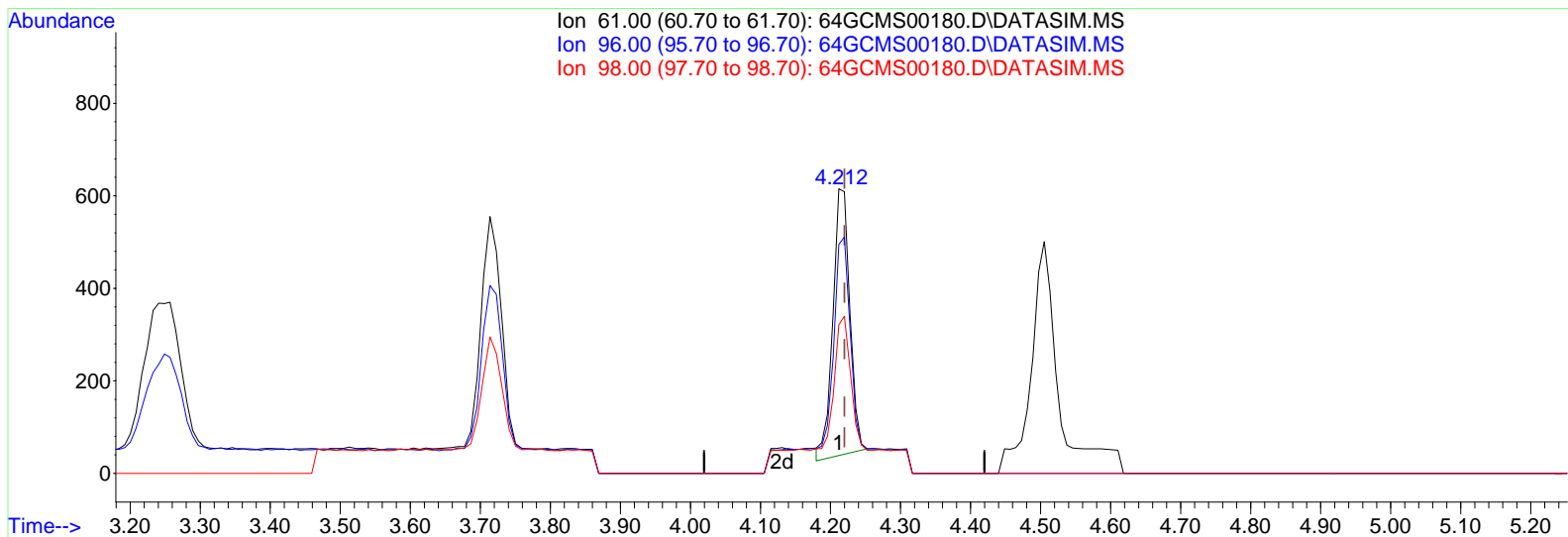
#8
 1,1,1-Trichloroethane
 Concen: 4.60 ppbv
 RT: 4.505 min Scan# 301
 Delta R.T. 0.000 min
 Lab File: 64GCMS00180.D
 Acq: 3 May 2016 6:13 am

Tgt Ion	Resp	Lower	Upper
97	100		
99	67.1	51.5	77.3
61	51.7	38.6	58.0



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00180.D
 Acq On : 3 May 2016 6:13 am
 Operator : dlm
 Sample : STD20160503-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:38:50 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



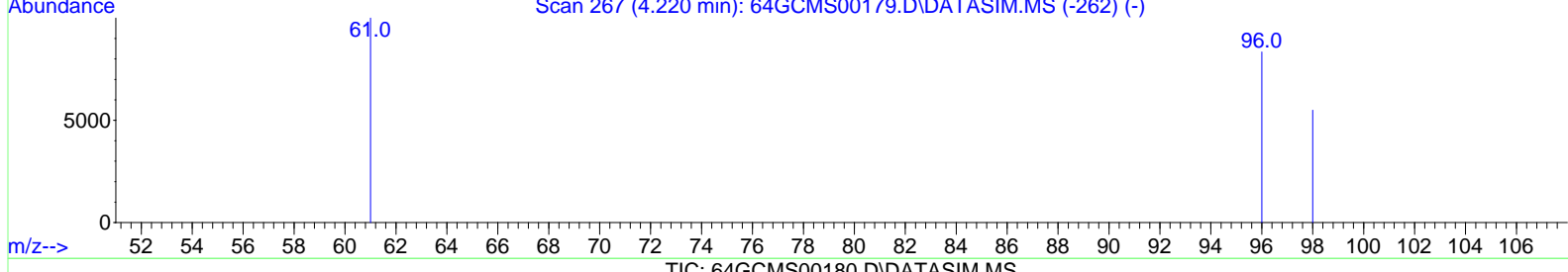
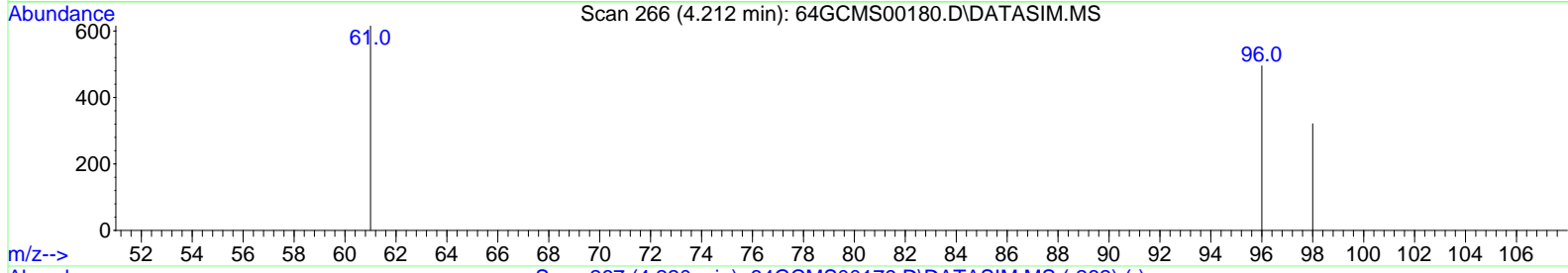
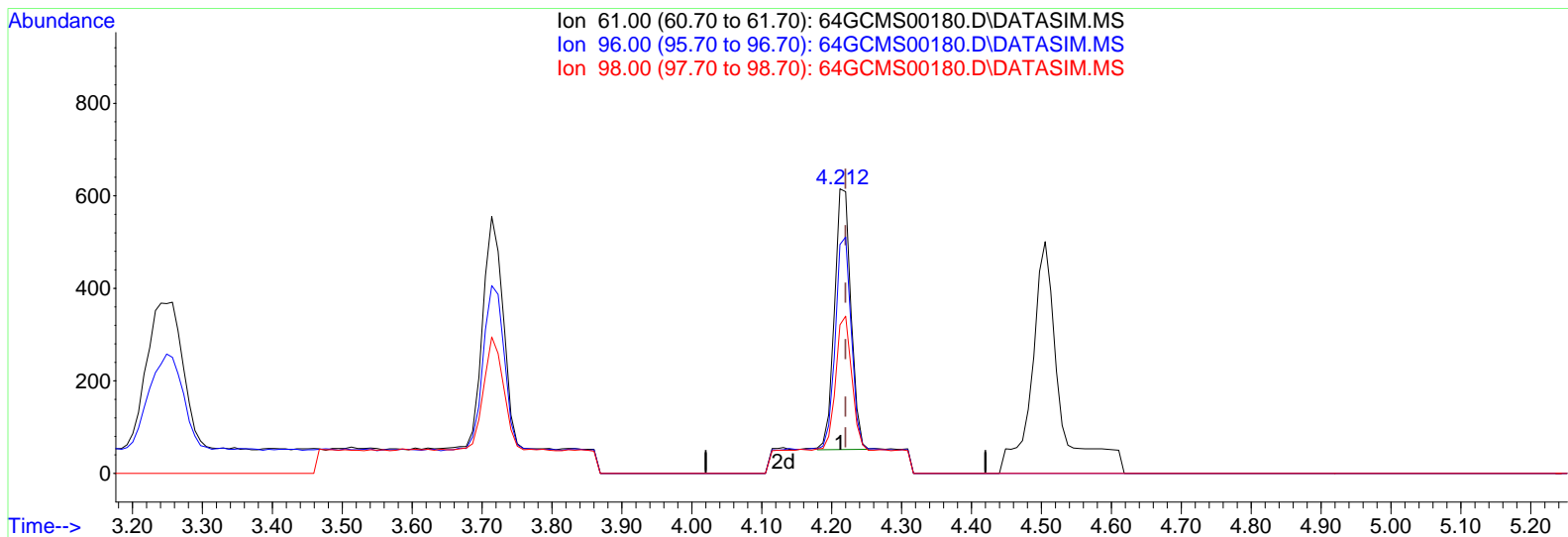
(7) cis-1,2-Dichloroethene

4.212min (-0.008) 4.77 ppbv

response	971	
Ion	Exp%	Act%
61.00	100.00	100.00
96.00	65.00	74.46
98.00	41.80	53.24#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00180.D
 Acq On : 3 May 2016 6:13 am
 Operator : dlm
 Sample : STD20160503-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:38:50 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

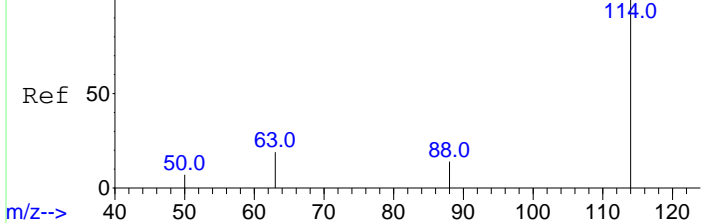


(7) cis-1,2-Dichloroethene

4.212min (-0.008) 4.52 ppbv m

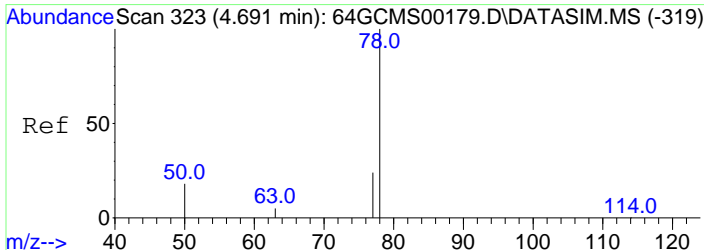
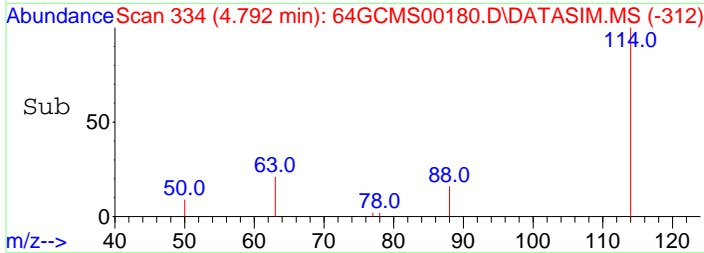
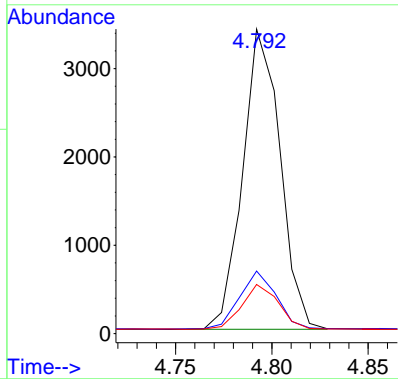
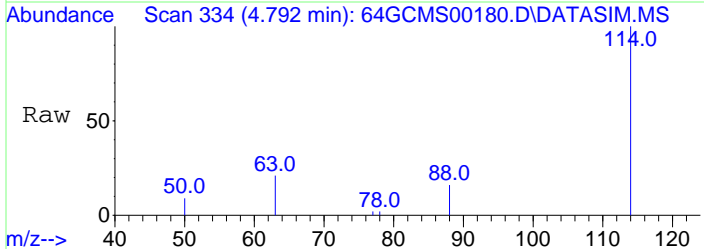
response	921	
Ion	Exp%	Act%
61.00	100.00	100.00
96.00	65.00	78.50#
98.00	41.80	56.13#
0.00	0.00	0.00

Abundance Scan 334 (4.792 min): 64GCMS00179.D\DATASIM.MS (-331)



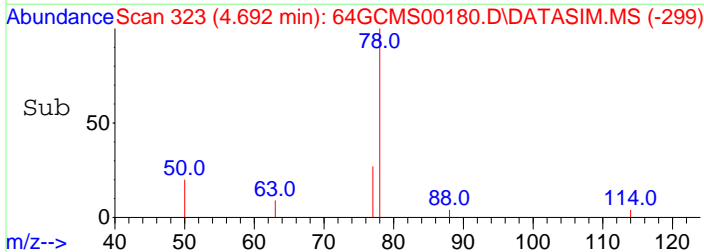
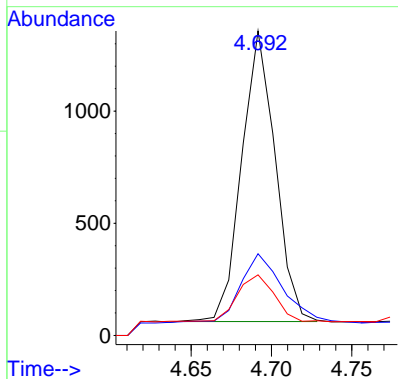
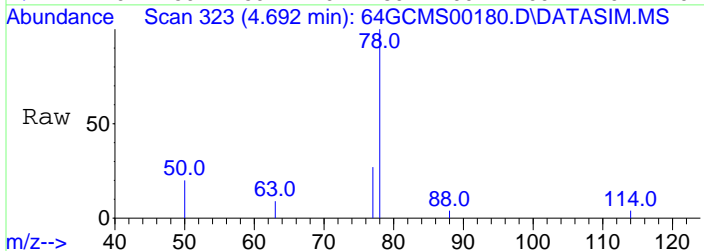
#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. 0.000 min
Lab File: 64GCMS00180.D
Acq: 3 May 2016 6:13 am

Tgt Ion	Resp	Lower	Upper
114	4602		
63	19.8	19.2	28.8
88	14.5	13.7	20.5



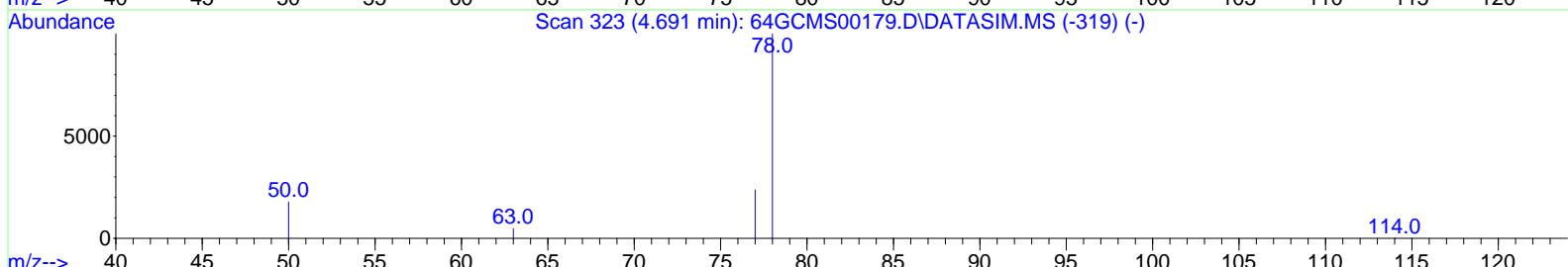
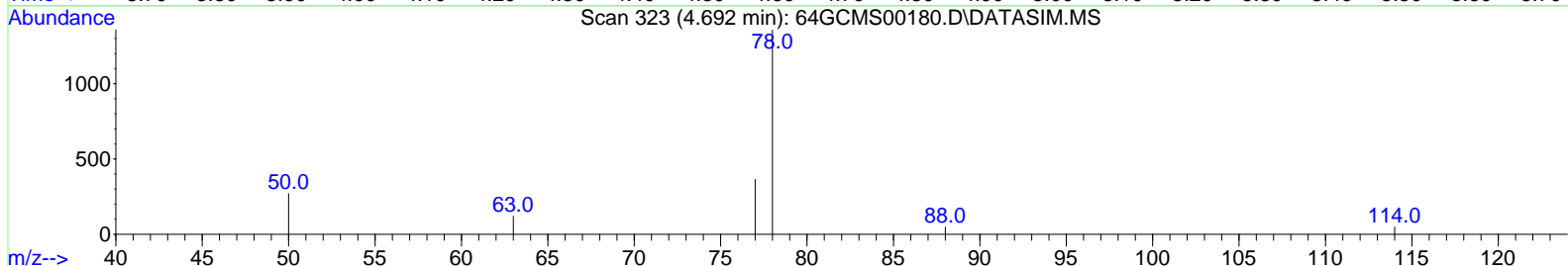
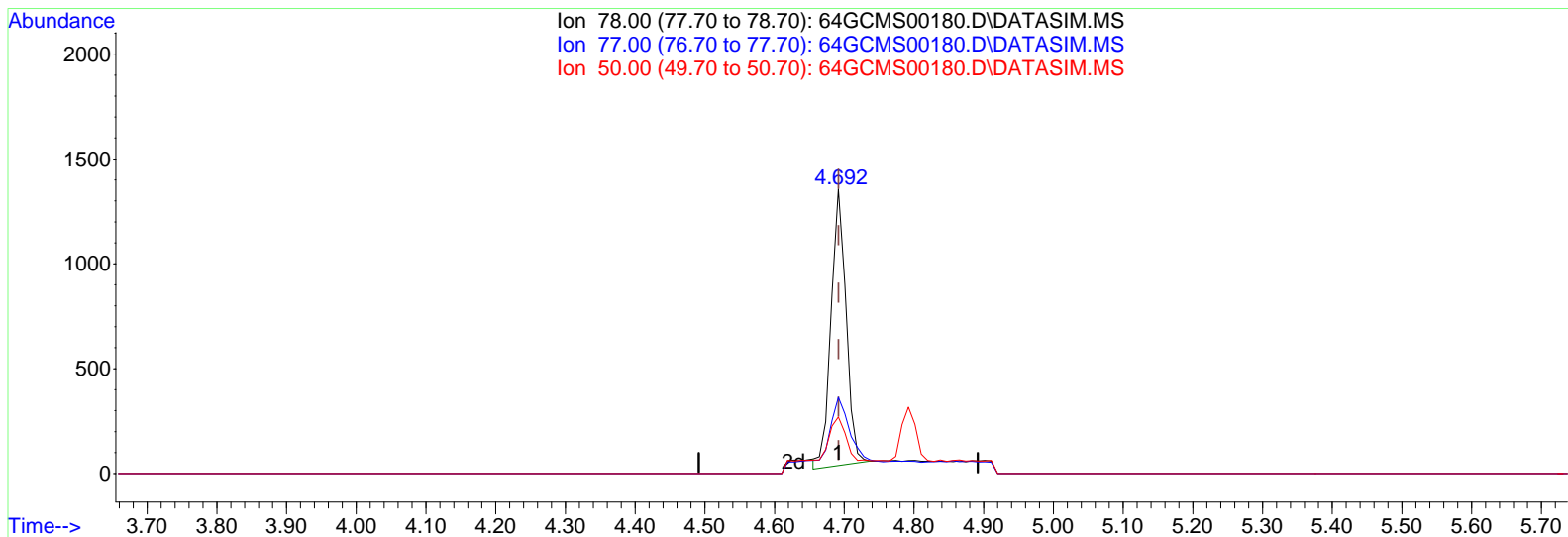
#10
Benzene
Concen: 5.12 ppbv m
RT: 4.692 min Scan# 323
Delta R.T. 0.000 min
Lab File: 64GCMS00180.D
Acq: 3 May 2016 6:13 am

Tgt Ion	Resp	Lower	Upper
78	1878		
77	35.9	18.2	27.4#
50	21.0	16.6	24.8



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00180.D
 Acq On : 3 May 2016 6:13 am
 Operator : dlm
 Sample : STD20160503-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:38:50 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



TIC: 64GCMS00180.D\DATASIM.MS

(10) Benzene

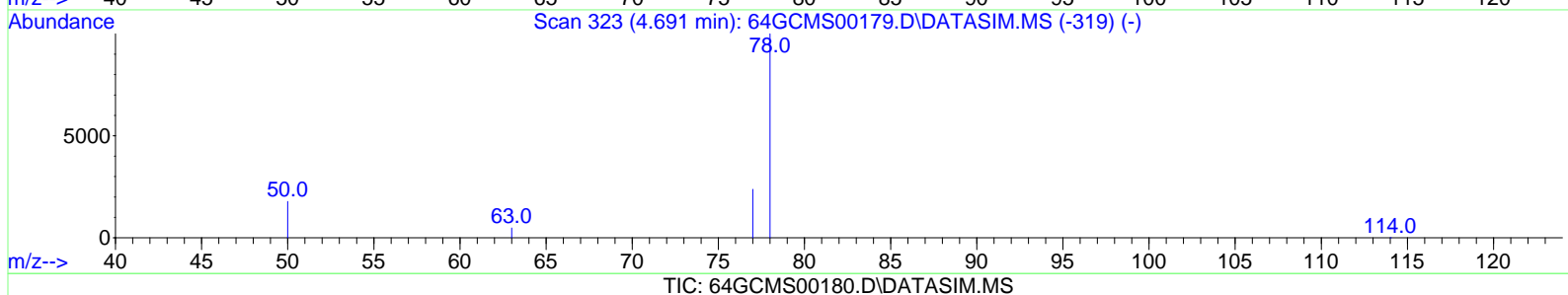
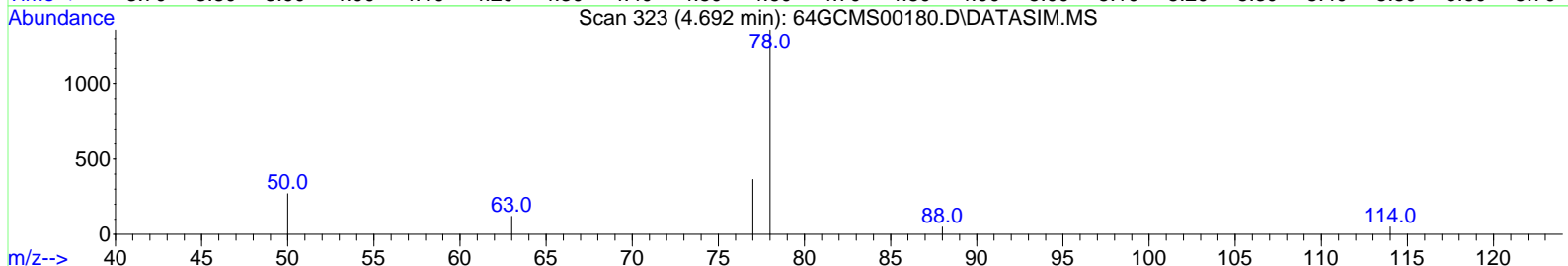
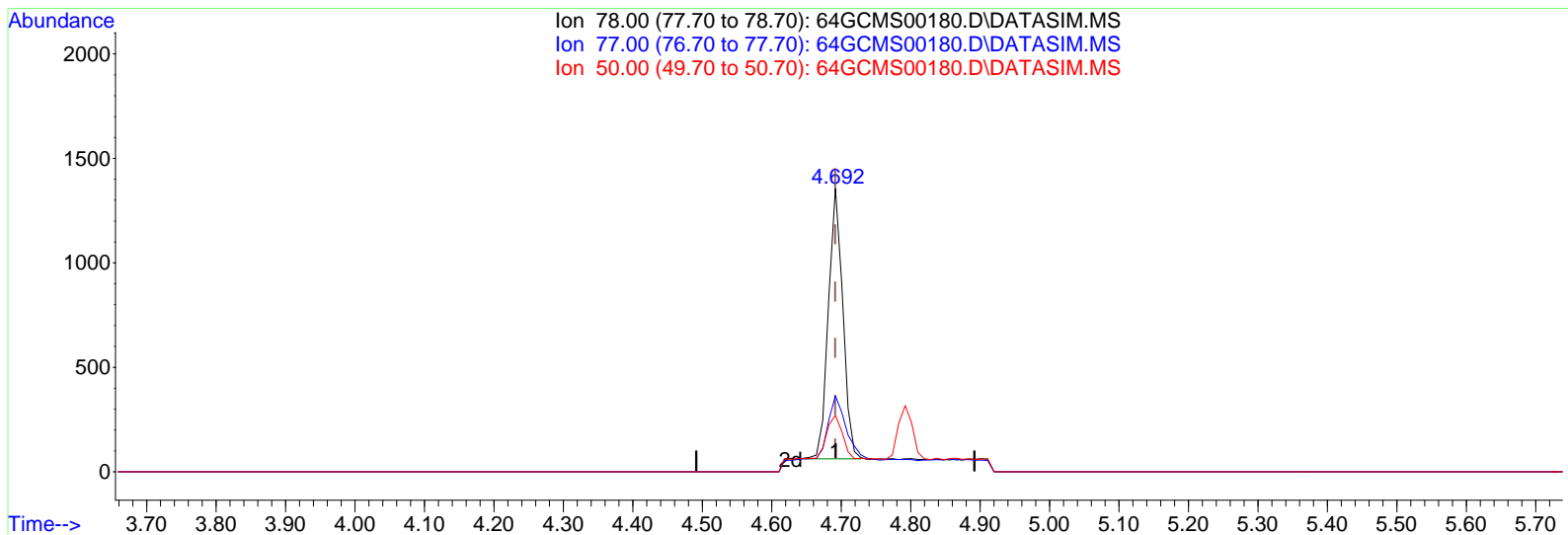
4.692min (0.000) 5.39 ppbv

response 1979

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	34.11#
50.00	20.70	19.91
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00180.D
 Acq On : 3 May 2016 6:13 am
 Operator : dlm
 Sample : STD20160503-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:38:50 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

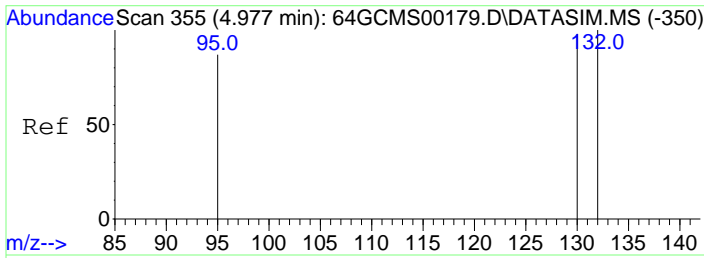


(10) Benzene

4.692min (0.000) 5.12 ppbv m

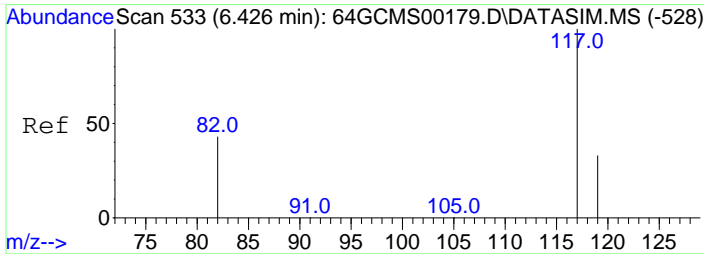
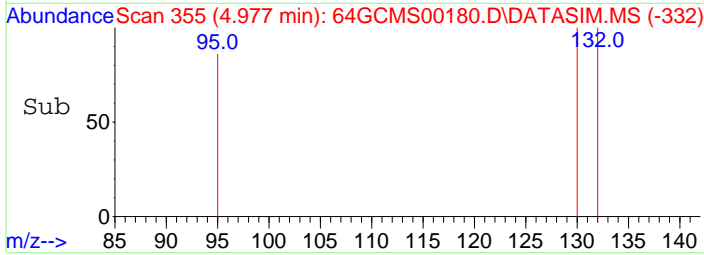
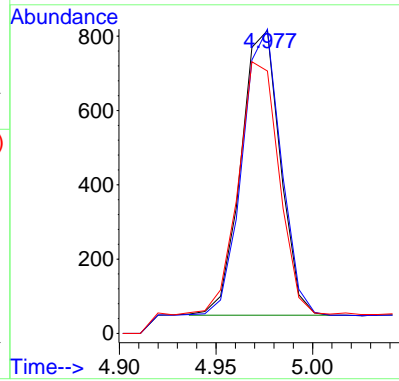
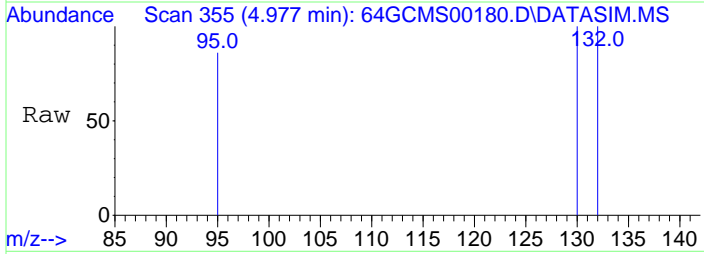
response 1878

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	35.94#
50.00	20.70	20.98
0.00	0.00	0.00



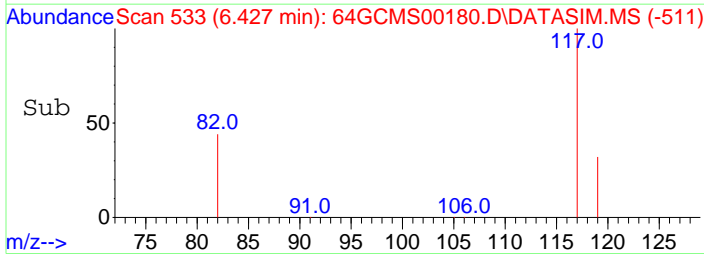
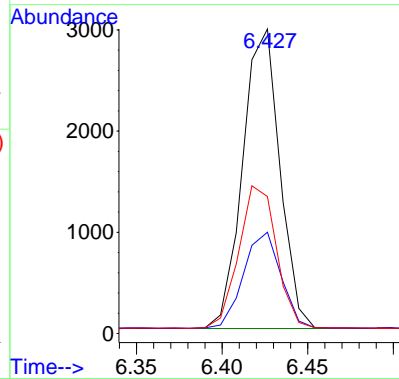
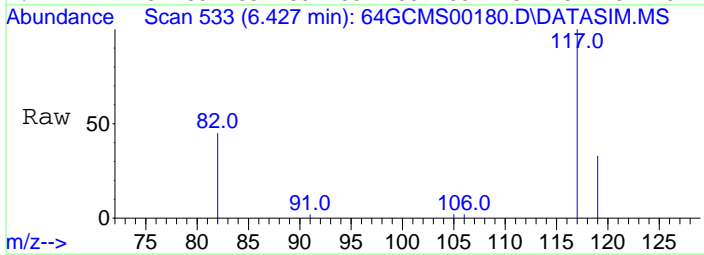
#11
 Trichloroethene
 Concen: 4.78 ppbv
 RT: 4.977 min Scan# 355
 Delta R.T. 0.000 min
 Lab File: 64GCMS00180.D
 Acq: 3 May 2016 6:13 am

Tgt Ion	Resp	Lower	Upper
130	1089		
130	100		
132	98.5	76.9	115.3
95	98.9	81.5	122.3

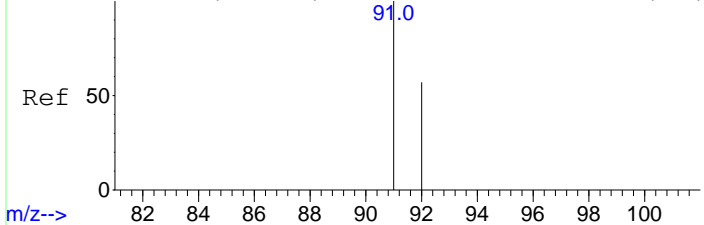


#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.427 min Scan# 533
 Delta R.T. 0.000 min
 Lab File: 64GCMS00180.D
 Acq: 3 May 2016 6:13 am

Tgt Ion	Resp	Lower	Upper
117	4476		
117	100		
119	32.0	25.8	38.6
82	48.3	45.6	68.4

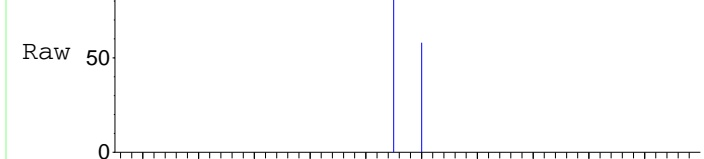


Abundance Scan 433 (5.583 min): 64GCMS00179.D\DATASIM.MS (-428)



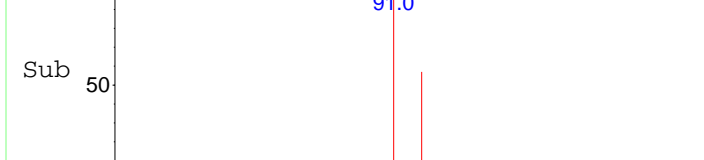
m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00180.D\DATASIM.MS



m/z-->

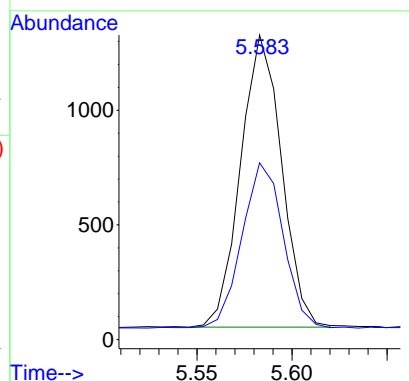
Abundance Scan 433 (5.583 min): 64GCMS00180.D\DATASIM.MS (-406)



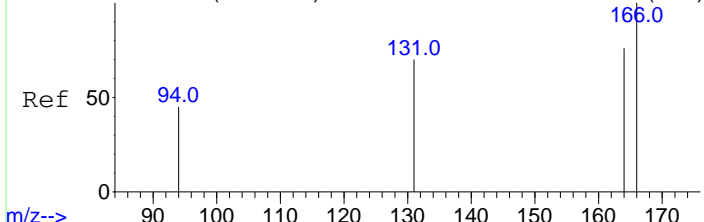
m/z-->

#13
 Toluene
 Concen: 4.12 ppbv
 RT: 5.583 min Scan# 433
 Delta R.T. 0.000 min
 Lab File: 64GCMS00180.D
 Acq: 3 May 2016 6:13 am

Tgt Ion:	91	Resp:	1915
Ion Ratio	Lower	Upper	
91	100		
92	57.0	48.0	72.0



Abundance Scan 484 (5.988 min): 64GCMS00179.D\DATASIM.MS (-479)



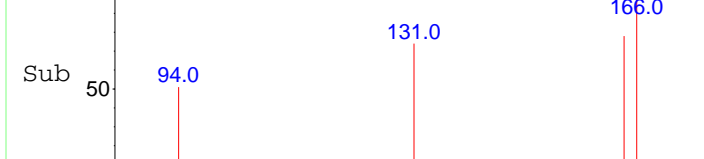
m/z-->

Abundance Scan 484 (5.988 min): 64GCMS00180.D\DATASIM.MS



m/z-->

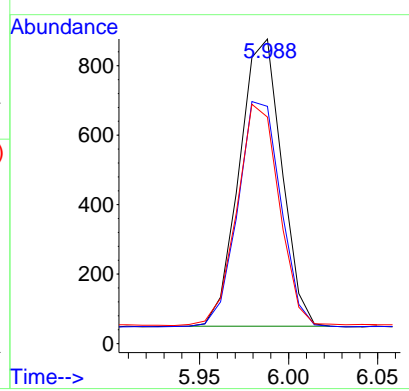
Abundance Scan 484 (5.988 min): 64GCMS00180.D\DATASIM.MS (-461)



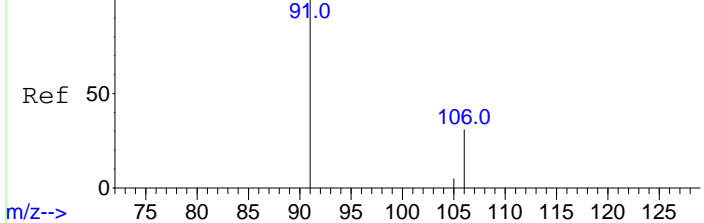
m/z-->

#14
 Tetrachloroethene
 Concen: 4.28 ppbv
 RT: 5.988 min Scan# 484
 Delta R.T. 0.000 min
 Lab File: 64GCMS00180.D
 Acq: 3 May 2016 6:13 am

Tgt Ion:	166	Resp:	1373
Ion Ratio	Lower	Upper	
166	100		
164	78.6	63.4	95.0
131	75.2	63.4	95.0



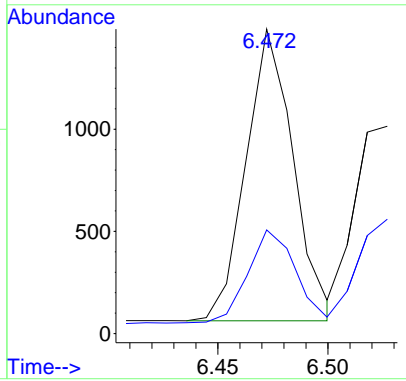
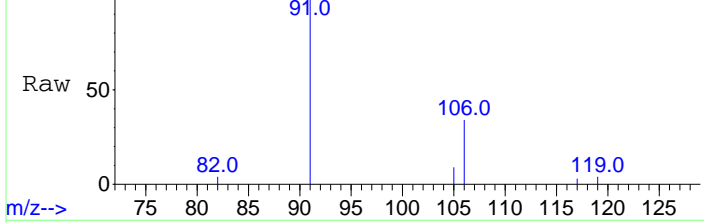
Abundance Scan 538 (6.472 min): 64GCMS00179.D\DATASIM.MS (-534)



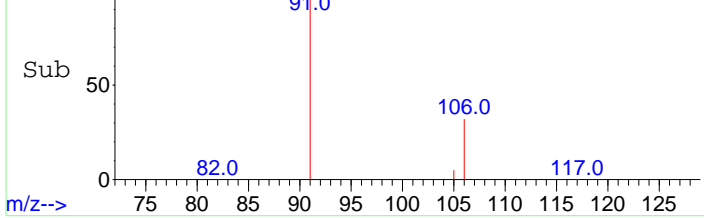
#15
Ethyl Benzene
Concen: 3.72 ppbv
RT: 6.472 min Scan# 538
Delta R.T. 0.000 min
Lab File: 64GCMS00180.D
Acq: 3 May 2016 6:13 am

Tgt Ion: 91 Resp: 2133
Ion Ratio Lower Upper
91 100
106 32.1 24.2 36.2

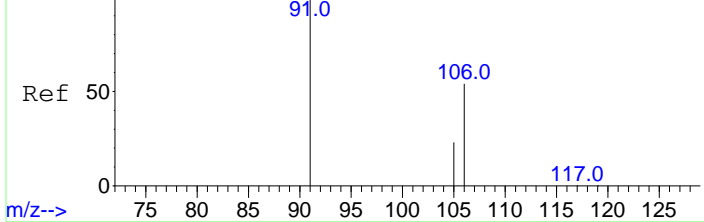
Abundance Scan 538 (6.472 min): 64GCMS00180.D\DATASIM.MS



Abundance Scan 538 (6.472 min): 64GCMS00180.D\DATASIM.MS (-516)



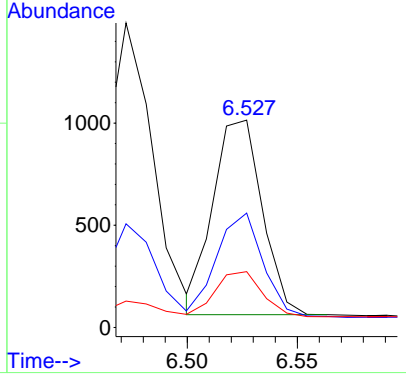
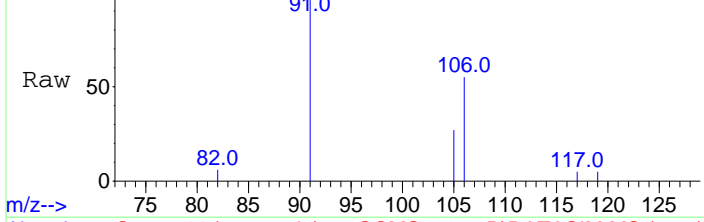
Abundance Scan 544 (6.527 min): 64GCMS00179.D\DATASIM.MS (-541)



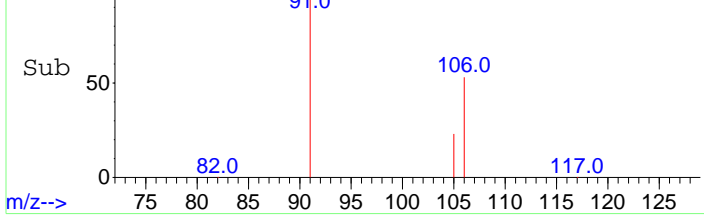
#16
m,p-Xylene
Concen: 3.20 ppbv
RT: 6.527 min Scan# 544
Delta R.T. 0.000 min
Lab File: 64GCMS00180.D
Acq: 3 May 2016 6:13 am

Tgt Ion: 91 Resp: 1486
Ion Ratio Lower Upper
91 100
106 50.5 37.7 56.5
105 22.3 17.0 25.4

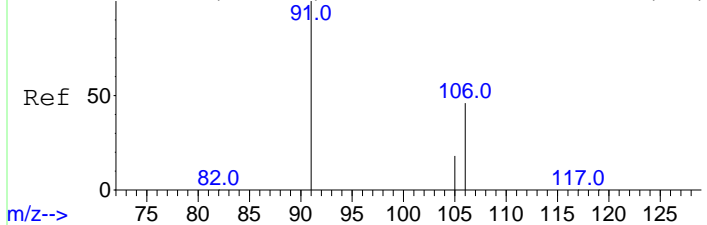
Abundance Scan 544 (6.527 min): 64GCMS00180.D\DATASIM.MS



Abundance Scan 544 (6.527 min): 64GCMS00180.D\DATASIM.MS (-522)



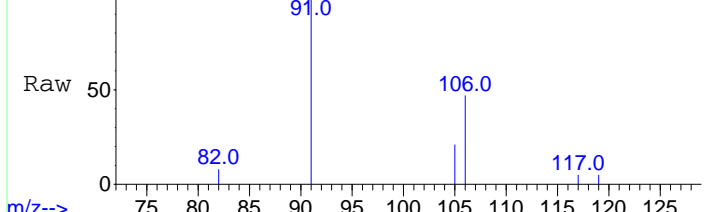
Abundance Scan 573 (6.792 min): 64GCMS00179.D\DATASIM.MS (-569)



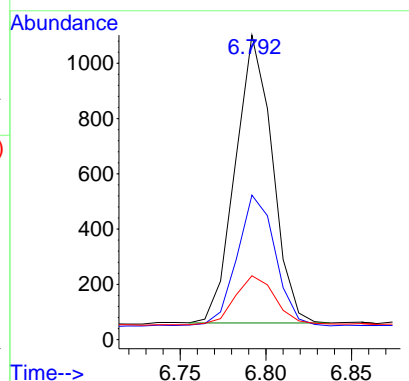
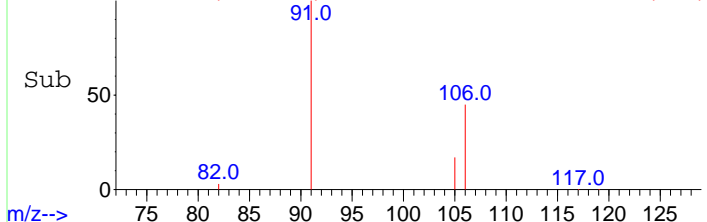
#17
 o-Xylene
 Concen: 3.10 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. 0.000 min
 Lab File: 64GCMS00180.D
 Acq: 3 May 2016 6:13 am

Tgt Ion	Resp	Lower	Upper
91	1565		
106	46.9	35.4	53.2
105	18.6	14.0	21.0

Abundance Scan 573 (6.792 min): 64GCMS00180.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00180.D\DATASIM.MS (-551)



LOW LEVEL CALIBRATION VERIFICATION

Data File 64GCMS00181
 Standard Number STD20160503-03
 Standard Name 0.5 ppbv STD LLCCV
 Loop Size 5 mL

Sample Multiplier: Units Date Analyzed	1 ppbv 5/3/2016	Primary Source Actual Values ppbv	Percent Difference %D	
Vinyl Chloride		0.51	-100	
1,1-Dichloroethene	0.47	0.51	-7	
Methyl Tert Butyl Ether	0.40	0.50	-20	
trans-1,2-Dichloroethene	0.44	0.52	-15	
1,1-Dichloroethane	0.52	0.51	2	
cis-1,2-Dichloroethene	0.42	0.52	-18	
1,1,1-Trichloroethane	0.44	0.50	-12	
Benzene	0.57	0.51	11	
Trichloroethene	0.53	0.50	5	
Toluene	0.44	0.51	-13	
Tetrachloroethene	0.44	0.51	-13	
Ethyl Benzene	0.38	0.54	-29	
m,p-Xylene	0.31	0.51	-39	
o-Xylene	0.36	0.51	-29	

%D = ± 50%

Primary Standard Cylinder # CC-128244

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00181.D
 Acq On : 3 May 2016 6:27 am
 Operator : dlm
 Sample : STD20160503-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

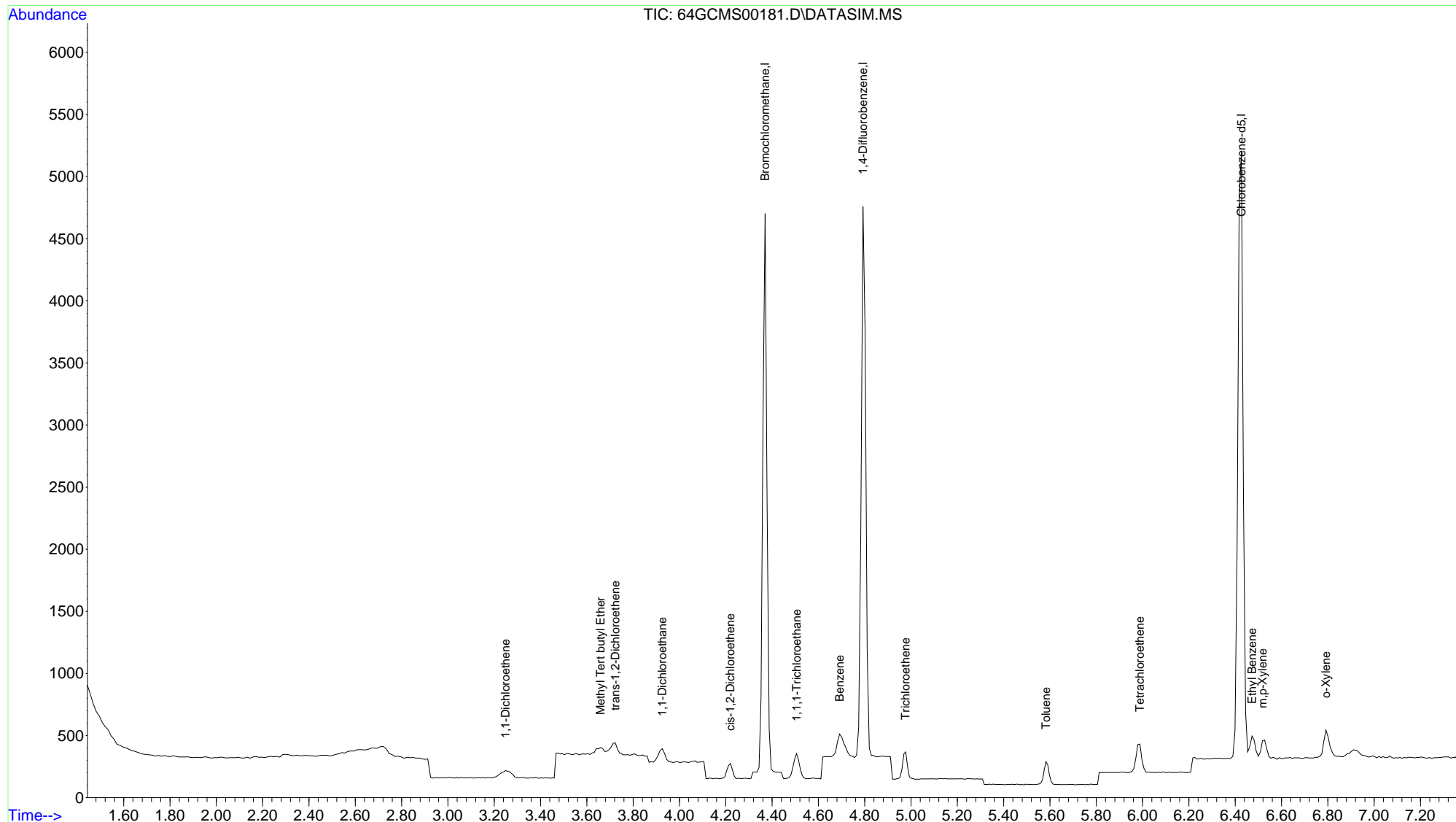
Quant Time: May 03 08:03:13 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

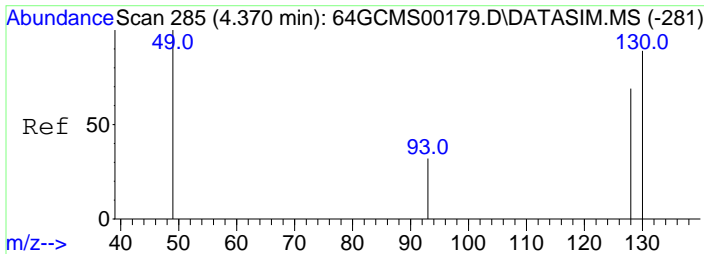
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Bromochloromethane	4.370	49	2005	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.792	114	4145	10.00	ppbv		0.00
12) Chlorobenzene-d5	6.426	117	4137	10.00	ppbv		0.00
Target Compounds							
							Qvalue
3) 1,1-Dichloroethene	3.249	61	107	0.47	ppbv	#	85
4) Methyl Tert butyl Ether	3.659	73	132	0.40	ppbv	#	86
5) trans-1,2-Dichloroethene	3.723	61	90	0.44	ppbv	#	73
6) 1,1-Dichloroethane	3.926	63	141	0.52	ppbv	#	1
7) cis-1,2-Dichloroethene	4.220	61	82m	0.42	ppbv		
8) 1,1,1-Trichloroethane	4.505	97	174m	0.44	ppbv		
10) Benzene	4.692	78	189m	0.57	ppbv		
11) Trichloroethene	4.977	130	108m	0.53	ppbv		
13) Toluene	5.583	91	188	0.44	ppbv		97
14) Tetrachloroethene	5.988	166	131	0.44	ppbv		96
15) Ethyl Benzene	6.472	91	201	0.38	ppbv		98
16) m,p-Xylene	6.518	91	135	0.31	ppbv		95
17) o-Xylene	6.792	91	170	0.36	ppbv	#	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00181.D
 Acq On : 3 May 2016 6:27 am
 Operator : dlm
 Sample : STD20160503-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 08:03:13 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

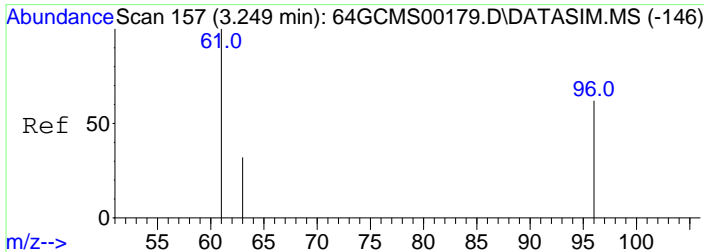
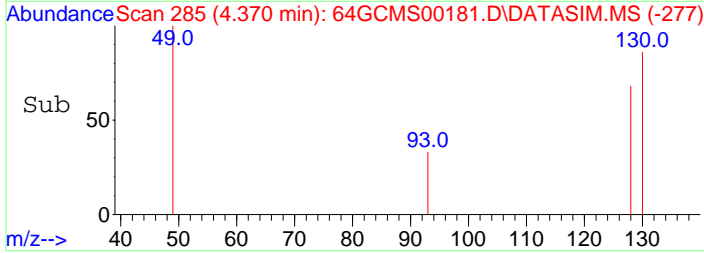
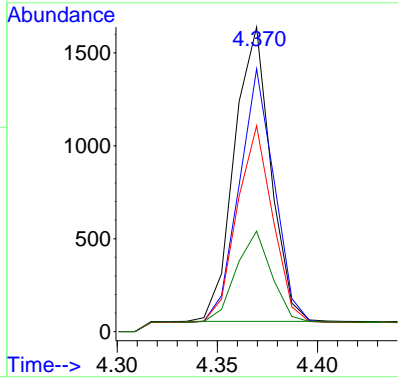
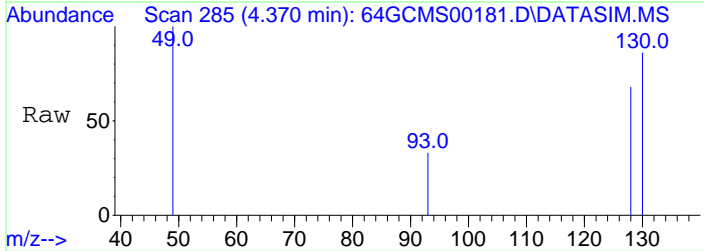




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00181.D
 Acq: 3 May 2016 6:27 am

Tgt Ion: 49 Resp: 2005

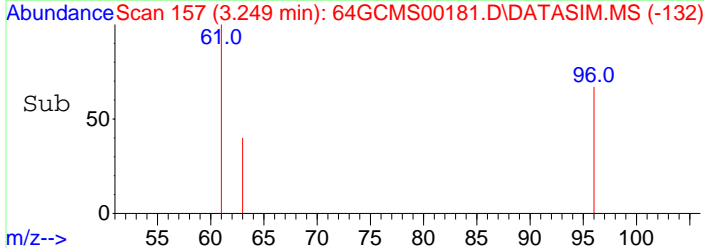
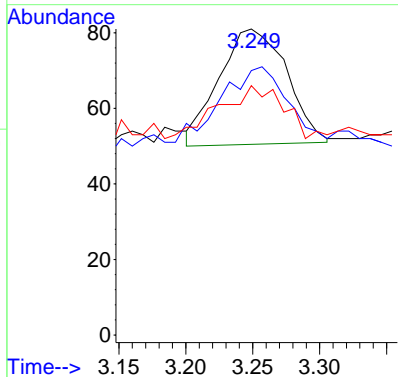
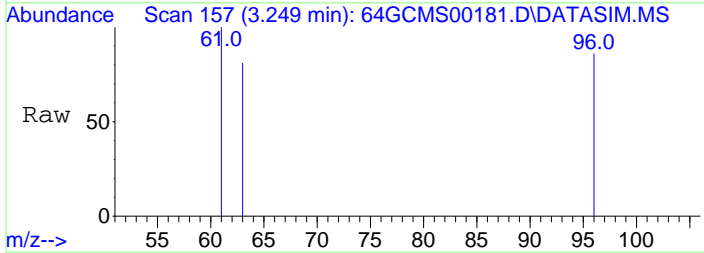
Ion	Ratio	Lower	Upper
49	100		
130	83.0	46.3	69.5#
128	65.3	35.7	53.5#
93	30.4	17.6	26.4#



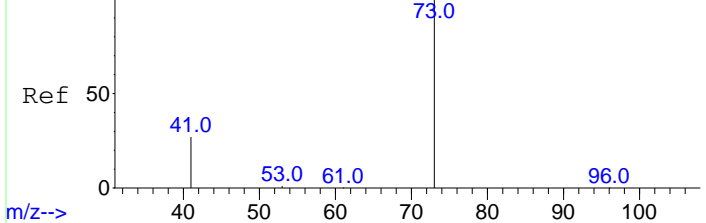
#3
 1,1-Dichloroethene
 Concen: 0.47 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. -0.000 min
 Lab File: 64GCMS00181.D
 Acq: 3 May 2016 6:27 am

Tgt Ion: 61 Resp: 107

Ion	Ratio	Lower	Upper
61	100		
96	62.6	40.9	61.3#
63	24.3	24.3	36.5#



Abundance Scan 205 (3.659 min): 64GCMS00179.D\DATASIM.MS (-196)

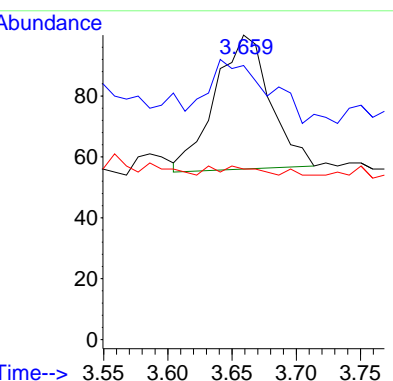
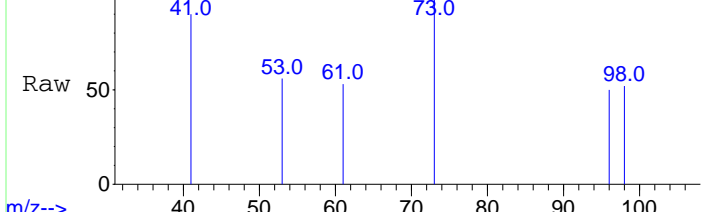


#4
Methyl Tert butyl Ether
Concen: 0.40 ppbv
RT: 3.659 min Scan# 205
Delta R.T. -0.000 min
Lab File: 64GCMS00181.D
Acq: 3 May 2016 6:27 am

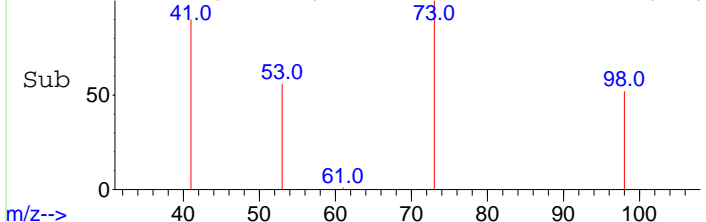
Tgt Ion: 73 Resp: 132

Ion	Ratio	Lower	Upper
73	100		
41	18.2	20.6	30.8#
53	0.0	1.2	1.8#

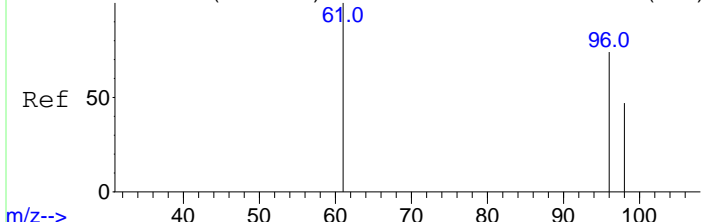
Abundance Scan 205 (3.659 min): 64GCMS00181.D\DATASIM.MS



Abundance Scan 205 (3.659 min): 64GCMS00181.D\DATASIM.MS (-183)



Abundance Scan 211 (3.714 min): 64GCMS00179.D\DATASIM.MS (-206)

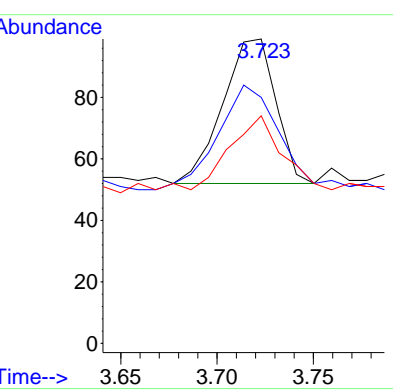
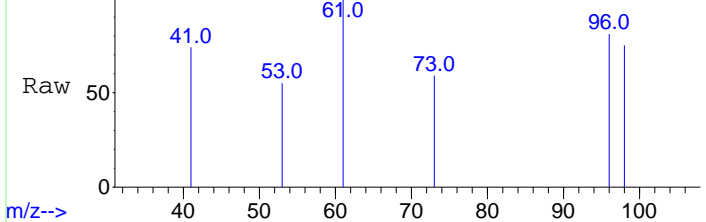


#5
trans-1,2-Dichloroethene
Concen: 0.44 ppbv
RT: 3.723 min Scan# 212
Delta R.T. 0.009 min
Lab File: 64GCMS00181.D
Acq: 3 May 2016 6:27 am

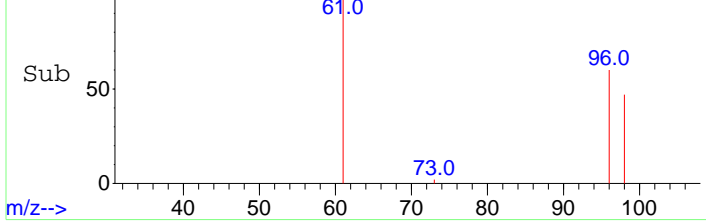
Tgt Ion: 61 Resp: 90

Ion	Ratio	Lower	Upper
61	100		
96	84.4	47.8	71.6#
98	48.9	30.6	46.0#

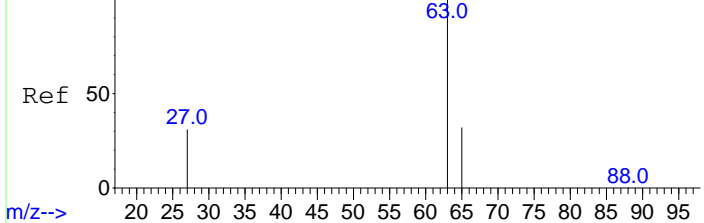
Abundance Scan 212 (3.723 min): 64GCMS00181.D\DATASIM.MS



Abundance Scan 212 (3.723 min): 64GCMS00181.D\DATASIM.MS (-189)



Abundance Scan 234 (3.926 min): 64GCMS00179.D\DATASIM.MS (-228)

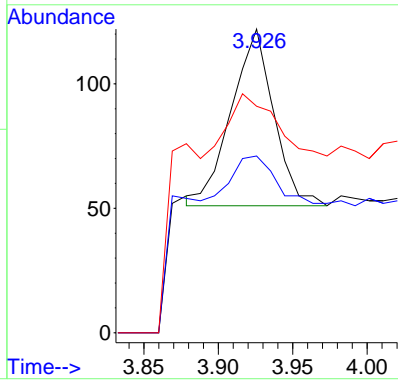
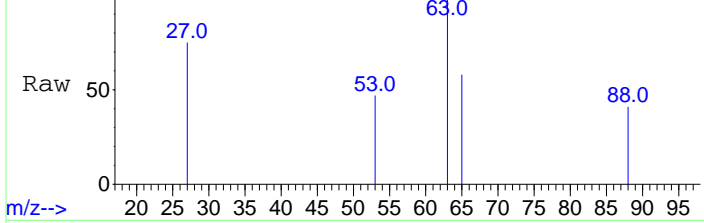


#6
1,1-Dichloroethane
Concen: 0.52 ppbv
RT: 3.926 min Scan# 234
Delta R.T. -0.000 min
Lab File: 64GCMS00181.D
Acq: 3 May 2016 6:27 am

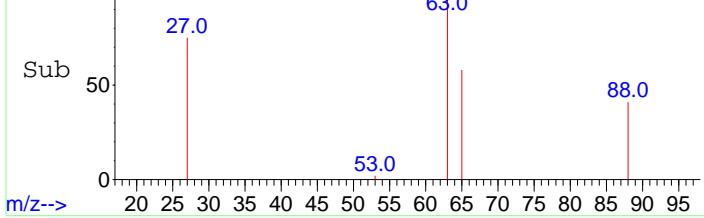
Tgt Ion: 63 Resp: 141

Ion	Ratio	Lower	Upper
63	100		
65	87.9	24.8	37.2#
27	214.9	21.1	31.7#

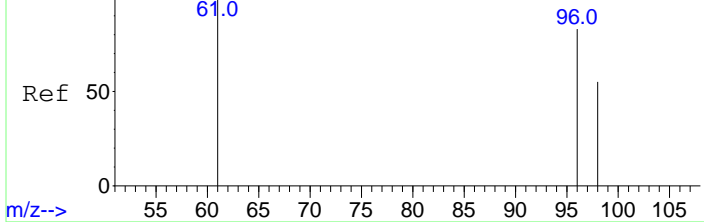
Abundance Scan 234 (3.926 min): 64GCMS00181.D\DATASIM.MS



Abundance Scan 234 (3.926 min): 64GCMS00181.D\DATASIM.MS (-212)



Abundance Scan 267 (4.220 min): 64GCMS00179.D\DATASIM.MS (-262)

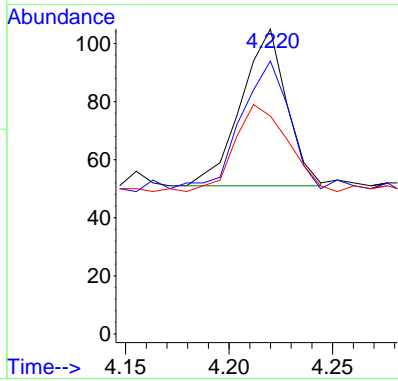
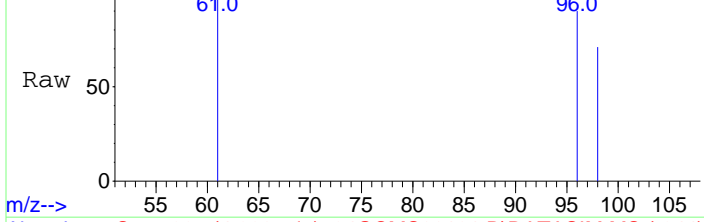


#7
cis-1,2-Dichloroethene
Concen: 0.42 ppbv m
RT: 4.220 min Scan# 267
Delta R.T. -0.000 min
Lab File: 64GCMS00181.D
Acq: 3 May 2016 6:27 am

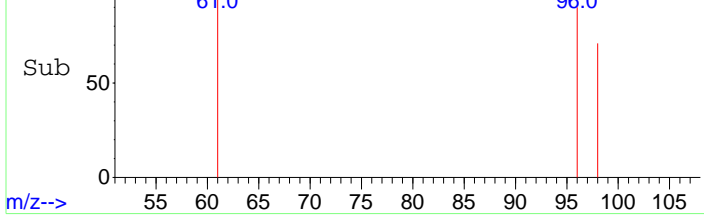
Tgt Ion: 61 Resp: 82

Ion	Ratio	Lower	Upper
61	100		
96	82.9	52.0	78.0#
98	63.4	33.4	50.2#

Abundance Scan 267 (4.220 min): 64GCMS00181.D\DATASIM.MS

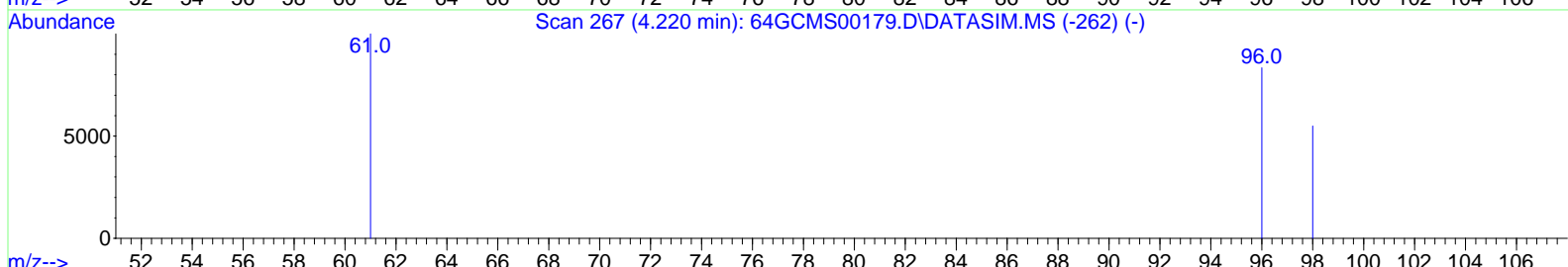
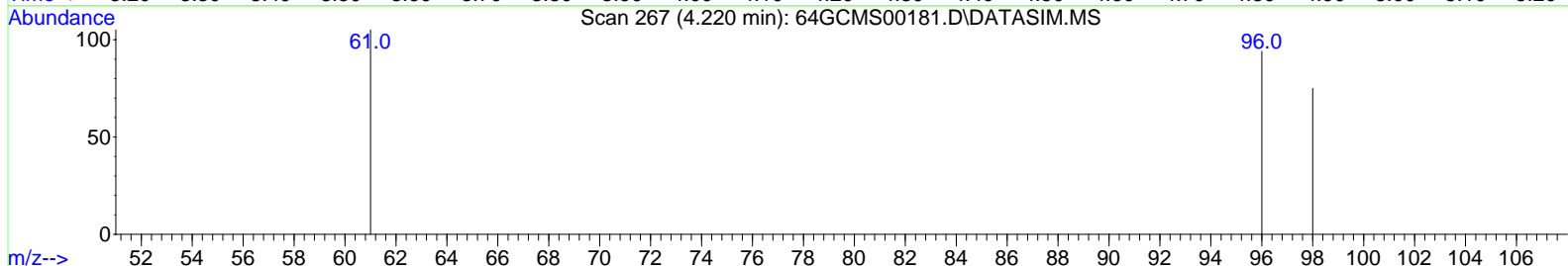
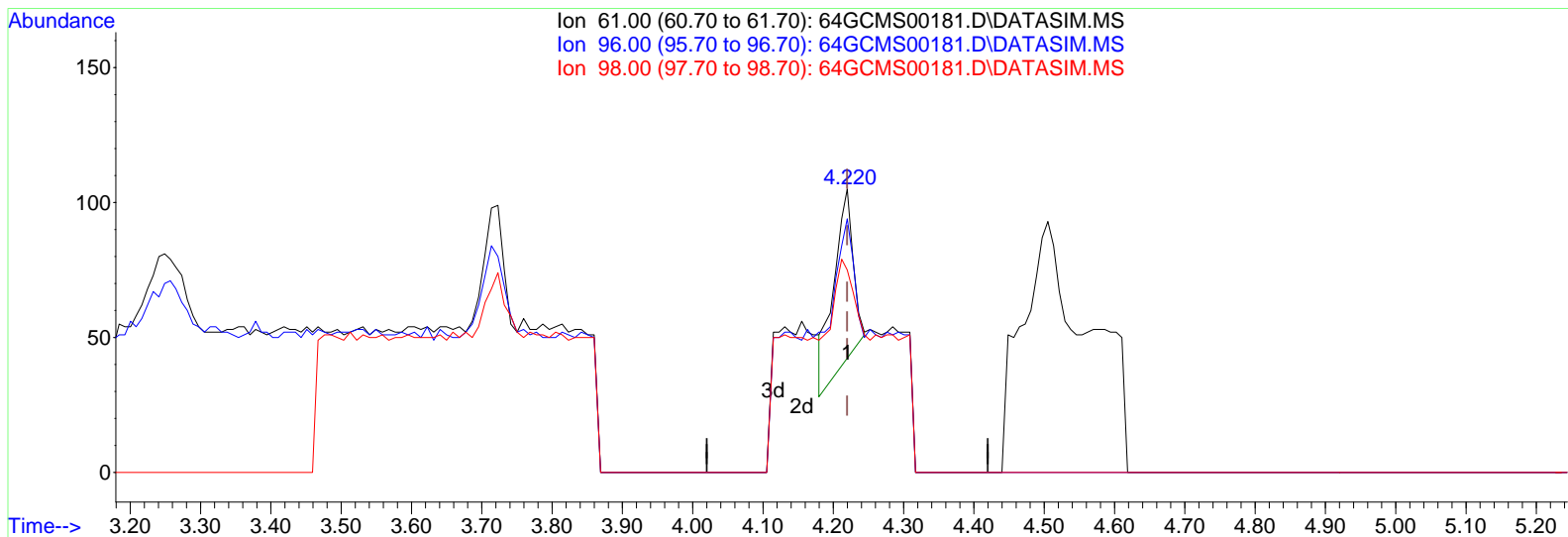


Abundance Scan 267 (4.220 min): 64GCMS00181.D\DATASIM.MS (-244)



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00181.D
 Acq On : 3 May 2016 6:27 am
 Operator : dlm
 Sample : STD20160503-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:59:53 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



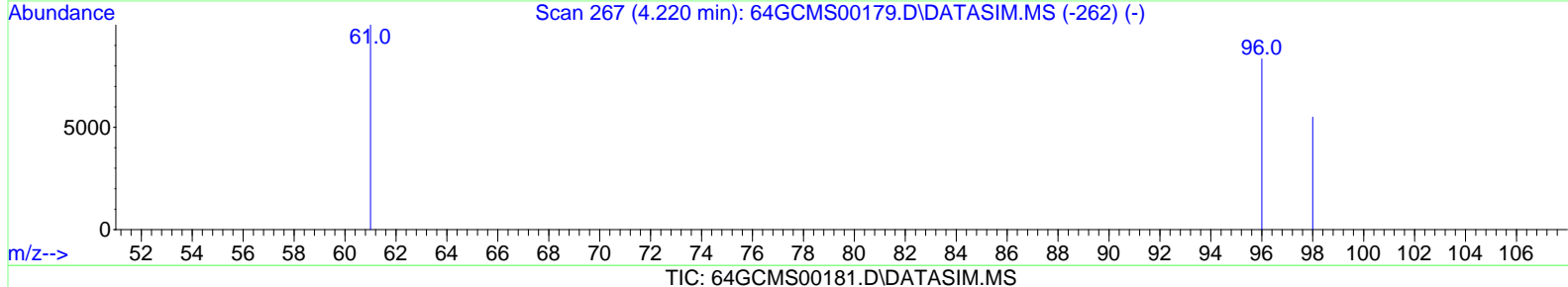
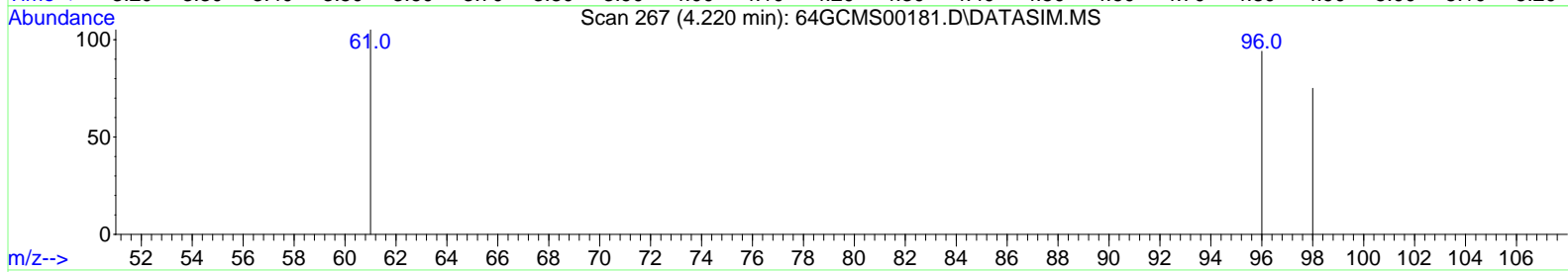
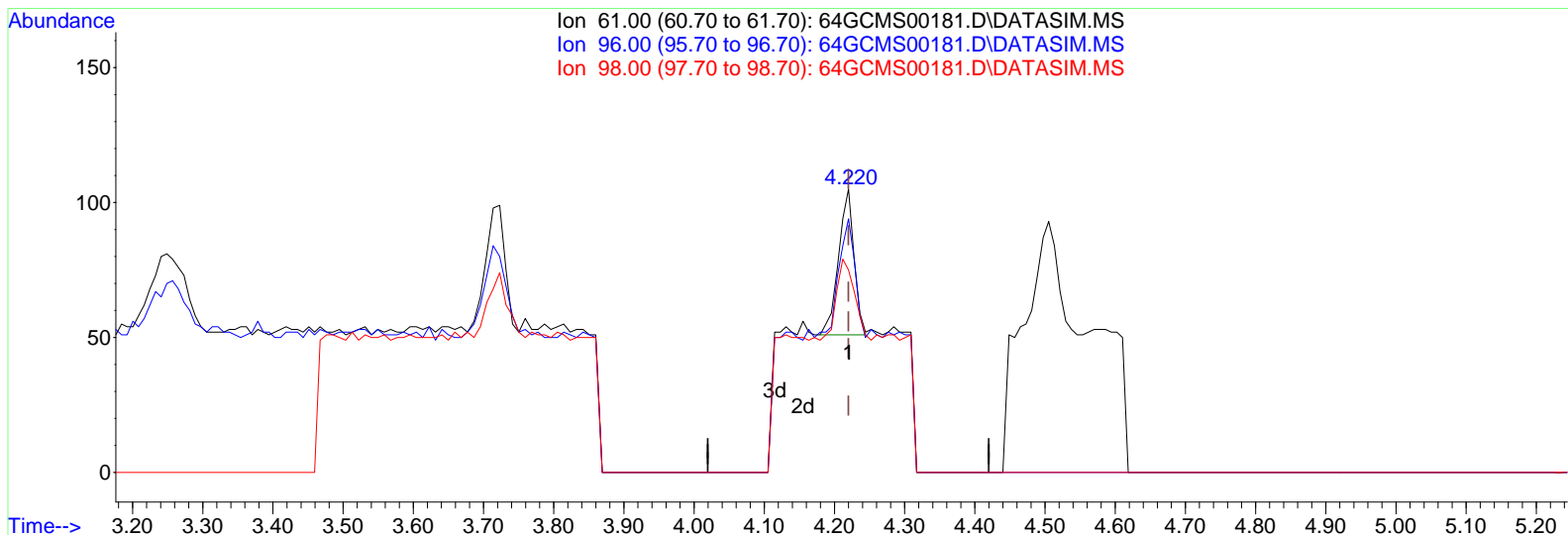
(7) cis-1,2-Dichloroethene

4.220min (-0.000) 0.65 ppbv

response	127
Ion	Exp% Act%
61.00	100.00 100.00
96.00	65.00 53.54
98.00	41.80 40.94
0.00	0.00 0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00181.D
 Acq On : 3 May 2016 6:27 am
 Operator : dlm
 Sample : STD20160503-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:59:53 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

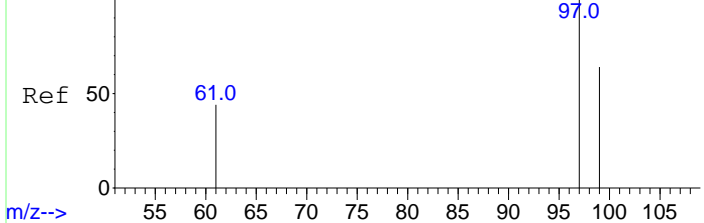


(7) *cis*-1,2-Dichloroethene

4.220min (-0.000) 0.42 ppbv m

response	82
Ion	Exp% Act%
61.00	100.00 100.00
96.00	65.00 82.93#
98.00	41.80 63.41#
0.00	0.00 0.00

Abundance Scan 301 (4.505 min): 64GCMS00179.D\DATASIM.MS (-293)



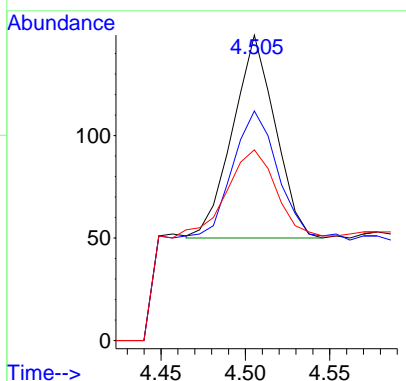
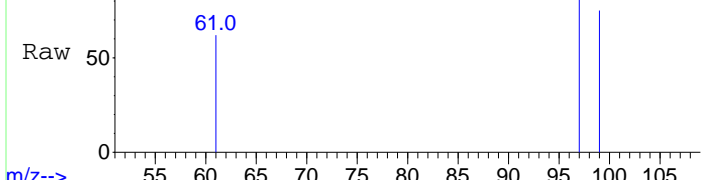
#8
1,1,1-Trichloroethane
Concen: 0.44 ppbv m
RT: 4.505 min Scan# 301
Delta R.T. -0.000 min
Lab File: 64GCMS00181.D
Acq: 3 May 2016 6:27 am

Tgt Ion: 97 Resp: 174

Ion	Ratio	Lower	Upper
97	100		
99	106.3	51.5	77.3#
61	90.2	38.6	58.0#

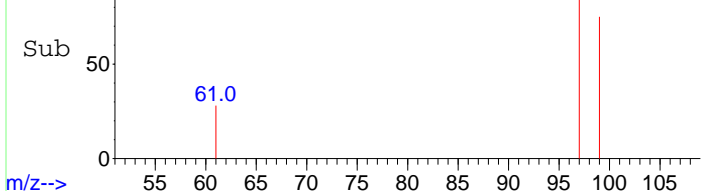
m/z-->

Abundance Scan 301 (4.505 min): 64GCMS00181.D\DATASIM.MS

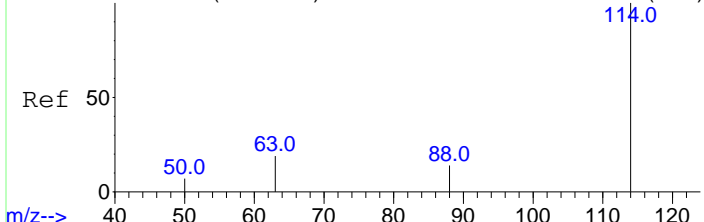


m/z-->

Abundance Scan 301 (4.505 min): 64GCMS00181.D\DATASIM.MS (-278)



Abundance Scan 334 (4.792 min): 64GCMS00179.D\DATASIM.MS (-331)



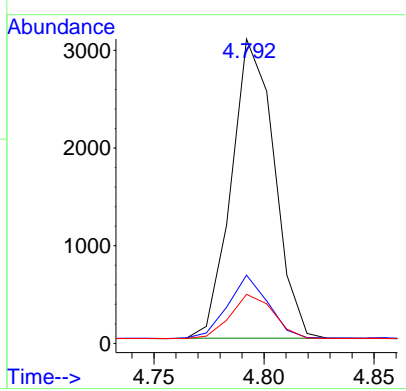
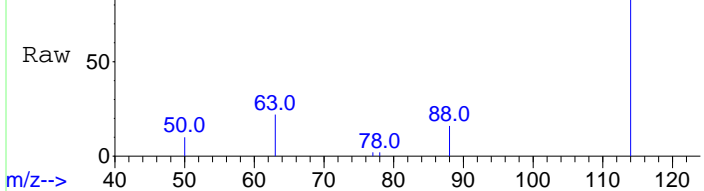
#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. -0.000 min
Lab File: 64GCMS00181.D
Acq: 3 May 2016 6:27 am

Tgt Ion: 114 Resp: 4145

Ion	Ratio	Lower	Upper
114	100		
63	20.1	19.2	28.8
88	14.9	13.7	20.5

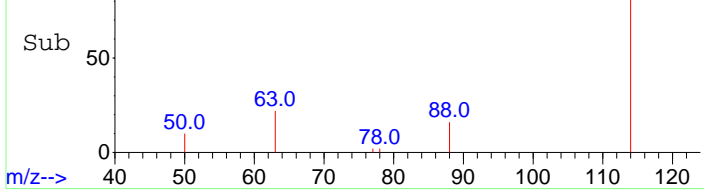
m/z-->

Abundance Scan 334 (4.792 min): 64GCMS00181.D\DATASIM.MS



m/z-->

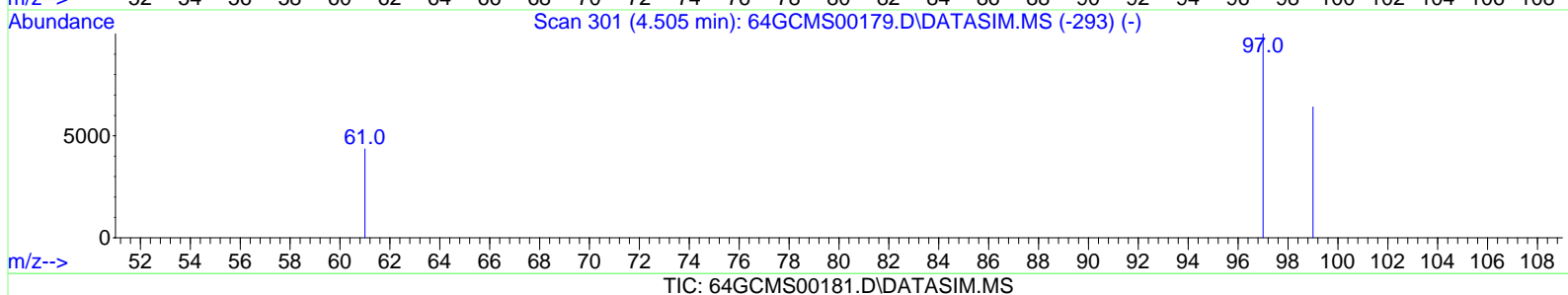
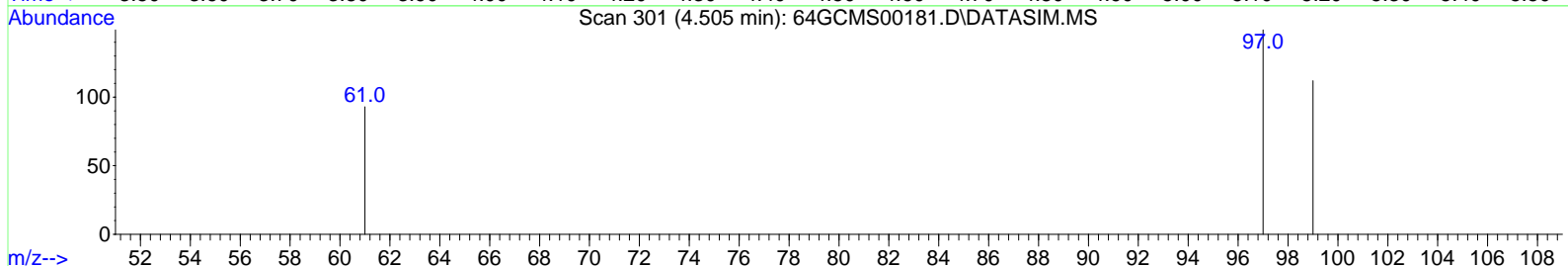
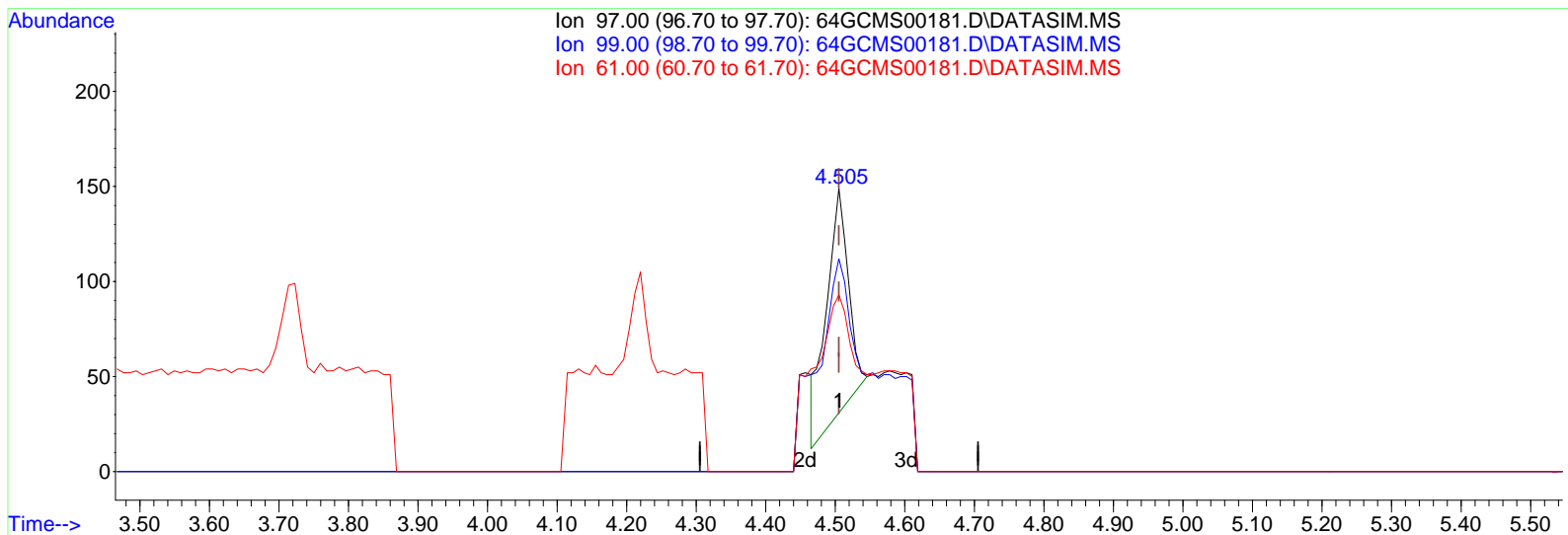
Abundance Scan 334 (4.792 min): 64GCMS00181.D\DATASIM.MS (-312)



m/z-->

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00181.D
 Acq On : 3 May 2016 6:27 am
 Operator : dlm
 Sample : STD20160503-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:59:53 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



(8) 1,1,1-Trichloroethane

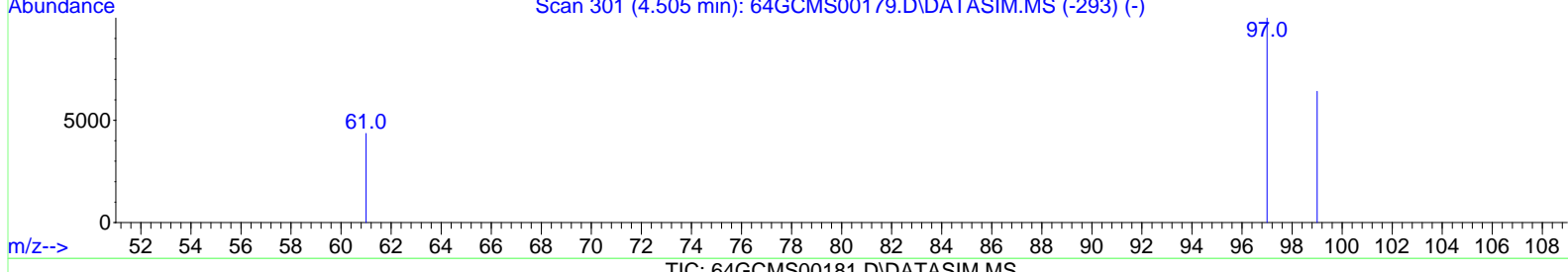
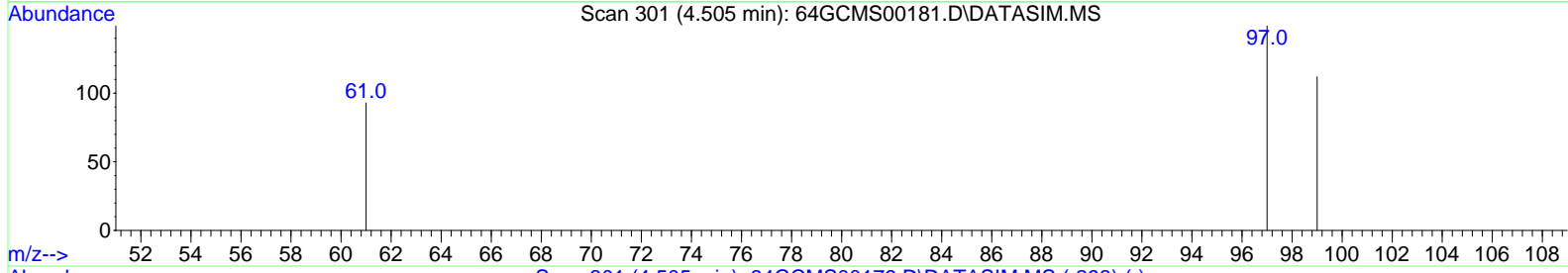
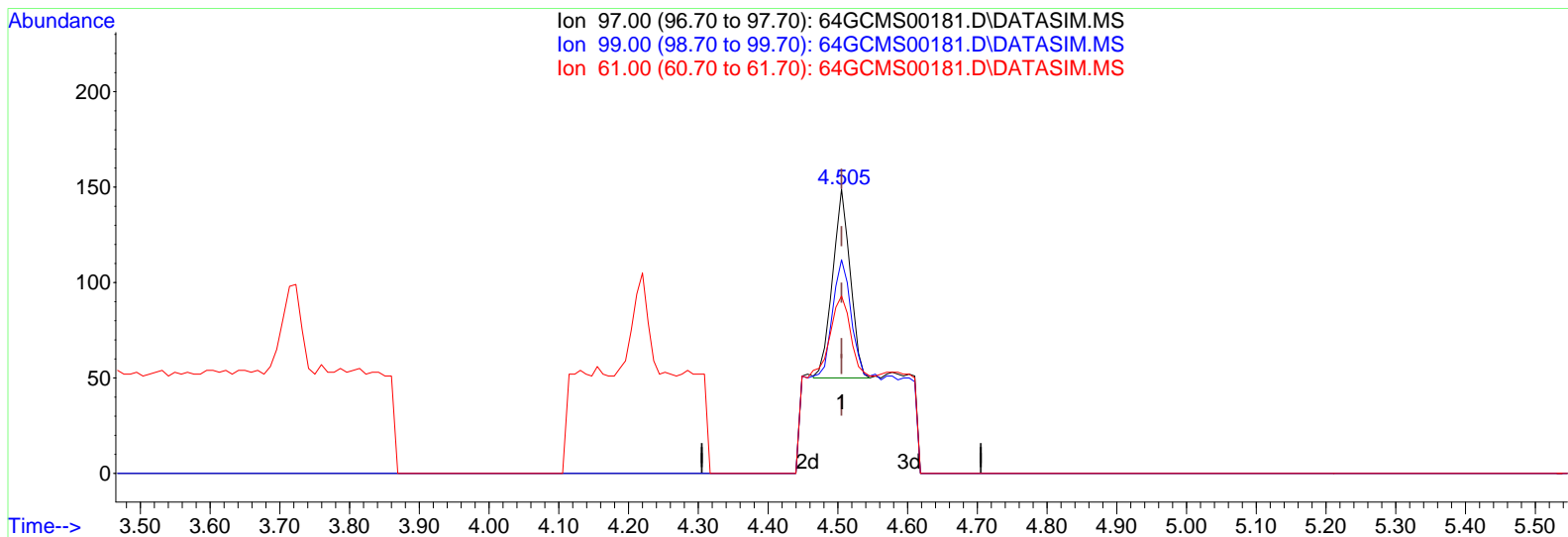
4.505min (-0.000) 0.68 ppbv

response 266

Ion	Exp%	Act%
97.00	100.00	100.00
99.00	64.40	69.55
61.00	48.30	59.02#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00181.D
 Acq On : 3 May 2016 6:27 am
 Operator : dlm
 Sample : STD20160503-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:59:53 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



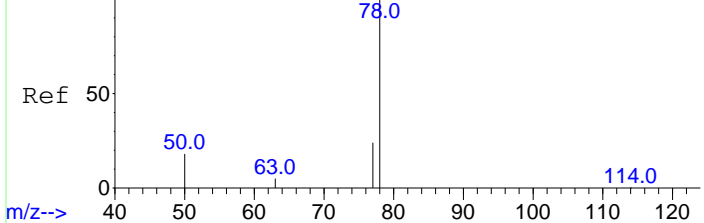
(8) 1,1,1-Trichloroethane

4.505min (-0.000) 0.44 ppbv m

response 174

Ion	Exp%	Act%
97.00	100.00	100.00
99.00	64.40	106.32#
61.00	48.30	90.23#
0.00	0.00	0.00

Abundance Scan 323 (4.691 min): 64GCMS00179.D\DATASIM.MS (-319)

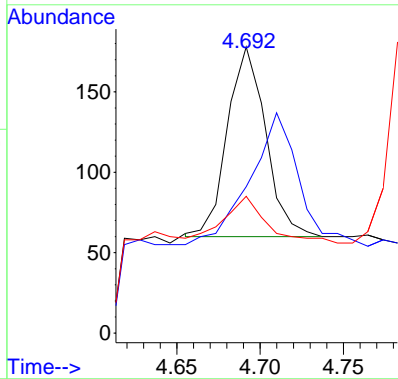
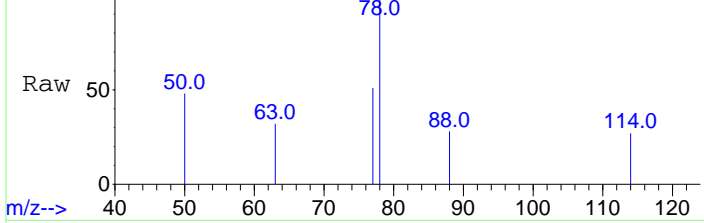


#10

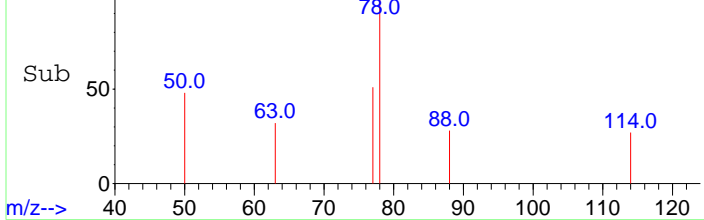
Benzene
 Concen: 0.57 ppbv m
 RT: 4.692 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00181.D
 Acq: 3 May 2016 6:27 am

Tgt Ion:	Resp:	Lower	Upper
78	100		
77	157.7	18.2	27.4#
50	116.4	16.6	24.8#

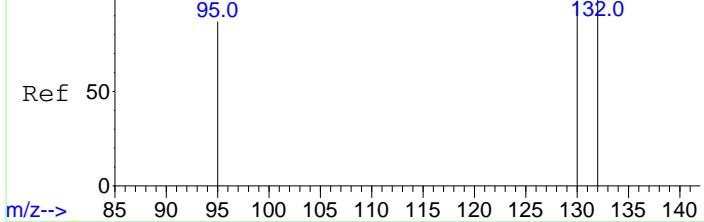
Abundance Scan 323 (4.692 min): 64GCMS00181.D\DATASIM.MS



Abundance Scan 323 (4.692 min): 64GCMS00181.D\DATASIM.MS (-299)



Abundance Scan 355 (4.977 min): 64GCMS00179.D\DATASIM.MS (-350)

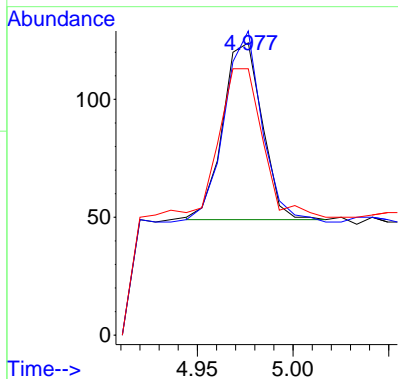
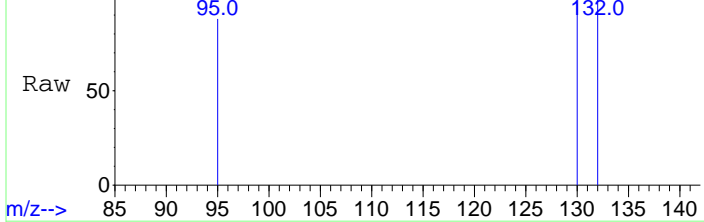


#11

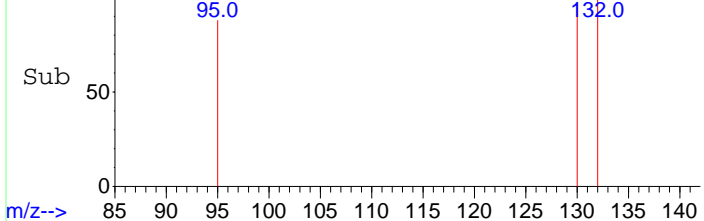
Trichloroethene
 Concen: 0.53 ppbv m
 RT: 4.977 min Scan# 355
 Delta R.T. -0.000 min
 Lab File: 64GCMS00181.D
 Acq: 3 May 2016 6:27 am

Tgt Ion:	Resp:	Lower	Upper
130	100		
132	170.4	76.9	115.3#
95	82.4	81.5	122.3

Abundance Scan 355 (4.977 min): 64GCMS00181.D\DATASIM.MS

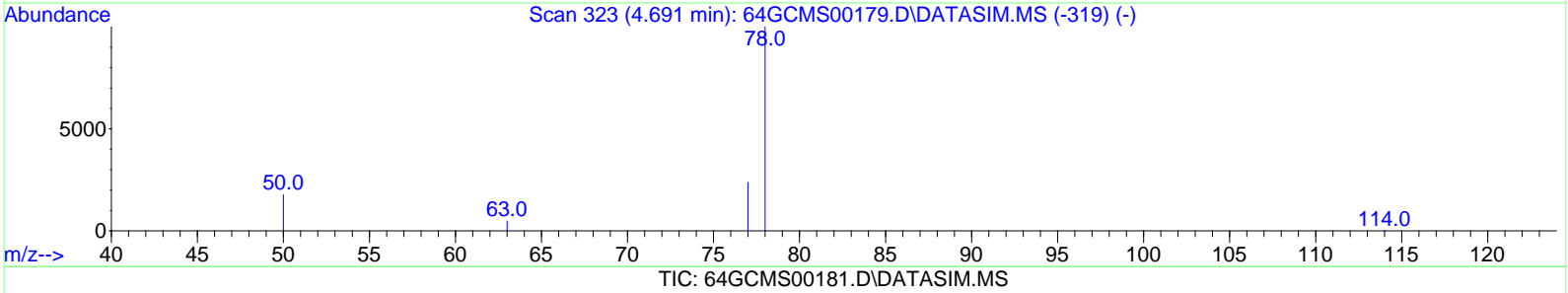
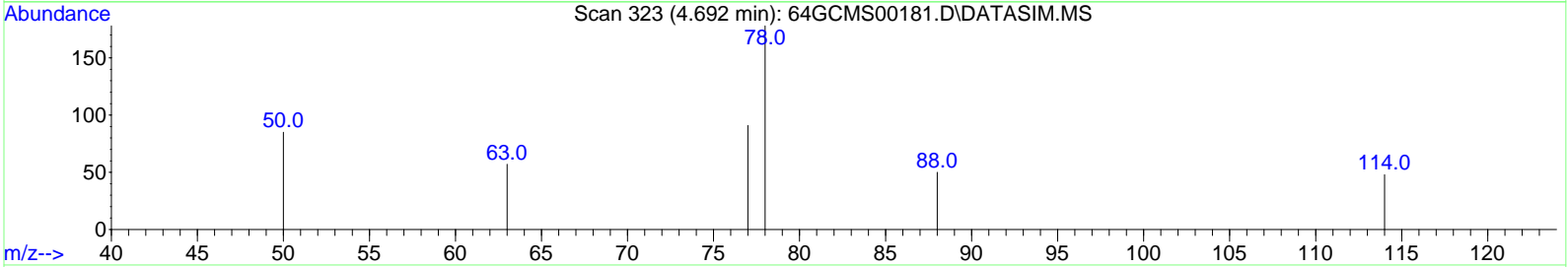
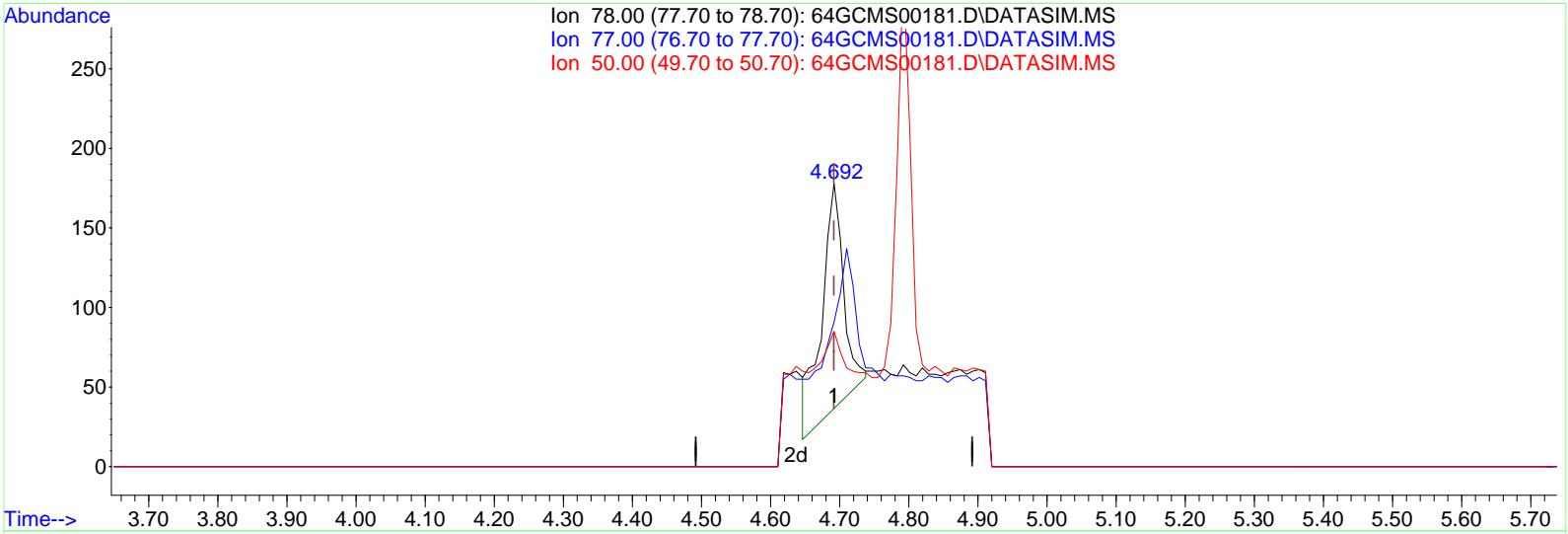


Abundance Scan 355 (4.977 min): 64GCMS00181.D\DATASIM.MS (-332)



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00181.D
 Acq On : 3 May 2016 6:27 am
 Operator : dlm
 Sample : STD20160503-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:59:53 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



(10) Benzene

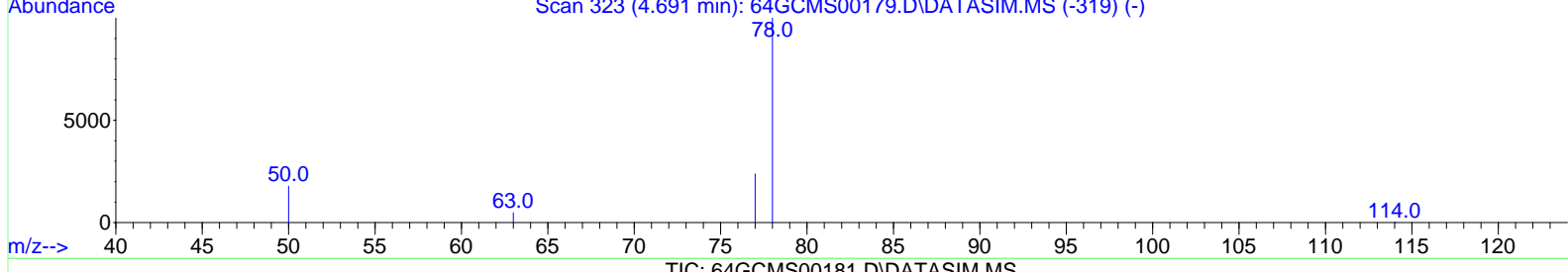
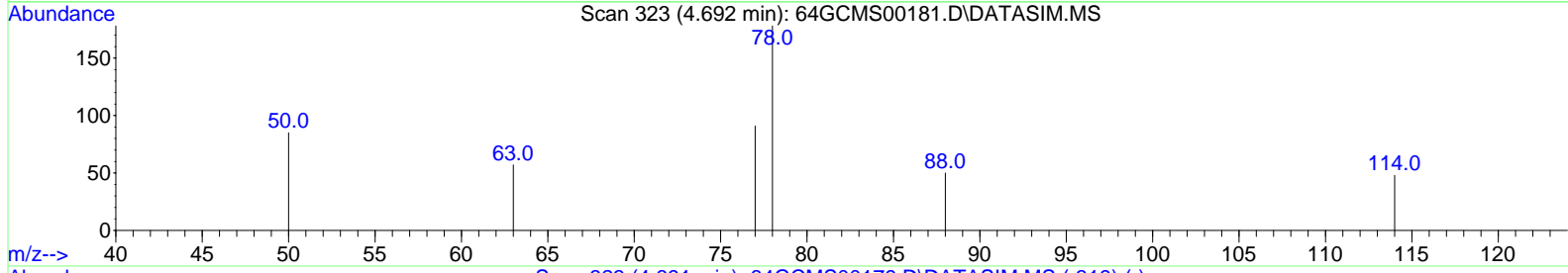
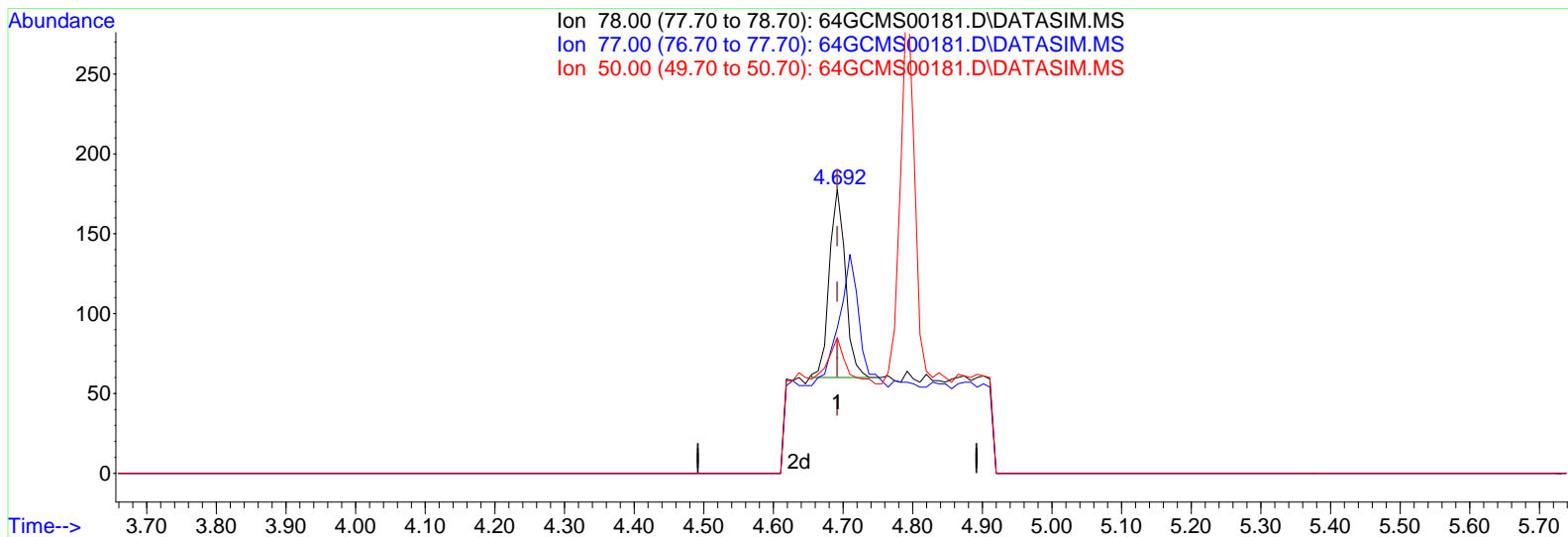
4.692min (-0.000) 0.96 ppbv

response 318

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	93.71#
50.00	20.70	69.18#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00181.D
 Acq On : 3 May 2016 6:27 am
 Operator : dlm
 Sample : STD20160503-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:59:53 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



(10) Benzene

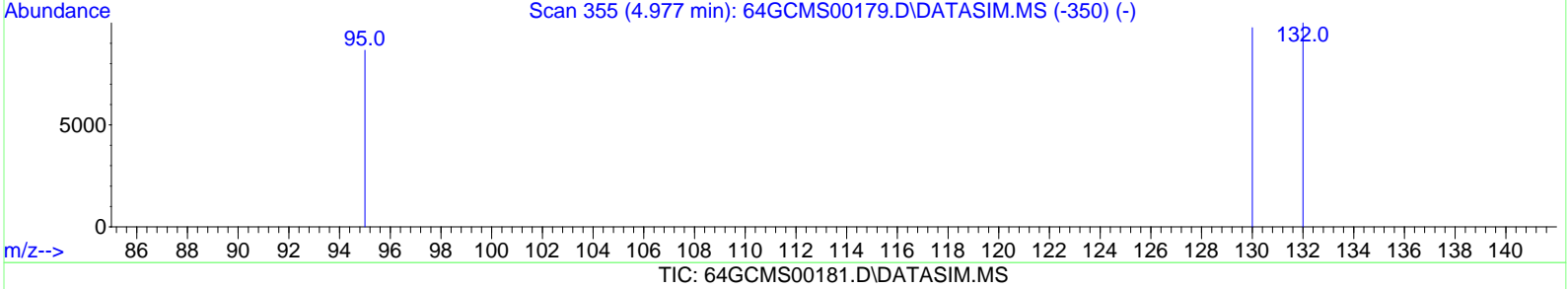
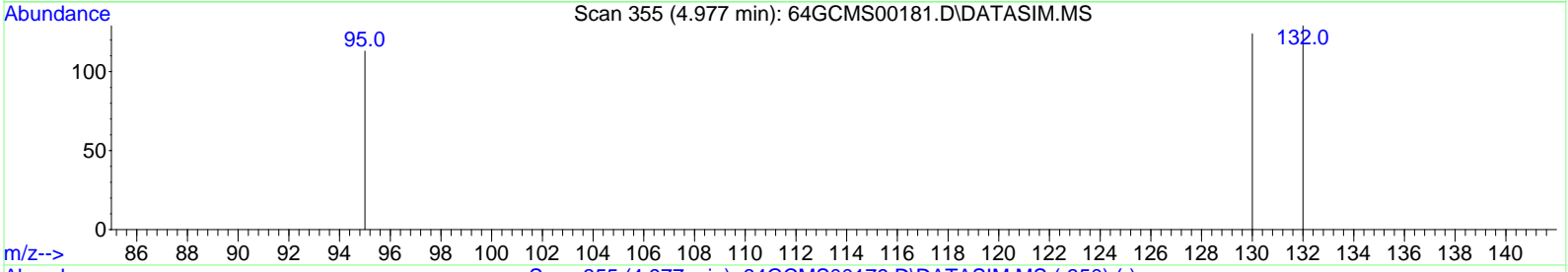
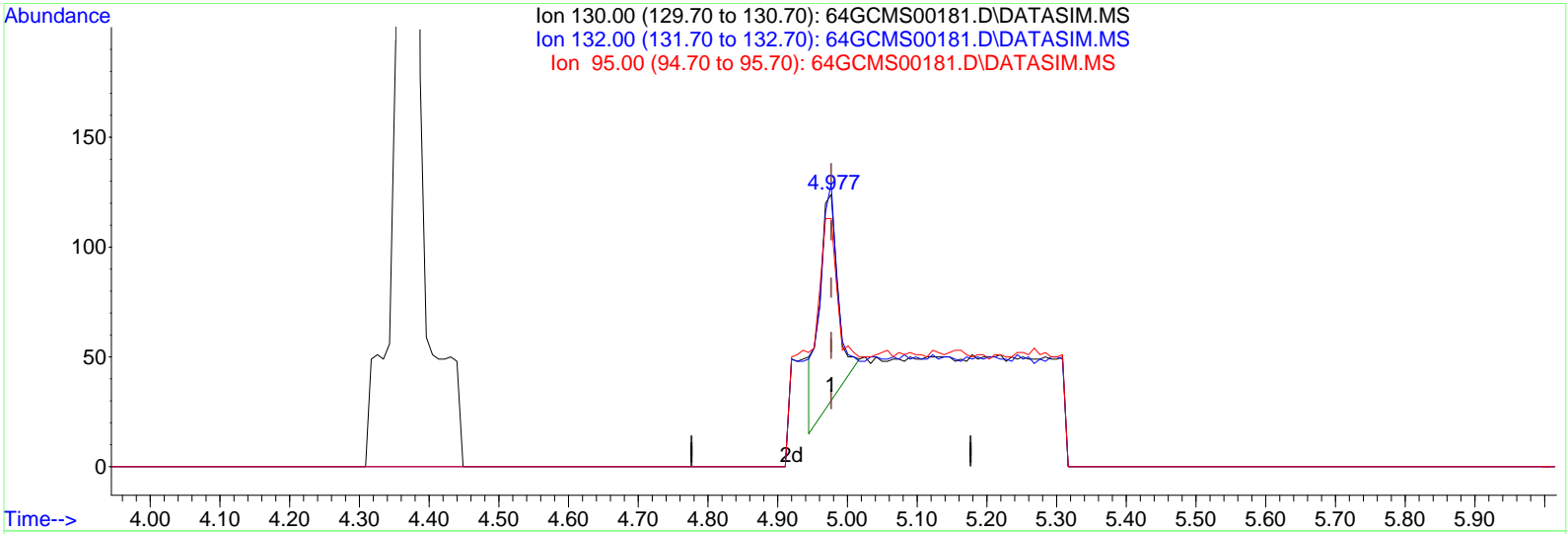
4.692min (-0.000) 0.57 ppbv m

response 189

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	157.67#
50.00	20.70	116.40#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00181.D
 Acq On : 3 May 2016 6:27 am
 Operator : dlm
 Sample : STD20160503-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:59:53 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



(11) Trichloroethene

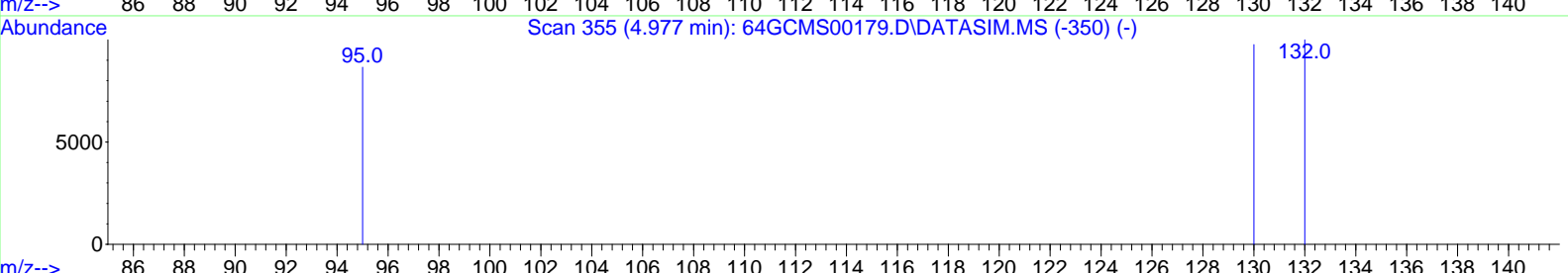
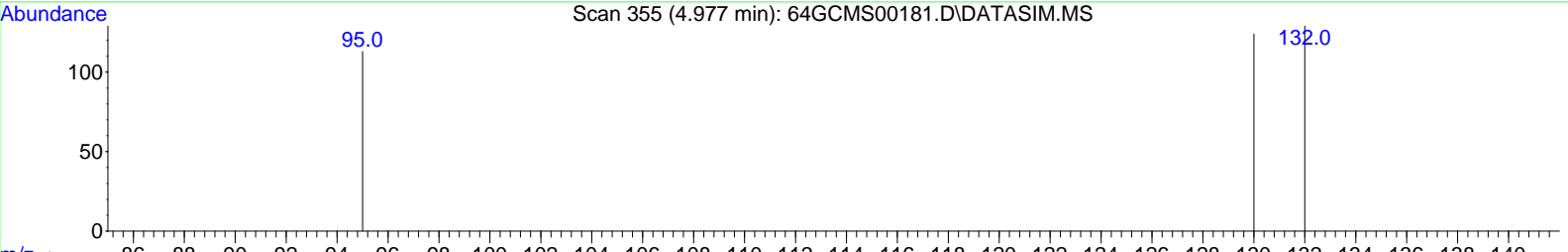
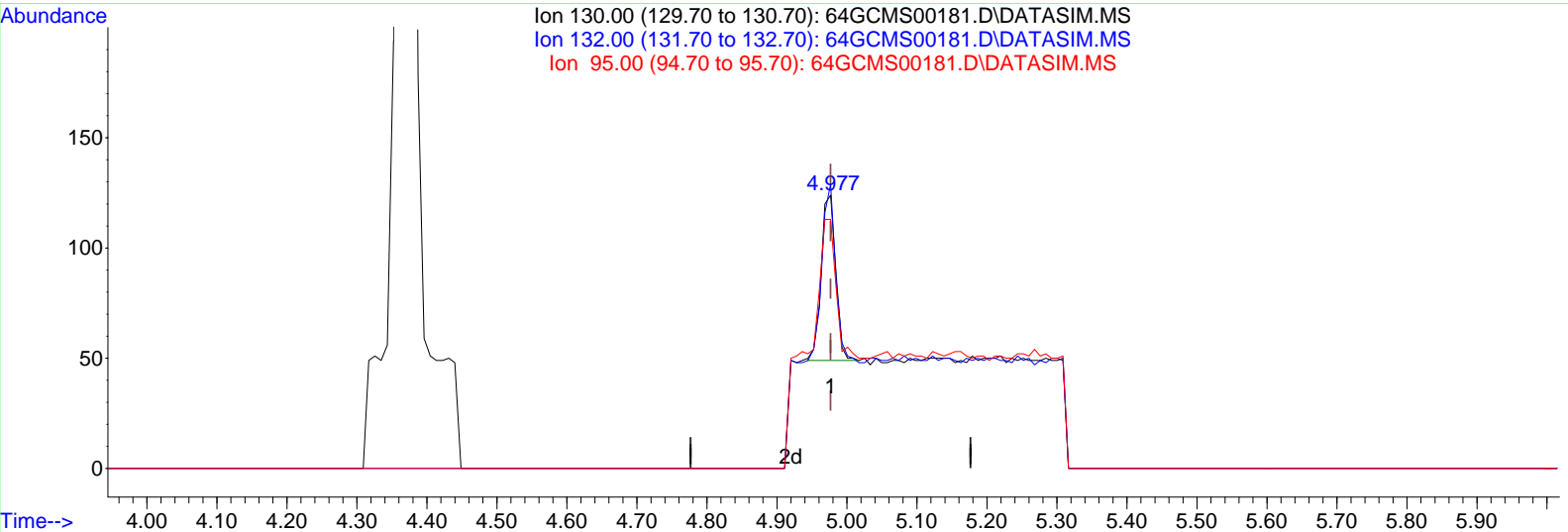
4.977min (-0.000) 0.89 ppbv

response 182

Ion	Exp%	Act%
130.00	100.00	100.00
132.00	96.10	101.10
95.00	101.90	48.90#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00181.D
 Acq On : 3 May 2016 6:27 am
 Operator : dlm
 Sample : STD20160503-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:59:53 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



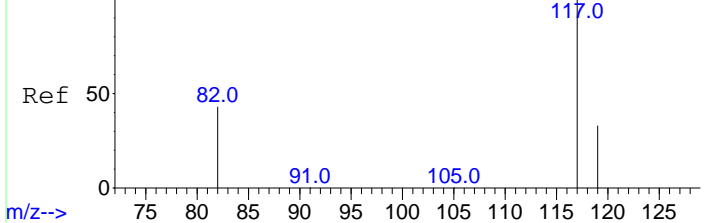
(11) Trichloroethene

4.977min (-0.000) 0.53 ppbv m

response 108

Ion	Exp%	Act%
130.00	100.00	100.00
132.00	96.10	170.37#
95.00	101.90	82.41
0.00	0.00	0.00

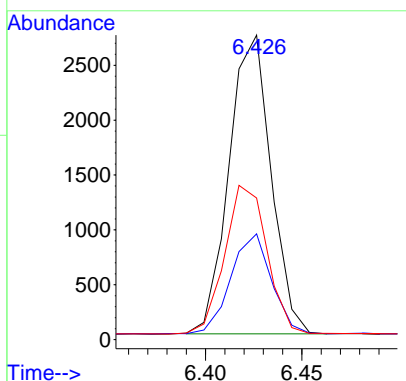
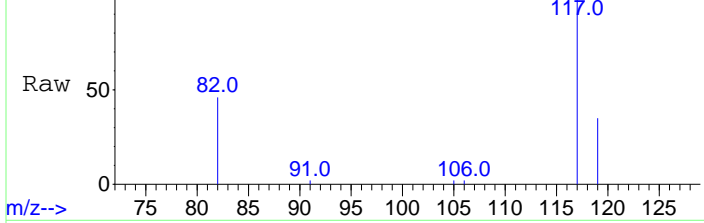
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



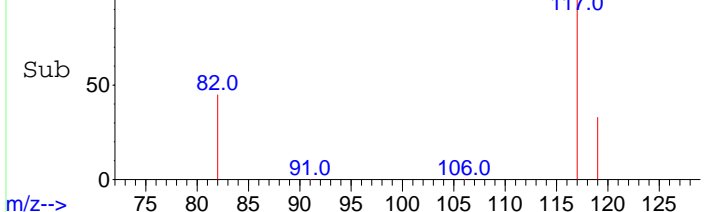
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00181.D
 Acq: 3 May 2016 6:27 am

Tgt Ion	Resp	Lower	Upper
117	4137		
119	32.2	25.8	38.6
82	50.0	45.6	68.4

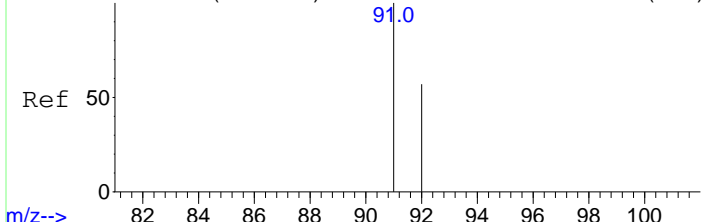
Abundance Scan 533 (6.426 min): 64GCMS00181.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00181.D\DATASIM.MS (-511)



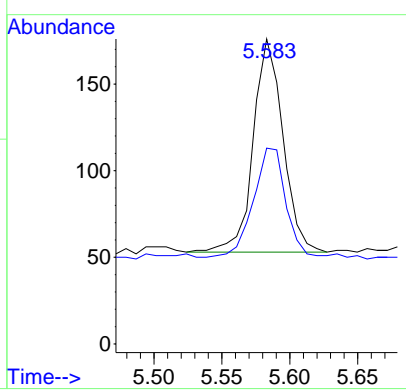
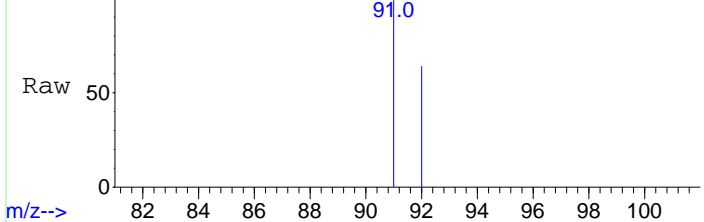
Abundance Scan 433 (5.583 min): 64GCMS00179.D\DATASIM.MS (-428)



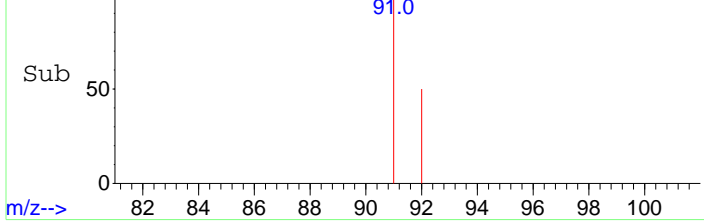
#13
 Toluene
 Concen: 0.44 ppbv
 RT: 5.583 min Scan# 433
 Delta R.T. -0.000 min
 Lab File: 64GCMS00181.D
 Acq: 3 May 2016 6:27 am

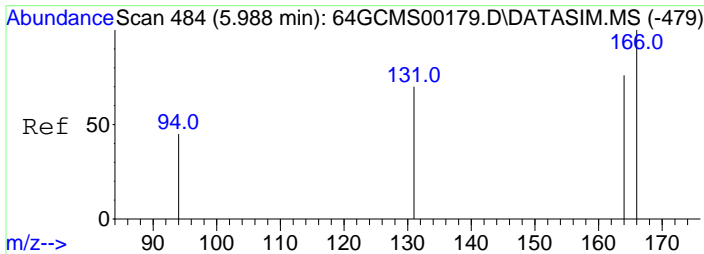
Tgt Ion	Resp	Lower	Upper
91	188		
92	58.0	48.0	72.0

Abundance Scan 433 (5.583 min): 64GCMS00181.D\DATASIM.MS



Abundance Scan 433 (5.583 min): 64GCMS00181.D\DATASIM.MS (-406)

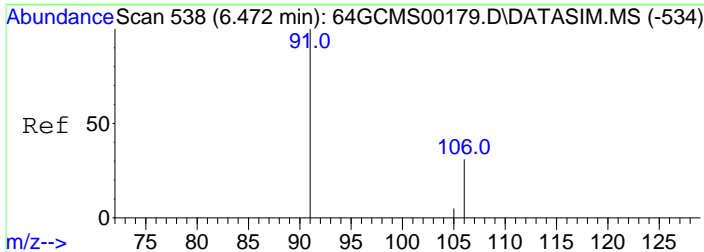
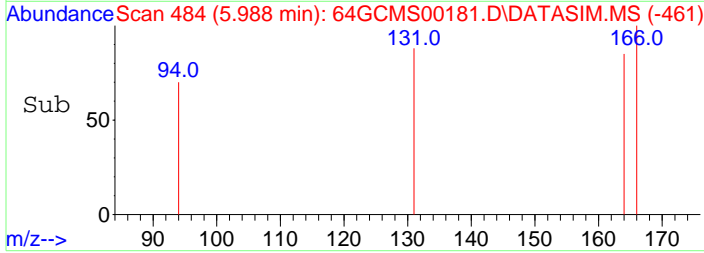
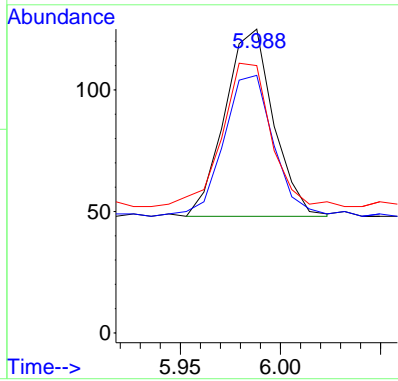
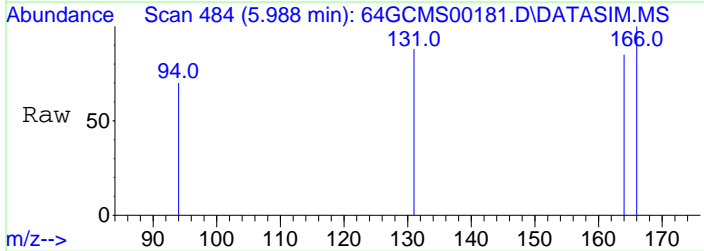




#14
 Tetrachloroethene
 Concen: 0.44 ppbv
 RT: 5.988 min Scan# 484
 Delta R.T. -0.000 min
 Lab File: 64GCMS00181.D
 Acq: 3 May 2016 6:27 am

Tgt Ion: 166 Resp: 131

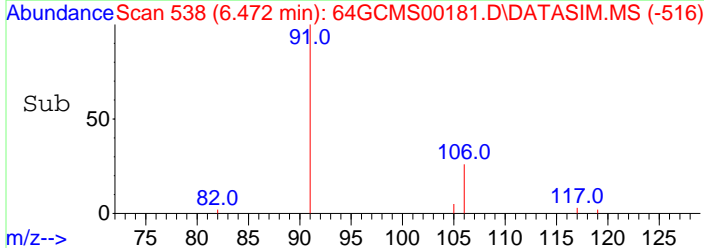
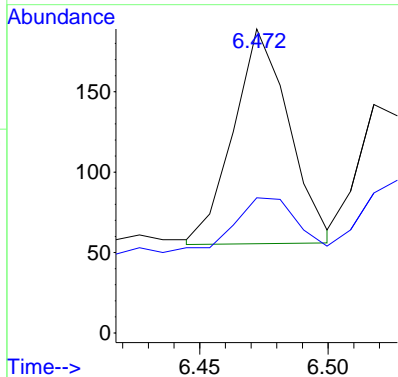
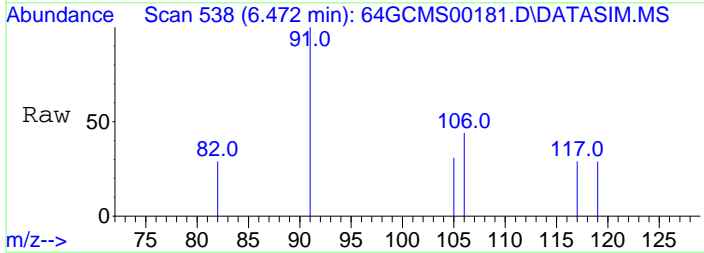
Ion	Ratio	Lower	Upper
166	100		
164	77.1	63.4	95.0
131	74.0	63.4	95.0



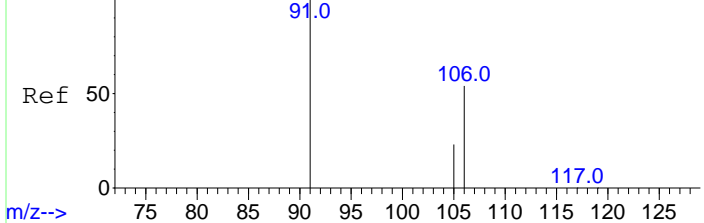
#15
 Ethyl Benzene
 Concen: 0.38 ppbv
 RT: 6.472 min Scan# 538
 Delta R.T. -0.000 min
 Lab File: 64GCMS00181.D
 Acq: 3 May 2016 6:27 am

Tgt Ion: 91 Resp: 201

Ion	Ratio	Lower	Upper
91	100		
106	31.3	24.2	36.2



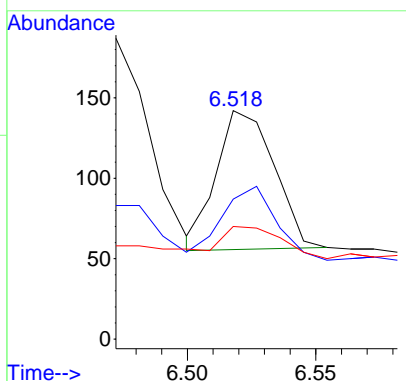
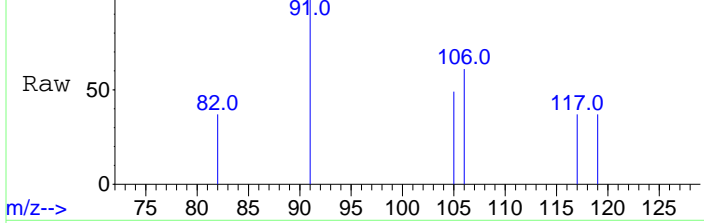
Abundance Scan 544 (6.527 min): 64GCMS00179.D\DATASIM.MS (-541)



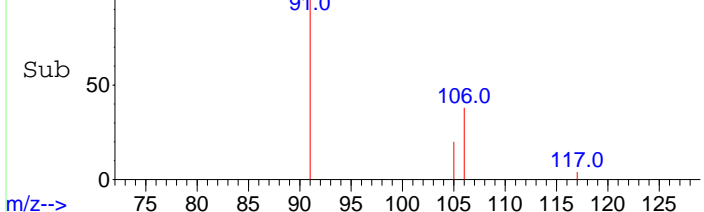
#16
m,p-Xylene
Concen: 0.31 ppbv
RT: 6.518 min Scan# 543
Delta R.T. -0.009 min
Lab File: 64GCMS00181.D
Acq: 3 May 2016 6:27 am

Tgt Ion: 91 Resp: 135
Ion Ratio Lower Upper
91 100
106 50.4 37.7 56.5
105 23.0 17.0 25.4

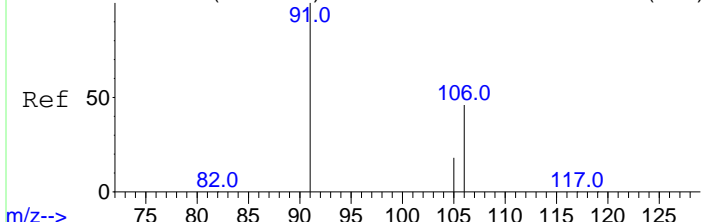
Abundance Scan 543 (6.518 min): 64GCMS00181.D\DATASIM.MS



Abundance Scan 543 (6.518 min): 64GCMS00181.D\DATASIM.MS (-522)



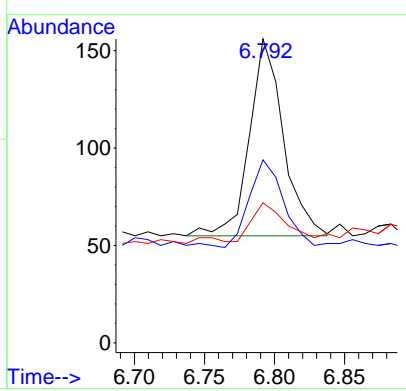
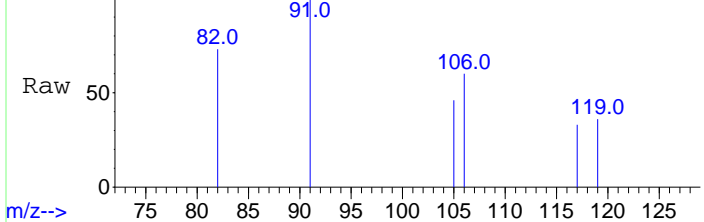
Abundance Scan 573 (6.792 min): 64GCMS00179.D\DATASIM.MS (-569)



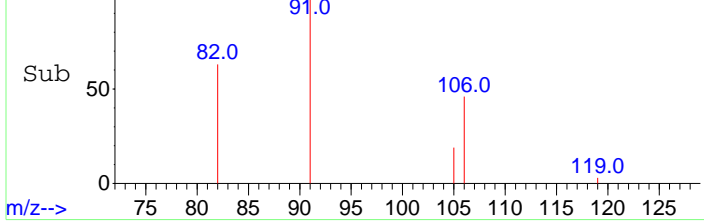
#17
o-Xylene
Concen: 0.36 ppbv
RT: 6.792 min Scan# 573
Delta R.T. -0.000 min
Lab File: 64GCMS00181.D
Acq: 3 May 2016 6:27 am

Tgt Ion: 91 Resp: 170
Ion Ratio Lower Upper
91 100
106 44.7 35.4 53.2
105 22.4 14.0 21.0#

Abundance Scan 573 (6.792 min): 64GCMS00181.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00181.D\DATASIM.MS (-551)



LABORATORY CONTROL SAMPLE

Data File 64GCMS00183
 Standard Number 20160503-LCS
 Standard Name 500 ppbv STD
 Loop Size 5 mL

Sample Multiplier: Units Date Analyzed	1 ppbv 5/3/2016	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %
Vinyl Chloride	501.49	500.00	100	70-130
1,1-Dichloroethene	483.69	500.00	97	70-130
Methyl Tert Butyl Ether	481.58	500.00	96	70-130
trans-1,2-Dichloroethene	539.13	520.00	104	70-130
1,1-Dichloroethane	500.94	510.00	98	70-130
cis-1,2-Dichloroethene	498.27	515.00	97	70-130
1,1,1-Trichloroethane	477.05	497.50	96	70-130
Benzene	523.68	505.00	104	70-130
Trichloroethene	476.07	500.00	95	70-130
Toluene	523.41	507.50	103	70-130
Tetrachloroethene	458.16	502.50	91	70-130
Ethyl Benzene	575.21	512.50	112	70-130
m,p-Xylene	562.72	505.00	111	70-130
o-Xylene	516.67	502.50	103	70-130

Secondary Standard Cylinder # CC-143609

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00183.D
 Acq On : 3 May 2016 6:54 am
 Operator : dlm
 Sample : 20160503-LCS \ 500 ppbv LCS
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

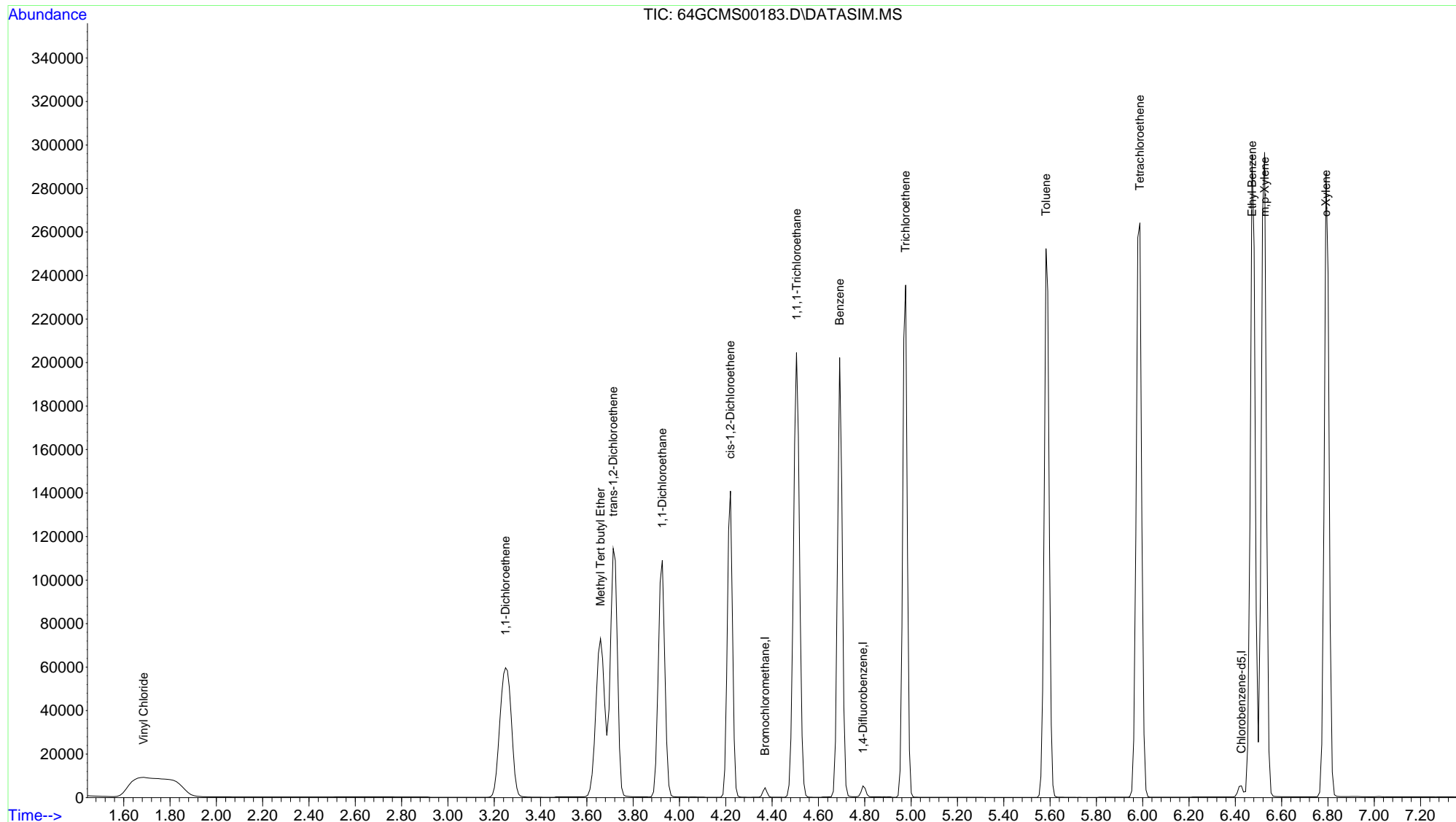
Quant Time: May 03 07:02:54 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 19:36:10 2016
 Response via : Initial Calibration

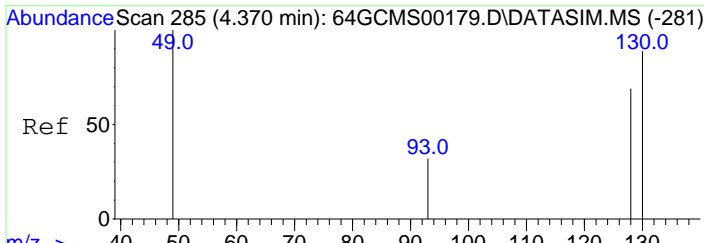
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.369	49	1930	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	4773	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.426	117	4389	10.00	ppbv	0.00
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.686	62	63024	501.49	ppbv	# 79
3) 1,1-Dichloroethene	3.249	61	106818	483.69	ppbv	# 89
4) Methyl Tert butyl Ether	3.659	73	152556	481.58	ppbv	93
5) trans-1,2-Dichloroethene	3.714	61	105938	539.13	ppbv	# 81
6) 1,1-Dichloroethane	3.926	63	130320	500.94	ppbv	# 93
7) cis-1,2-Dichloroethene	4.220	61	93442	498.27	ppbv	# 81
8) 1,1,1-Trichloroethane	4.505	97	180469	477.05	ppbv	98
10) Benzene	4.691	78	199356	523.68	ppbv	96
11) Trichloroethene	4.976	130	112423	476.07	ppbv	94
13) Toluene	5.583	91	238447	523.41	ppbv	97
14) Tetrachloroethene	5.988	166	144029	458.16	ppbv	96
15) Ethyl Benzene	6.472	91	323346	575.21	ppbv	97
16) m,p-Xylene	6.527	91	256586	562.72	ppbv	96
17) o-Xylene	6.792	91	255554	516.67	ppbv	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00183.D
 Acq On : 3 May 2016 6:54 am
 Operator : dlm
 Sample : 20160503-LCS \ 500 ppbv LCS
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 07:02:54 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 19:36:10 2016
 Response via : Initial Calibration

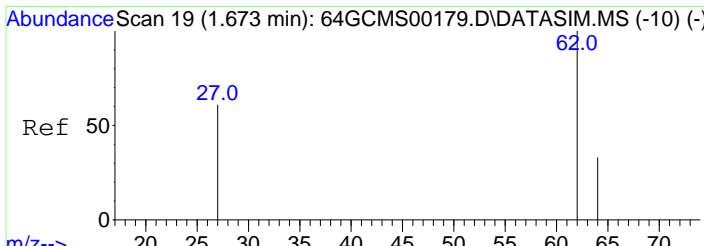
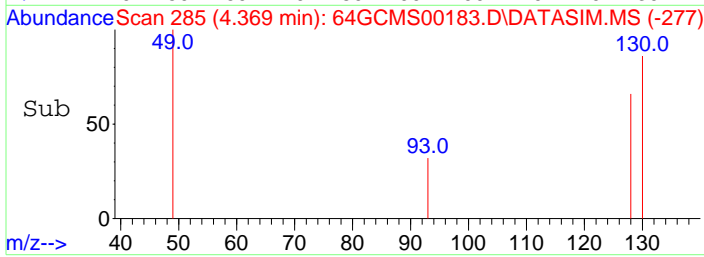
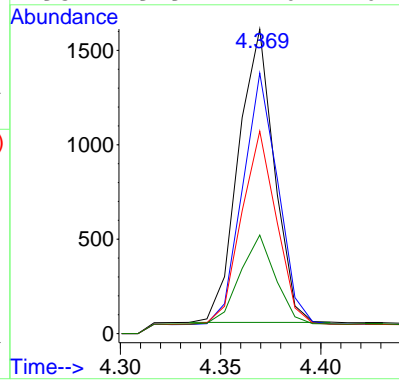
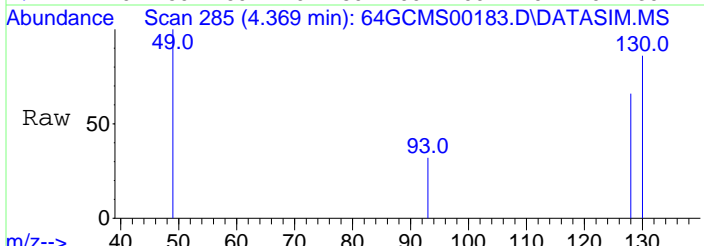




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.369 min Scan# 285
 Delta R.T. -0.001 min
 Lab File: 64GCMS00183.D
 Acq: 3 May 2016 6:54 am

Tgt Ion: 49 Resp: 1930

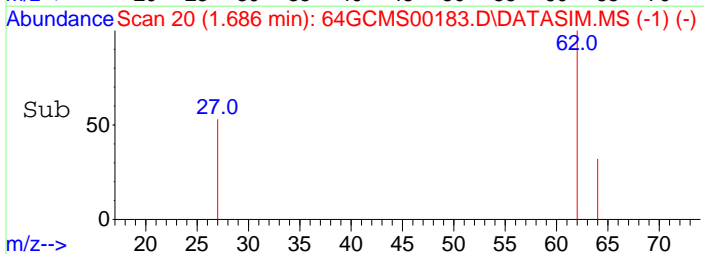
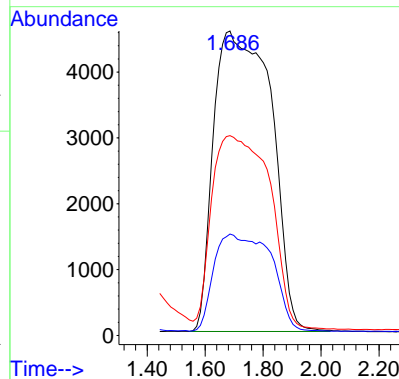
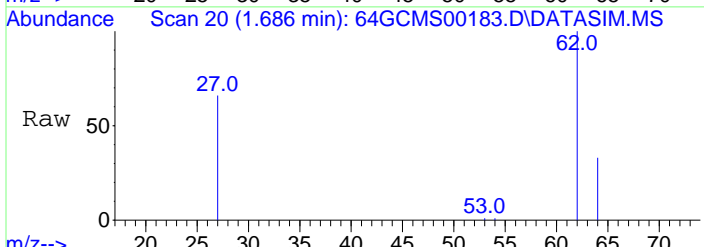
Ion	Ratio	Lower	Upper
49	100		
130	84.3	46.3	69.5#
128	64.2	35.7	53.5#
93	29.9	17.6	26.4#

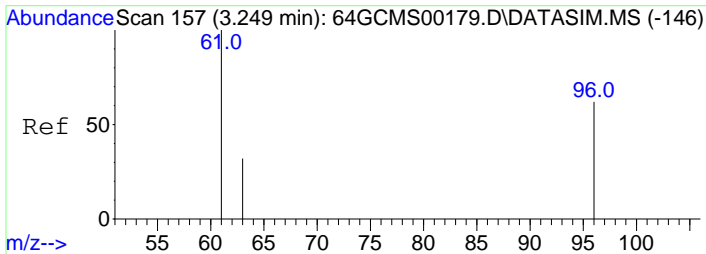


#2
 Vinyl Chloride
 Concen: 501.49 ppbv
 RT: 1.686 min Scan# 20
 Delta R.T. -0.000 min
 Lab File: 64GCMS00183.D
 Acq: 3 May 2016 6:54 am

Tgt Ion: 62 Resp: 63024

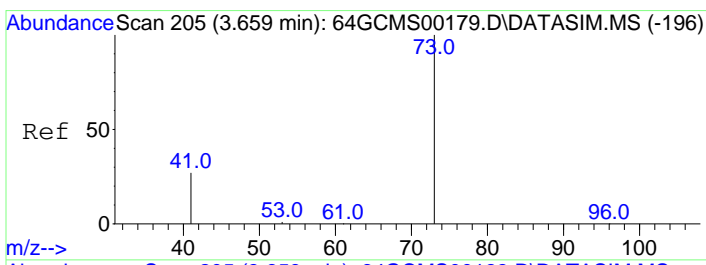
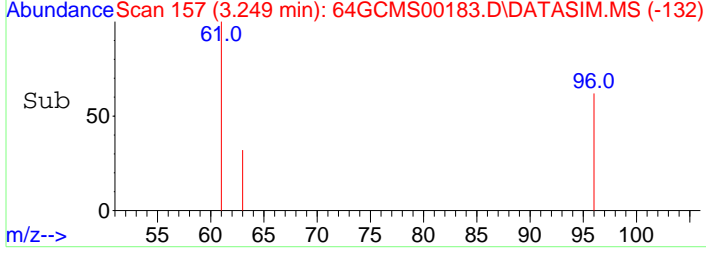
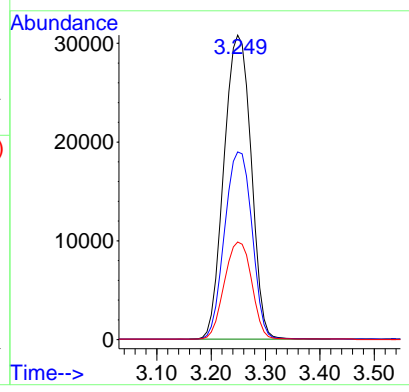
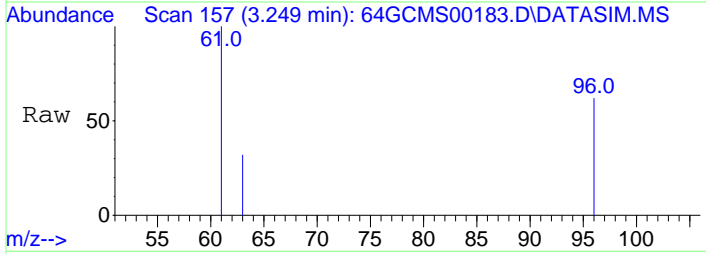
Ion	Ratio	Lower	Upper
62	100		
64	21.9	23.7	35.5#
27	64.7	38.0	57.0#





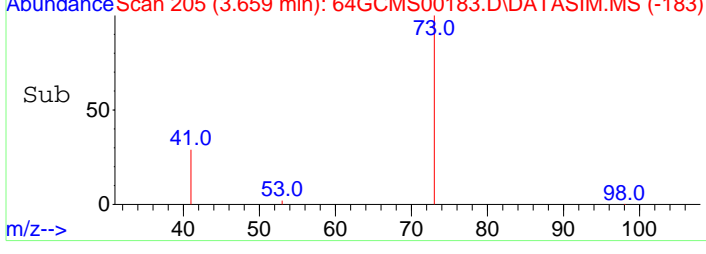
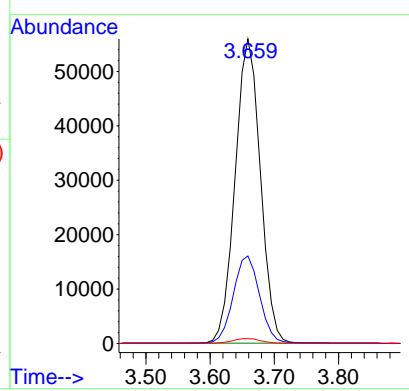
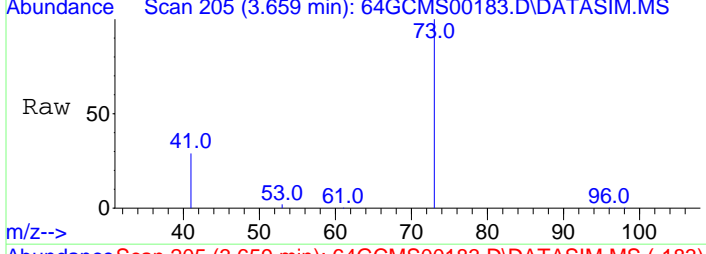
#3
 1,1-Dichloroethene
 Concen: 483.69 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. -0.000 min
 Lab File: 64GCMS00183.D
 Acq: 3 May 2016 6:54 am

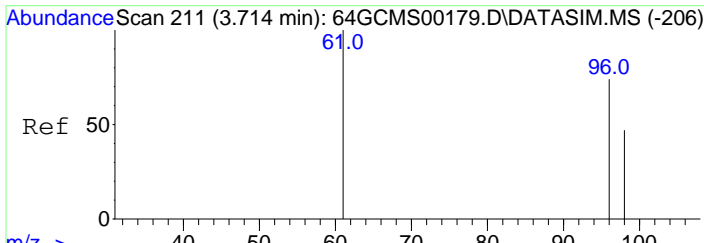
Tgt Ion	Resp	Lower	Upper
61	106818		
96	62.1	40.9	61.3#
63	32.1	24.3	36.5



#4
 Methyl Tert butyl Ether
 Concen: 481.58 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 64GCMS00183.D
 Acq: 3 May 2016 6:54 am

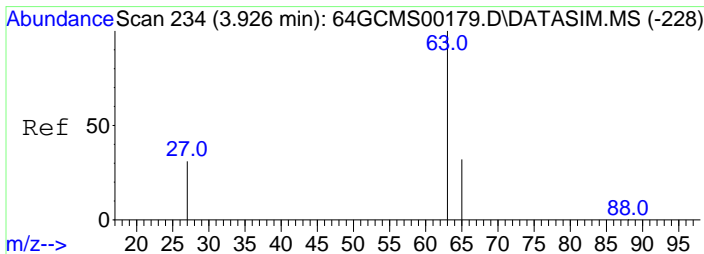
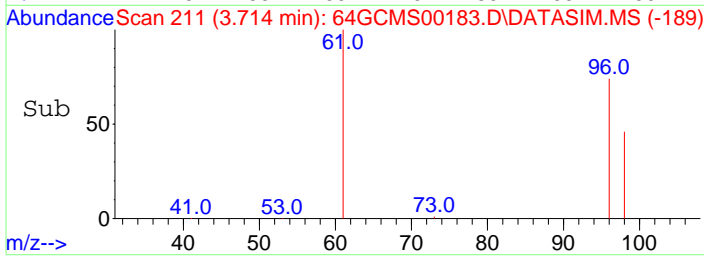
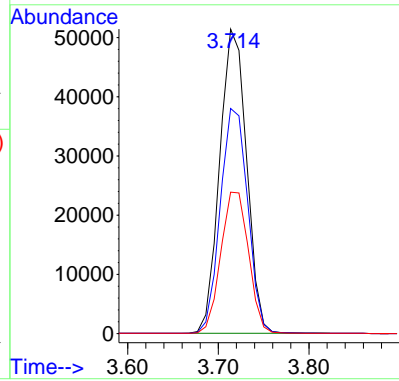
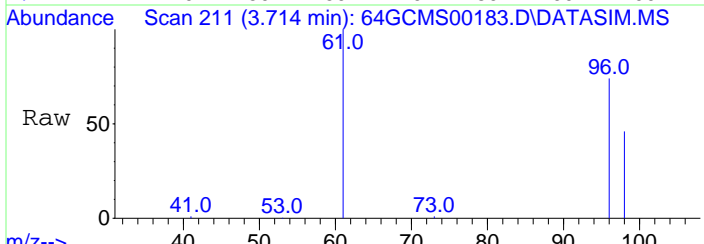
Tgt Ion	Resp	Lower	Upper
73	152556		
41	29.7	20.6	30.8
53	1.6	1.2	1.8





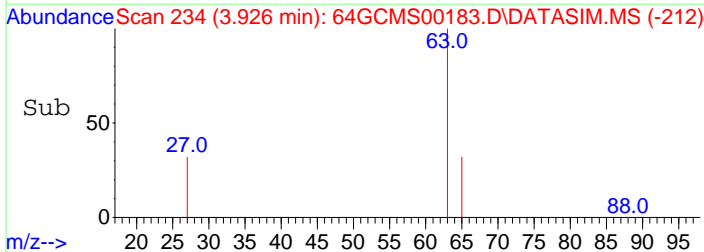
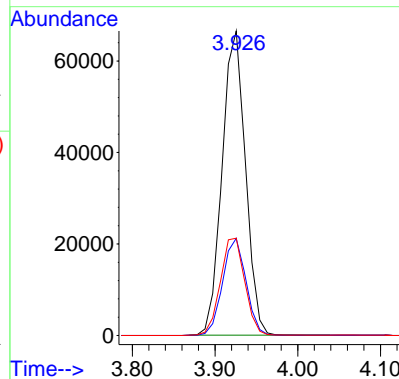
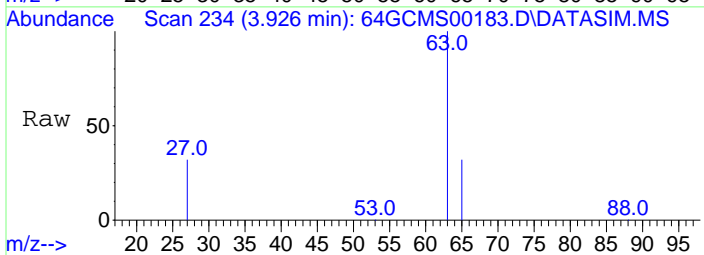
#5
 trans-1,2-Dichloroethene
 Concen: 539.13 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. -0.000 min
 Lab File: 64GCMS00183.D
 Acq: 3 May 2016 6:54 am

Tgt Ion	Resp	Lower	Upper
61	105938		
61	100		
96	75.3	47.8	71.6#
98	47.9	30.6	46.0#

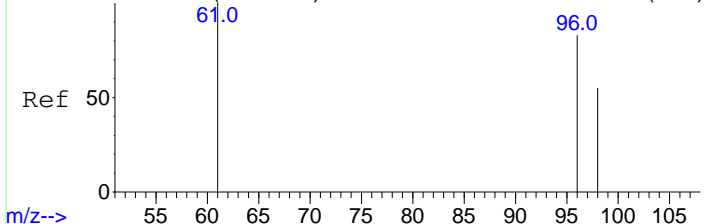


#6
 1,1-Dichloroethane
 Concen: 500.94 ppbv
 RT: 3.926 min Scan# 234
 Delta R.T. -0.000 min
 Lab File: 64GCMS00183.D
 Acq: 3 May 2016 6:54 am

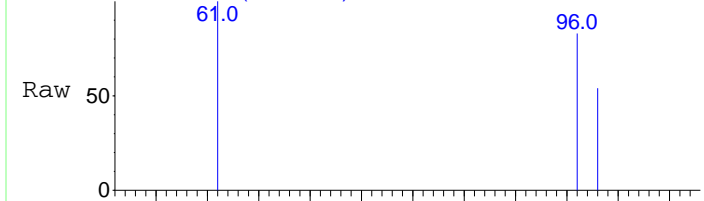
Tgt Ion	Resp	Lower	Upper
63	130320		
63	100		
65	32.0	24.8	37.2
27	33.4	21.1	31.7#



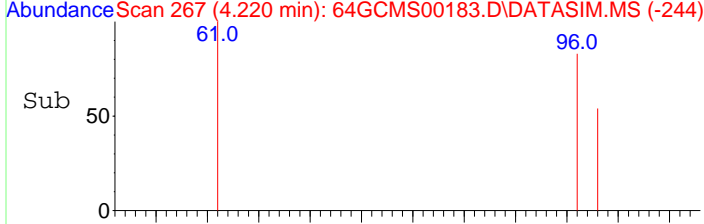
Abundance Scan 267 (4.220 min): 64GCMS00179.D\DATASIM.MS (-262)



m/z-->



Abundance Scan 267 (4.220 min): 64GCMS00183.D\DATASIM.MS (-244)

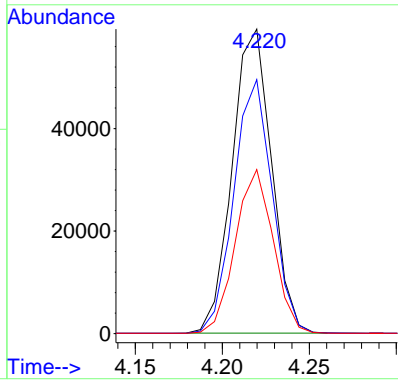


m/z-->

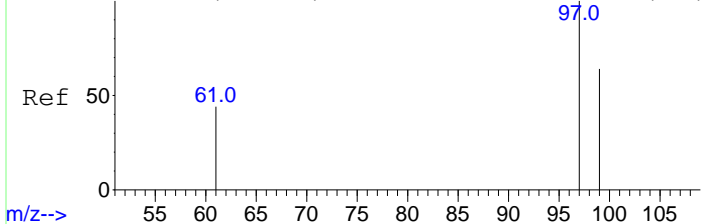
#7
cis-1,2-Dichloroethene
Concen: 498.27 ppbv
RT: 4.220 min Scan# 267
Delta R.T. -0.000 min
Lab File: 64GCMS00183.D
Acq: 3 May 2016 6:54 am

Tgt Ion: 61 Resp: 93442

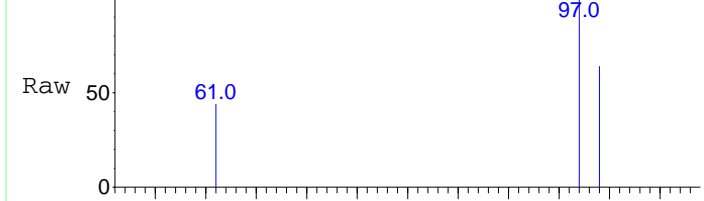
Ion	Ratio	Lower	Upper
61	100		
96	81.2	52.0	78.0#
98	51.9	33.4	50.2#



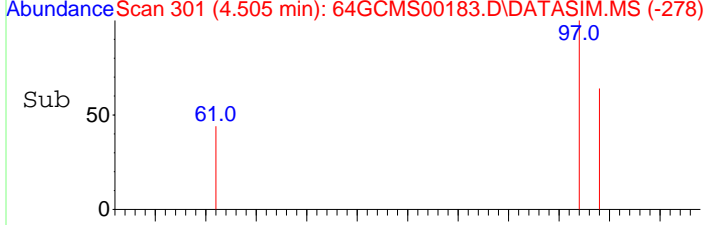
Abundance Scan 301 (4.505 min): 64GCMS00179.D\DATASIM.MS (-293)



m/z-->



Abundance Scan 301 (4.505 min): 64GCMS00183.D\DATASIM.MS (-278)

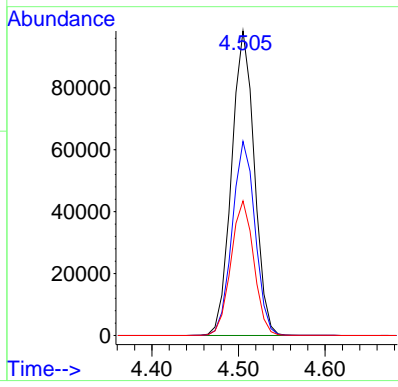


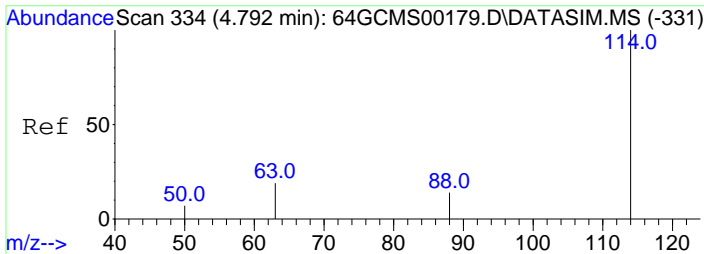
m/z-->

#8
1,1,1-Trichloroethane
Concen: 477.05 ppbv
RT: 4.505 min Scan# 301
Delta R.T. -0.000 min
Lab File: 64GCMS00183.D
Acq: 3 May 2016 6:54 am

Tgt Ion: 97 Resp: 180469

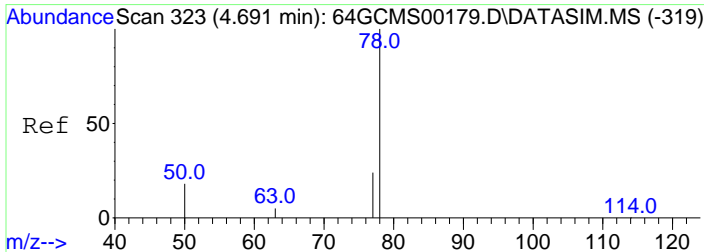
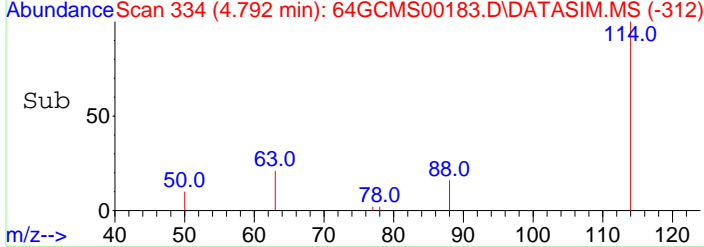
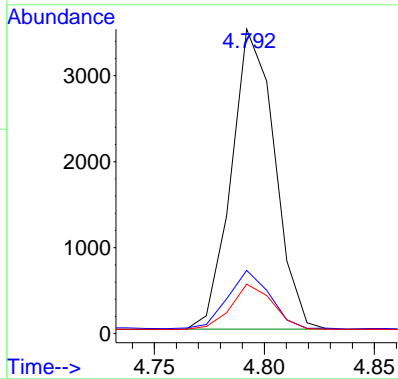
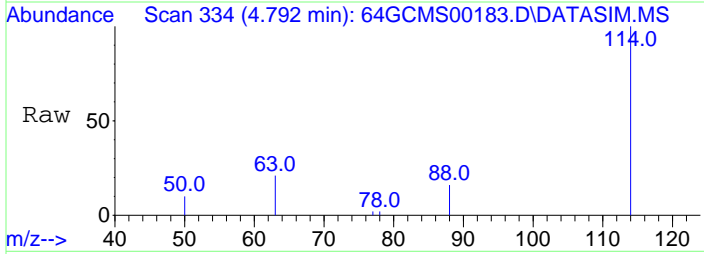
Ion	Ratio	Lower	Upper
97	100		
99	64.2	51.5	77.3
61	44.6	38.6	58.0





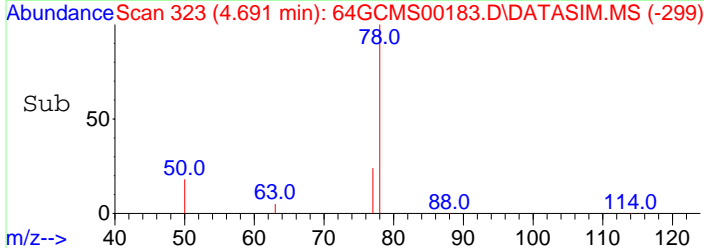
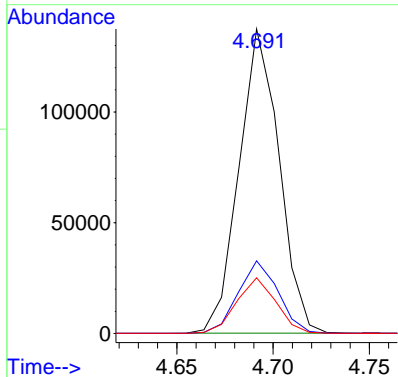
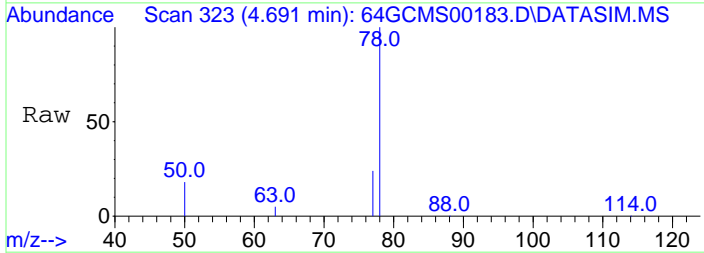
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00183.D
 Acq: 3 May 2016 6:54 am

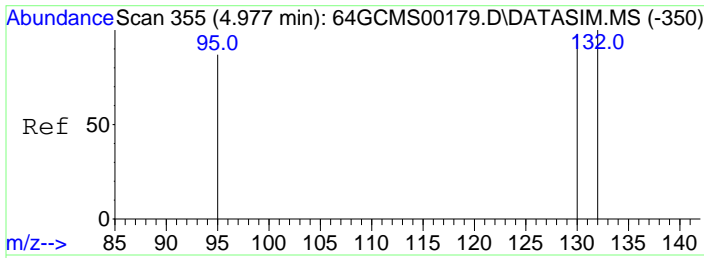
Tgt Ion	Resp	Lower	Upper
114	100		
63	18.8	19.2	28.8#
88	14.6	13.7	20.5



#10
 Benzene
 Concen: 523.68 ppbv
 RT: 4.691 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00183.D
 Acq: 3 May 2016 6:54 am

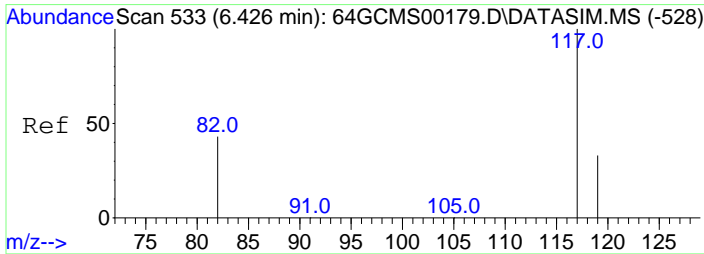
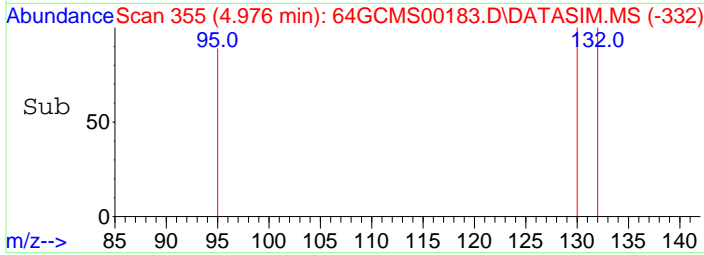
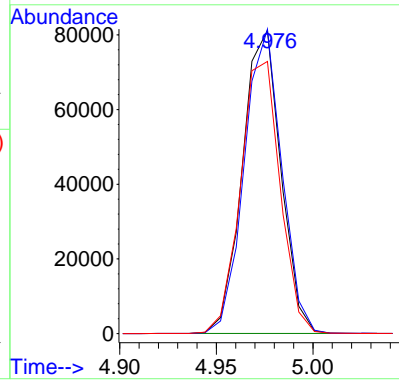
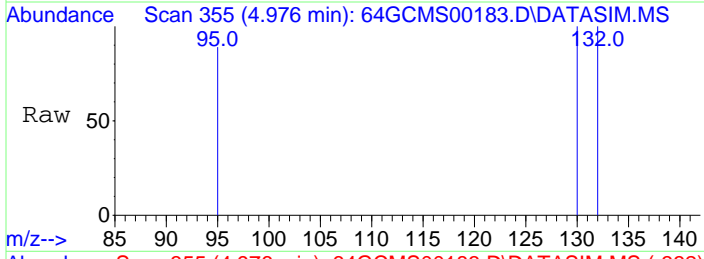
Tgt Ion	Resp	Lower	Upper
78	100		
77	23.7	18.2	27.4
50	17.9	16.6	24.8





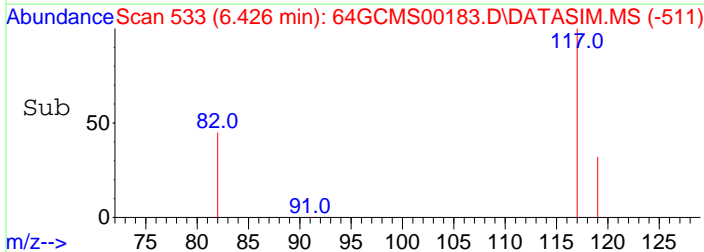
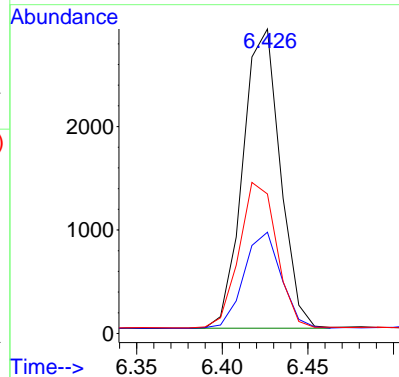
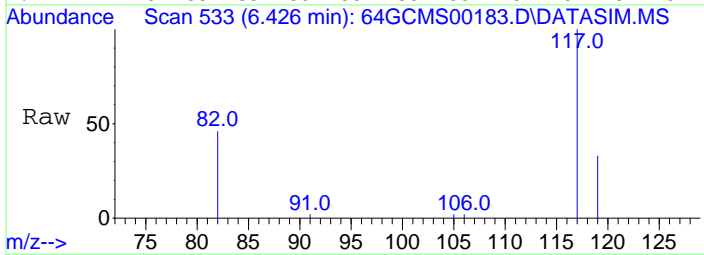
#11
 Trichloroethene
 Concen: 476.07 ppbv
 RT: 4.976 min Scan# 355
 Delta R.T. -0.000 min
 Lab File: 64GCMS00183.D
 Acq: 3 May 2016 6:54 am

Tgt Ion	Resp	Lower	Upper
130	112423		
130	100		
132	97.8	76.9	115.3
95	92.5	81.5	122.3

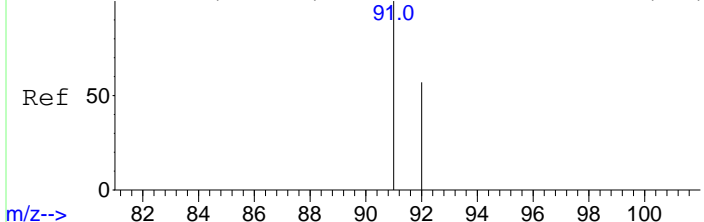


#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00183.D
 Acq: 3 May 2016 6:54 am

Tgt Ion	Resp	Lower	Upper
117	4389		
117	100		
119	31.9	25.8	38.6
82	49.1	45.6	68.4

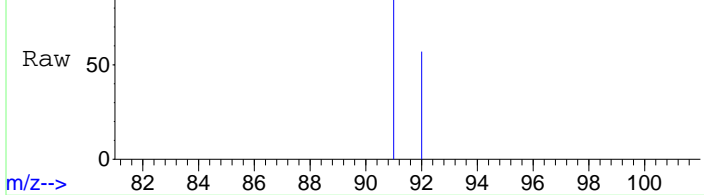


Abundance Scan 433 (5.583 min): 64GCMS00179.D\DATASIM.MS (-428)



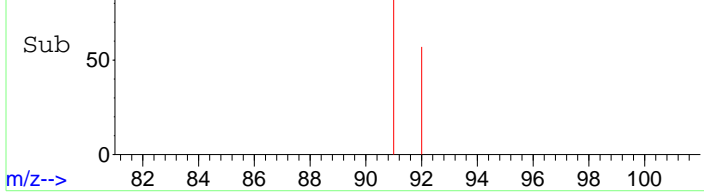
m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00183.D\DATASIM.MS



m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00183.D\DATASIM.MS (-406)

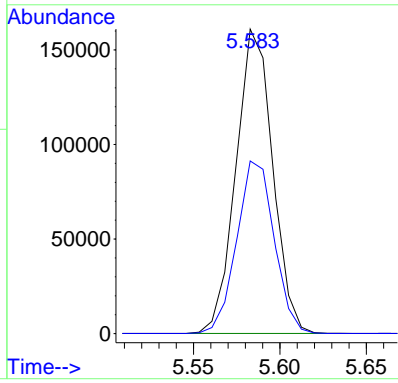


m/z-->

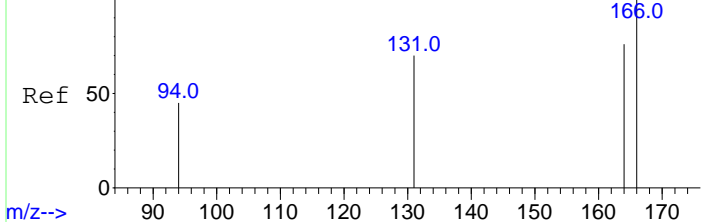
#13

Toluene
Concen: 523.41 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00183.D
Acq: 3 May 2016 6:54 am

Tgt Ion	Resp	Lower	Upper
91	100		
92	57.8	48.0	72.0

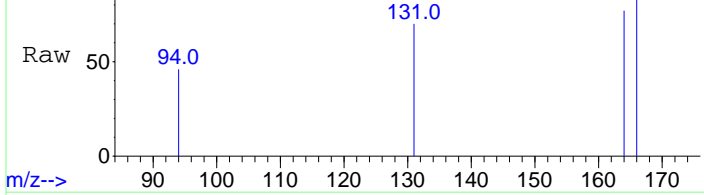


Abundance Scan 484 (5.988 min): 64GCMS00179.D\DATASIM.MS (-479)



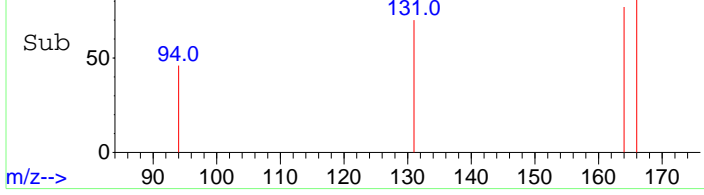
m/z-->

Abundance Scan 484 (5.988 min): 64GCMS00183.D\DATASIM.MS



m/z-->

Abundance Scan 484 (5.988 min): 64GCMS00183.D\DATASIM.MS (-461)

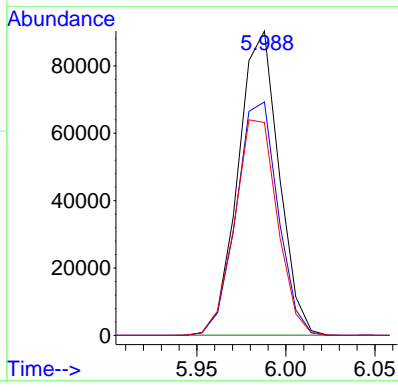


m/z-->

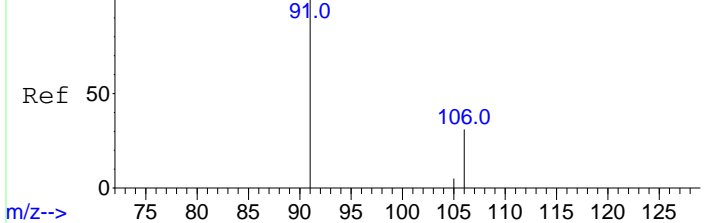
#14

Tetrachloroethene
Concen: 458.16 ppbv
RT: 5.988 min Scan# 484
Delta R.T. -0.000 min
Lab File: 64GCMS00183.D
Acq: 3 May 2016 6:54 am

Tgt Ion	Resp	Lower	Upper
166	100		
164	78.4	63.4	95.0
131	73.8	63.4	95.0

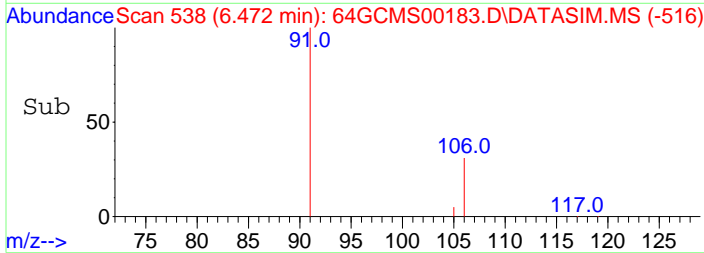
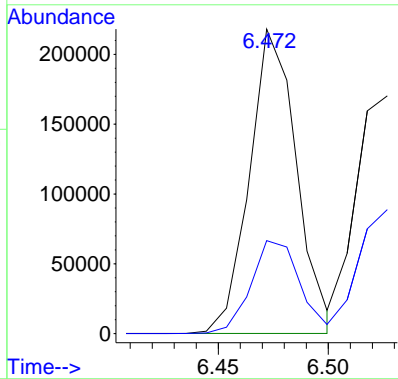
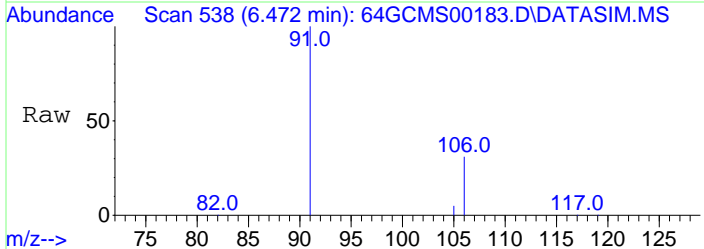


Abundance Scan 538 (6.472 min): 64GCMS00179.D\DATASIM.MS (-534)

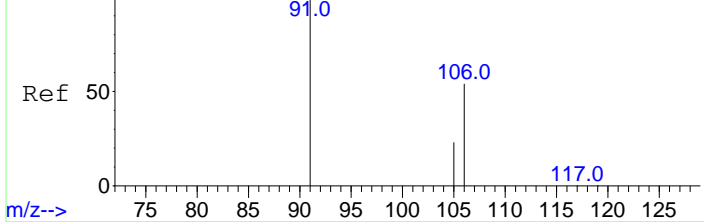


#15
Ethyl Benzene
Concen: 575.21 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00183.D
Acq: 3 May 2016 6:54 am

Tgt Ion	Resp	Lower	Upper
91	100		
106	31.9	24.2	36.2

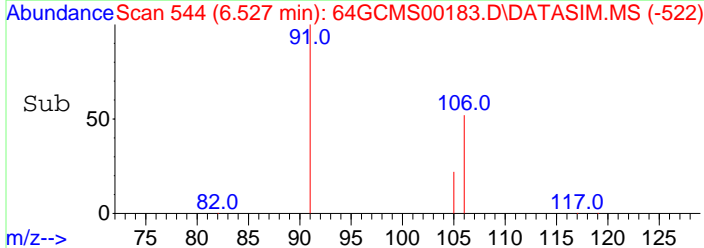
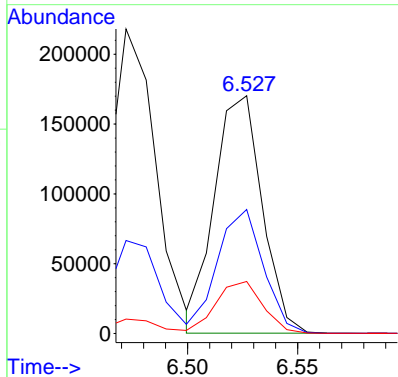
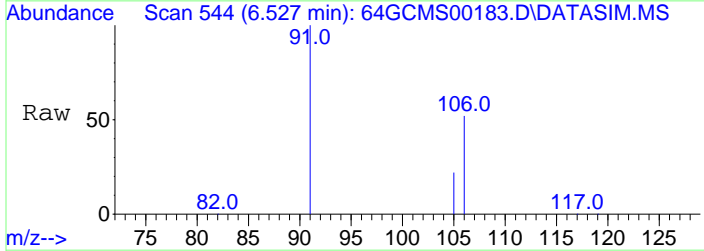


Abundance Scan 544 (6.527 min): 64GCMS00179.D\DATASIM.MS (-541)

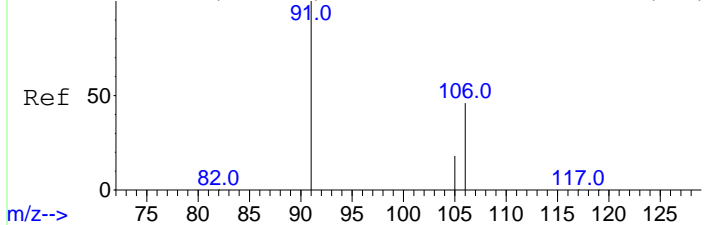


#16
m,p-Xylene
Concen: 562.72 ppbv
RT: 6.527 min Scan# 544
Delta R.T. -0.000 min
Lab File: 64GCMS00183.D
Acq: 3 May 2016 6:54 am

Tgt Ion	Resp	Lower	Upper
91	100		
106	50.3	37.7	56.5
105	21.5	17.0	25.4



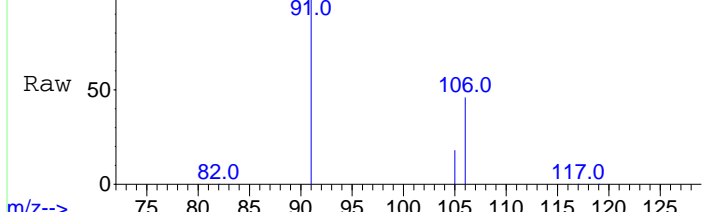
Abundance Scan 573 (6.792 min): 64GCMS00179.D\DATASIM.MS (-569)



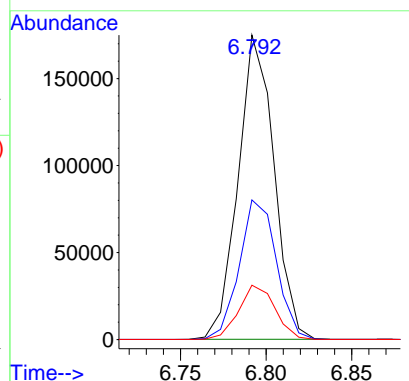
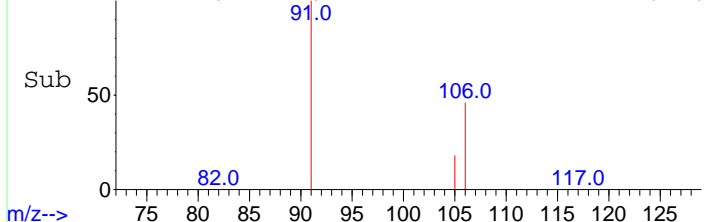
#17
 o-Xylene
 Concen: 516.67 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00183.D
 Acq: 3 May 2016 6:54 am

Tgt Ion:	Resp:	Lower	Upper
91	255554		
106	47.4	35.4	53.2
105	18.1	14.0	21.0

Abundance Scan 573 (6.792 min): 64GCMS00183.D\DATASIM.MS



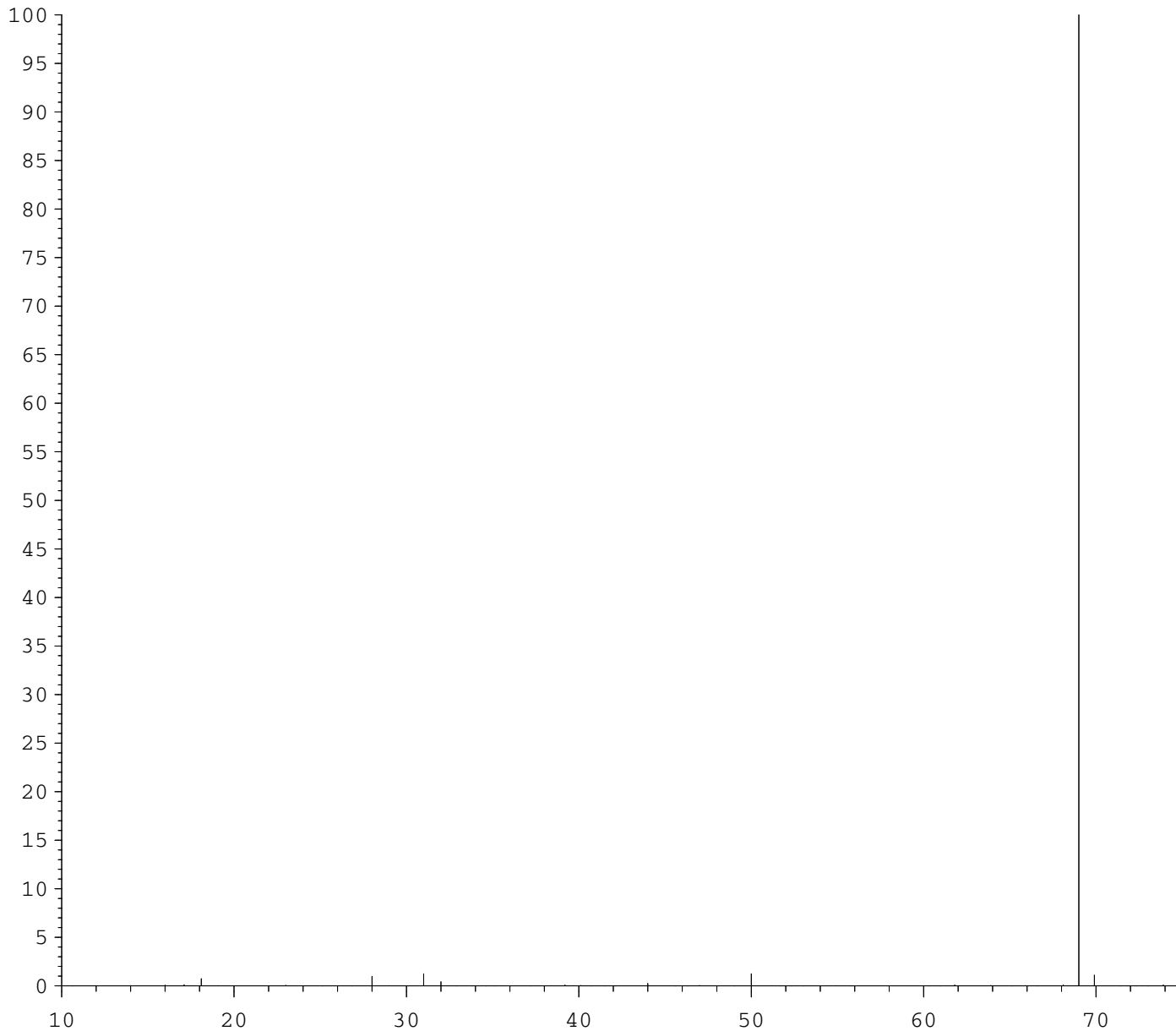
Abundance Scan 573 (6.792 min): 64GCMS00183.D\DATASIM.MS (-551)



Instrument: EPA 2871
 Wed May 04 06:20:57 2016

C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
 76 peaks Base: 69.00 Abundance: 436928

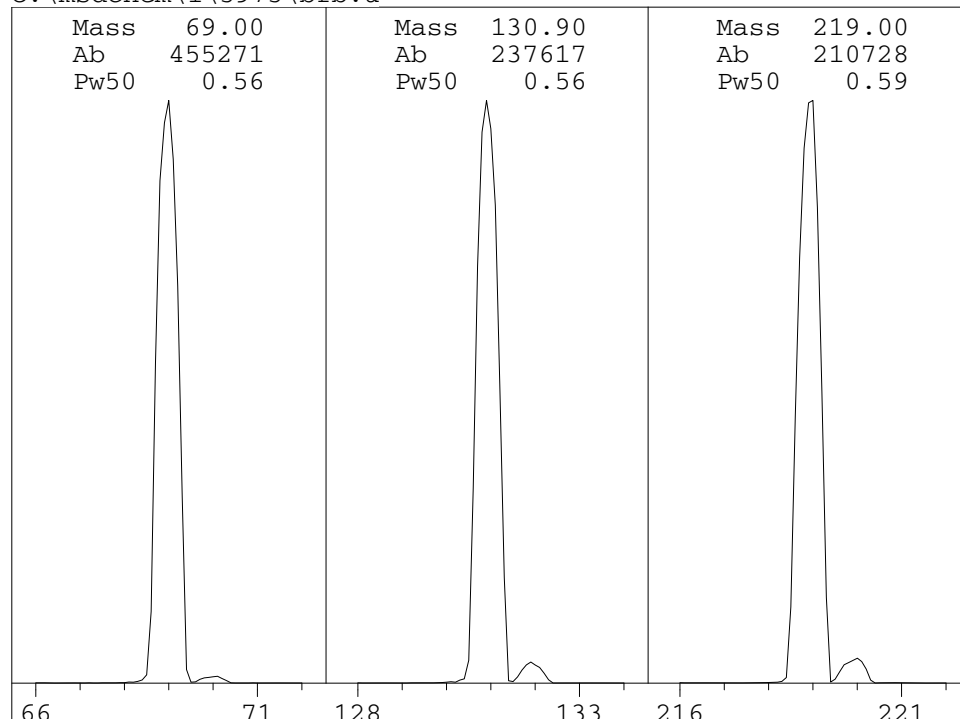


Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	436928	100.00	69.90	4819	1.10
18.10	3263	0.75	19.10	175	5.36
28.00	4313	0.99	29.00	159	3.69

Current Params used: bfb.u

Relative abundances:

18/69 = 0.75	Water%	(counts=3263)
28/69 = 0.99	Nitrogen%	(counts=4313)
32/69 = 0.44	Oxygen%	(counts=1913)
44/69 = 0.25	Carbon Dioxide%	(counts=1091)
28/18 = 132.18	Nitrogen/Water%	

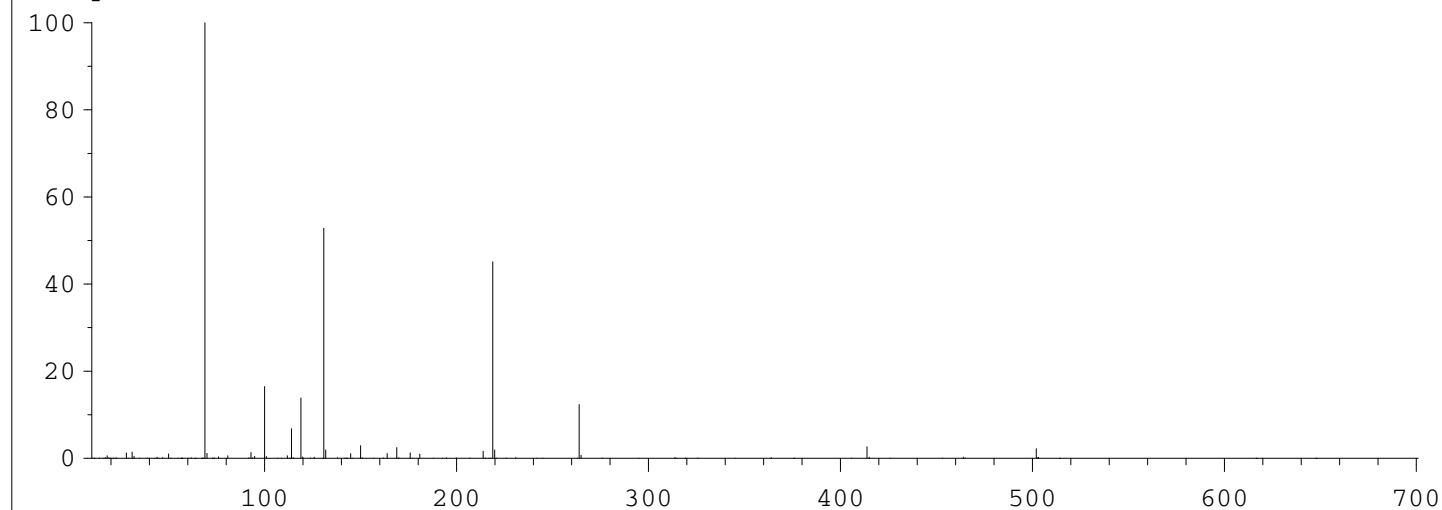


Ion Pol Pos MassGain -721
MassOffs -41
Emission 34.6 AmuGain 1910
EIEnrgy 69.9 AmuOffs 123.38
Filament 2 Wid219 0.010
DC Pol Pos
Repeller 19.90
IonFcus 73.1 HEDEnab On
EntLens 0.0 EMVolts 1306
EntOffs Var

Samples 8
PFTBA Open Averages 3
Stepsize 0.10

Temperatures and Pressures:
MS Source 230 TurboSpd 100
MS Quad 150 HiVac 9.95e06

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
113 peaks Base: 69.00 Abundance: 425984



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	425984	100.00	70.00	4864	1.14
130.90	225088	52.84	131.90	8143	3.62
218.90	192128	45.10	219.90	8151	4.24

Air/Water Check: H2O~0.58% N2~1.22% O2~0.45% CO2~0.28% N2/H2O~208.94%

Column(1) Flow: 1.5 Column(2): -1.79769e+308 ml/min. Interface Temp: 200

Ramp Criteria:

Ion Focus Maximum 90 volts using ion 69; EM Gain 416045
Repeller Maximum 20 volts using ion 131; Gain Factor 4.16

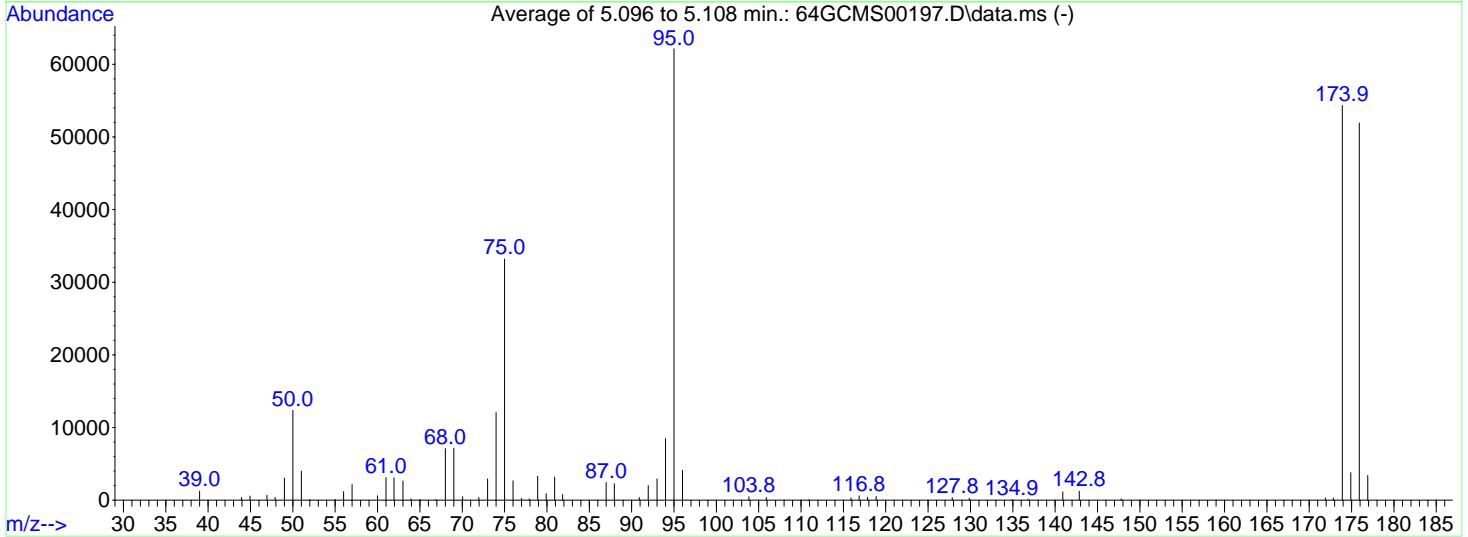
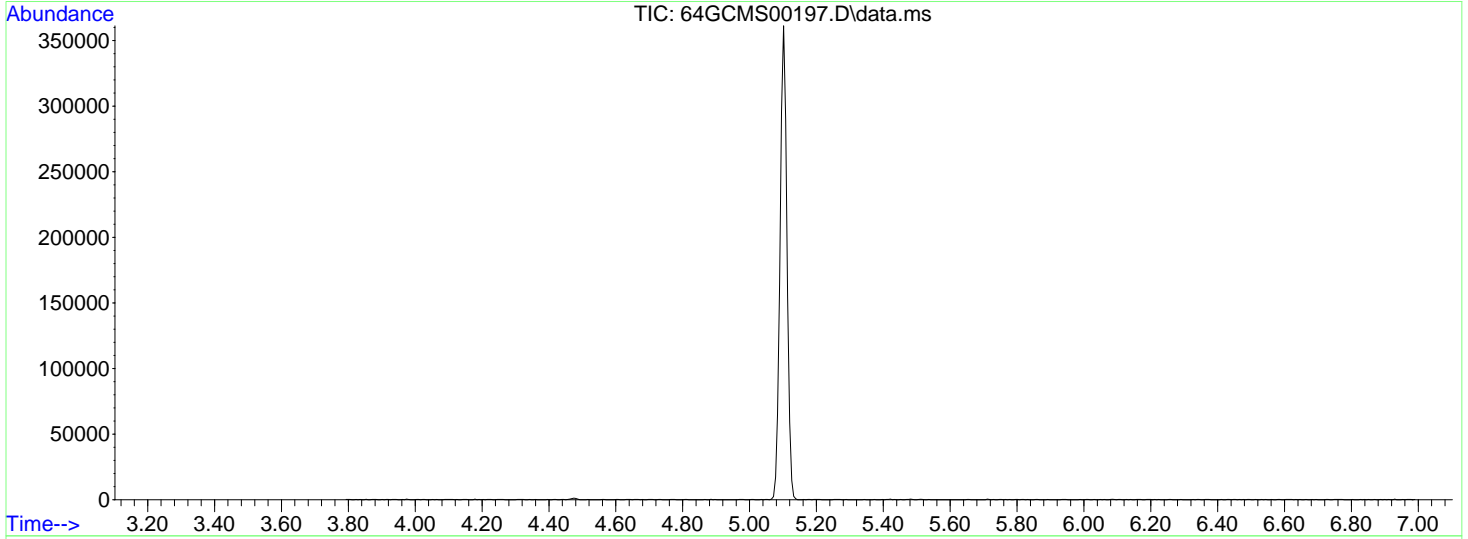
MassGain Values(Samples): -711(3) -698(2) -681(1) -608(0) -556(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	123.4	123.4	123.4	123.4	123.4	123.4	123.4
Entrance Lens Offset:	12.8	12.5	15.6	15.6	20.1	23.6	23.6
Target Abund(%):	1.0	100.0	48.0	44.0	2.4	2.0	2.0
Actual Tune Abund(%):	1.0	100.0	52.8	45.1	2.7	2.2	

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00197.D
 Acq On : 4 May 2016 5:27 am
 Operator : dlm
 Sample : BFB \ 1 ppmv
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 Last Update : Tue May 03 08:37:26 2016



AutoFind: Scans 217, 218, 219; Background Corrected with Scan 210

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.9	12347	PASS
75	95	30	66	53.4	33187	PASS
95	95	100	100	100.0	62131	PASS
96	95	5	9	6.6	4092	PASS
173	174	0.00	2	0.6	319	PASS
174	95	50	120	87.4	54317	PASS
175	174	4	9	7.0	3780	PASS
176	174	93	101	95.6	51915	PASS
177	176	5	9	6.5	3398	PASS

GC/MS QA-QC Check Report

Tune File: D:\msdchem\1\data\20160504\64GCMS00197.D

Tune Time: 4 May 2016 5:27 am

Daily Calibration File: D:\msdchem\1\data\20160504\64GCMS00198.D

File	Sample	Internal Standard Responses		
		1935	4702	4336
64GCMS00198.D	STD2016050	1935	4702	4336
64GCMS00199.D	STD2016050	1969	3887	3795
64GCMS00200.D	STD2016050	1934	3544	3568
64GCMS00201.D	20160504-M	1907	3408	3399
64GCMS00202.D	20160504-L	2020	4574	4298
64GCMS00203.D	51060 \ Un	2066	4104	3626
64GCMS00204.D	GM-SG-10 \	2074	4574	4762
64GCMS00205.D	51061 \ Un	2047	3483	3491
64GCMS00206.D	51061 \ Un	1886	3159	3092
64GCMS00207.D	51062 \ Un	1799	2947	2870
64GCMS00208.D	GM-SG-08 \	4362*	10202*	11331*
64GCMS00209.D	Blank \ In	2054	3417	3451
64GCMS00210.D	GM-SG-08 \	2132	5014	5654
64GCMS00211.D	51063 \ Un	1995	3356	3250
64GCMS00212.D	51064 \ Un	2071	3325	3304
64GCMS00213.D	GM-SG-07 \	2054	3704	4584
64GCMS00214.D	GM-SG-06 \	2112	3825	3979
64GCMS00215.D	51065 \ Un	2074	3524	4778
64GCMS00216.D	51066 \ Un	2042	3310	3169
64GCMS00217.D	51067 \ Un	1978	3102	3043

(fails) - fails 24hr time check * - fails criteria

Created: Wed May 04 18:24:18 2016 EPA 3064

Method Path : C:\msdchem\1\methods\
Method File : LOOP2016_0501.M
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
Last Update : Thu May 05 14:45:30 2016
Response Via : Initial Calibration

CC Data File: 64GCMS00198.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%
1 I	Bromochloromethane	1.000	1.000	0.0	78
2	Vinyl Chloride	0.651	0.569	12.6	66
3	1,1-Dichloroethene	1.144	0.993	13.2	66
4	Methyl Tert butyl Ether	1.641	1.385	15.6	62
5	trans-1,2-Dichloroethene	1.018	0.927	9.0	67
6	1,1-Dichloroethane	1.348	1.163	13.7	68
7	cis-1,2-Dichloroethene	0.972	0.836	14.0	66
8	1,1,1-Trichloroethane	1.960	1.655	15.5	68
9 I	1,4-Difluorobenzene	1.000	1.000	0.0	70
10	Benzene	0.798	0.740	7.3	67
11	Trichloroethene	0.495	0.419	15.3	64
12 I	Chlorobenzene-d5	1.000	1.000	0.0	71
13	Toluene	1.038	0.962	7.3	64
14	Tetrachloroethene	0.716	0.577	19.4	65
15	Ethyl Benzene	1.281	1.242	3.1	65
16	m,p-Xylene	1.039	1.057	-1.7	67
17	o-Xylene	1.127	1.058	6.1	66

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00198.D
 Acq On : 4 May 2016 5:47 am
 Operator : dlm
 Sample : STD20160504-01 \ 500 ppbv CCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

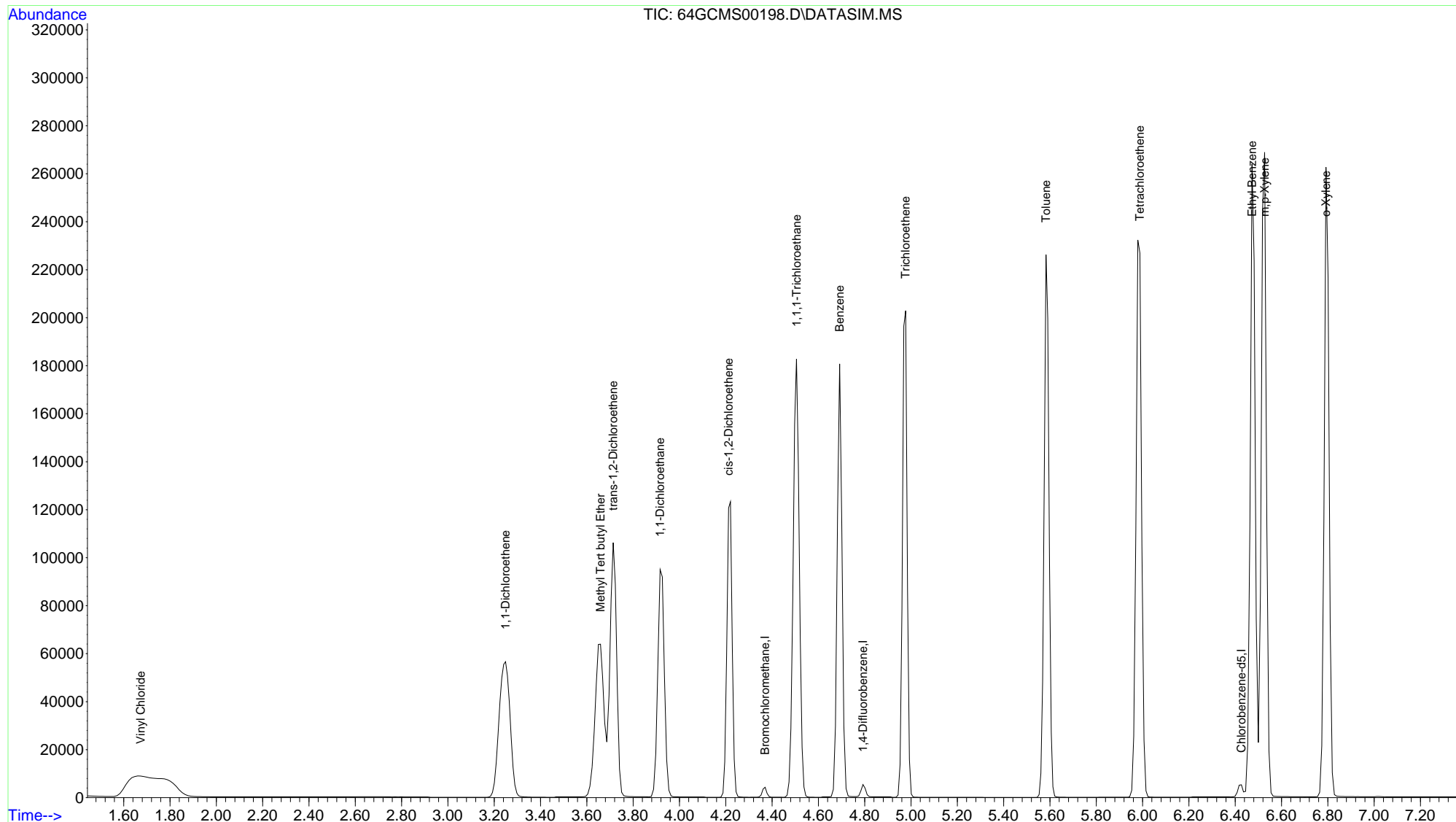
Quant Time: May 04 06:08:25 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

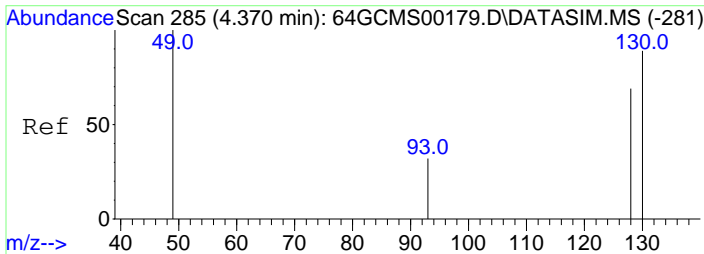
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Bromochloromethane	4.370	49	1935	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.792	114	4702	10.00	ppbv		0.00
12) Chlorobenzene-d5	6.427	117	4336	10.00	ppbv		0.00
Target Compounds							
							Qvalue
2) Vinyl Chloride	1.673	62	55871m	443.42	ppbv		
3) 1,1-Dichloroethene	3.249	61	97031	438.24	ppbv	#	89
4) Methyl Tert butyl Ether	3.659	73	134629	423.89	ppbv		93
5) trans-1,2-Dichloroethene	3.714	61	92795	471.02	ppbv	#	81
6) 1,1-Dichloroethane	3.916	63	114785	440.08	ppbv	#	93
7) cis-1,2-Dichloroethene	4.212	61	83301	443.05	ppbv	#	81
8) 1,1,1-Trichloroethane	4.505	97	160958	424.38	ppbv		98
10) Benzene	4.692	78	178229	475.25	ppbv		96
11) Trichloroethene	4.977	130	98972	425.44	ppbv		95
13) Toluene	5.583	91	211762	470.51	ppbv		97
14) Tetrachloroethene	5.988	166	126340	406.80	ppbv		97
15) Ethyl Benzene	6.472	91	289347	521.02	ppbv		97
16) m,p-Xylene	6.527	91	233728	518.86	ppbv		97
17) o-Xylene	6.792	91	231672	474.11	ppbv		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00198.D
 Acq On : 4 May 2016 5:47 am
 Operator : dlm
 Sample : STD20160504-01 \ 500 ppbv CCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:08:25 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

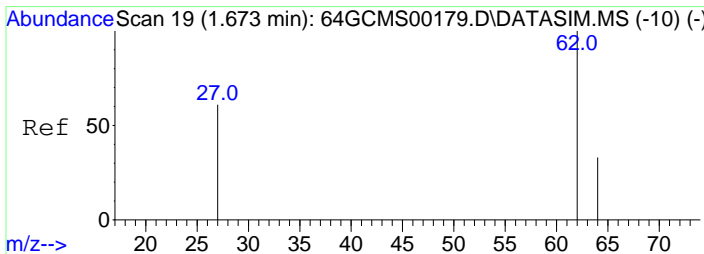
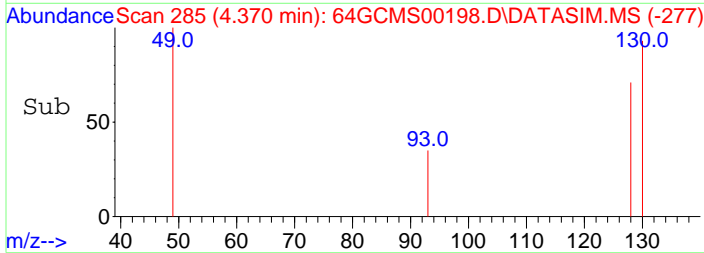
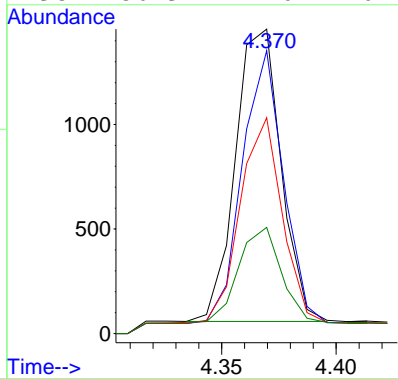
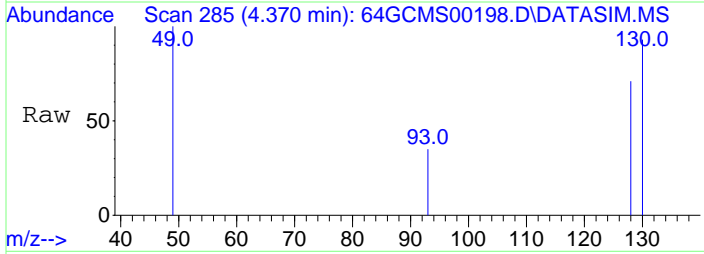




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00198.D
 Acq: 4 May 2016 5:47 am

Tgt Ion: 49 Resp: 1935

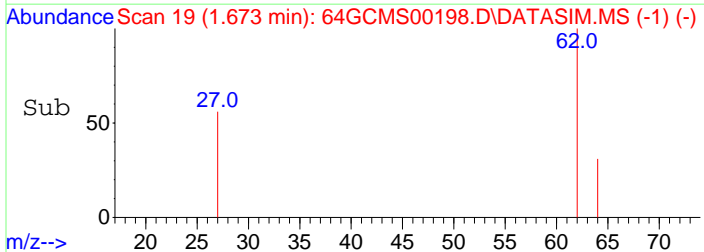
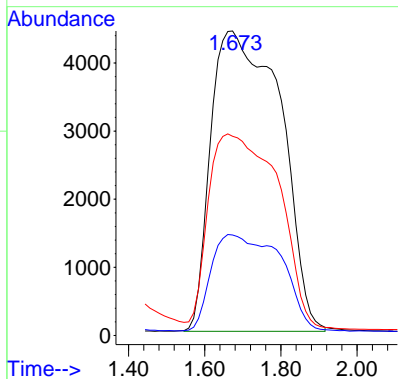
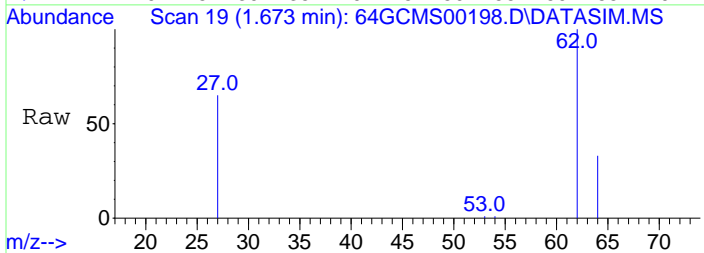
Ion	Ratio	Lower	Upper
49	100		
130	84.3	46.3	69.5#
128	65.1	35.7	53.5#
93	30.9	17.6	26.4#



#2
 Vinyl Chloride
 Concen: 443.42 ppbv m
 RT: 1.673 min Scan# 19
 Delta R.T. -0.013 min
 Lab File: 64GCMS00198.D
 Acq: 4 May 2016 5:47 am

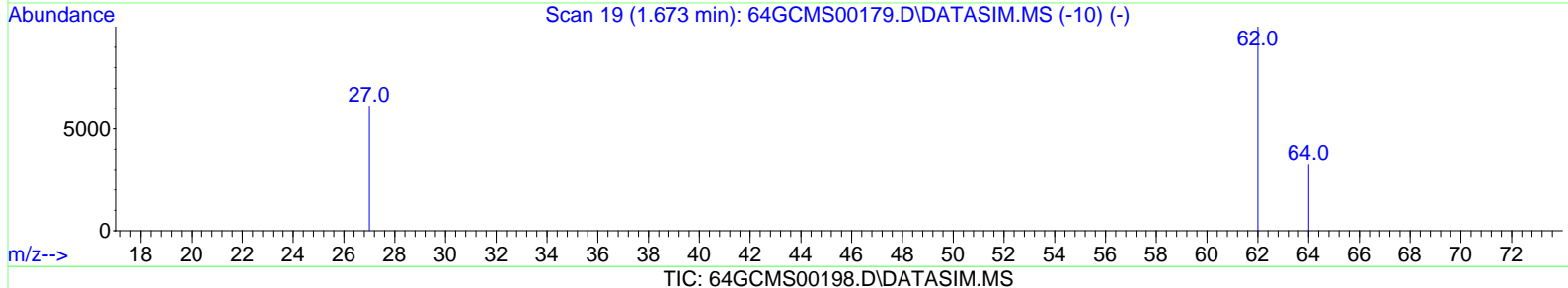
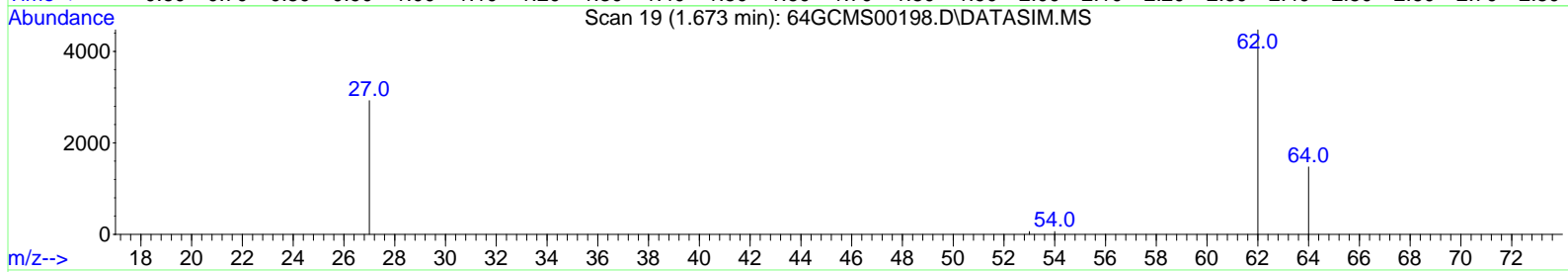
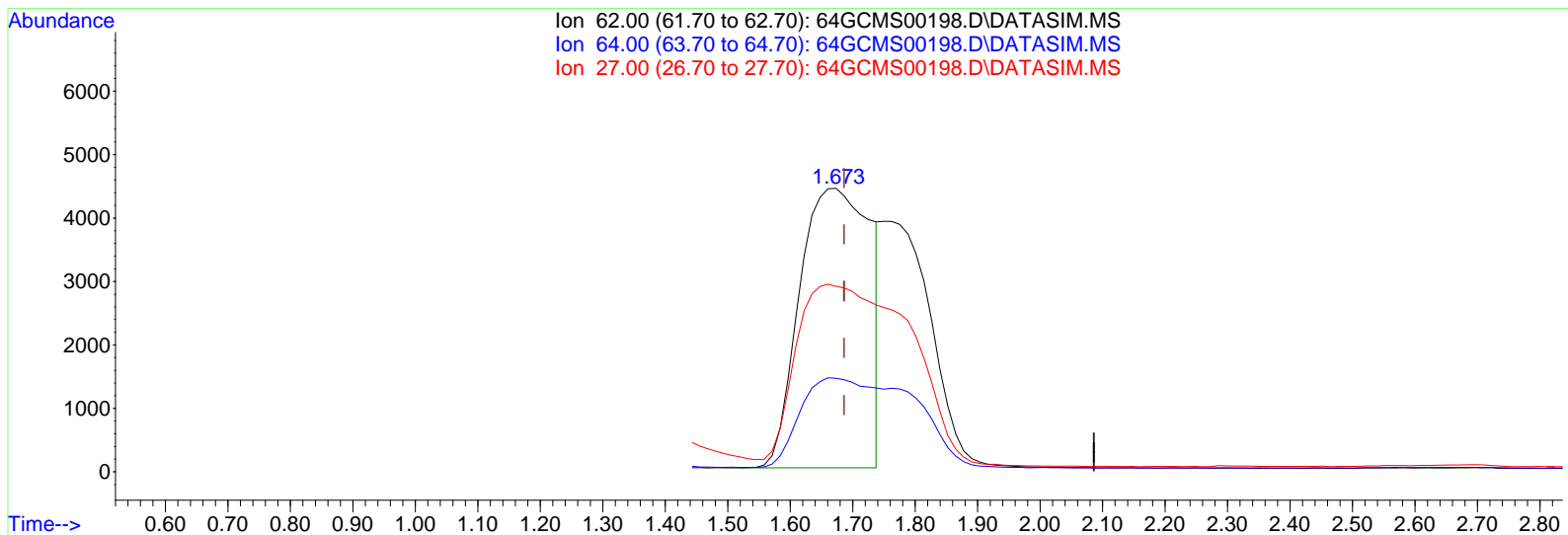
Tgt Ion: 62 Resp: 55871

Ion	Ratio	Lower	Upper
62	100		
64	21.5	23.7	35.5#
27	65.7	38.0	57.0#



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00198.D
 Acq On : 4 May 2016 5:47 am
 Operator : dlm
 Sample : STD20160504 \ 500 ppbv CCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 05:56:19 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



(2) Vinyl Chloride

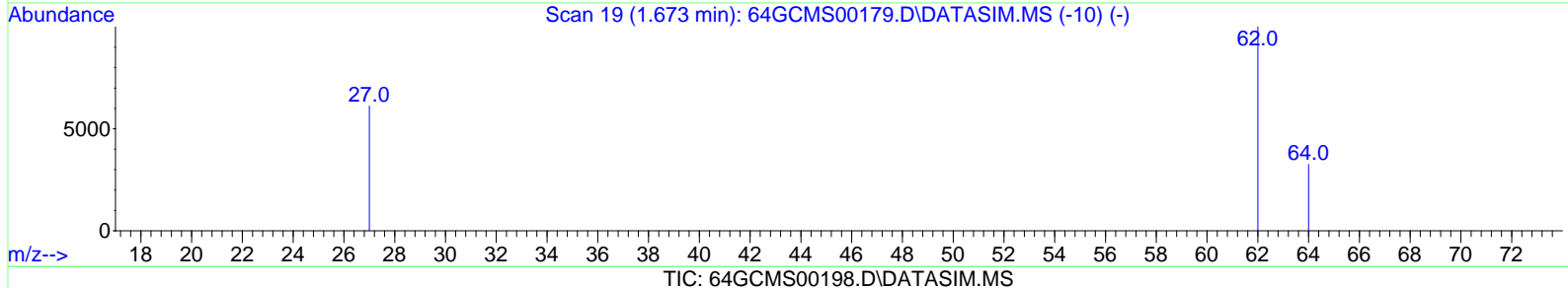
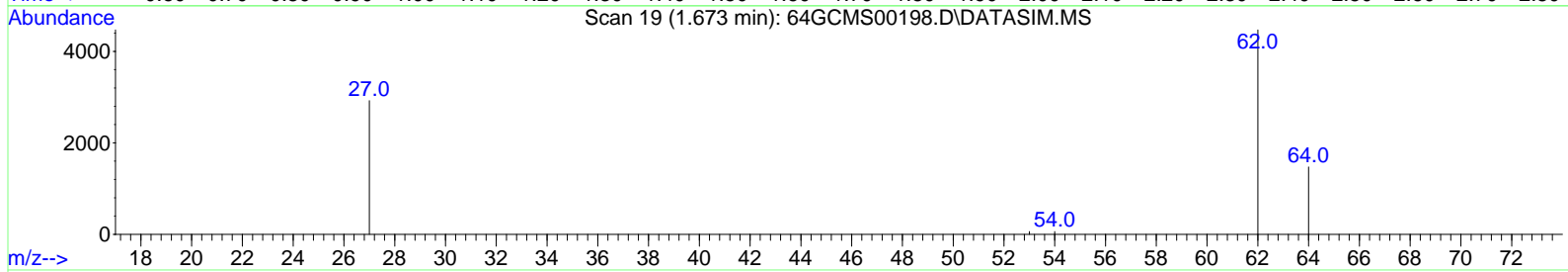
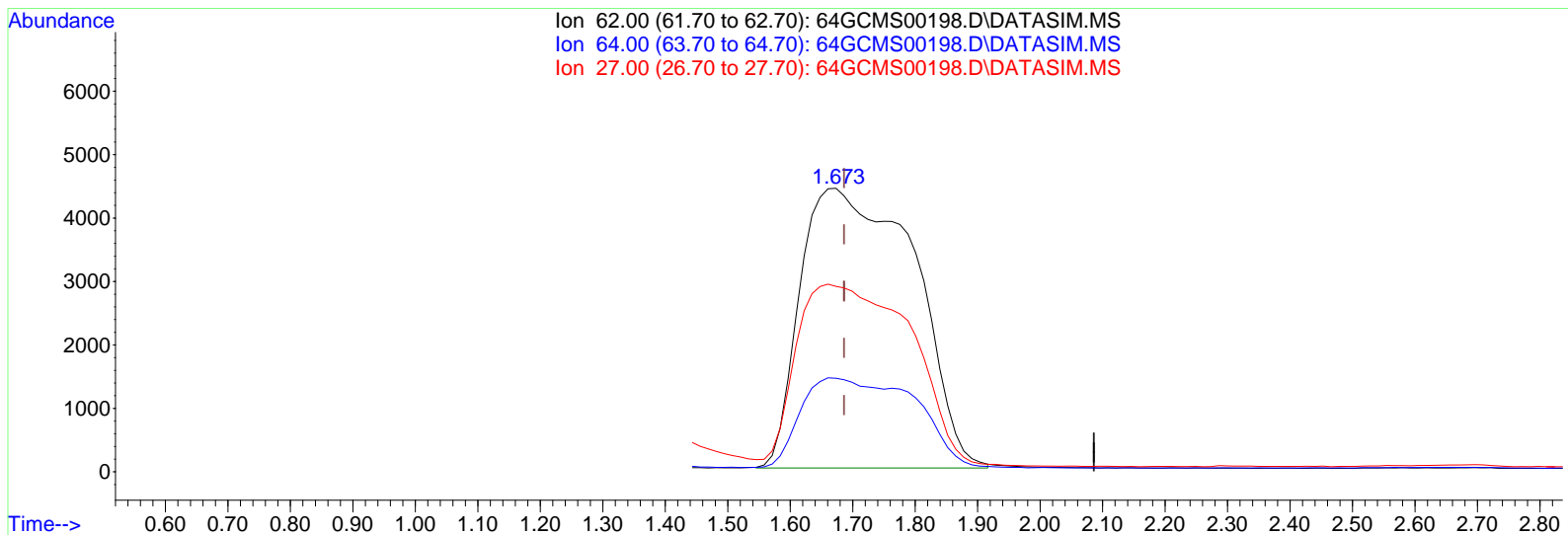
1.673min (-0.013) 275.53 ppbv

response 34717

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	34.55
27.00	47.50	105.71#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00198.D
 Acq On : 4 May 2016 5:47 am
 Operator : dlm
 Sample : STD20160504 \ 500 ppbv CCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 05:56:19 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

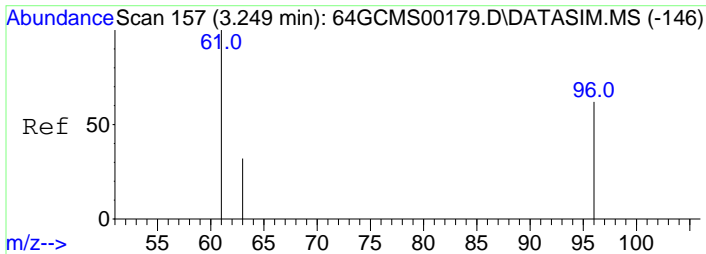


(2) Vinyl Chloride

1.673min (-0.013) 443.42 ppbv m

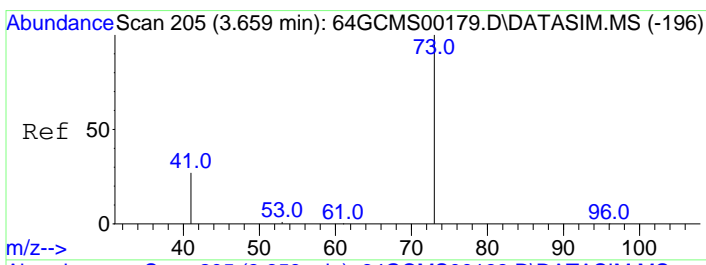
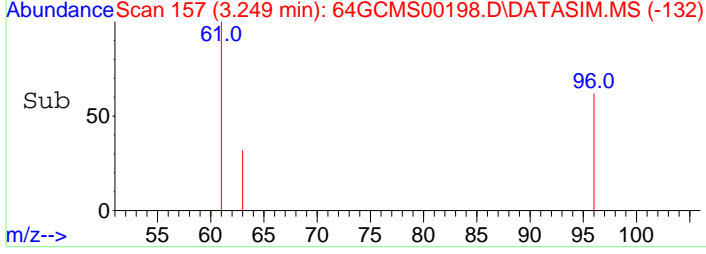
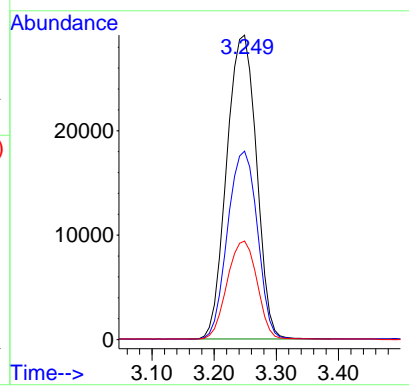
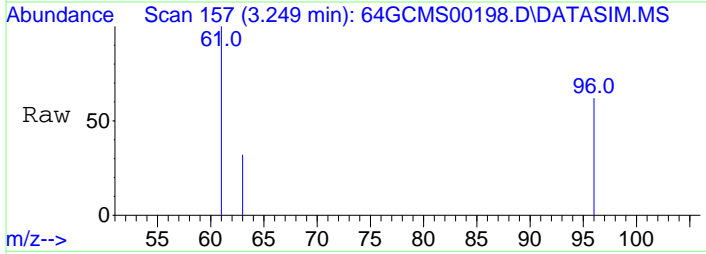
response 55871

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	21.47#
27.00	47.50	65.68#
0.00	0.00	0.00



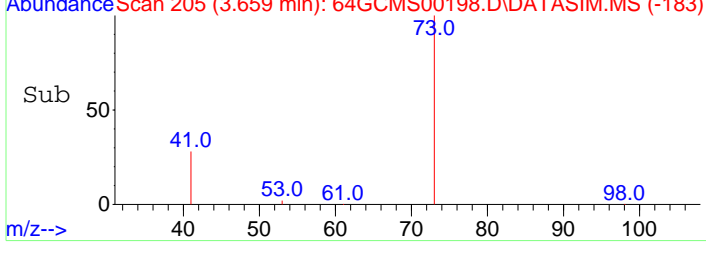
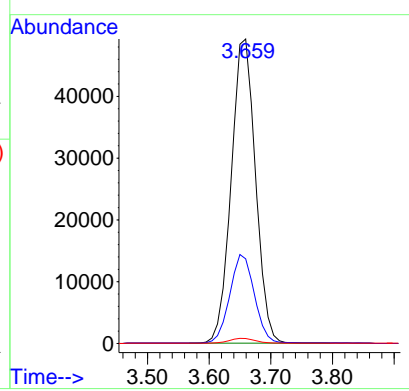
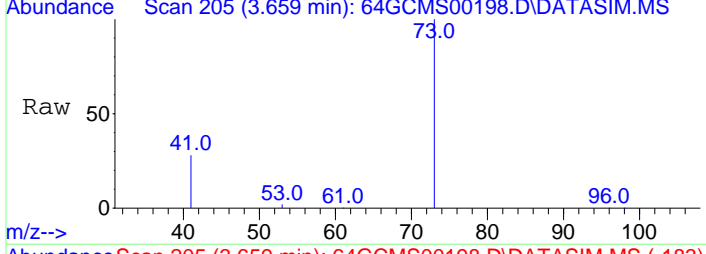
#3
 1,1-Dichloroethene
 Concen: 438.24 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. 0.000 min
 Lab File: 64GCMS00198.D
 Acq: 4 May 2016 5:47 am

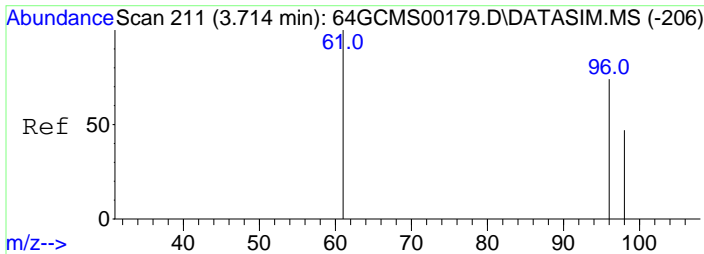
Tgt Ion	Resp	Lower	Upper
61	100		
96	61.9	40.9	61.3#
63	32.2	24.3	36.5



#4
 Methyl Tert butyl Ether
 Concen: 423.89 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. 0.000 min
 Lab File: 64GCMS00198.D
 Acq: 4 May 2016 5:47 am

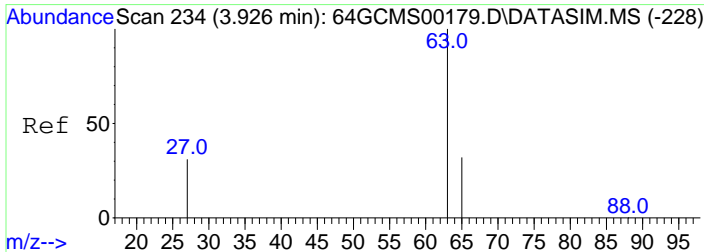
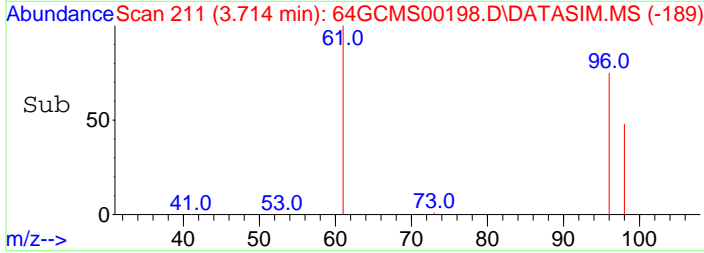
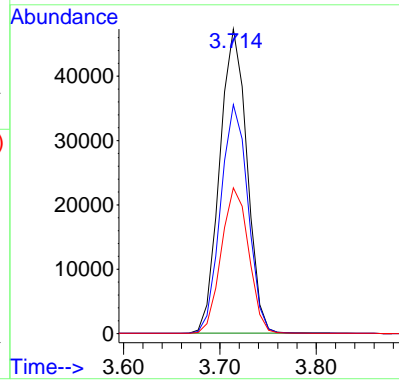
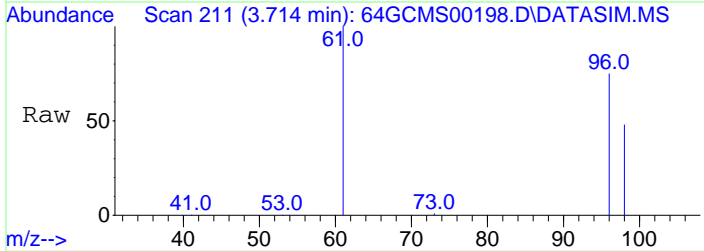
Tgt Ion	Resp	Lower	Upper
73	100		
41	29.4	20.6	30.8
53	1.6	1.2	1.8





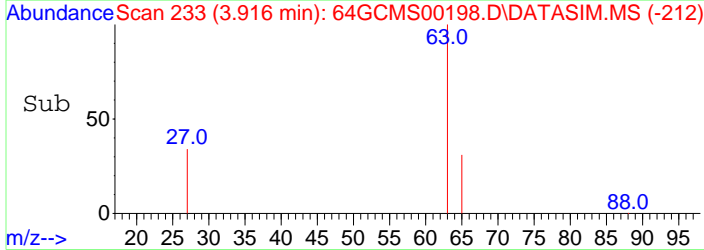
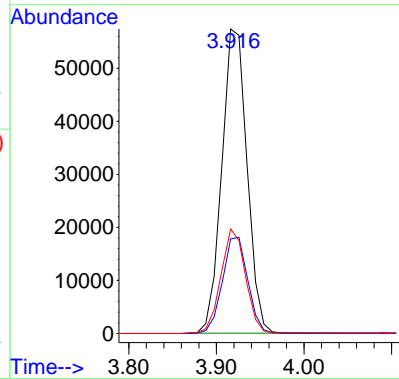
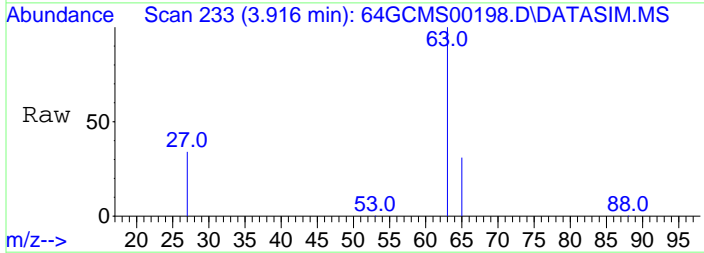
#5
 trans-1,2-Dichloroethene
 Concen: 471.02 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. 0.000 min
 Lab File: 64GCMS00198.D
 Acq: 4 May 2016 5:47 am

Tgt Ion	Resp	Lower	Upper
61	100		
96	75.4	47.8	71.6#
98	48.1	30.6	46.0#

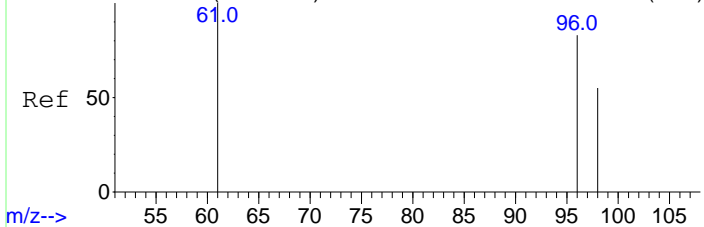


#6
 1,1-Dichloroethane
 Concen: 440.08 ppbv
 RT: 3.916 min Scan# 233
 Delta R.T. -0.009 min
 Lab File: 64GCMS00198.D
 Acq: 4 May 2016 5:47 am

Tgt Ion	Resp	Lower	Upper
63	100		
65	32.0	24.8	37.2
27	33.6	21.1	31.7#



Abundance Scan 267 (4.220 min): 64GCMS00179.D\DATASIM.MS (-262)

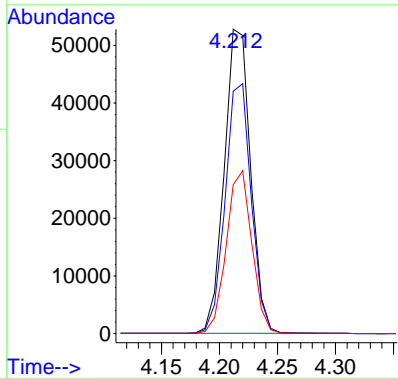
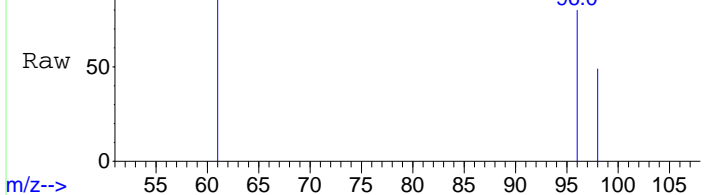


#7
cis-1,2-Dichloroethene
Concen: 443.05 ppbv
RT: 4.212 min Scan# 266
Delta R.T. -0.008 min
Lab File: 64GCMS00198.D
Acq: 4 May 2016 5:47 am

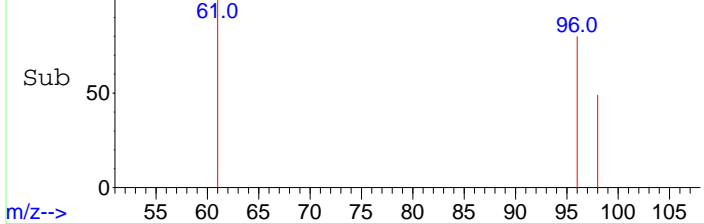
Tgt Ion: 61 Resp: 83301
Ion Ratio Lower Upper
61 100
96 81.2 52.0 78.0#
98 51.8 33.4 50.2#

m/z-->

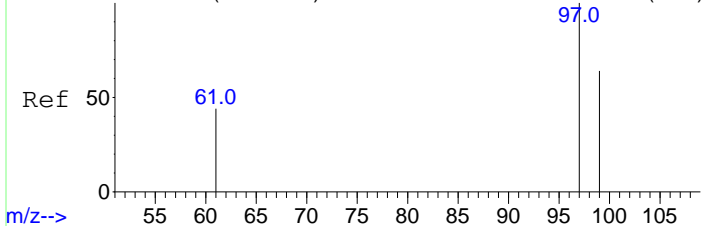
Abundance Scan 266 (4.212 min): 64GCMS00198.D\DATASIM.MS



Abundance Scan 266 (4.212 min): 64GCMS00198.D\DATASIM.MS (-244)



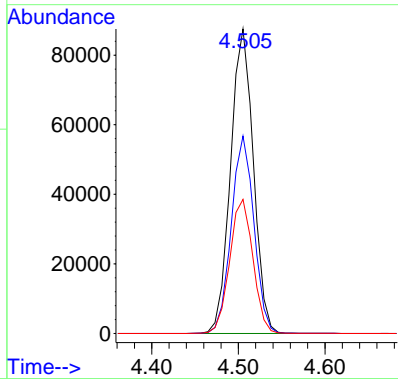
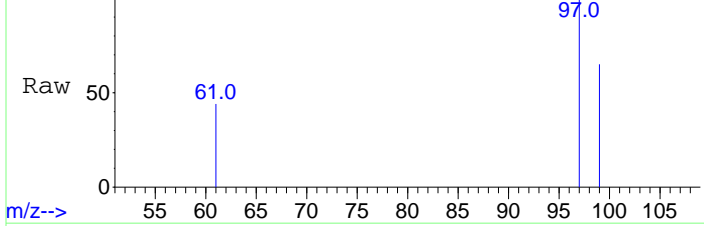
Abundance Scan 301 (4.505 min): 64GCMS00179.D\DATASIM.MS (-293)



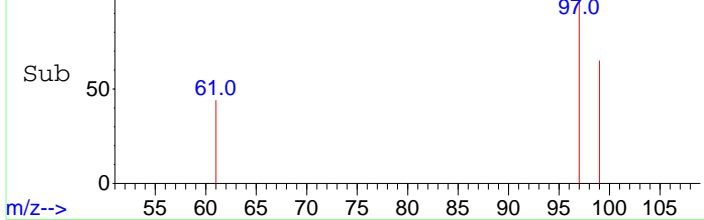
#8
1,1,1-Trichloroethane
Concen: 424.38 ppbv
RT: 4.505 min Scan# 301
Delta R.T. 0.000 min
Lab File: 64GCMS00198.D
Acq: 4 May 2016 5:47 am

Tgt Ion: 97 Resp: 160958
Ion Ratio Lower Upper
97 100
99 64.5 51.5 77.3
61 45.0 38.6 58.0

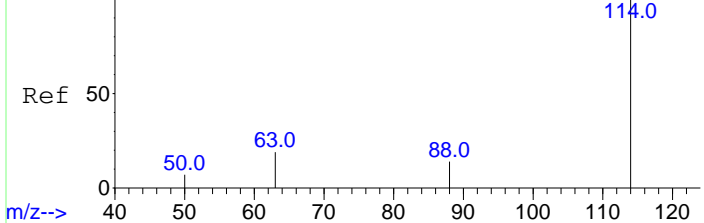
Abundance Scan 301 (4.505 min): 64GCMS00198.D\DATASIM.MS



Abundance Scan 301 (4.505 min): 64GCMS00198.D\DATASIM.MS (-278)

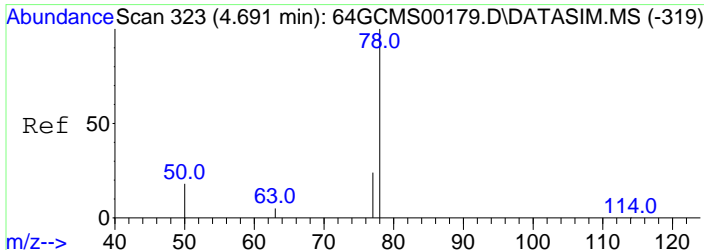
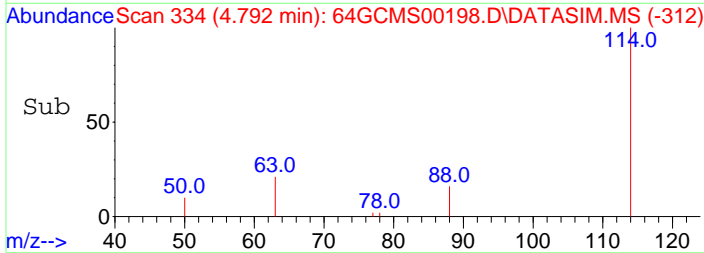
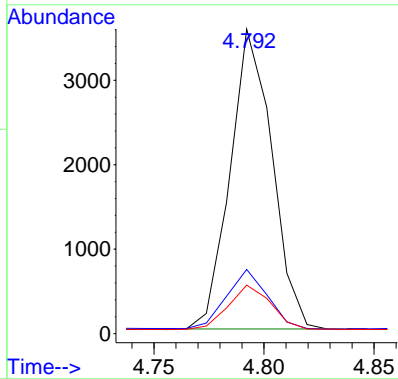
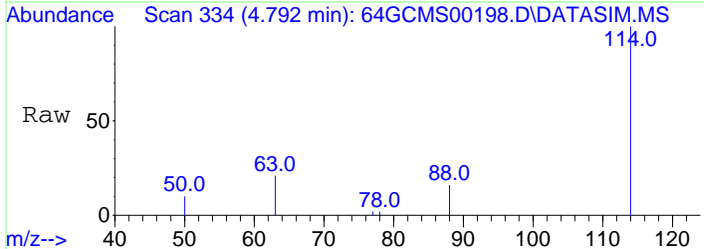


Abundance Scan 334 (4.792 min): 64GCMS00179.D\DATASIM.MS (-331)



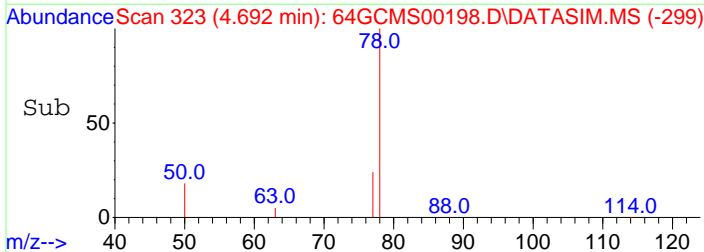
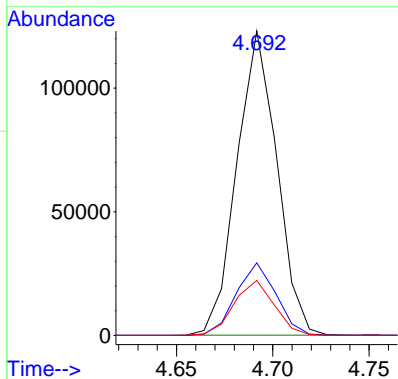
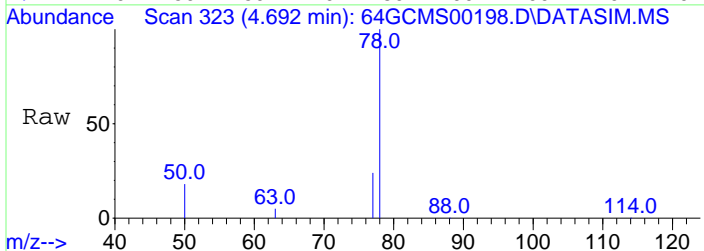
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. 0.000 min
 Lab File: 64GCMS00198.D
 Acq: 4 May 2016 5:47 am

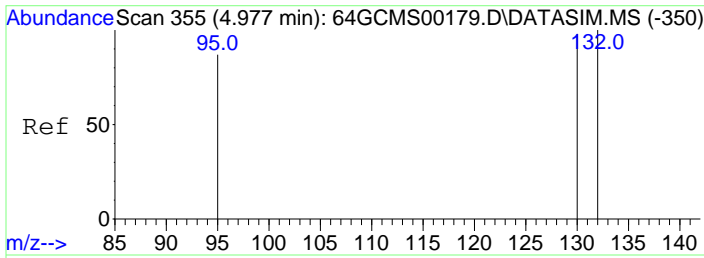
Tgt Ion	Resp	Lower	Upper
114	100		
63	19.4	19.2	28.8
88	15.0	13.7	20.5



#10
 Benzene
 Concen: 475.25 ppbv
 RT: 4.692 min Scan# 323
 Delta R.T. 0.000 min
 Lab File: 64GCMS00198.D
 Acq: 4 May 2016 5:47 am

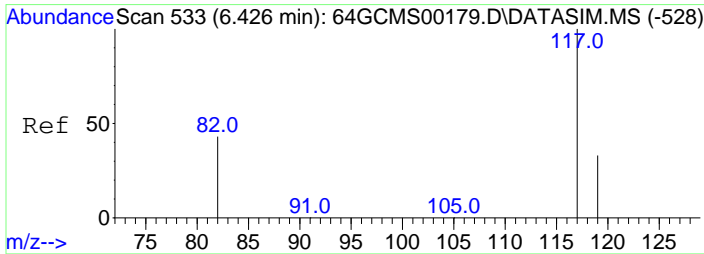
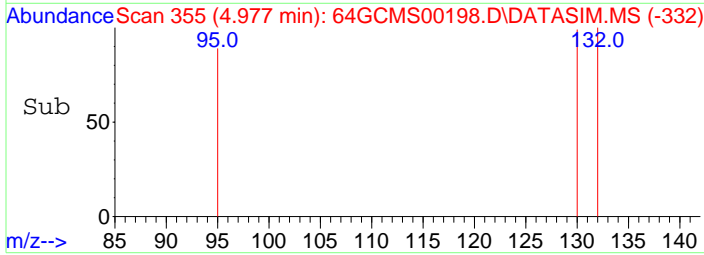
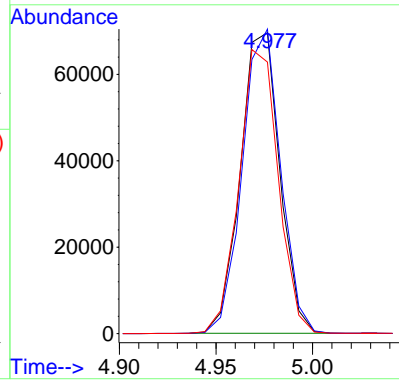
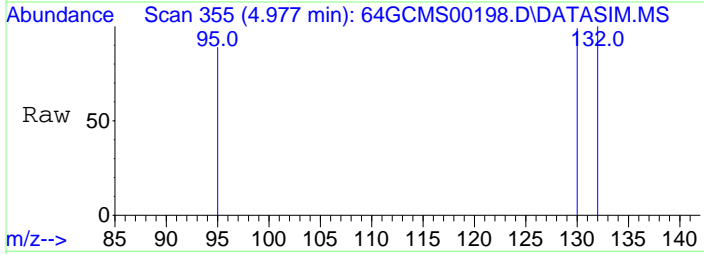
Tgt Ion	Resp	Lower	Upper
78	100		
77	23.7	18.2	27.4
50	18.0	16.6	24.8





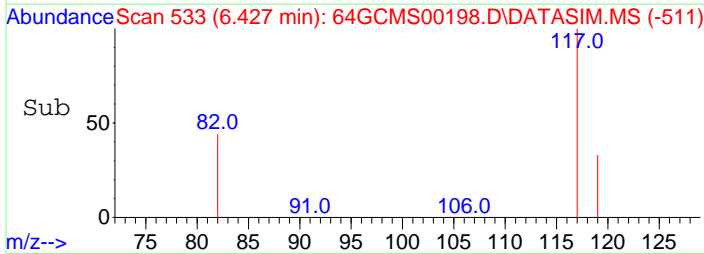
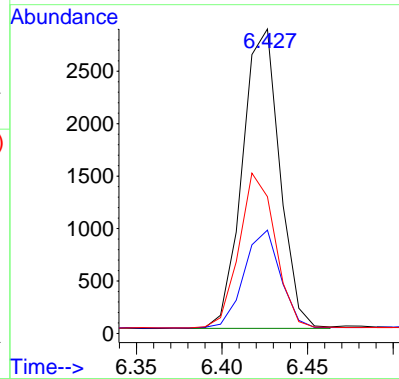
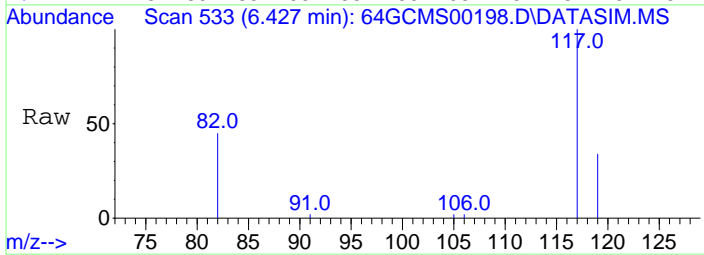
#11
 Trichloroethene
 Concen: 425.44 ppbv
 RT: 4.977 min Scan# 355
 Delta R.T. 0.000 min
 Lab File: 64GCMS00198.D
 Acq: 4 May 2016 5:47 am

Tgt Ion	Resp	Lower	Upper
130	100		
132	98.2	76.9	115.3
95	93.9	81.5	122.3

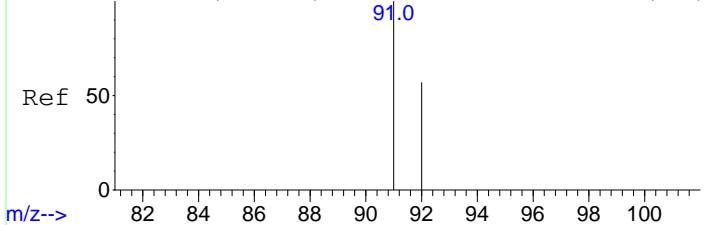


#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.427 min Scan# 533
 Delta R.T. 0.000 min
 Lab File: 64GCMS00198.D
 Acq: 4 May 2016 5:47 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	31.9	25.8	38.6
82	50.0	45.6	68.4

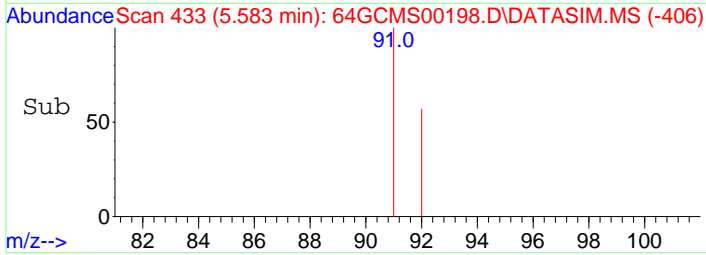
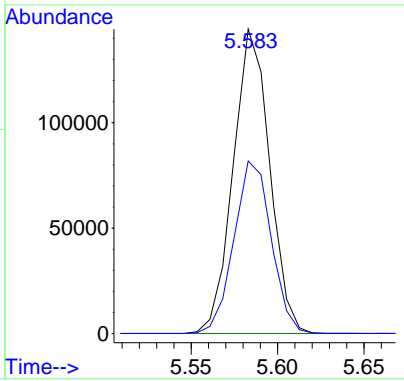
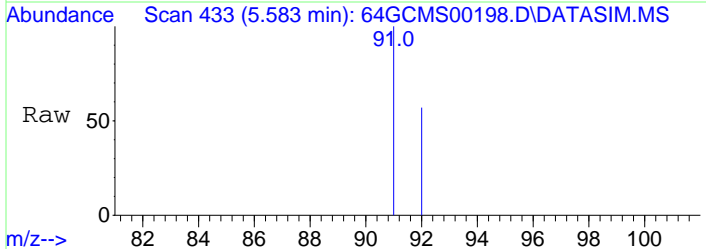


Abundance Scan 433 (5.583 min): 64GCMS00179.D\DATASIM.MS (-428)

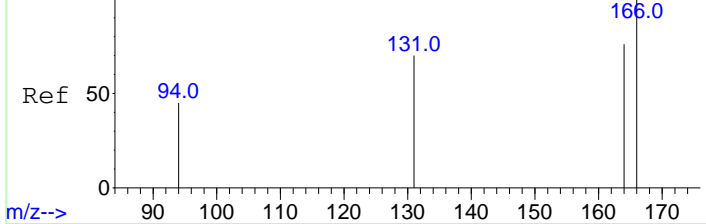


#13
Toluene
Concen: 470.51 ppbv
RT: 5.583 min Scan# 433
Delta R.T. 0.000 min
Lab File: 64GCMS00198.D
Acq: 4 May 2016 5:47 am

Tgt Ion	Resp	Lower	Upper
91	100		
92	57.9	48.0	72.0

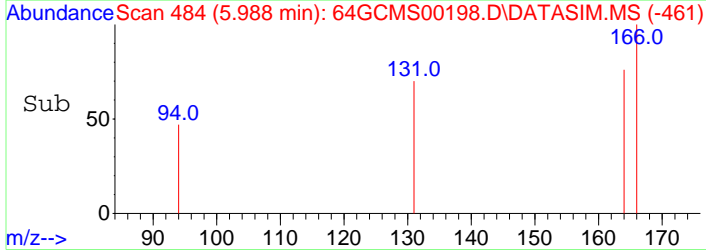
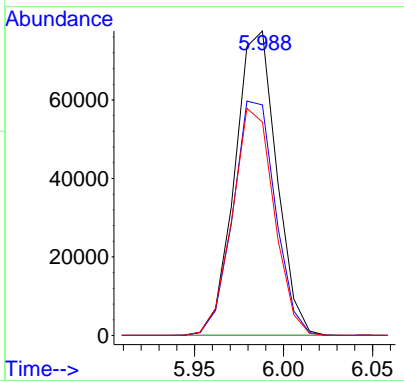
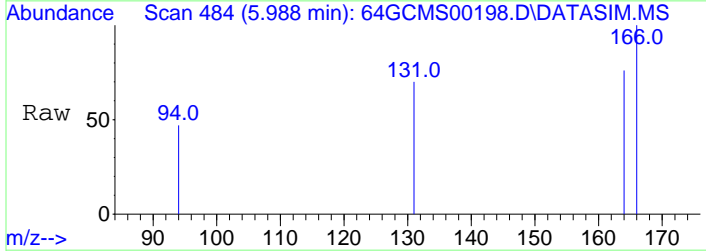


Abundance Scan 484 (5.988 min): 64GCMS00179.D\DATASIM.MS (-479)

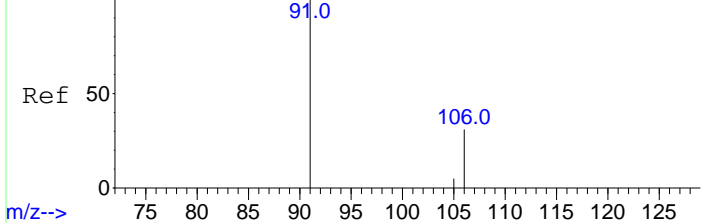


#14
Tetrachloroethene
Concen: 406.80 ppbv
RT: 5.988 min Scan# 484
Delta R.T. 0.000 min
Lab File: 64GCMS00198.D
Acq: 4 May 2016 5:47 am

Tgt Ion	Resp	Lower	Upper
166	100		
164	78.2	63.4	95.0
131	74.3	63.4	95.0

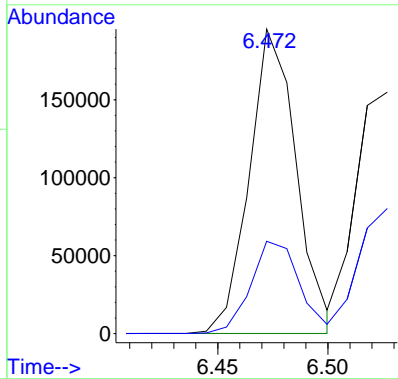
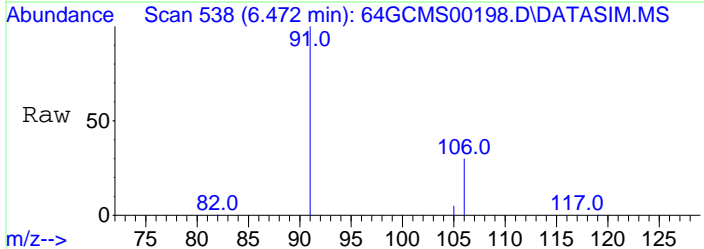


Abundance Scan 538 (6.472 min): 64GCMS00179.D\DATASIM.MS (-534)

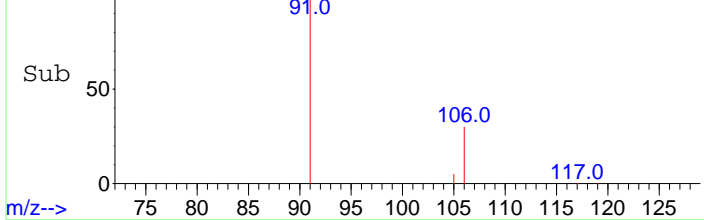


#15
Ethyl Benzene
Concen: 521.02 ppbv
RT: 6.472 min Scan# 538
Delta R.T. 0.000 min
Lab File: 64GCMS00198.D
Acq: 4 May 2016 5:47 am

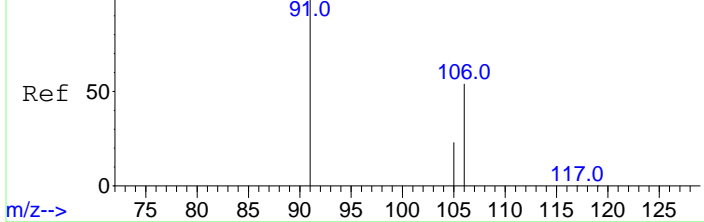
Tgt Ion: 91 Resp: 289347
Ion Ratio Lower Upper
91 100
106 31.7 24.2 36.2



Abundance Scan 538 (6.472 min): 64GCMS00198.D\DATASIM.MS (-516)

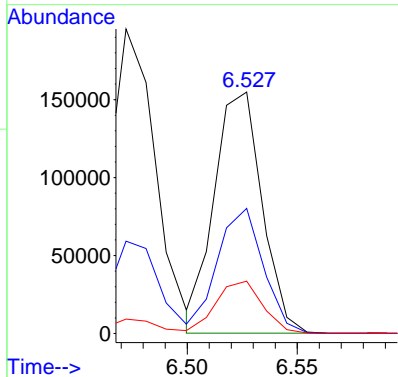
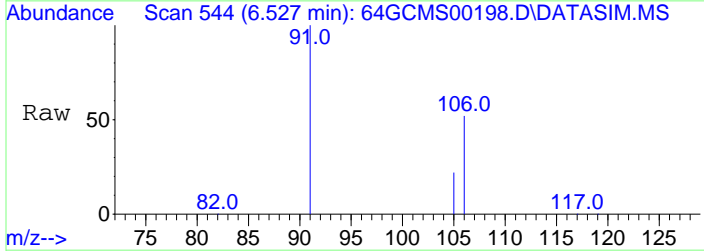


Abundance Scan 544 (6.527 min): 64GCMS00179.D\DATASIM.MS (-541)

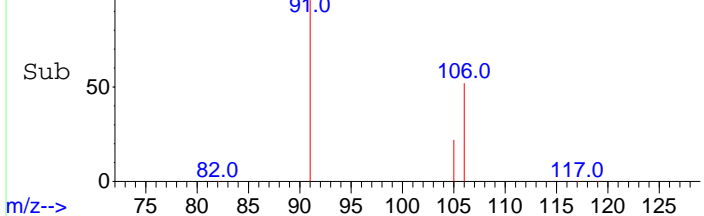


#16
m,p-Xylene
Concen: 518.86 ppbv
RT: 6.527 min Scan# 544
Delta R.T. 0.000 min
Lab File: 64GCMS00198.D
Acq: 4 May 2016 5:47 am

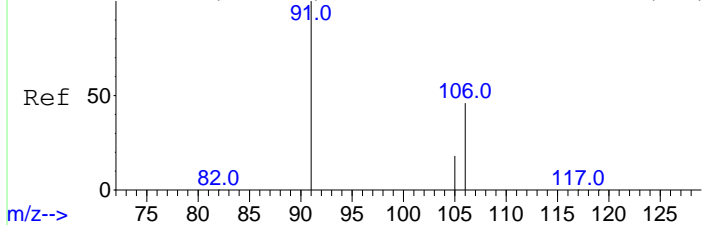
Tgt Ion: 91 Resp: 233728
Ion Ratio Lower Upper
91 100
106 49.9 37.7 56.5
105 21.2 17.0 25.4



Abundance Scan 544 (6.527 min): 64GCMS00198.D\DATASIM.MS (-522)



Abundance Scan 573 (6.792 min): 64GCMS00179.D\DATASIM.MS (-569)



#17

o-Xylene

Concen: 474.11 ppbv

RT: 6.792 min Scan# 573

Delta R.T. 0.000 min

Lab File: 64GCMS00198.D

Acq: 4 May 2016 5:47 am

Tgt Ion: 91 Resp: 231672

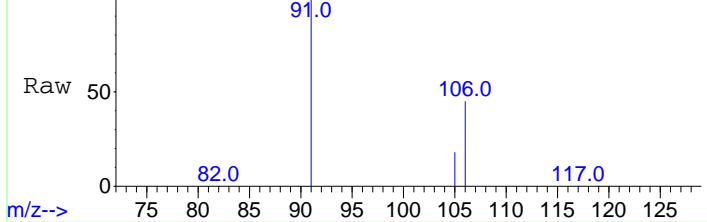
Ion Ratio Lower Upper

91 100

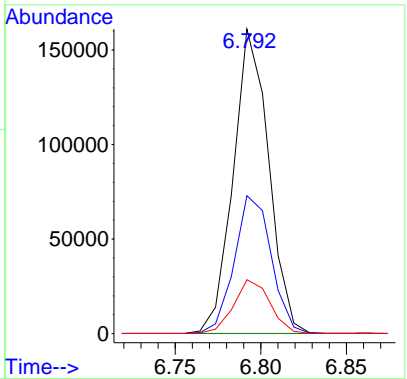
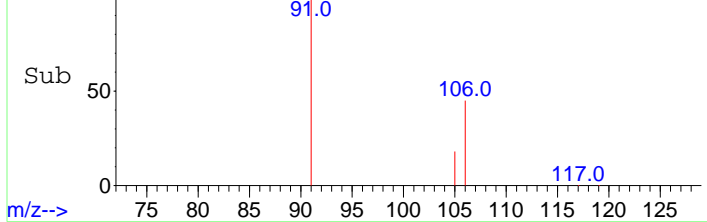
106 47.2 35.4 53.2

105 18.1 14.0 21.0

Abundance Scan 573 (6.792 min): 64GCMS00198.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00198.D\DATASIM.MS (-551)



LOW LEVEL CALIBRATION VERIFICATION

Data File 64GCMS00199
 Standard Number STD20160504-02
 Standard Name 5.0 ppbv STD LLCCV
 Loop Size 5 mL

Sample Multiplier: Units Date Analyzed	1 ppbv 5/4/2016	Primary Source Actual Values ppbv	Percent Difference %D	
Vinyl Chloride	4.09	5.1	-19	
1,1-Dichloroethene	3.93	5.1	-22	
Methyl Tert Butyl Ether	3.15	5.0	-37	
trans-1,2-Dichloroethene	3.87	5.2	-25	
1,1-Dichloroethane	3.98	5.1	-22	
cis-1,2-Dichloroethene	3.70	5.2	-28	
1,1,1-Trichloroethane	3.79	5.0	-25	
Benzene	4.81	5.1	-6	
Trichloroethene	4.18	5.0	-17	
Toluene	3.50	5.1	-31	
Tetrachloroethene	3.79	5.1	-25	
Ethyl Benzene	3.13	5.4	-42	
m,p-Xylene	2.63	5.1	-48	
o-Xylene	2.54	5.1	-50	

%D = ± 50%

Primary Standard Cylinder # CC-128244

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00199.D
 Acq On : 4 May 2016 6:02 am
 Operator : dlm
 Sample : STD20160504-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

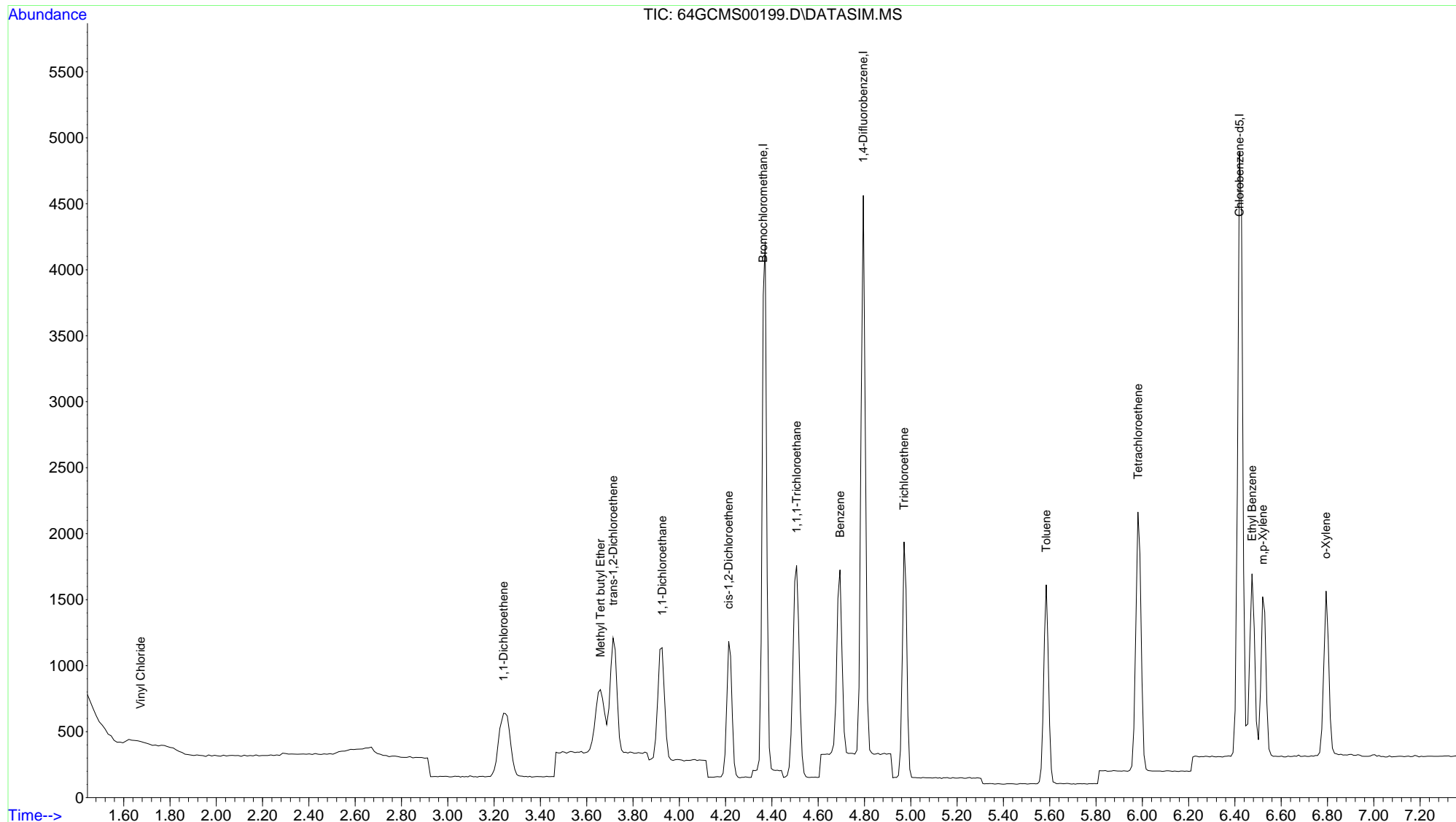
Quant Time: May 04 06:22:09 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

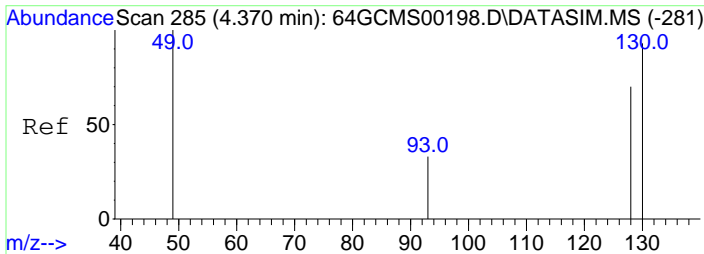
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Bromochloromethane	4.362	49	1969	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.794	114	3887	10.00	ppbv		0.00
12) Chlorobenzene-d5	6.419	117	3795	10.00	ppbv		0.00
Target Compounds							
							Qvalue
2) Vinyl Chloride	1.673	62	525m	4.09	ppbv		
3) 1,1-Dichloroethene	3.241	61	885	3.93	ppbv		91
4) Methyl Tert butyl Ether	3.659	73	1018	3.15	ppbv	#	79
5) trans-1,2-Dichloroethene	3.714	61	776	3.87	ppbv	#	80
6) 1,1-Dichloroethane	3.926	63	1057	3.98	ppbv	#	79
7) cis-1,2-Dichloroethene	4.213	61	708m	3.70	ppbv		
8) 1,1,1-Trichloroethane	4.507	97	1464m	3.79	ppbv		
10) Benzene	4.694	78	1490m	4.81	ppbv		
11) Trichloroethene	4.971	130	803	4.18	ppbv		91
13) Toluene	5.585	91	1380	3.50	ppbv		97
14) Tetrachloroethene	5.981	166	1029	3.79	ppbv		96
15) Ethyl Benzene	6.474	91	1521	3.13	ppbv		96
16) m,p-Xylene	6.520	91	1035	2.63	ppbv		95
17) o-Xylene	6.793	91	1087	2.54	ppbv		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

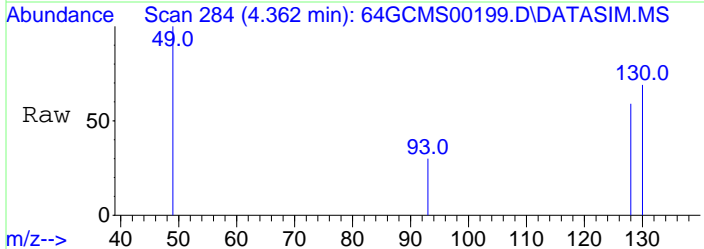
Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00199.D
 Acq On : 4 May 2016 6:02 am
 Operator : dlm
 Sample : STD20160504-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:22:09 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



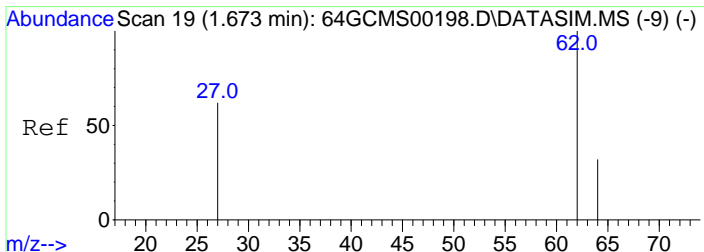
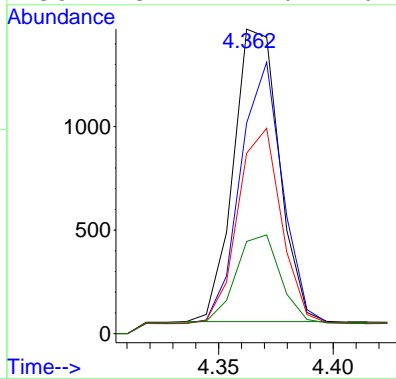
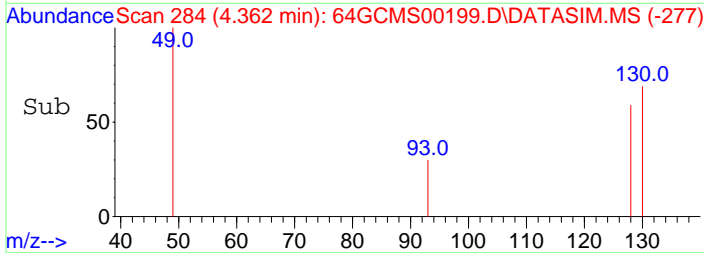


#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.362 min Scan# 284
 Delta R.T. -0.008 min
 Lab File: 64GCMS00199.D
 Acq: 4 May 2016 6:02 am

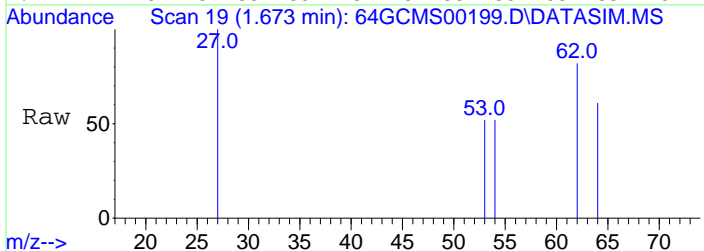


Tgt Ion: 49 Resp: 1969

Ion	Ratio	Lower	Upper
49	100		
130	81.8	46.3	69.5#
128	63.4	35.7	53.5#
93	29.1	17.6	26.4#

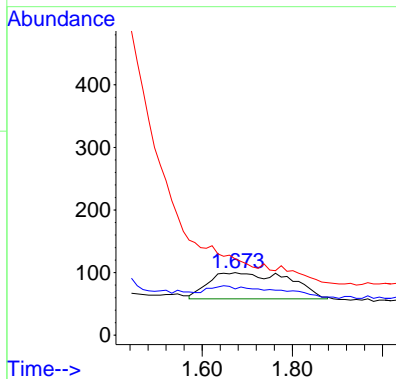
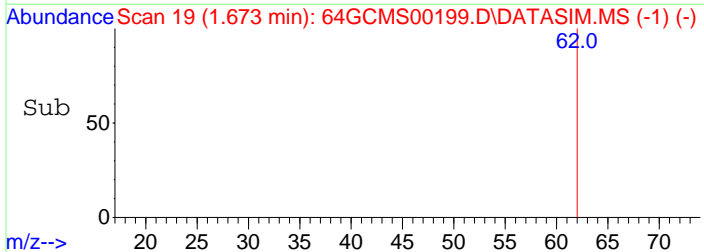


#2
 Vinyl Chloride
 Concen: 4.09 ppbv m
 RT: 1.673 min Scan# 19
 Delta R.T. -0.013 min
 Lab File: 64GCMS00199.D
 Acq: 4 May 2016 6:02 am



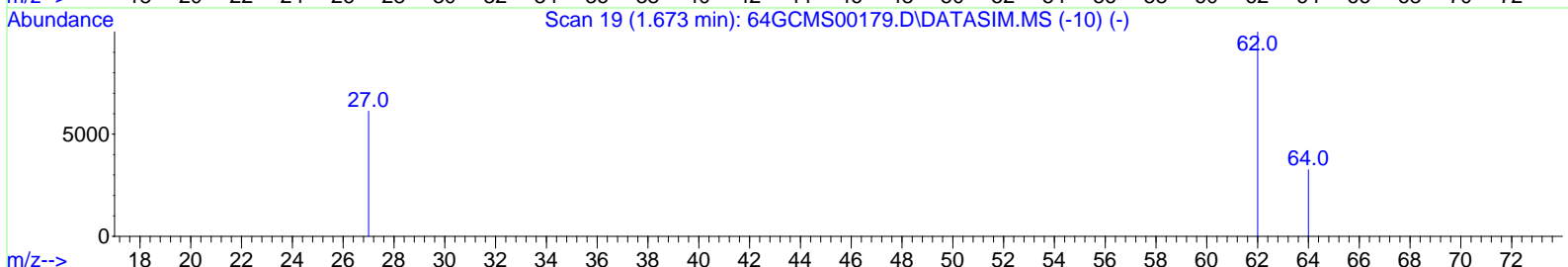
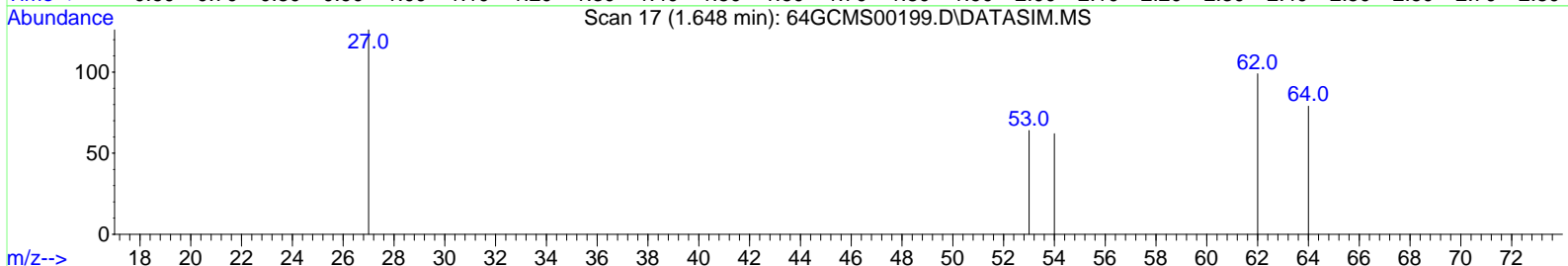
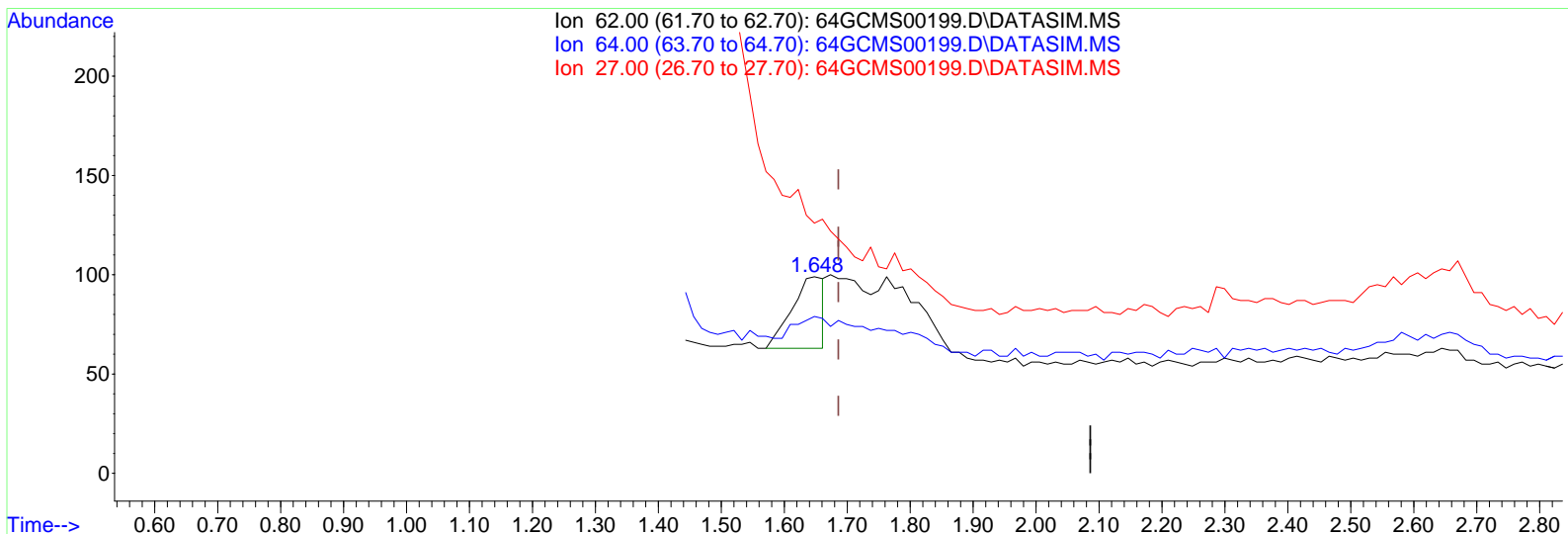
Tgt Ion: 62 Resp: 525

Ion	Ratio	Lower	Upper
62	100		
64	7.2	23.7	35.5#
27	0.0	38.0	57.0#



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00199.D
 Acq On : 4 May 2016 6:02 am
 Operator : dlm
 Sample : STD20160504-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:12:06 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



TIC: 64GCMS00199.D\DATASIM.MS

(2) Vinyl Chloride

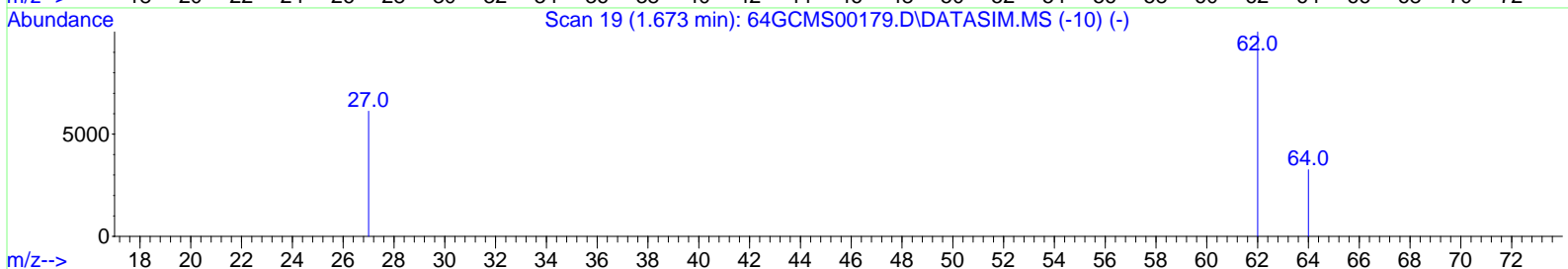
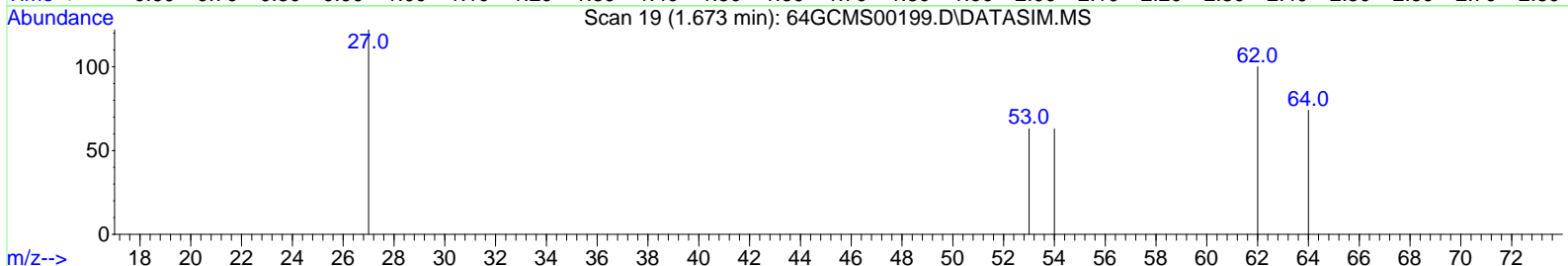
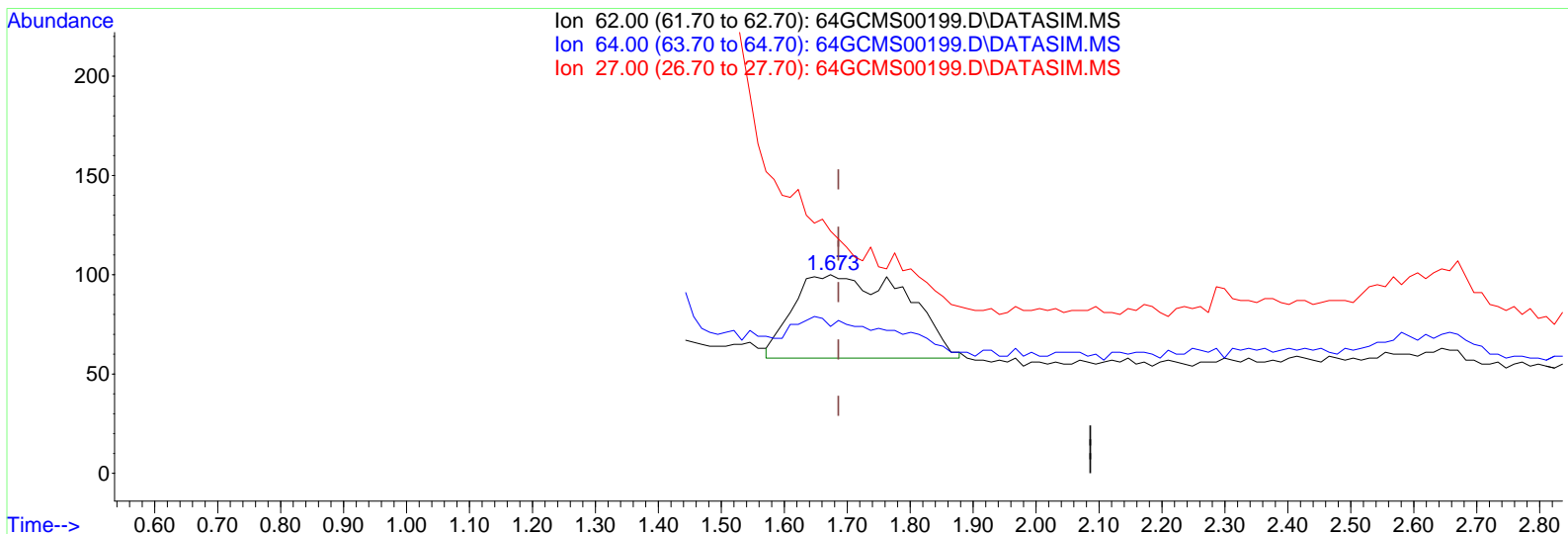
1.648min (-0.038) 1.00 ppbv

response 128

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	29.69
27.00	47.50	0.00#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00199.D
 Acq On : 4 May 2016 6:02 am
 Operator : dlm
 Sample : STD20160504-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:12:06 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



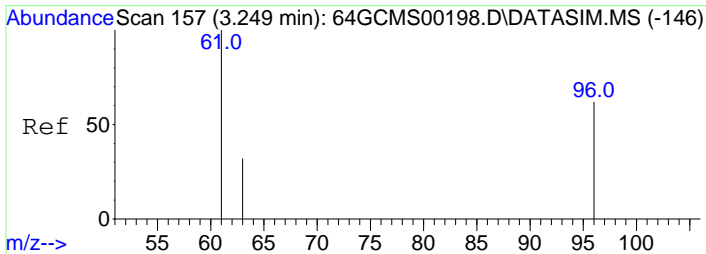
TIC: 64GCMS00199.D\DATASIM.MS

(2) Vinyl Chloride

1.673min (-0.013) 4.09 ppbv m

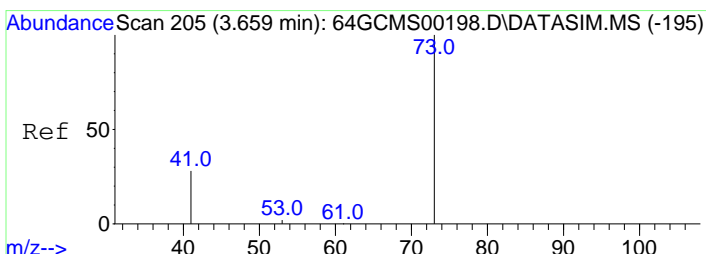
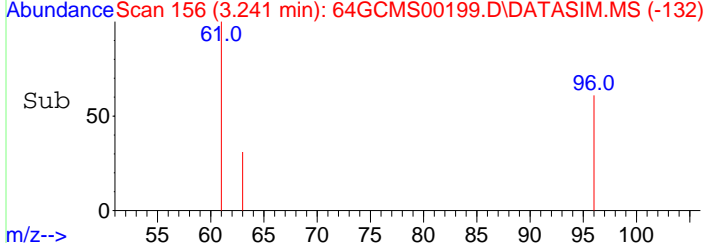
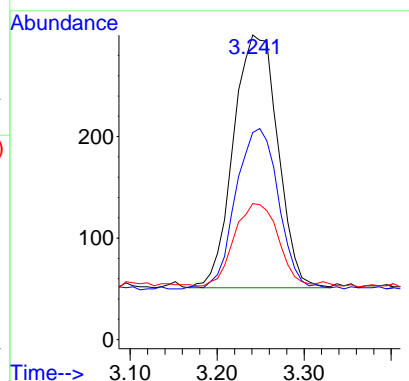
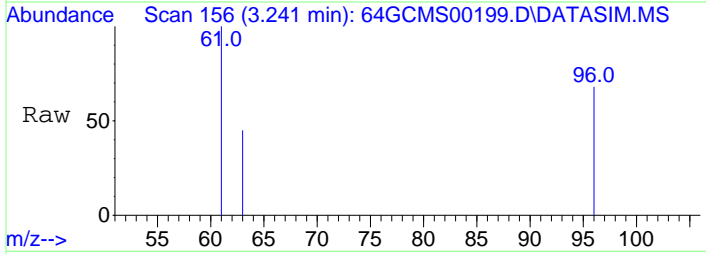
response 525

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	7.24#
27.00	47.50	0.00#
0.00	0.00	0.00



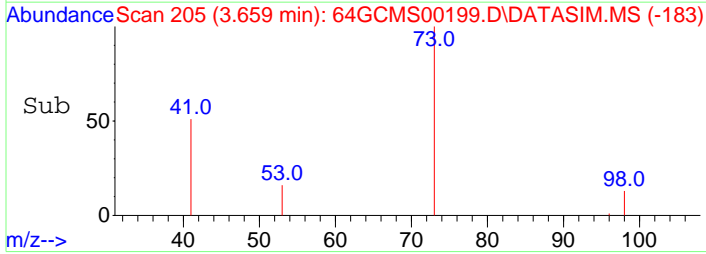
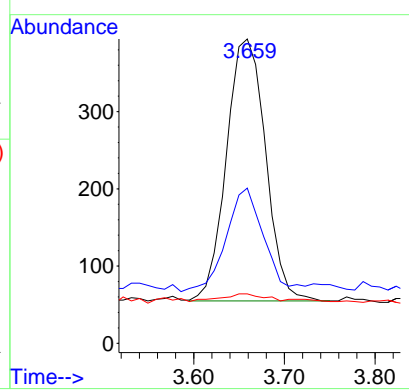
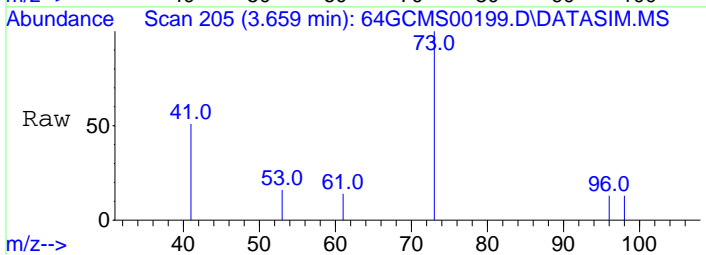
#3
 1,1-Dichloroethene
 Concen: 3.93 ppbv
 RT: 3.241 min Scan# 156
 Delta R.T. -0.008 min
 Lab File: 64GCMS00199.D
 Acq: 4 May 2016 6:02 am

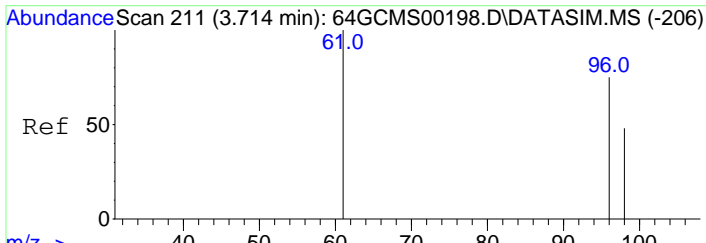
Tgt Ion	Resp	Lower	Upper
61	100		
96	59.5	40.9	61.3
63	32.2	24.3	36.5



#4
 Methyl Tert butyl Ether
 Concen: 3.15 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 64GCMS00199.D
 Acq: 4 May 2016 6:02 am

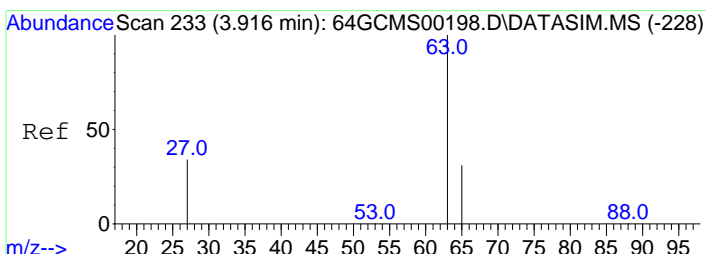
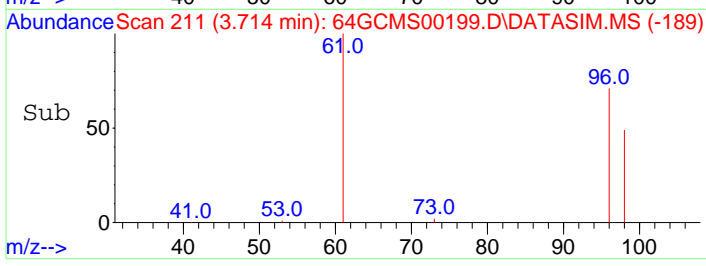
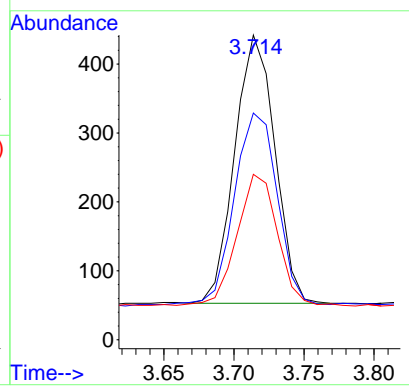
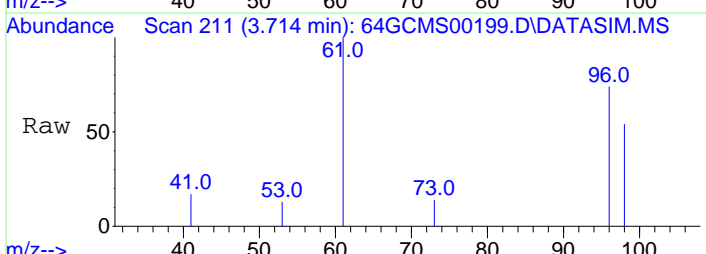
Tgt Ion	Resp	Lower	Upper
73	100		
41	36.9	20.6	30.8#
53	0.0	1.2	1.8#





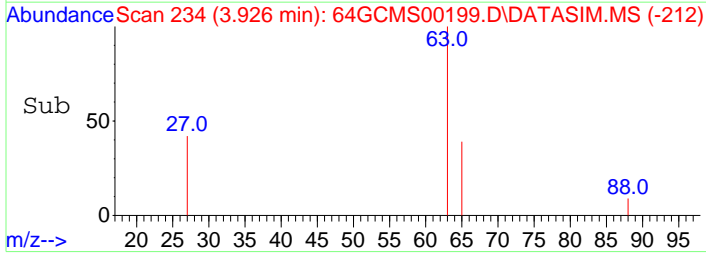
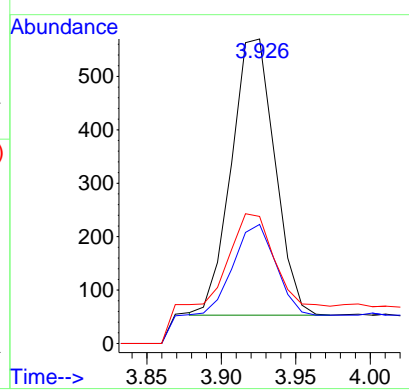
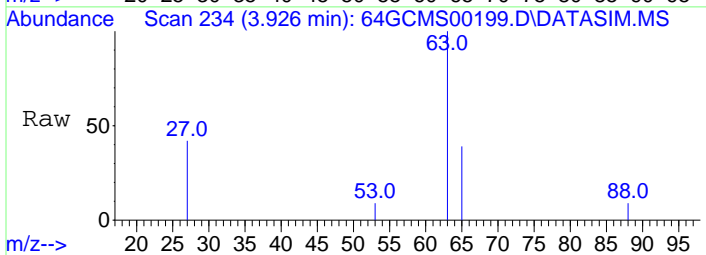
#5
 trans-1,2-Dichloroethene
 Concen: 3.87 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. -0.000 min
 Lab File: 64GCMS00199.D
 Acq: 4 May 2016 6:02 am

Tgt Ion	Resp	Lower	Upper
61	100		
96	75.8	47.8	71.6#
98	49.2	30.6	46.0#

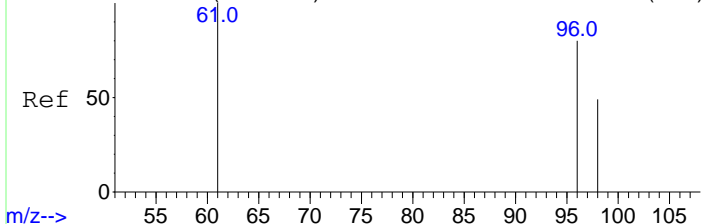


#6
 1,1-Dichloroethane
 Concen: 3.98 ppbv
 RT: 3.926 min Scan# 234
 Delta R.T. -0.000 min
 Lab File: 64GCMS00199.D
 Acq: 4 May 2016 6:02 am

Tgt Ion	Resp	Lower	Upper
63	100		
65	32.0	24.8	37.2
27	48.5	21.1	31.7#

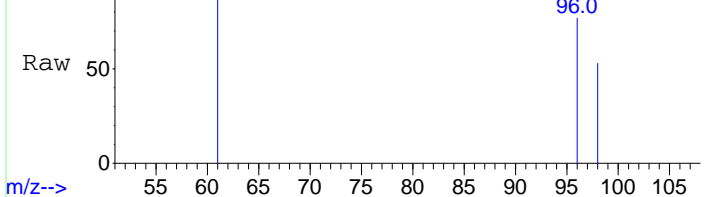


Abundance Scan 266 (4.212 min): 64GCMS00198.D\DATASIM.MS (-261)



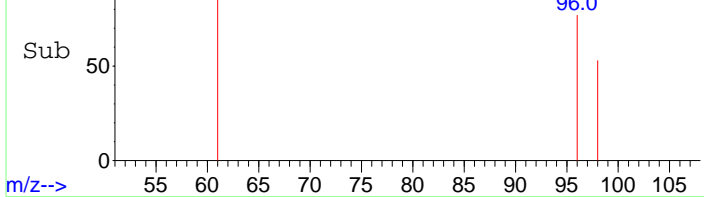
m/z-->

Abundance Scan 266 (4.213 min): 64GCMS00199.D\DATASIM.MS



m/z-->

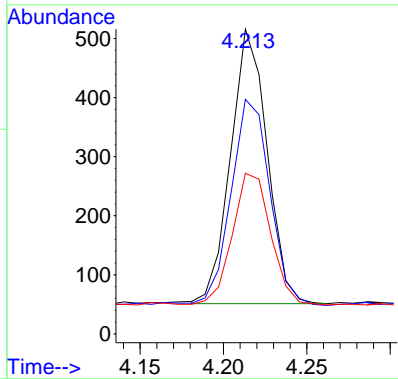
Abundance Scan 266 (4.213 min): 64GCMS00199.D\DATASIM.MS (-244)



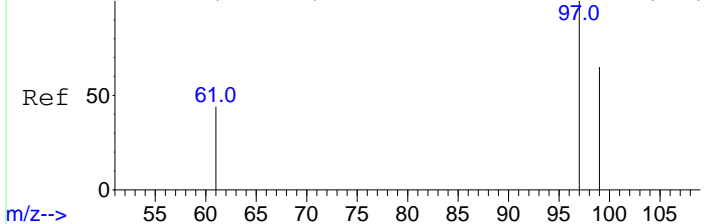
m/z-->

#7
cis-1,2-Dichloroethene
Concen: 3.70 ppbv m
RT: 4.213 min Scan# 266
Delta R.T. -0.007 min
Lab File: 64GCMS00199.D
Acq: 4 May 2016 6:02 am

Tgt Ion:	61	Resp:	708
Ion Ratio	Lower	Upper	
61	100		
96	112.9	52.0	78.0#
98	59.7	33.4	50.2#

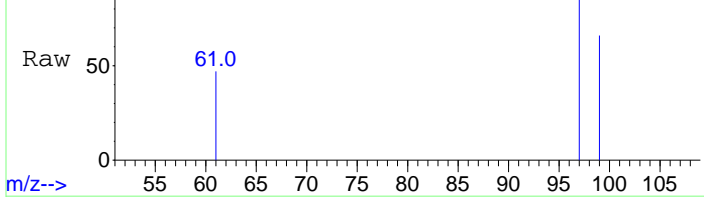


Abundance Scan 301 (4.505 min): 64GCMS00198.D\DATASIM.MS (-293)



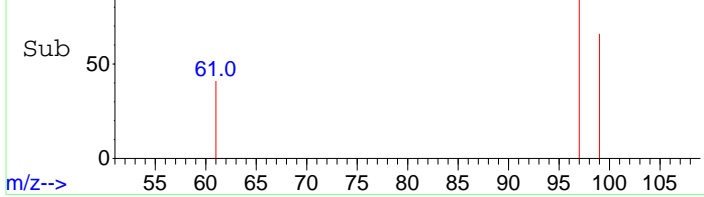
m/z-->

Abundance Scan 301 (4.507 min): 64GCMS00199.D\DATASIM.MS



m/z-->

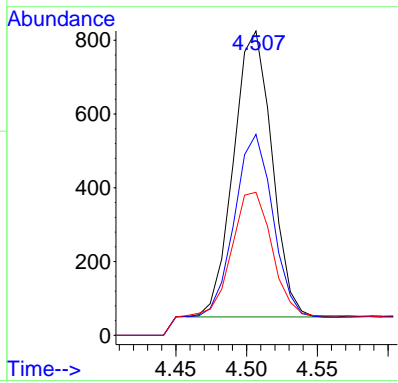
Abundance Scan 301 (4.507 min): 64GCMS00199.D\DATASIM.MS (-277)



m/z-->

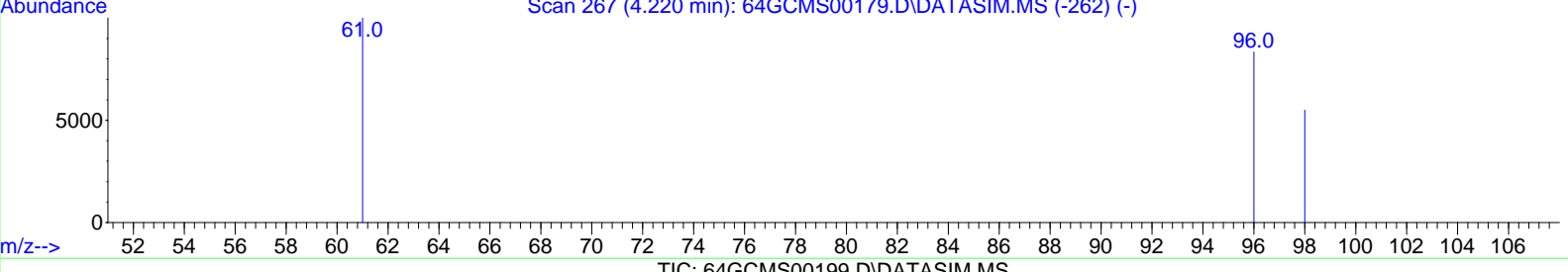
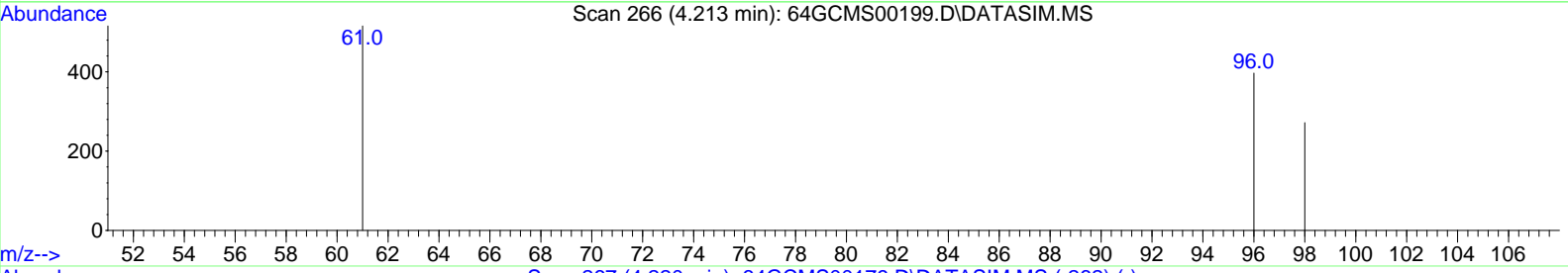
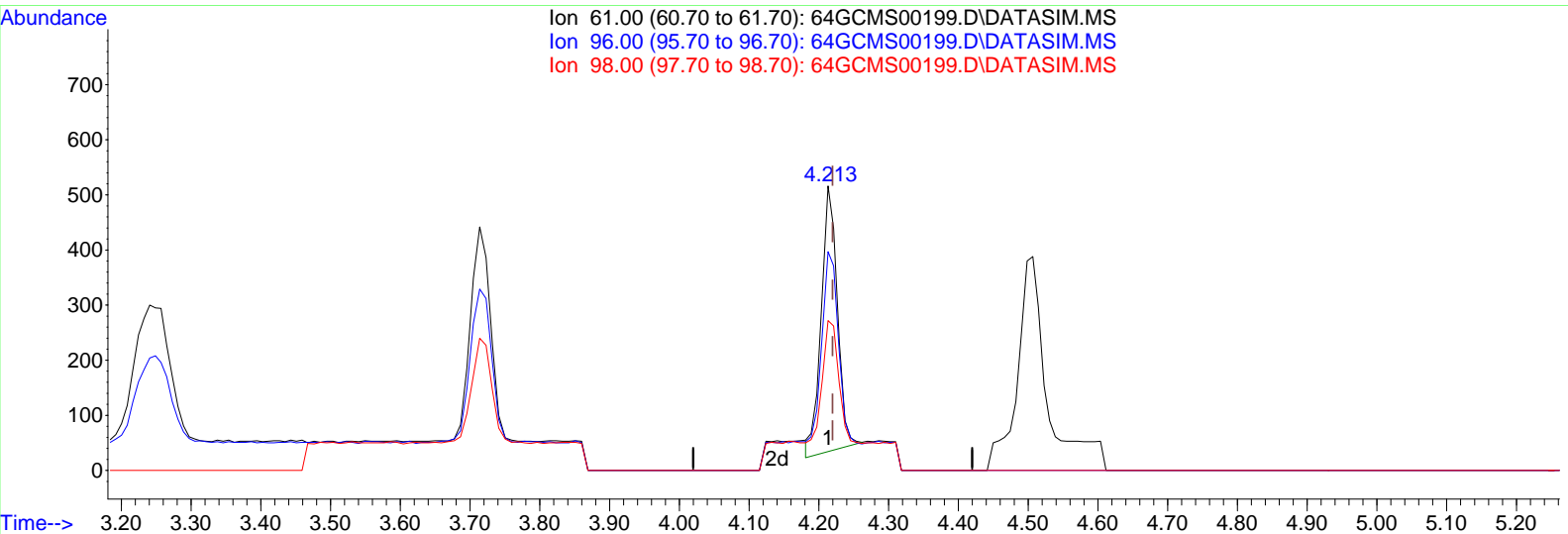
#8
1,1,1-Trichloroethane
Concen: 3.79 ppbv m
RT: 4.507 min Scan# 301
Delta R.T. 0.001 min
Lab File: 64GCMS00199.D
Acq: 4 May 2016 6:02 am

Tgt Ion:	97	Resp:	1464
Ion Ratio	Lower	Upper	
97	100		
99	63.8	51.5	77.3
61	69.5	38.6	58.0#



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00199.D
 Acq On : 4 May 2016 6:02 am
 Operator : dlm
 Sample : STD20160504-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:12:06 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



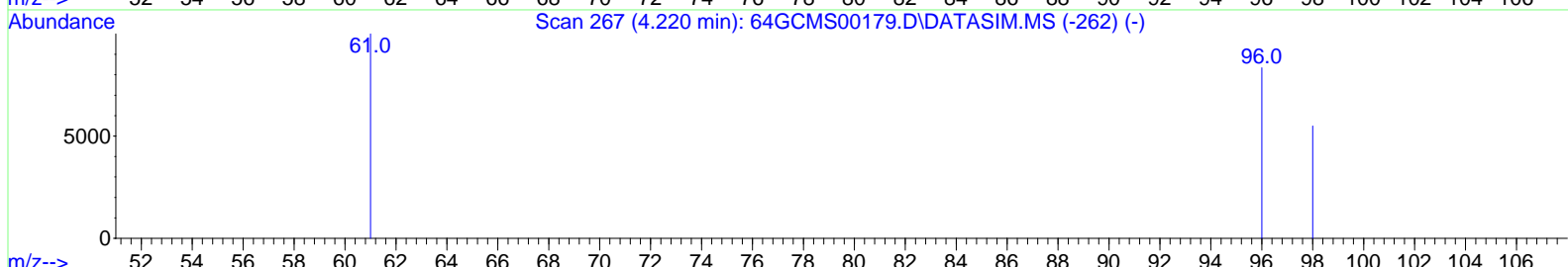
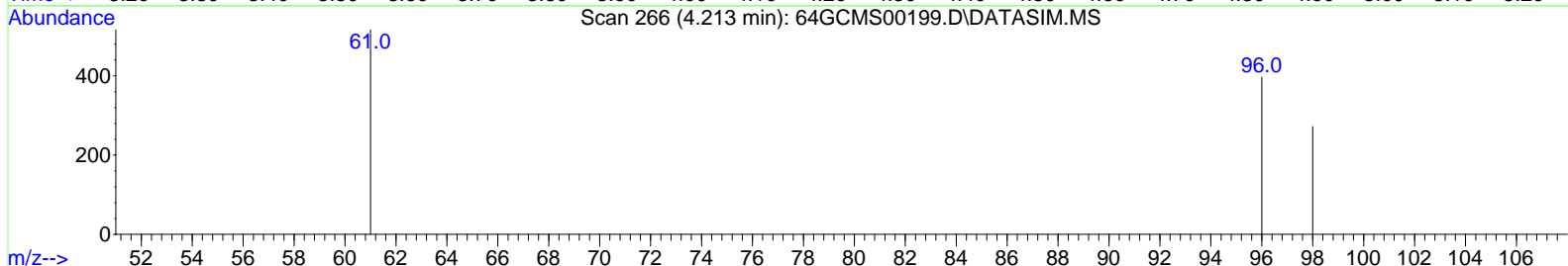
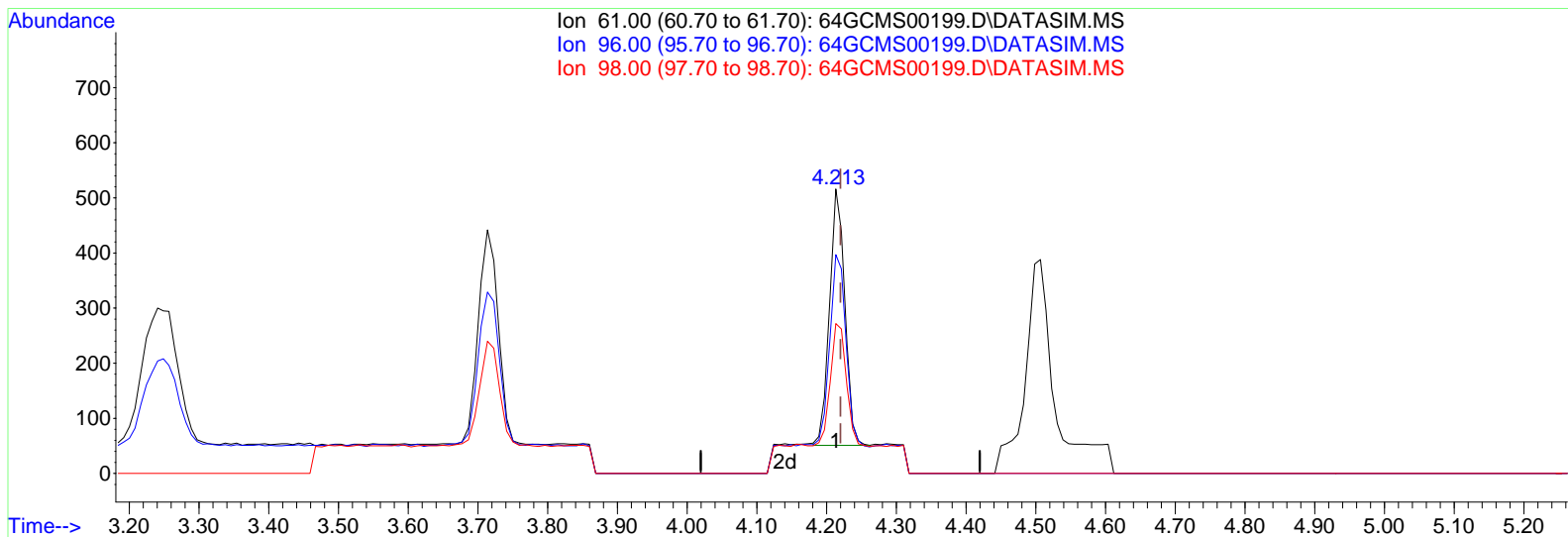
(7) cis-1,2-Dichloroethene

4.213min (-0.007) 4.06 ppbv

response	776
Ion	Exp% Act%
61.00	100.00 100.00
96.00	65.00 102.96#
98.00	41.80 54.51#
0.00	0.00 0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00199.D
 Acq On : 4 May 2016 6:02 am
 Operator : dlm
 Sample : STD20160504-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:12:06 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



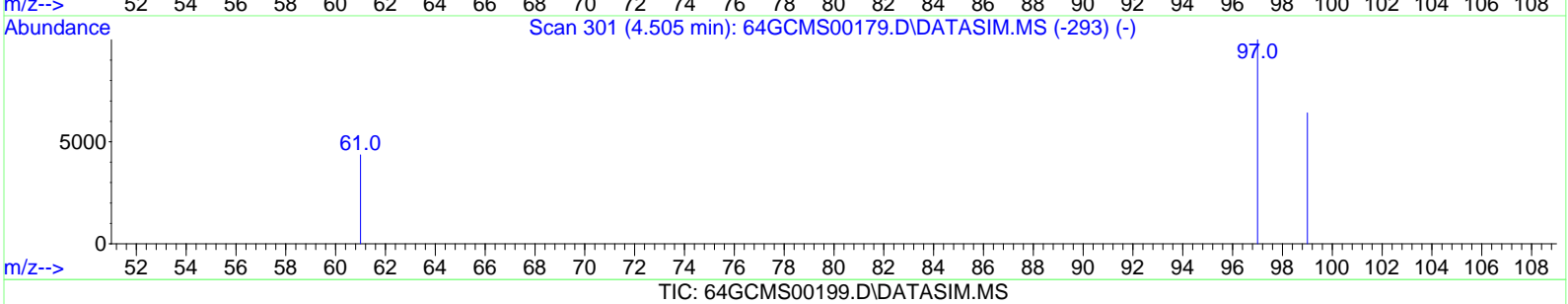
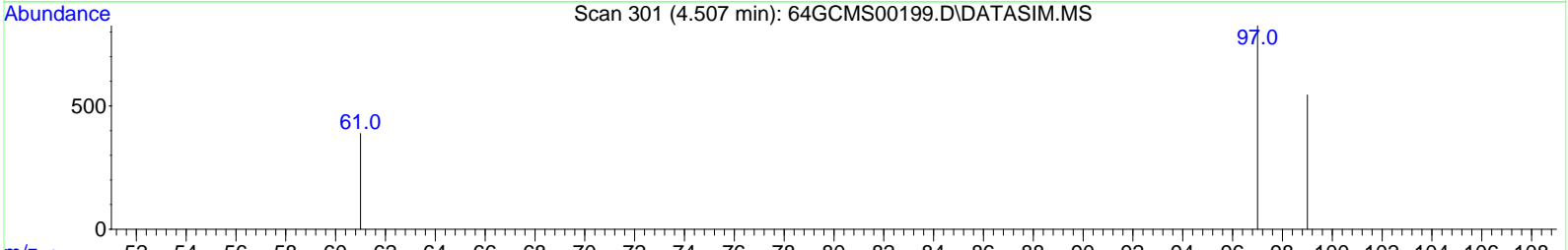
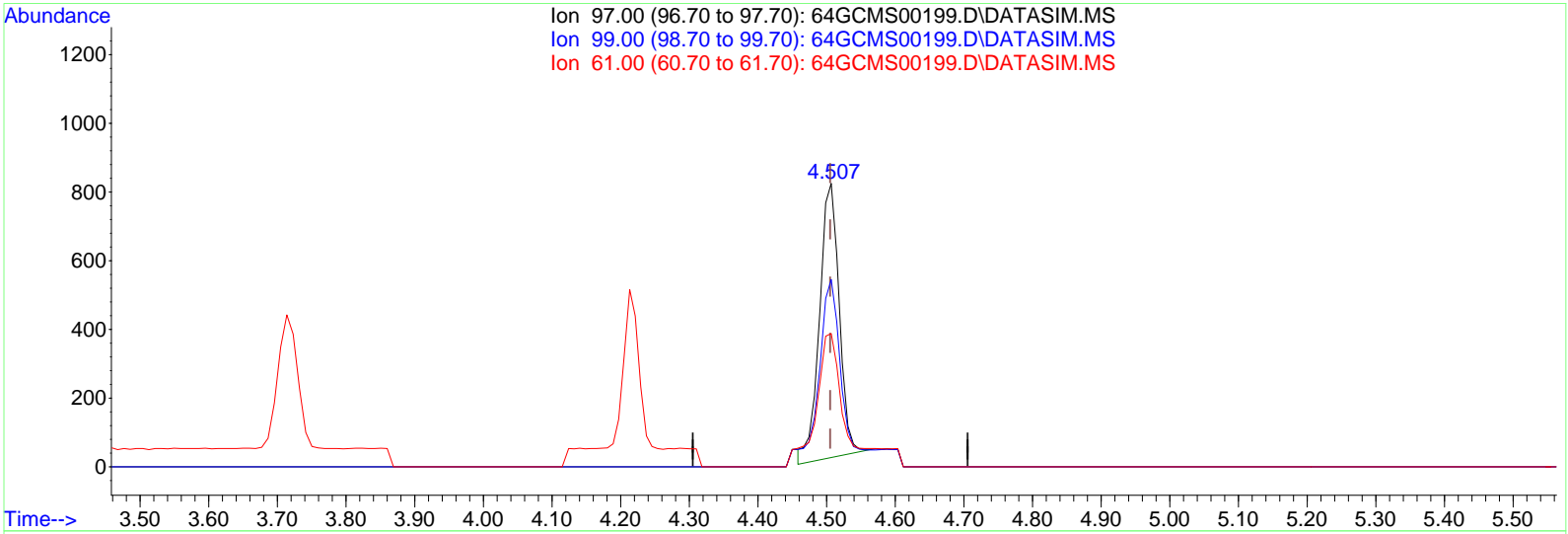
(7) cis-1,2-Dichloroethene

4.213min (-0.007) 3.70 ppbv m

response	708	
Ion	Exp%	Act%
61.00	100.00	100.00
96.00	65.00	112.85#
98.00	41.80	59.75#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00199.D
 Acq On : 4 May 2016 6:02 am
 Operator : dlm
 Sample : STD20160504-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:12:06 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



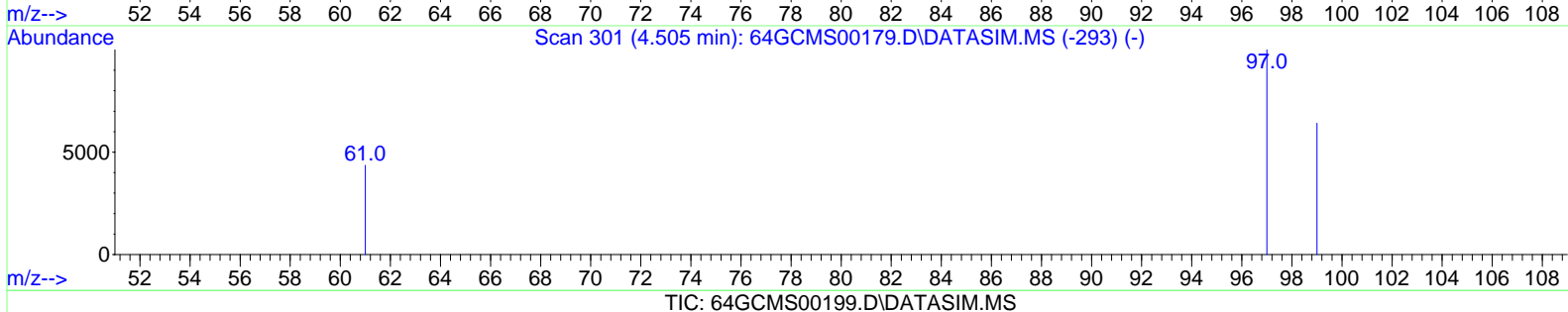
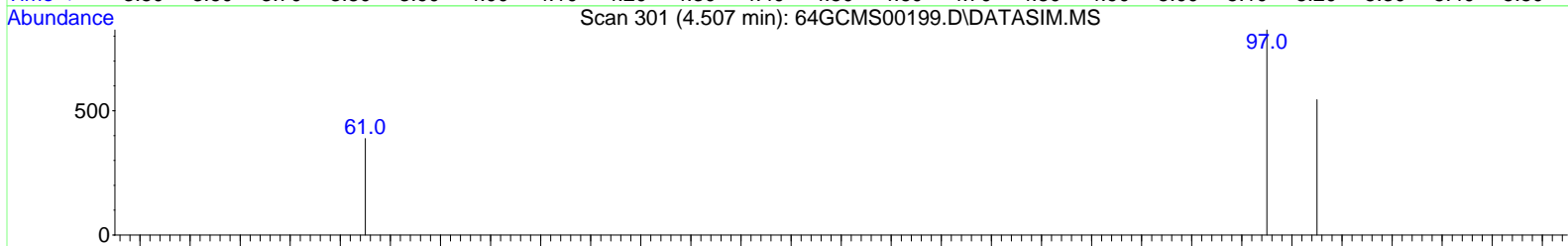
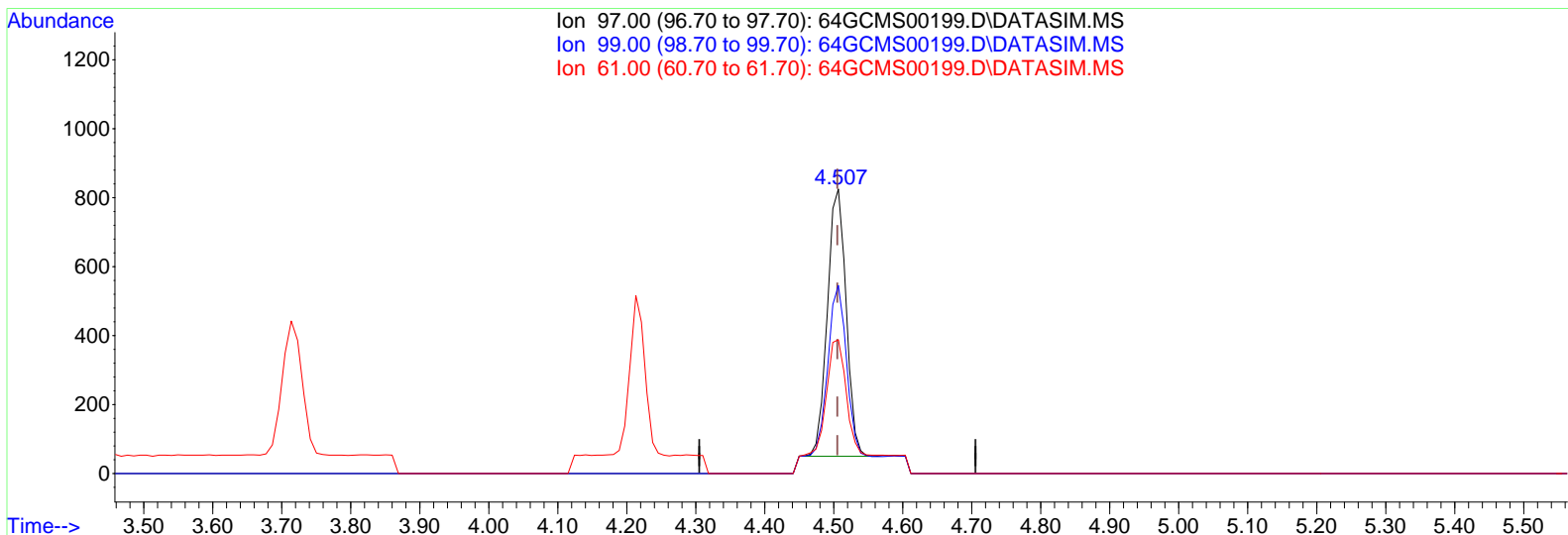
(8) 1,1,1-Trichloroethane

4.507min (+ 0.001) 4.15 ppbv

response	1600	
Ion	Exp%	Act%
97.00	100.00	100.00
99.00	64.40	58.38
61.00	48.30	63.63#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00199.D
 Acq On : 4 May 2016 6:02 am
 Operator : dlm
 Sample : STD20160504-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:12:06 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

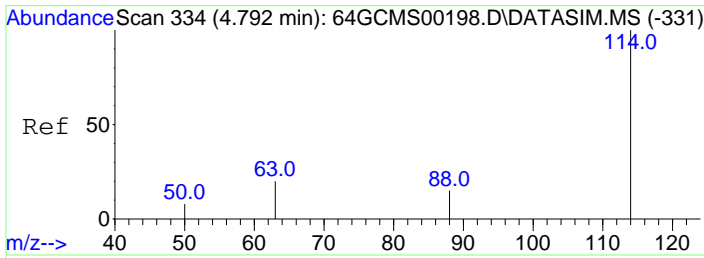


(8) 1,1,1-Trichloroethane

4.507min (+ 0.001) 3.79 ppbv m

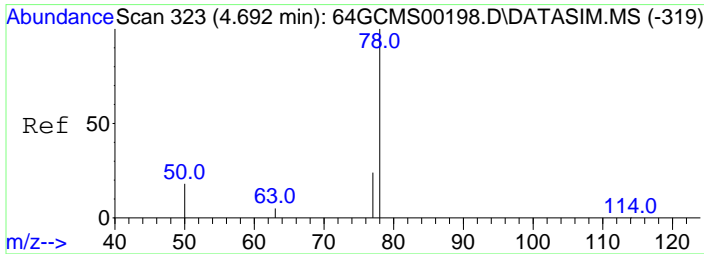
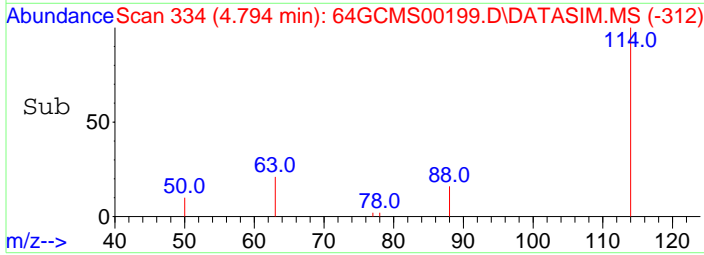
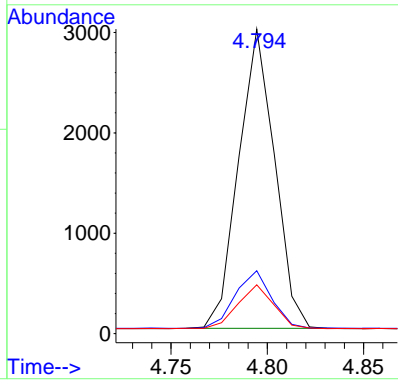
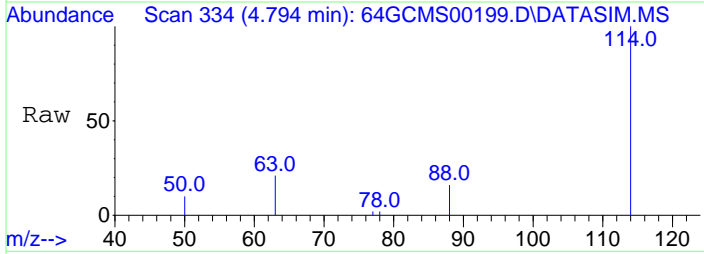
response 1464

Ion	Exp%	Act%
97.00	100.00	100.00
99.00	64.40	63.80
61.00	48.30	69.54#
0.00	0.00	0.00



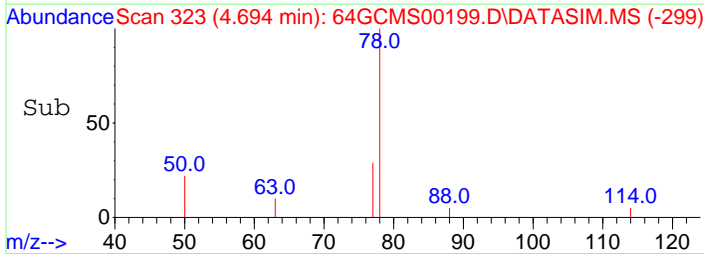
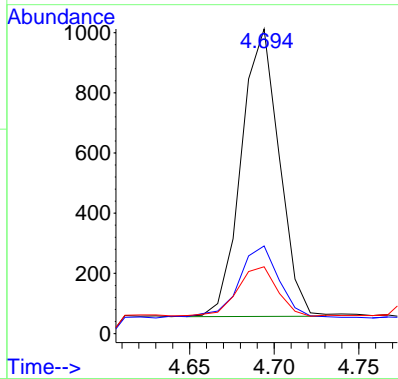
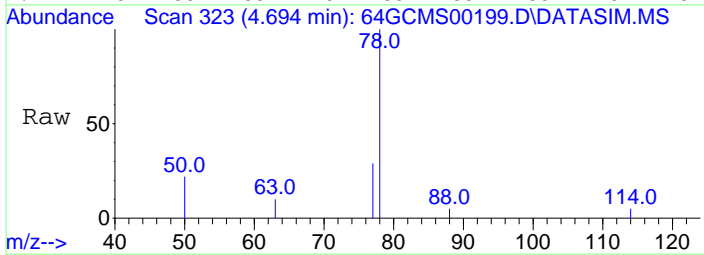
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.794 min Scan# 334
 Delta R.T. 0.002 min
 Lab File: 64GCMS00199.D
 Acq: 4 May 2016 6:02 am

Tgt Ion	Resp	Lower	Upper
114	100		
63	19.5	19.2	28.8
88	14.6	13.7	20.5



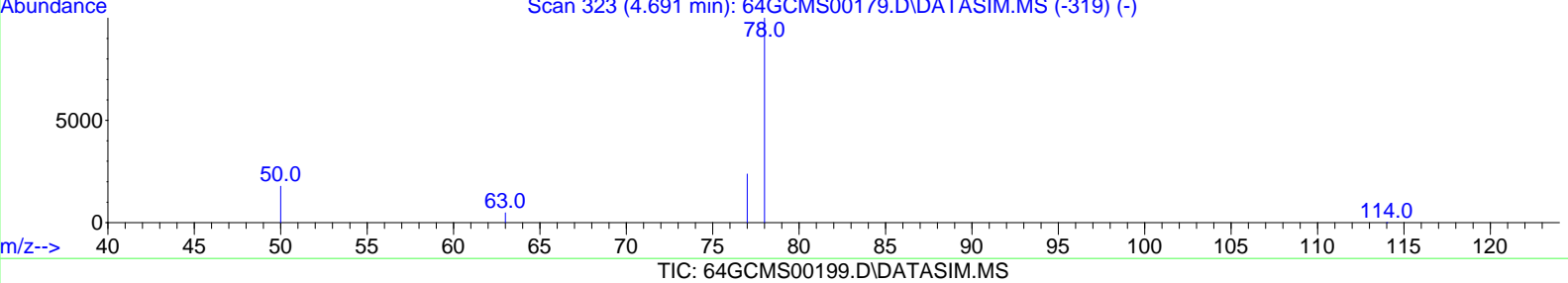
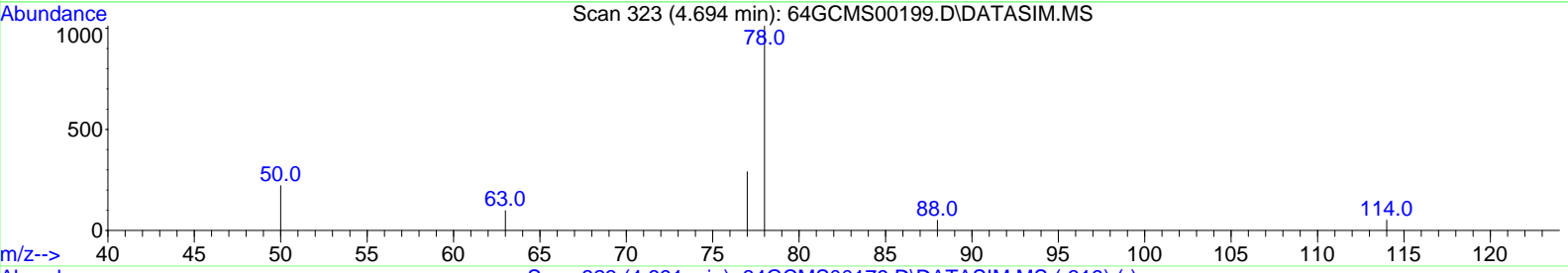
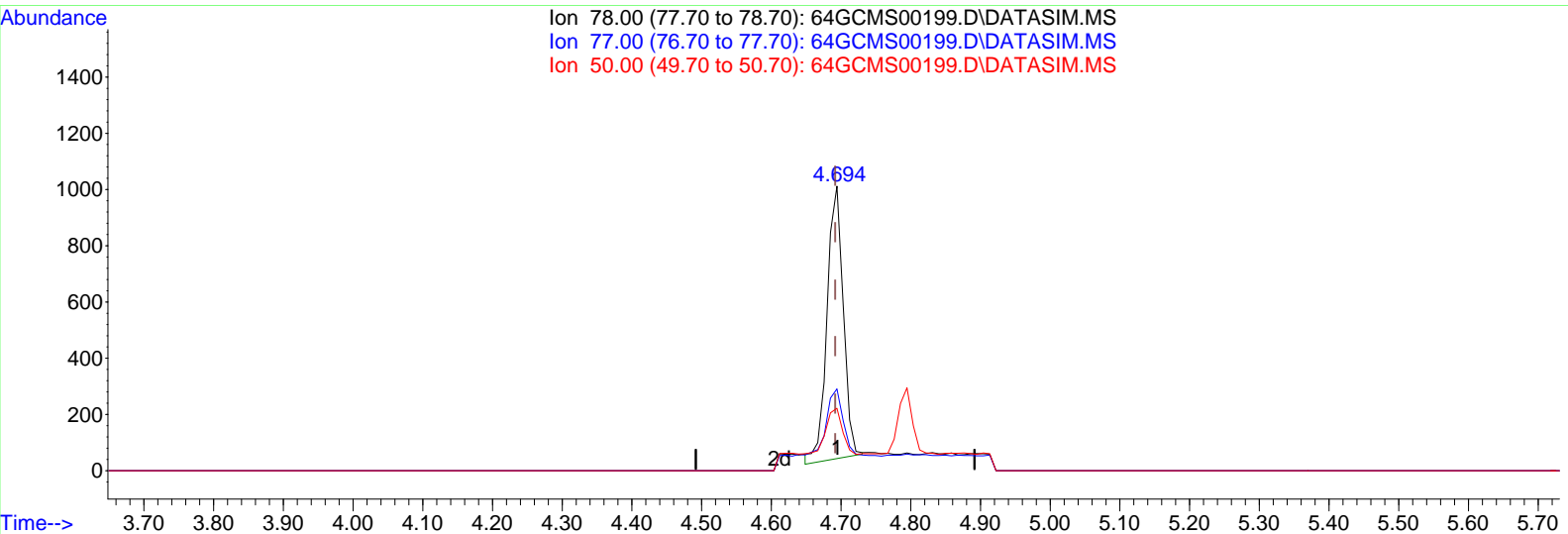
#10
 Benzene
 Concen: 4.81 ppbv m
 RT: 4.694 min Scan# 323
 Delta R.T. 0.002 min
 Lab File: 64GCMS00199.D
 Acq: 4 May 2016 6:02 am

Tgt Ion	Resp	Lower	Upper
78	100		
77	34.9	18.2	27.4#
50	26.2	16.6	24.8#



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00199.D
 Acq On : 4 May 2016 6:02 am
 Operator : dlm
 Sample : STD20160504-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:12:06 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



(10) Benzene

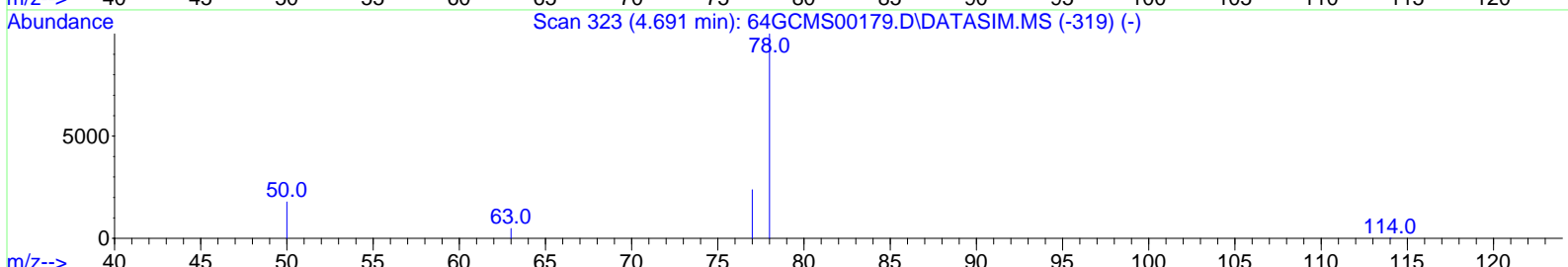
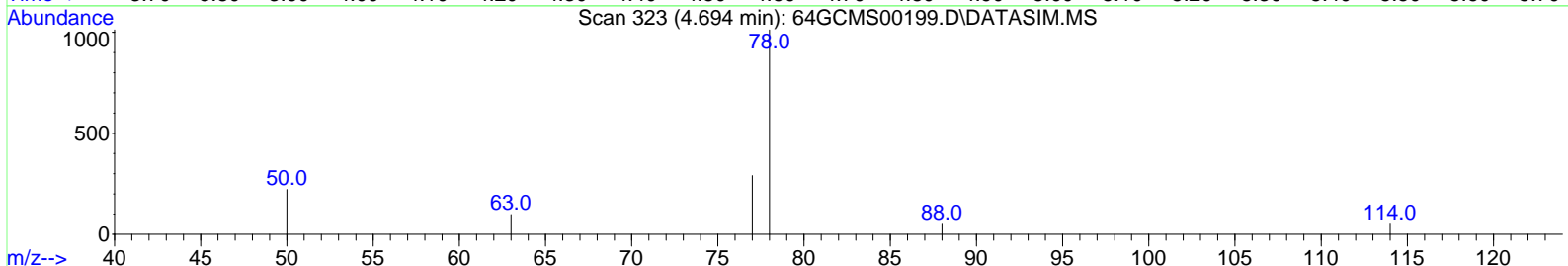
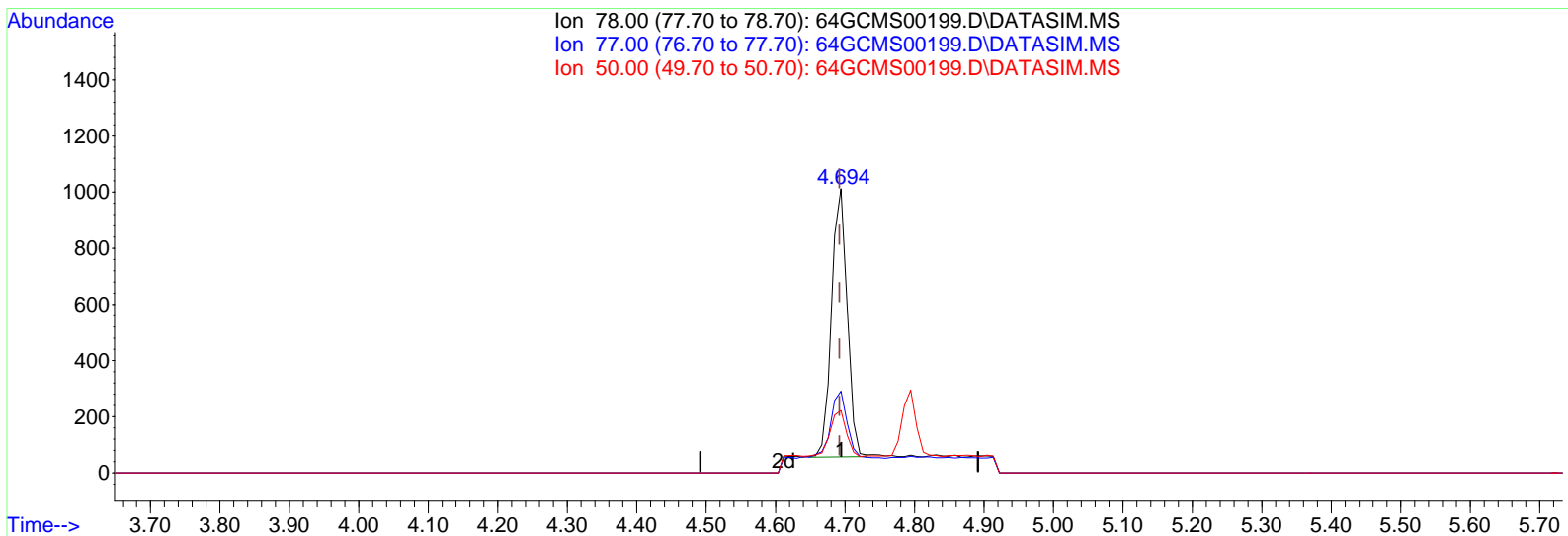
4.694min (+ 0.002) 5.06 ppbv

response 1569

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	33.14#
50.00	20.70	24.86#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00199.D
 Acq On : 4 May 2016 6:02 am
 Operator : dlm
 Sample : STD20160504-02 \ 5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:12:06 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



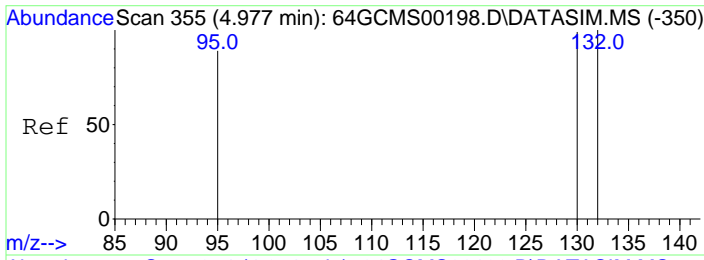
TIC: 64GCMS00199.D\DATASIM.MS

(10) Benzene

4.694min (+ 0.002) 4.81 ppbv m

response 1490

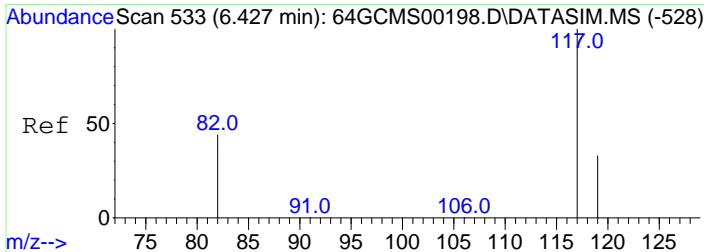
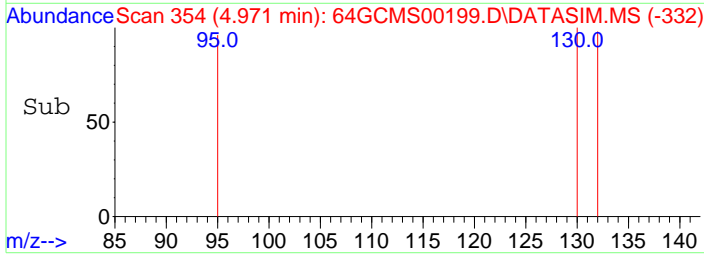
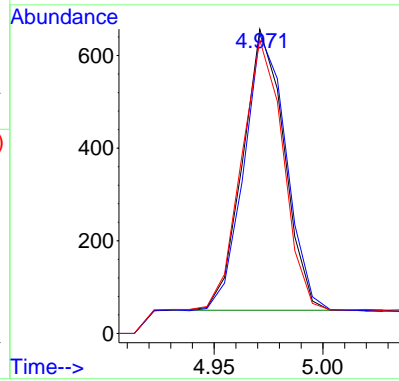
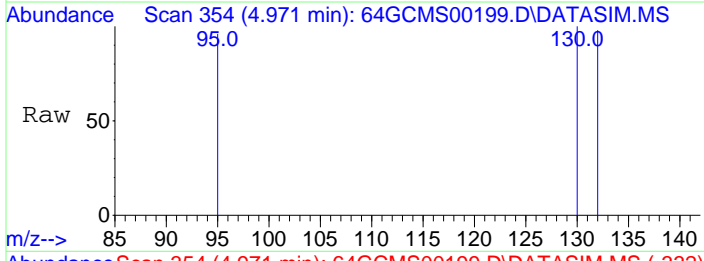
Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	34.90#
50.00	20.70	26.17#
0.00	0.00	0.00



#11
 Trichloroethene
 Concen: 4.18 ppbv
 RT: 4.971 min Scan# 354
 Delta R.T. -0.006 min
 Lab File: 64GCMS00199.D
 Acq: 4 May 2016 6:02 am

Tgt Ion:130 Resp: 803

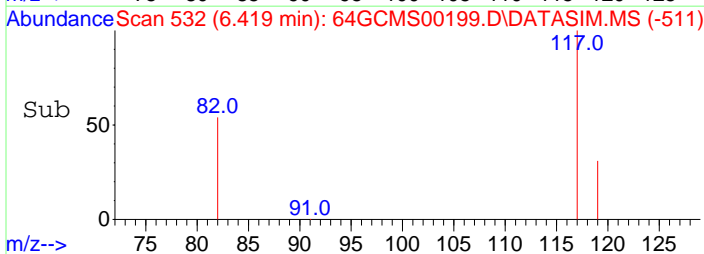
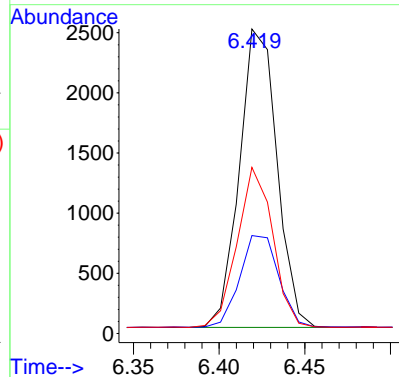
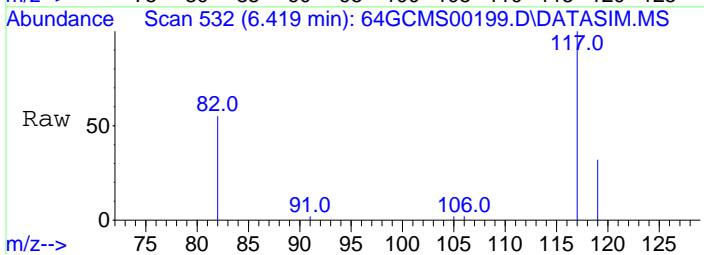
Ion	Ratio	Lower	Upper
130	100		
132	110.5	76.9	115.3
95	105.2	81.5	122.3



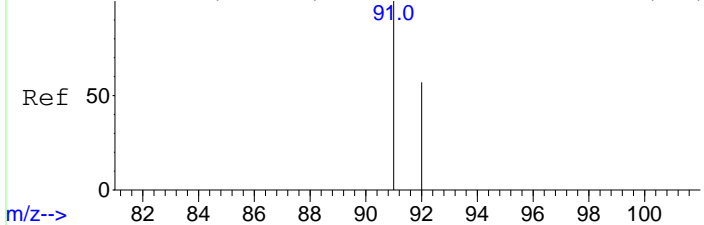
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.419 min Scan# 532
 Delta R.T. -0.007 min
 Lab File: 64GCMS00199.D
 Acq: 4 May 2016 6:02 am

Tgt Ion:117 Resp: 3795

Ion	Ratio	Lower	Upper
117	100		
119	31.9	25.8	38.6
82	50.9	45.6	68.4

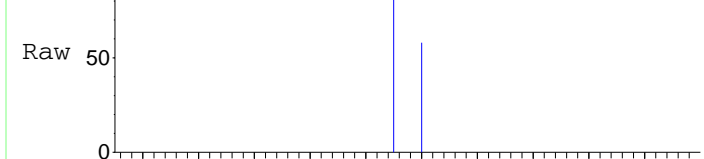


Abundance Scan 433 (5.583 min): 64GCMS00198.D\DATASIM.MS (-428)



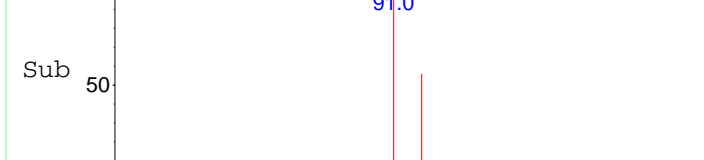
m/z-->

Abundance Scan 433 (5.585 min): 64GCMS00199.D\DATASIM.MS



m/z-->

Abundance Scan 433 (5.585 min): 64GCMS00199.D\DATASIM.MS (-406)

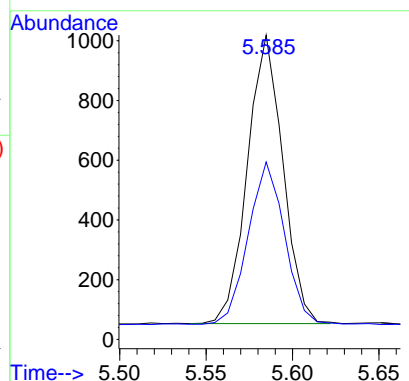


m/z-->

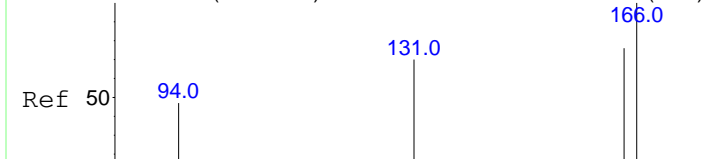
#13
Toluene
Concen: 3.50 ppbv
RT: 5.585 min Scan# 433
Delta R.T. 0.002 min
Lab File: 64GCMS00199.D
Acq: 4 May 2016 6:02 am

Tgt Ion: 91 Resp: 1380

Ion	Ratio	Lower	Upper
91	100		
92	57.5	48.0	72.0

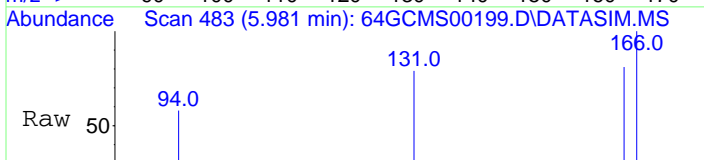


Abundance Scan 484 (5.988 min): 64GCMS00198.D\DATASIM.MS (-479)



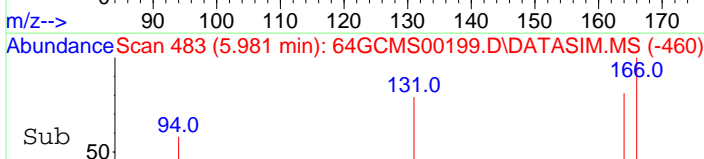
m/z-->

Abundance Scan 483 (5.981 min): 64GCMS00199.D\DATASIM.MS



m/z-->

Abundance Scan 483 (5.981 min): 64GCMS00199.D\DATASIM.MS (-460)

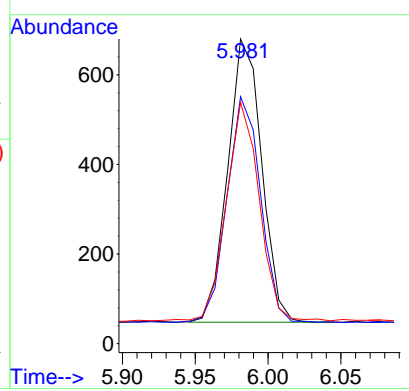


m/z-->

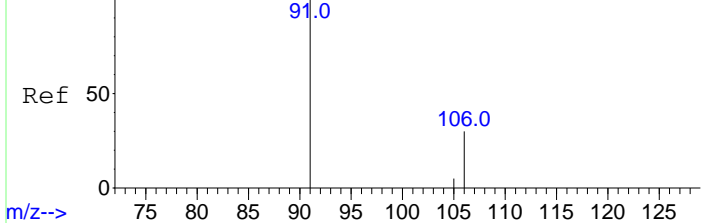
#14
Tetrachloroethene
Concen: 3.79 ppbv
RT: 5.981 min Scan# 483
Delta R.T. -0.007 min
Lab File: 64GCMS00199.D
Acq: 4 May 2016 6:02 am

Tgt Ion: 166 Resp: 1029

Ion	Ratio	Lower	Upper
166	100		
164	77.4	63.4	95.0
131	73.2	63.4	95.0



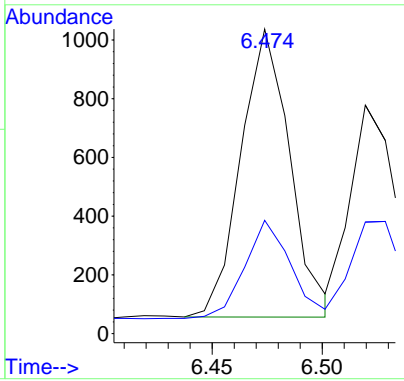
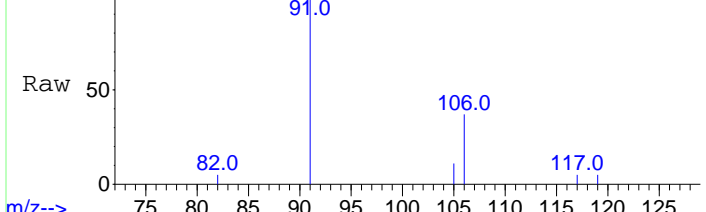
Abundance Scan 538 (6.472 min): 64GCMS00198.D\DATASIM.MS (-534)



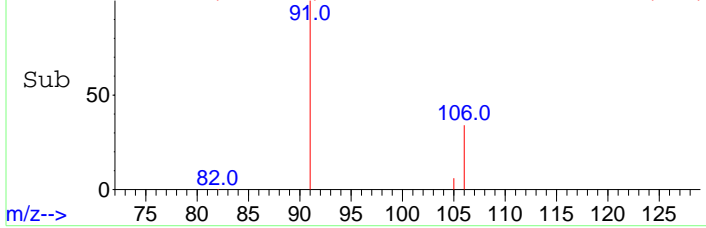
#15
Ethyl Benzene
Concen: 3.13 ppbv
RT: 6.474 min Scan# 538
Delta R.T. 0.002 min
Lab File: 64GCMS00199.D
Acq: 4 May 2016 6:02 am

Tgt Ion	Resp	Lower	Upper
91	1521		
106	32.5	24.2	36.2

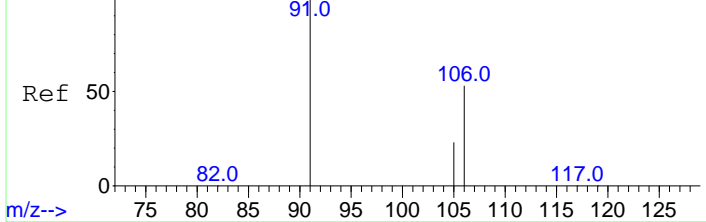
Abundance Scan 538 (6.474 min): 64GCMS00199.D\DATASIM.MS



Abundance Scan 538 (6.474 min): 64GCMS00199.D\DATASIM.MS (-516)



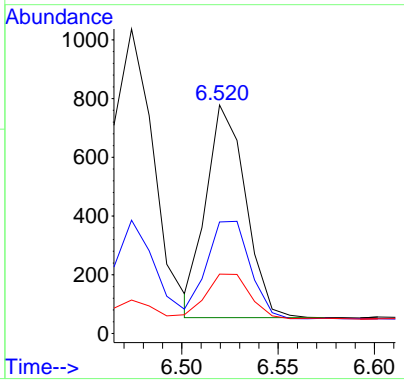
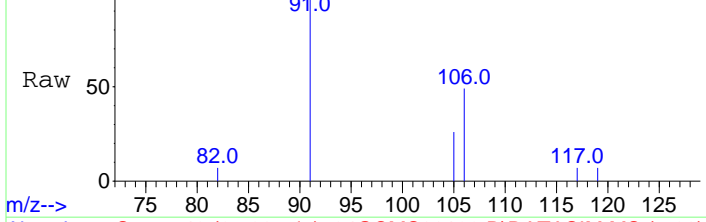
Abundance Scan 544 (6.527 min): 64GCMS00198.D\DATASIM.MS (-541)



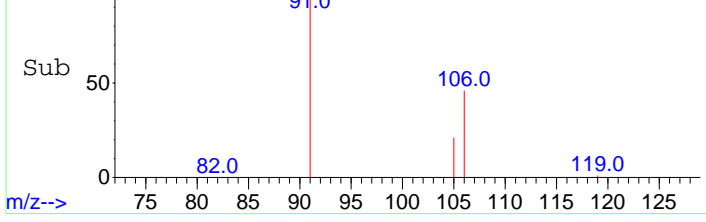
#16
m,p-Xylene
Concen: 2.63 ppbv
RT: 6.520 min Scan# 543
Delta R.T. -0.007 min
Lab File: 64GCMS00199.D
Acq: 4 May 2016 6:02 am

Tgt Ion	Resp	Lower	Upper
91	1035		
106	50.4	37.7	56.5
105	24.2	17.0	25.4

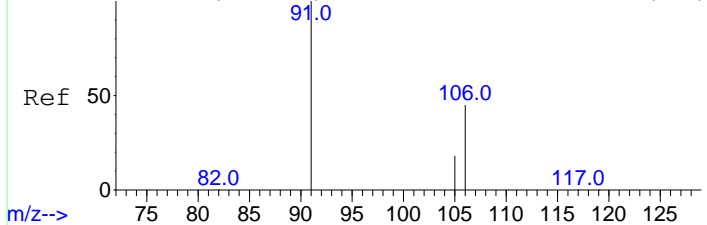
Abundance Scan 543 (6.520 min): 64GCMS00199.D\DATASIM.MS



Abundance Scan 543 (6.520 min): 64GCMS00199.D\DATASIM.MS (-522)



Abundance Scan 573 (6.792 min): 64GCMS00198.D\DATASIM.MS (-569)

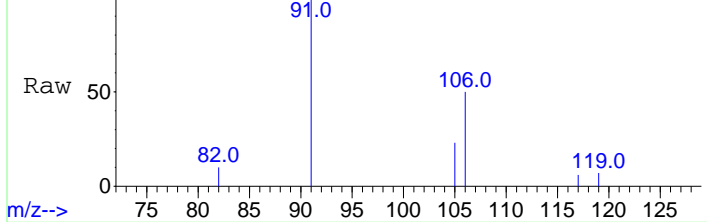


#17

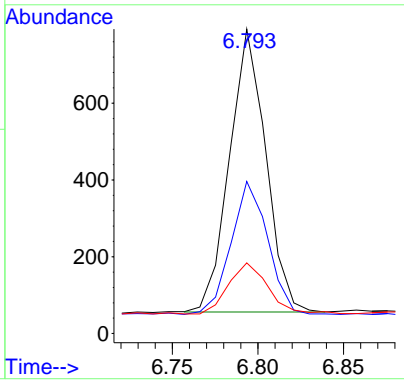
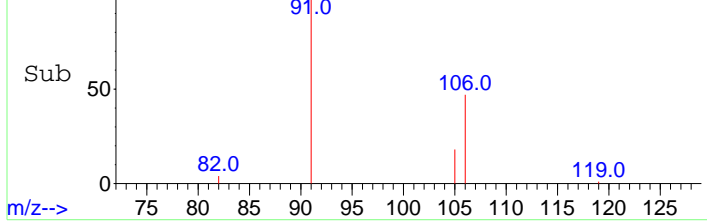
o-Xylene
 Concen: 2.54 ppbv
 RT: 6.793 min Scan# 573
 Delta R.T. 0.002 min
 Lab File: 64GCMS00199.D
 Acq: 4 May 2016 6:02 am

Tgt Ion	Resp	Lower	Upper
91	1087		
106	47.5	35.4	53.2
105	19.7	14.0	21.0

Abundance Scan 573 (6.793 min): 64GCMS00199.D\DATASIM.MS



Abundance Scan 573 (6.793 min): 64GCMS00199.D\DATASIM.MS (-551)



LOW LEVEL CALIBRATION VERIFICATION

Data File 64GCMS00200
 Standard Number STD20160504-03
 Standard Name 0.5 ppbv STD LLCCV
 Loop Size 5 mL

Sample Multiplier: Units Date Analyzed	1 ppbv 5/4/2016	Primary Source Actual Values ppbv	Percent Difference %D	
Vinyl Chloride		0.51	-100	
1,1-Dichloroethene	0.40	0.51	-21	
Methyl Tert Butyl Ether	0.32	0.50	-36	
trans-1,2-Dichloroethene	0.40	0.52	-23	
1,1-Dichloroethane	0.40	0.51	-22	
cis-1,2-Dichloroethene	0.35	0.52	-32	
1,1,1-Trichloroethane	0.37	0.50	-26	
Benzene	0.56	0.51	9	
Trichloroethene	0.45	0.50	-10	
Toluene	0.35	0.51	-31	
Tetrachloroethene	0.40	0.51	-21	
Ethyl Benzene	0.37	0.54	-31	
m,p-Xylene	0.26	0.51	-49	
o-Xylene	0.30	0.51	-41	

%D = ± 50%

Primary Standard Cylinder # CC-128244

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00200.D
 Acq On : 4 May 2016 6:16 am
 Operator : dlm
 Sample : STD20160504-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

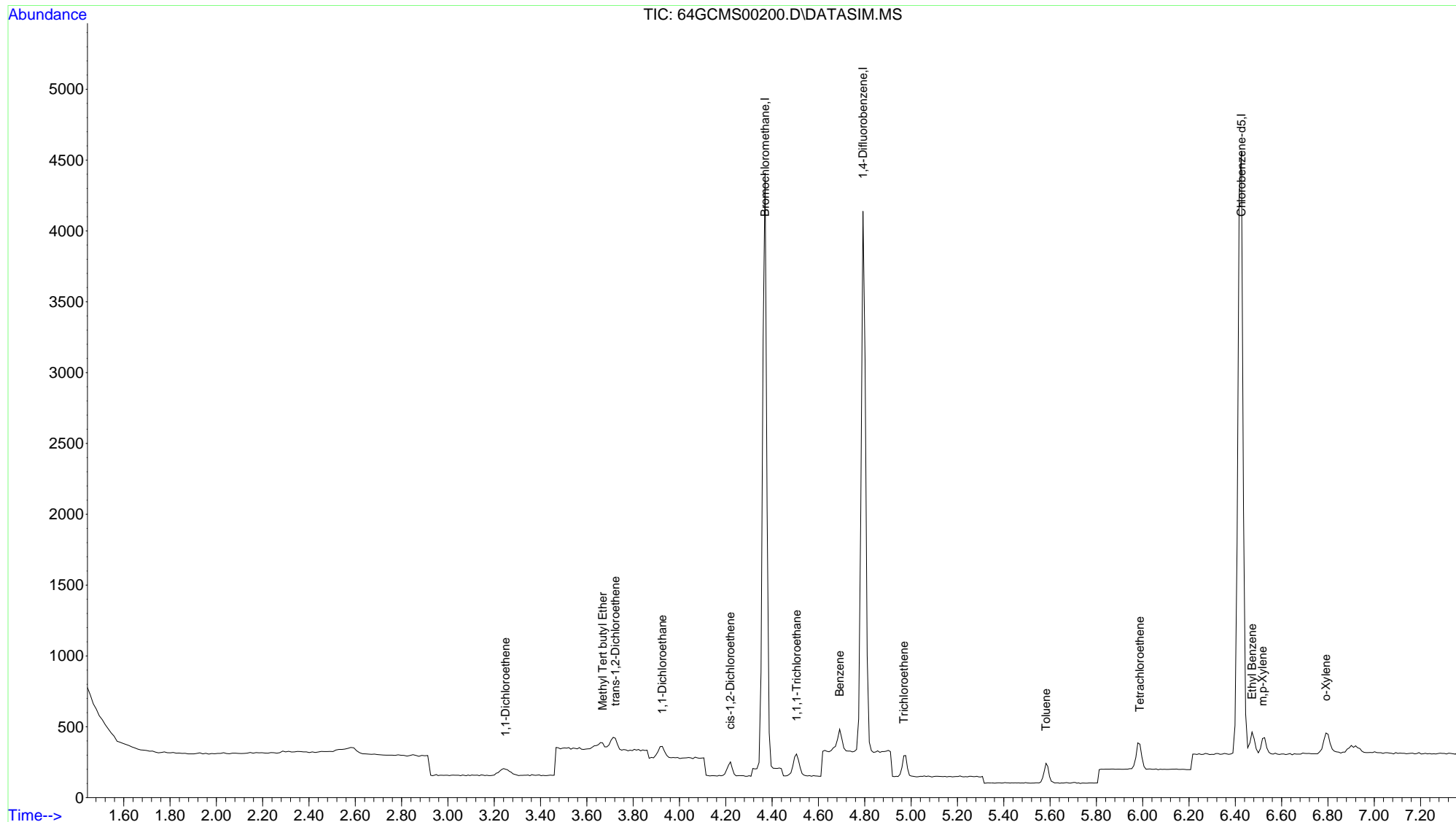
Quant Time: May 04 06:27:23 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

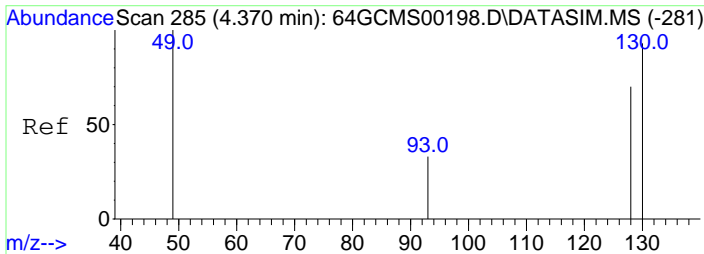
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Bromochloromethane	4.370	49	1934	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.792	114	3544	10.00	ppbv		0.00
12) Chlorobenzene-d5	6.426	117	3568	10.00	ppbv		0.00
Target Compounds							
							Qvalue
3) 1,1-Dichloroethene	3.249	61	89	0.40	ppbv	#	83
4) Methyl Tert butyl Ether	3.668	73	100	0.32	ppbv	#	52
5) trans-1,2-Dichloroethene	3.723	61	78	0.40	ppbv	#	73
6) 1,1-Dichloroethane	3.926	63	105	0.40	ppbv	#	1
7) cis-1,2-Dichloroethene	4.220	61	66	0.35	ppbv		85
8) 1,1,1-Trichloroethane	4.505	97	142m	0.37	ppbv		
10) Benzene	4.691	78	158m	0.56	ppbv		
11) Trichloroethene	4.968	130	79	0.45	ppbv	#	35
13) Toluene	5.583	91	130	0.35	ppbv		89
14) Tetrachloroethene	5.988	166	102	0.40	ppbv		98
15) Ethyl Benzene	6.472	91	169	0.37	ppbv		92
16) m,p-Xylene	6.518	91	98	0.26	ppbv	#	86
17) o-Xylene	6.792	91	119	0.30	ppbv	#	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00200.D
 Acq On : 4 May 2016 6:16 am
 Operator : dlm
 Sample : STD20160504-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:27:23 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

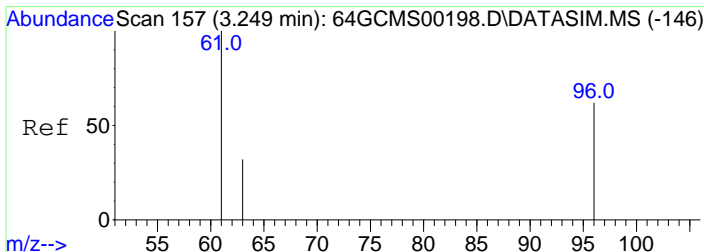
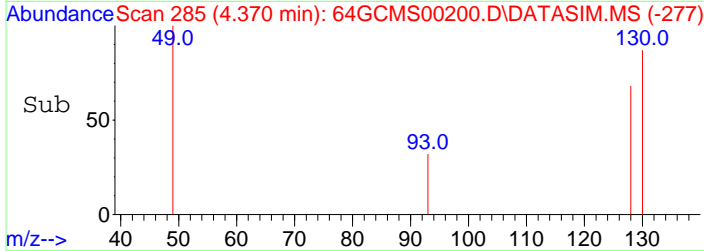
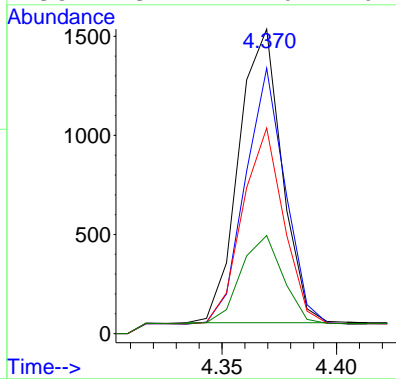
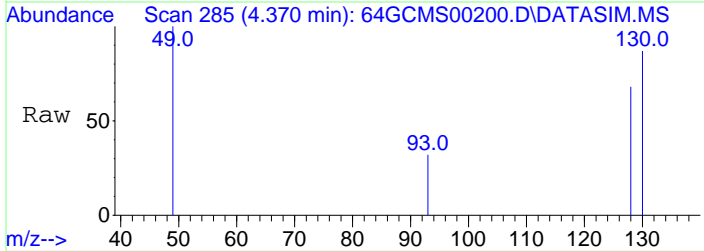




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00200.D
 Acq: 4 May 2016 6:16 am

Tgt Ion: 49 Resp: 1934

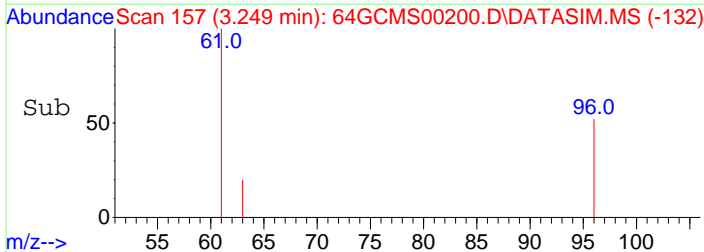
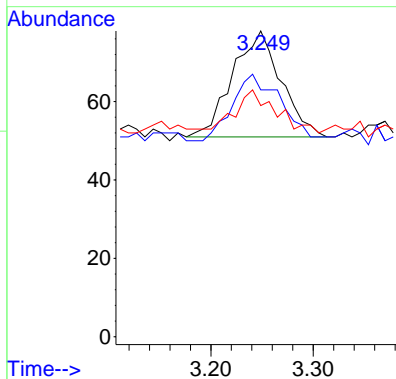
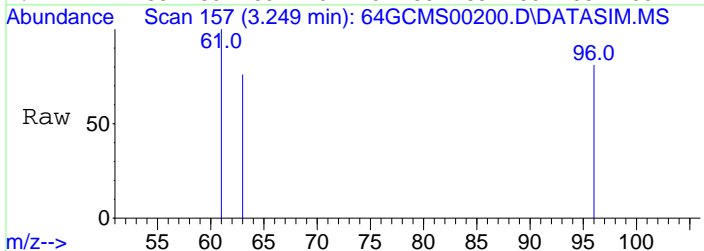
Ion	Ratio	Lower	Upper
49	100		
130	81.0	46.3	69.5#
128	64.1	35.7	53.5#
93	29.4	17.6	26.4#



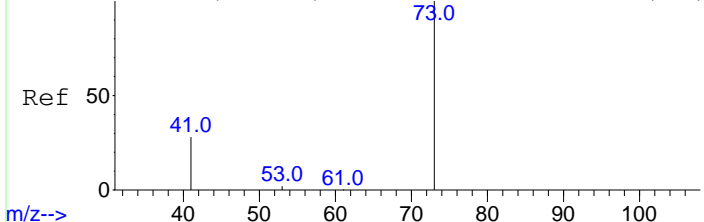
#3
 1,1-Dichloroethene
 Concen: 0.40 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. -0.000 min
 Lab File: 64GCMS00200.D
 Acq: 4 May 2016 6:16 am

Tgt Ion: 61 Resp: 89

Ion	Ratio	Lower	Upper
61	100		
96	37.1	40.9	61.3#
63	23.6	24.3	36.5#



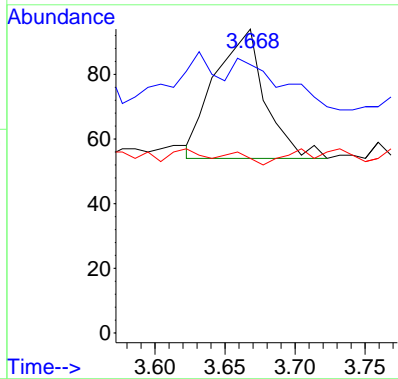
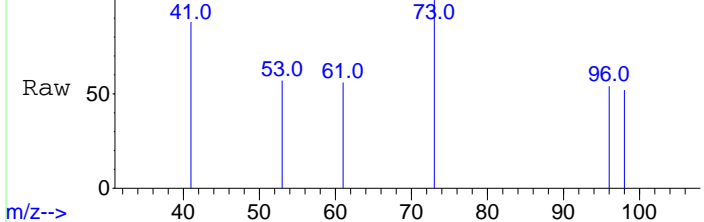
Abundance Scan 205 (3.659 min): 64GCMS00198.D\DATASIM.MS (-195)



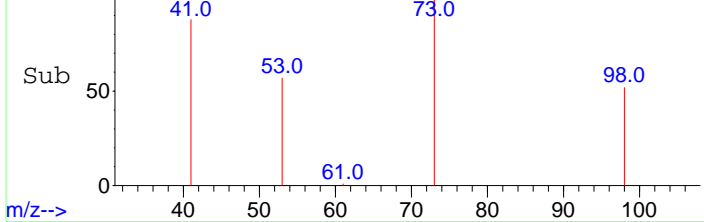
#4
 Methyl Tert butyl Ether
 Concen: 0.32 ppbv
 RT: 3.668 min Scan# 206
 Delta R.T. 0.009 min
 Lab File: 64GCMS00200.D
 Acq: 4 May 2016 6:16 am

Tgt Ion	Resp	Lower	Upper
73	100		
41	0.0	20.6	30.8#
53	0.0	1.2	1.8#

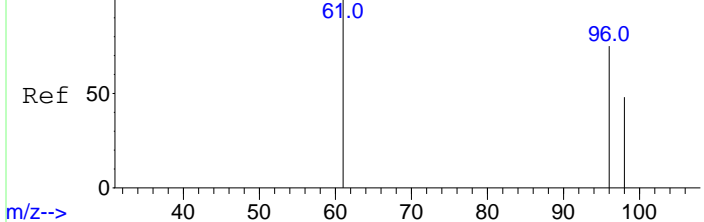
Abundance Scan 206 (3.668 min): 64GCMS00200.D\DATASIM.MS



Abundance Scan 206 (3.668 min): 64GCMS00200.D\DATASIM.MS (-183)



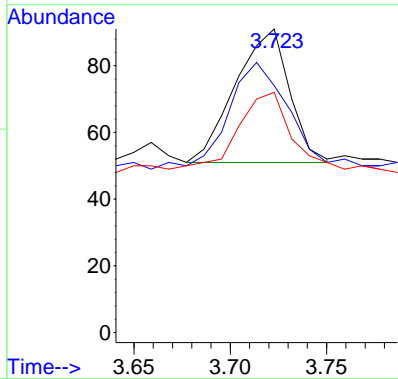
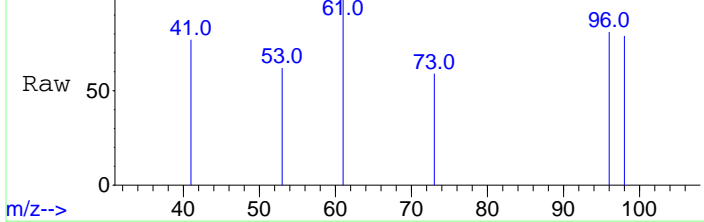
Abundance Scan 211 (3.714 min): 64GCMS00198.D\DATASIM.MS (-206)



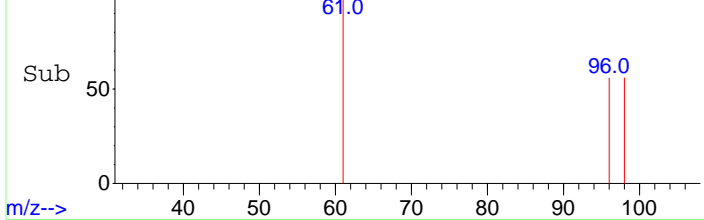
#5
 trans-1,2-Dichloroethene
 Concen: 0.40 ppbv
 RT: 3.723 min Scan# 212
 Delta R.T. 0.009 min
 Lab File: 64GCMS00200.D
 Acq: 4 May 2016 6:16 am

Tgt Ion	Resp	Lower	Upper
61	100		
96	82.1	47.8	71.6#
98	52.6	30.6	46.0#

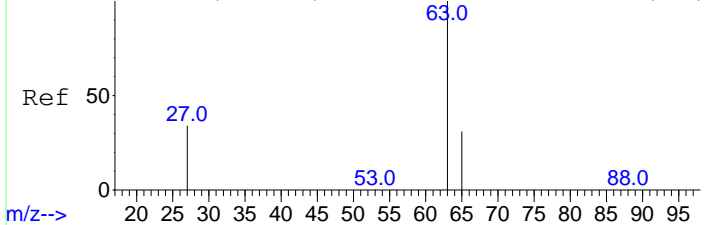
Abundance Scan 212 (3.723 min): 64GCMS00200.D\DATASIM.MS



Abundance Scan 212 (3.723 min): 64GCMS00200.D\DATASIM.MS (-189)



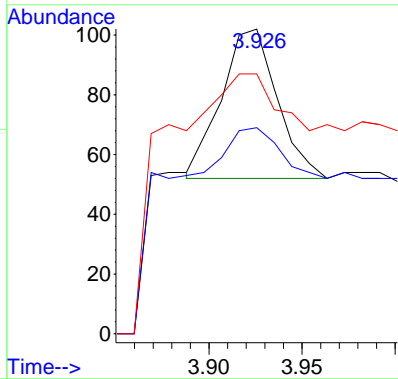
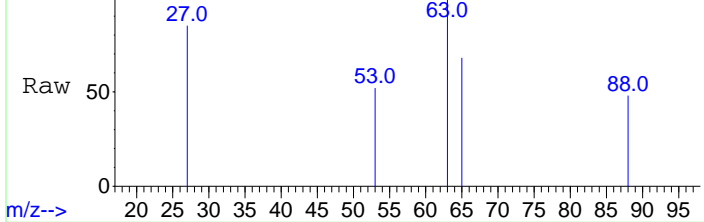
Abundance Scan 233 (3.916 min): 64GCMS00198.D\DATASIM.MS (-228)



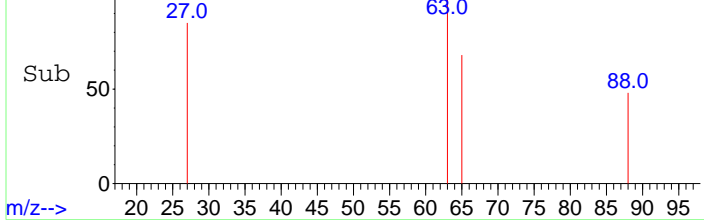
#6
1,1-Dichloroethane
Concen: 0.40 ppbv
RT: 3.926 min Scan# 234
Delta R.T. -0.000 min
Lab File: 64GCMS00200.D
Acq: 4 May 2016 6:16 am

Tgt Ion	Resp	Lower	Upper
63	100		
65	93.3	24.8	37.2#
27	127.6	21.1	31.7#

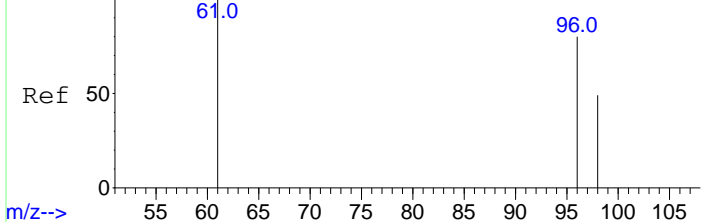
Scan 234 (3.926 min): 64GCMS00200.D\DATASIM.MS



Scan 234 (3.926 min): 64GCMS00200.D\DATASIM.MS (-212)



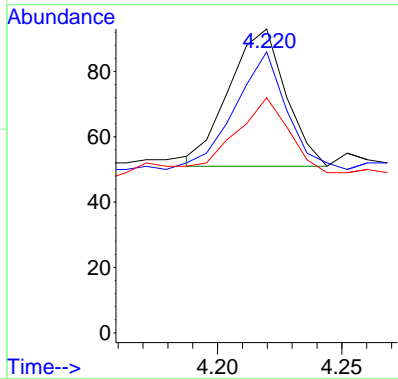
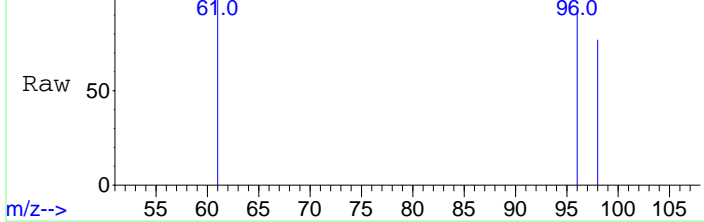
Abundance Scan 266 (4.212 min): 64GCMS00198.D\DATASIM.MS (-261)



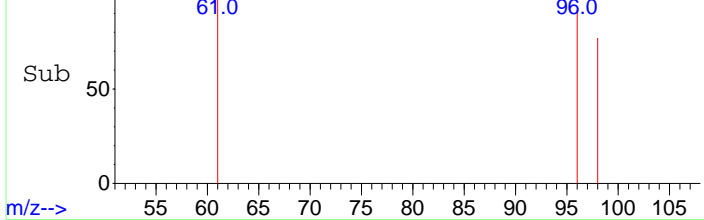
#7
cis-1,2-Dichloroethene
Concen: 0.35 ppbv
RT: 4.220 min Scan# 267
Delta R.T. -0.000 min
Lab File: 64GCMS00200.D
Acq: 4 May 2016 6:16 am

Tgt Ion	Resp	Lower	Upper
61	100		
96	77.3	52.0	78.0
98	50.0	33.4	50.2

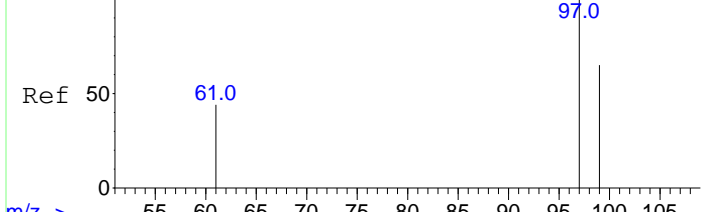
Scan 267 (4.220 min): 64GCMS00200.D\DATASIM.MS



Scan 267 (4.220 min): 64GCMS00200.D\DATASIM.MS (-244)

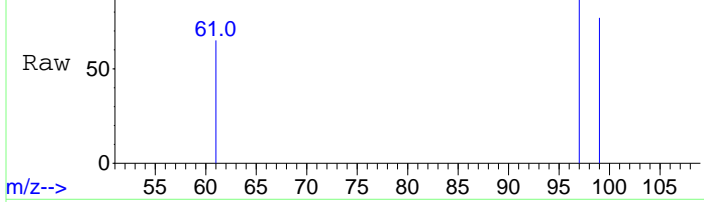


Abundance Scan 301 (4.505 min): 64GCMS00198.D\DATASIM.MS (-293)



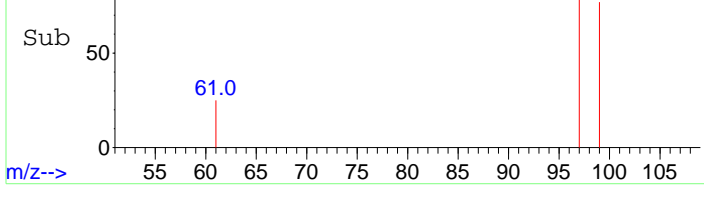
m/z-->

Abundance Scan 301 (4.505 min): 64GCMS00200.D\DATASIM.MS



m/z-->

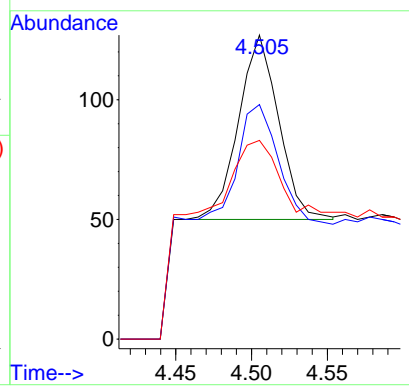
Abundance Scan 301 (4.505 min): 64GCMS00200.D\DATASIM.MS (-278)



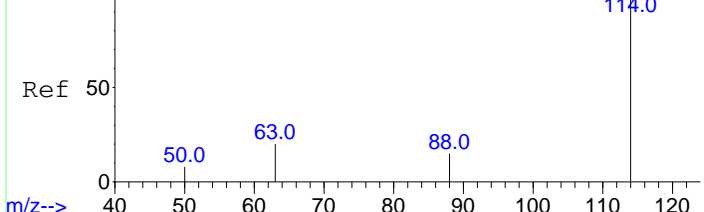
m/z-->

#8
1,1,1-Trichloroethane
Concen: 0.37 ppbv m
RT: 4.505 min Scan# 301
Delta R.T. -0.000 min
Lab File: 64GCMS00200.D
Acq: 4 May 2016 6:16 am

Tgt Ion	Resp	Lower	Upper
97	100		
99	122.5	51.5	77.3#
61	79.6	38.6	58.0#

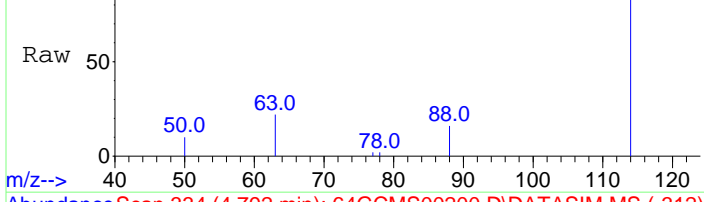


Abundance Scan 334 (4.792 min): 64GCMS00198.D\DATASIM.MS (-331)



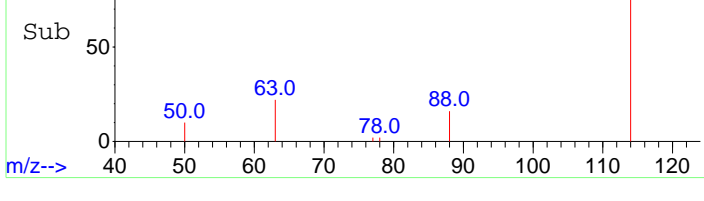
m/z-->

Abundance Scan 334 (4.792 min): 64GCMS00200.D\DATASIM.MS



m/z-->

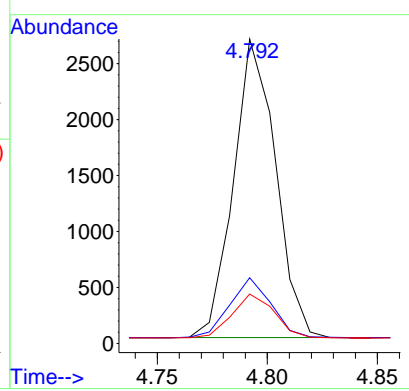
Abundance Scan 334 (4.792 min): 64GCMS00200.D\DATASIM.MS (-312)



m/z-->

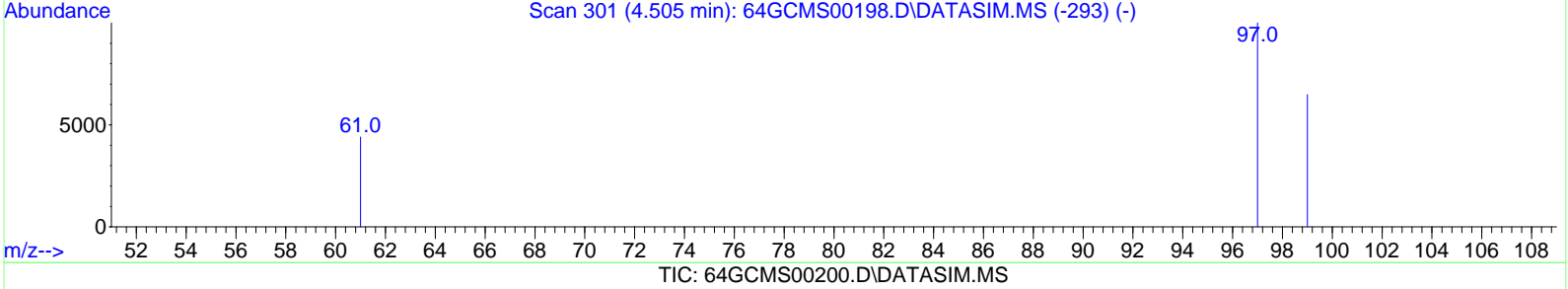
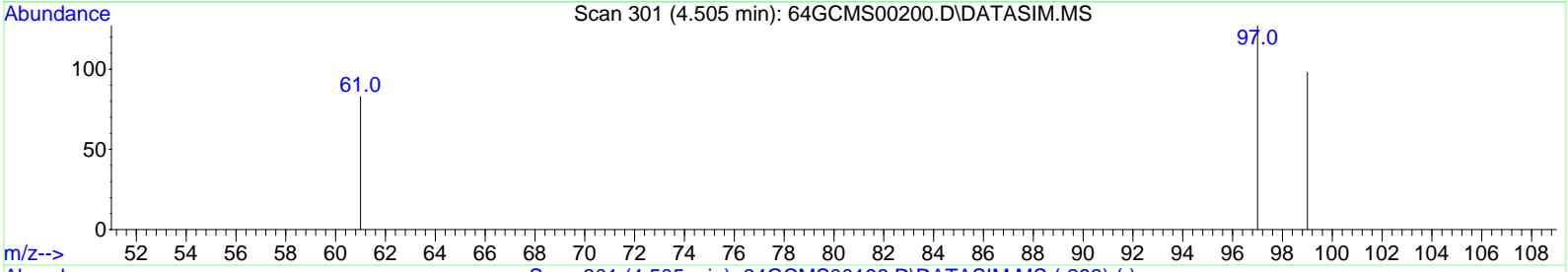
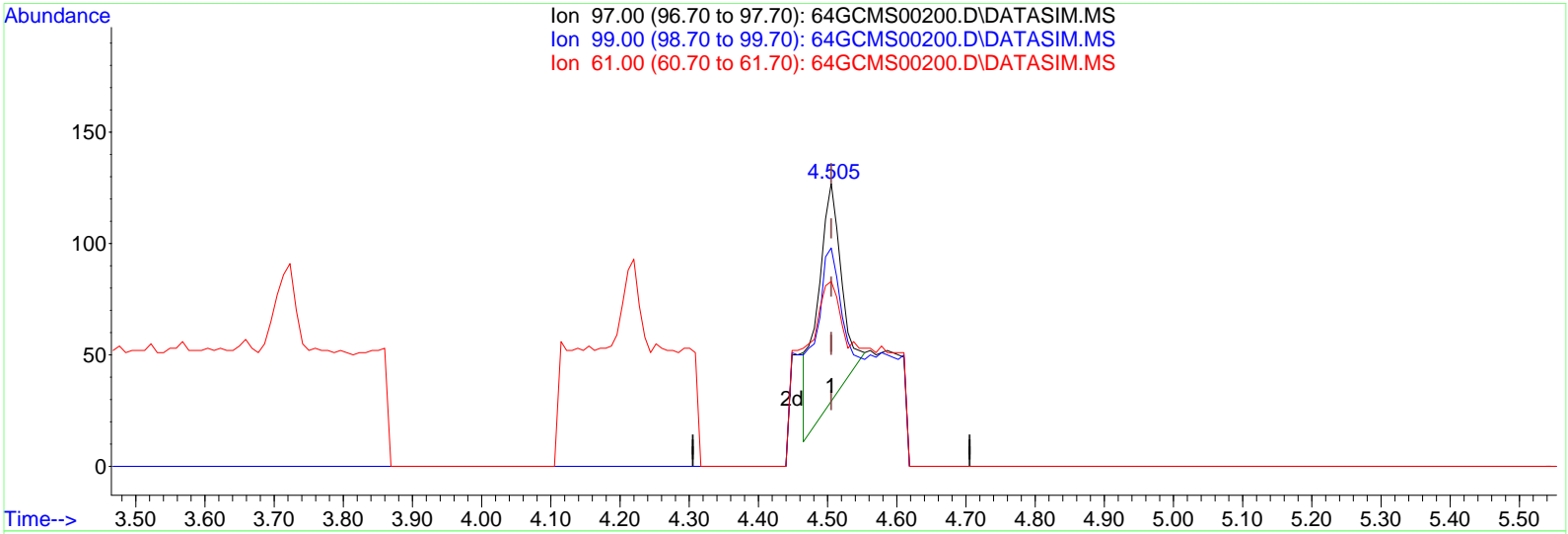
#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. -0.000 min
Lab File: 64GCMS00200.D
Acq: 4 May 2016 6:16 am

Tgt Ion	Resp	Lower	Upper
114	100		
63	19.9	19.2	28.8
88	14.6	13.7	20.5



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00200.D
 Acq On : 4 May 2016 6:16 am
 Operator : dlm
 Sample : STD20160504-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:24:43 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



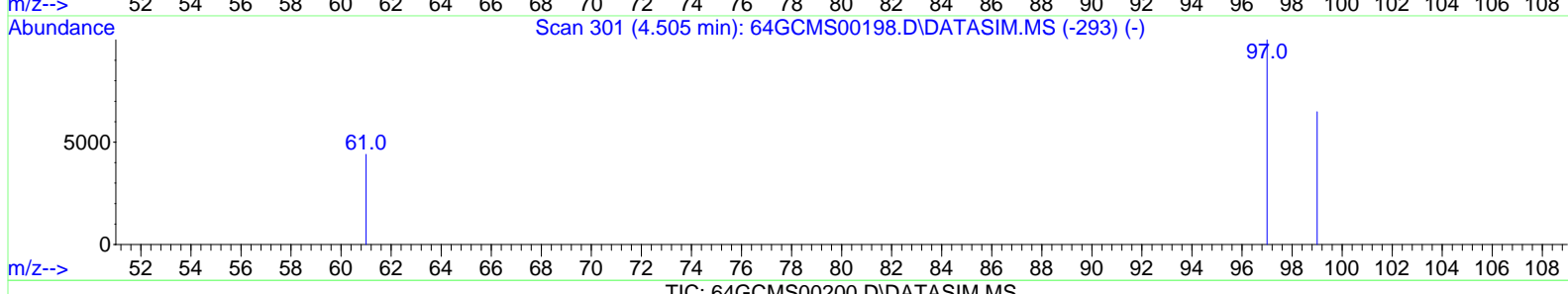
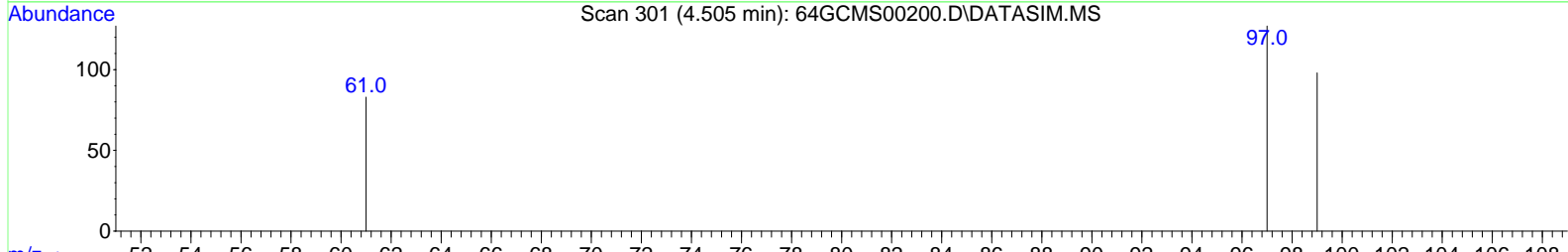
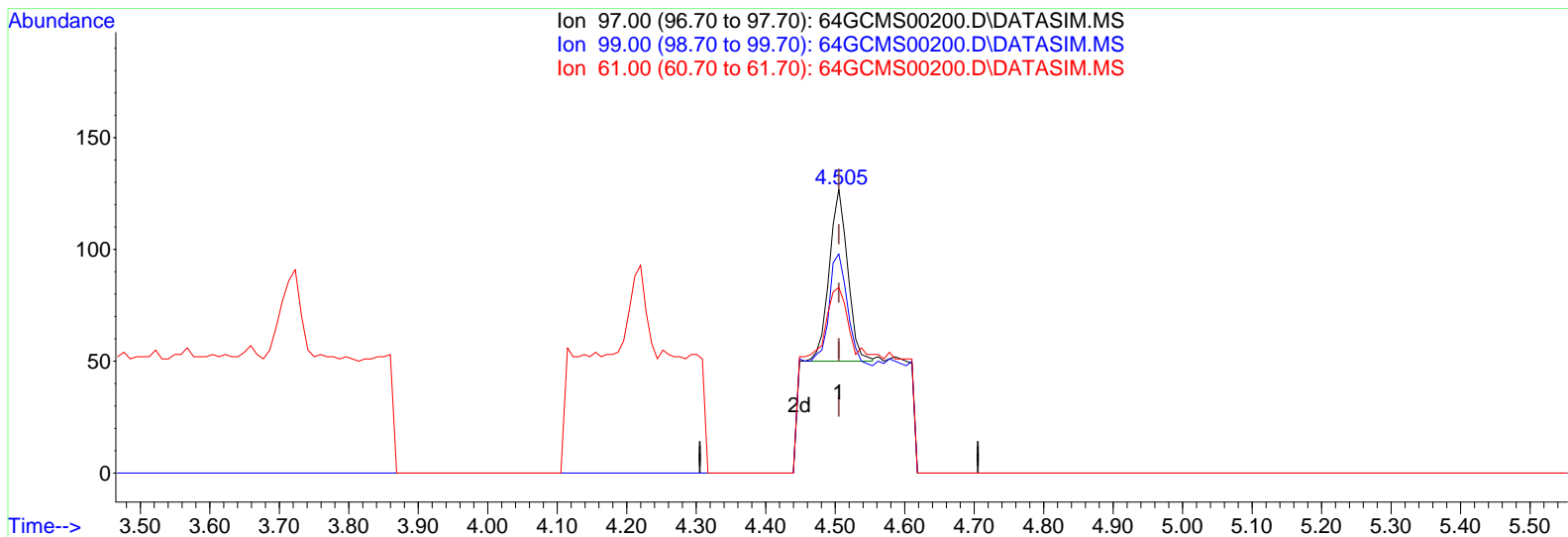
(8) 1,1,1-Trichloroethane

4.505min (-0.000) 0.64 ppbv

response	243
Ion	Exp% Act%
97.00	100.00 100.00
99.00	64.40 71.60
61.00	48.30 46.50
0.00	0.00 0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00200.D
 Acq On : 4 May 2016 6:16 am
 Operator : dlm
 Sample : STD20160504-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:24:43 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



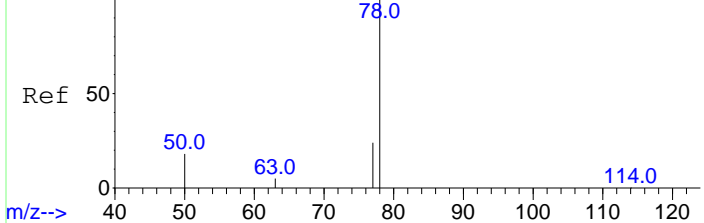
(8) 1,1,1-Trichloroethane

4.505min (-0.000) 0.37 ppbv m

response 142

Ion	Exp%	Act%
97.00	100.00	100.00
99.00	64.40	122.54#
61.00	48.30	79.58#
0.00	0.00	0.00

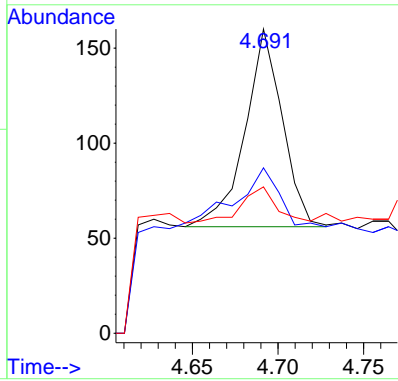
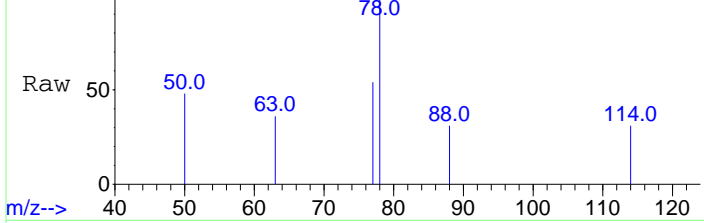
Abundance Scan 323 (4.692 min): 64GCMS00198.D\DATASIM.MS (-319)



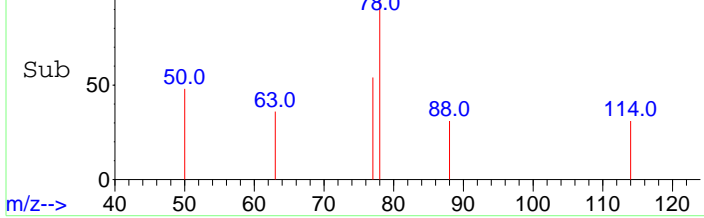
#10
Benzene
Concen: 0.56 ppbv m
RT: 4.691 min Scan# 323
Delta R.T. -0.000 min
Lab File: 64GCMS00200.D
Acq: 4 May 2016 6:16 am

Tgt Ion	Resp	Lower	Upper
78	100		
77	91.1	18.2	27.4#
50	34.8	16.6	24.8#

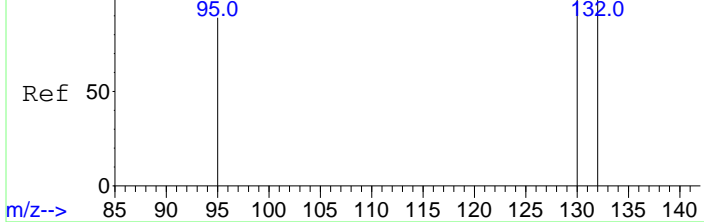
Abundance Scan 323 (4.691 min): 64GCMS00200.D\DATASIM.MS



Abundance Scan 323 (4.691 min): 64GCMS00200.D\DATASIM.MS (-299)



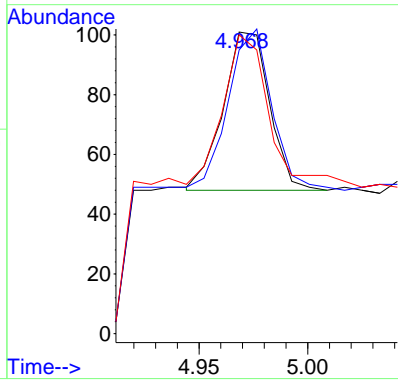
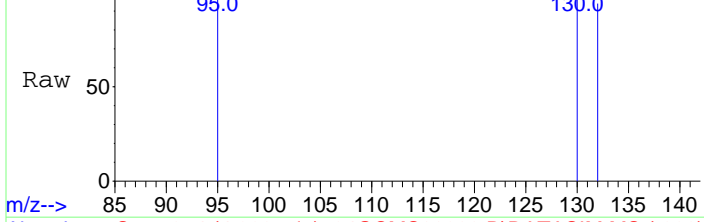
Abundance Scan 355 (4.977 min): 64GCMS00198.D\DATASIM.MS (-350)



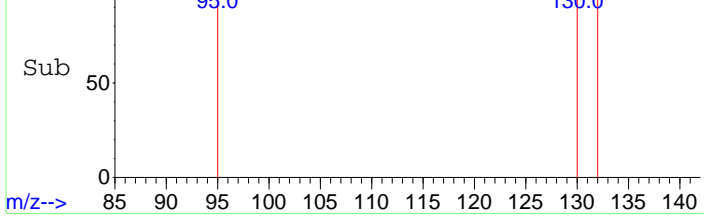
#11
Trichloroethene
Concen: 0.45 ppbv
RT: 4.968 min Scan# 354
Delta R.T. -0.008 min
Lab File: 64GCMS00200.D
Acq: 4 May 2016 6:16 am

Tgt Ion	Resp	Lower	Upper
130	100		
132	187.3	76.9	115.3#
95	140.5	81.5	122.3#

Abundance Scan 354 (4.968 min): 64GCMS00200.D\DATASIM.MS

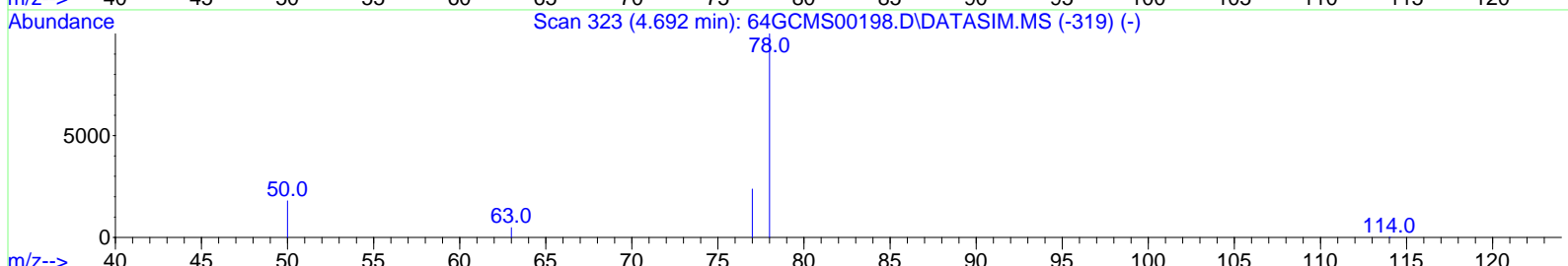
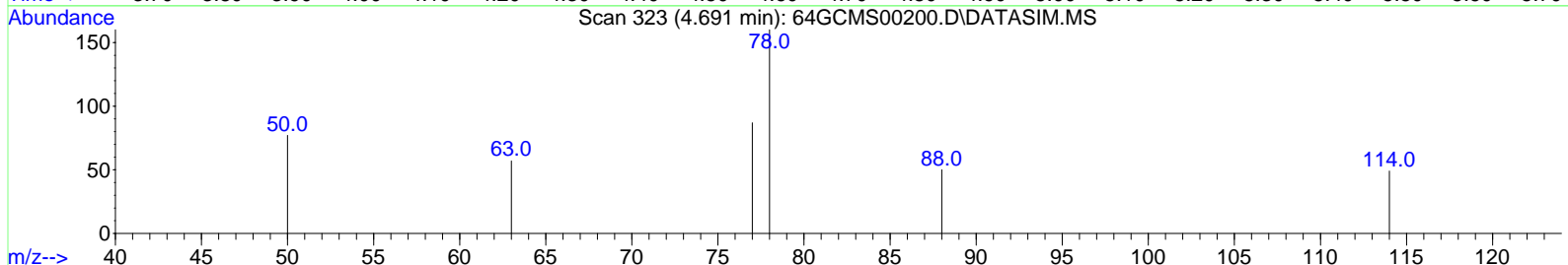
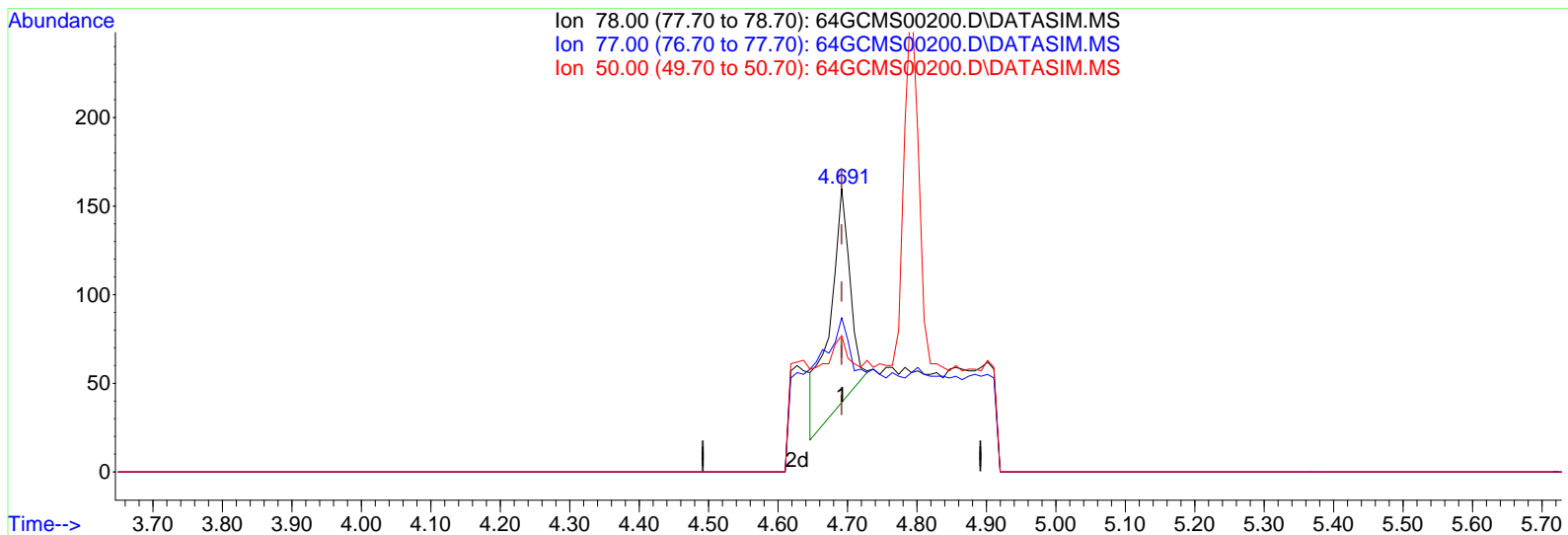


Abundance Scan 354 (4.968 min): 64GCMS00200.D\DATASIM.MS (-332)



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00200.D
 Acq On : 4 May 2016 6:16 am
 Operator : dlm
 Sample : STD20160504-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:24:43 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



TIC: 64GCMS00200.D\DATASIM.MS

(10) Benzene

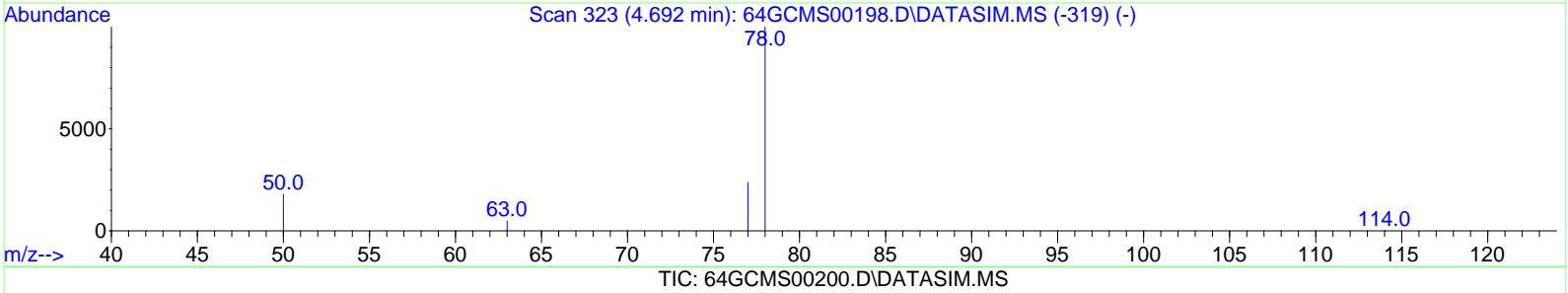
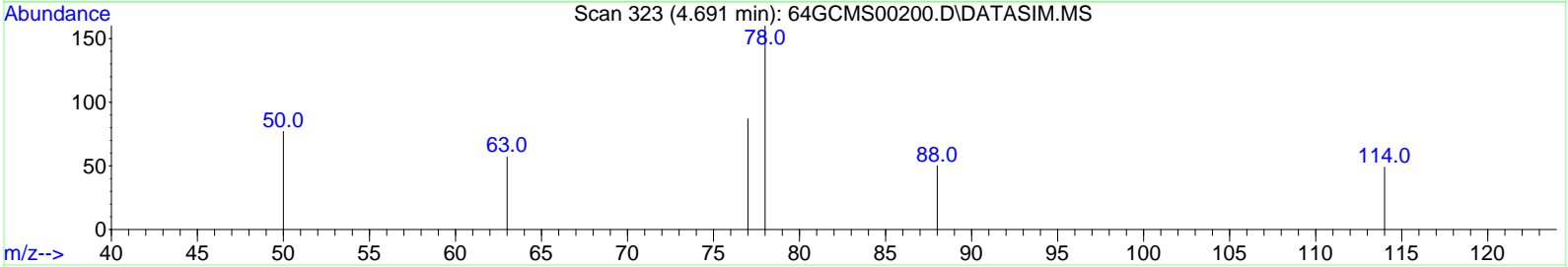
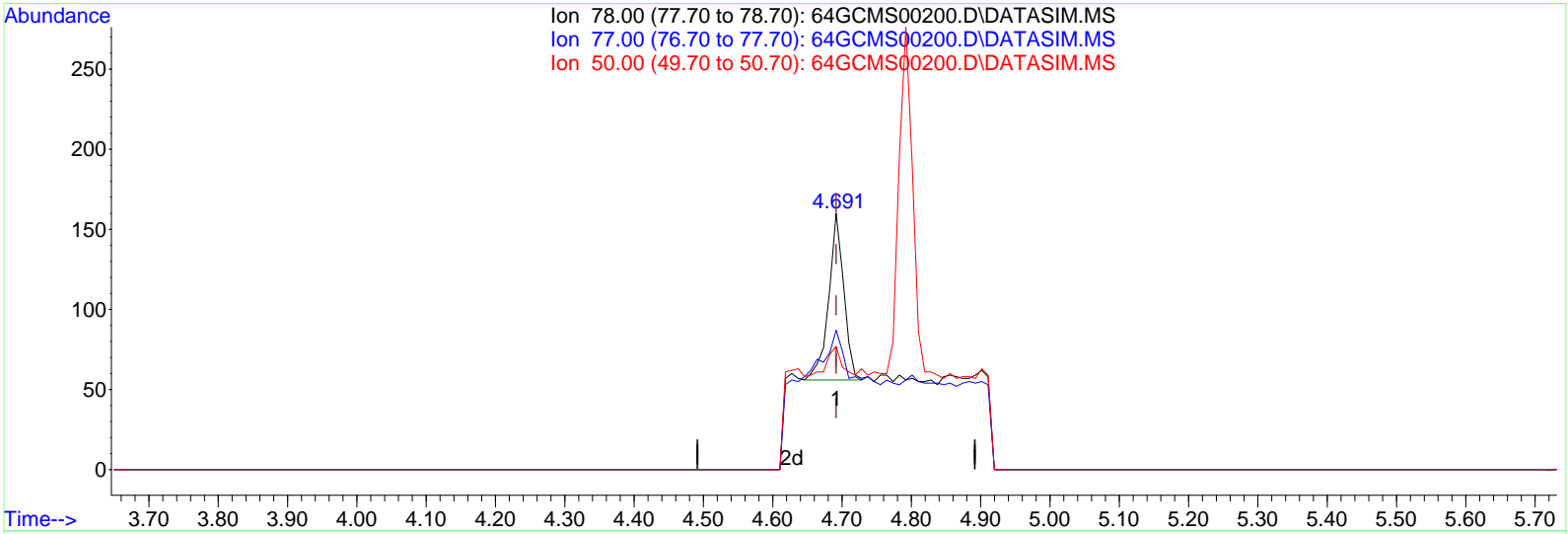
4.691min (-0.000) 0.89 ppbv

response 252

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	57.14#
50.00	20.70	21.83
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00200.D
 Acq On : 4 May 2016 6:16 am
 Operator : dlm
 Sample : STD20160504-03 \ 0.5 ppbv LLCCV
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:24:43 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



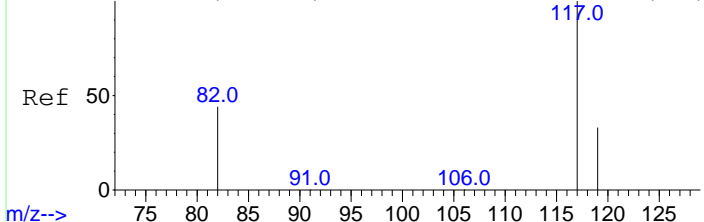
(10) Benzene

4.691min (-0.000) 0.56 ppbv m

response 158

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	91.14#
50.00	20.70	34.81#
0.00	0.00	0.00

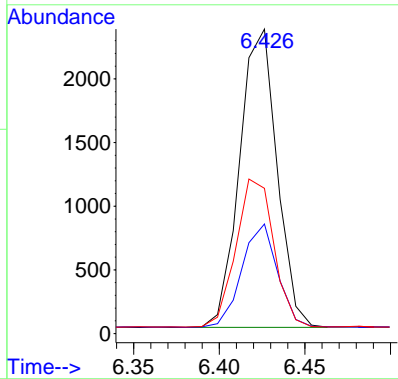
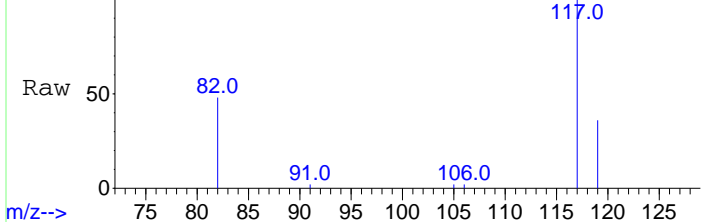
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



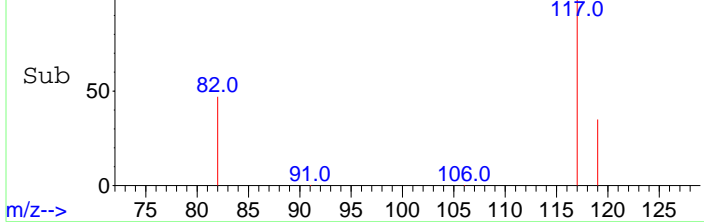
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00200.D
 Acq: 4 May 2016 6:16 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	33.1	25.8	38.6
82	50.3	45.6	68.4

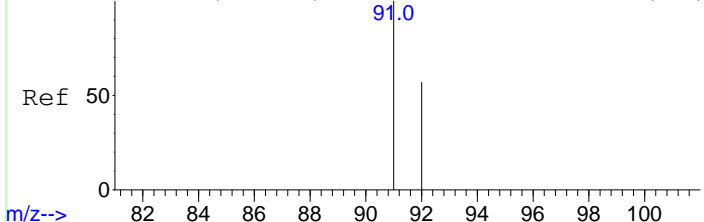
Abundance Scan 533 (6.426 min): 64GCMS00200.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00200.D\DATASIM.MS (-511)



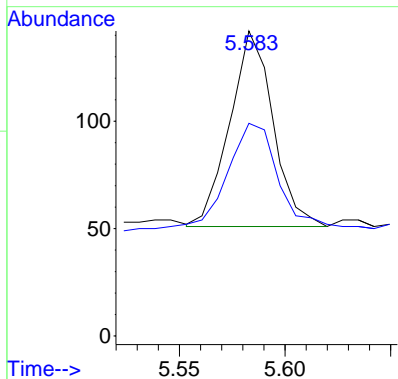
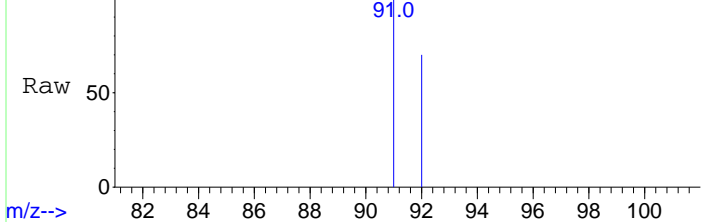
Abundance Scan 433 (5.583 min): 64GCMS00198.D\DATASIM.MS (-428)



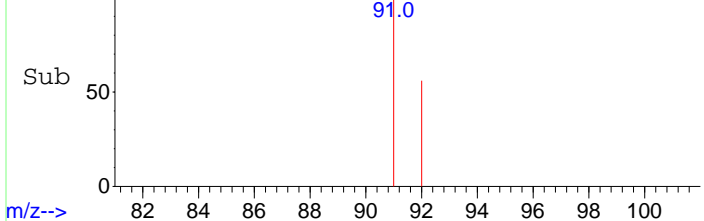
#13
 Toluene
 Concen: 0.35 ppbv
 RT: 5.583 min Scan# 433
 Delta R.T. -0.000 min
 Lab File: 64GCMS00200.D
 Acq: 4 May 2016 6:16 am

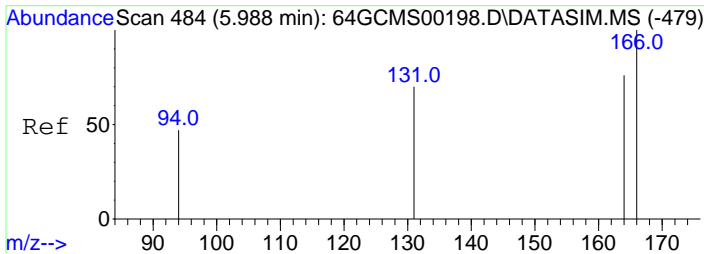
Tgt Ion	Resp	Lower	Upper
91	100		
92	68.5	48.0	72.0

Abundance Scan 433 (5.583 min): 64GCMS00200.D\DATASIM.MS



Abundance Scan 433 (5.583 min): 64GCMS00200.D\DATASIM.MS (-406)

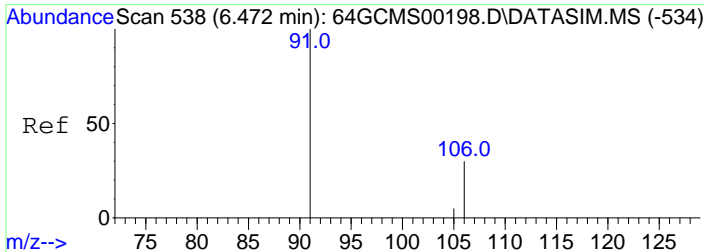
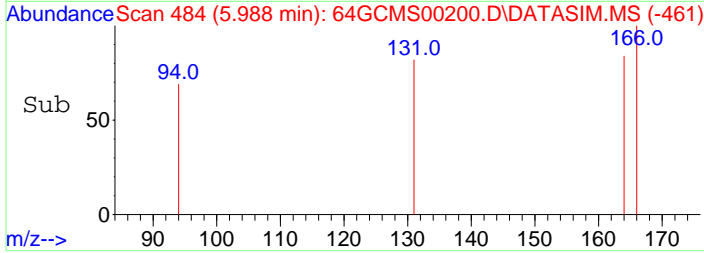
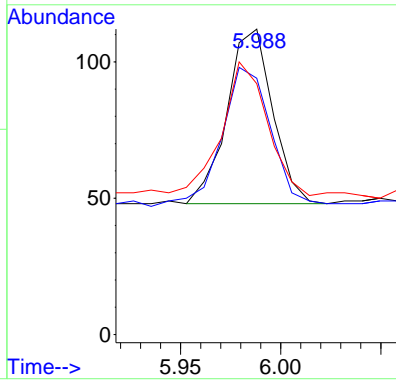
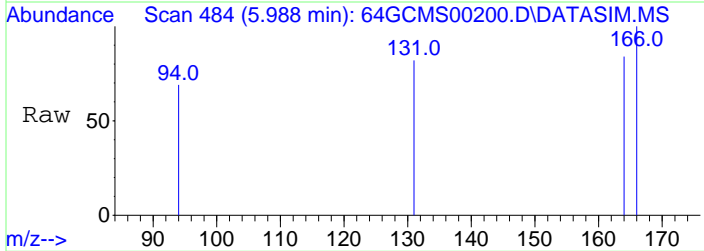




#14
Tetrachloroethene
Concen: 0.40 ppbv
RT: 5.988 min Scan# 484
Delta R.T. -0.000 min
Lab File: 64GCMS00200.D
Acq: 4 May 2016 6:16 am

Tgt Ion: 166 Resp: 102

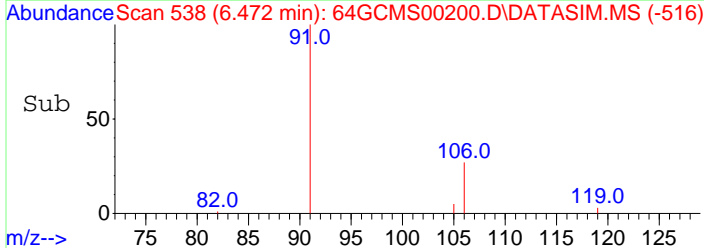
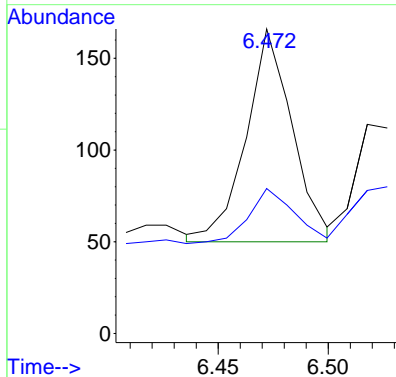
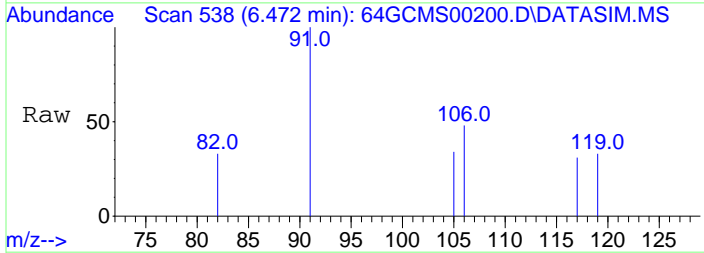
Ion	Ratio	Lower	Upper
166	100		
164	79.4	63.4	95.0
131	75.5	63.4	95.0

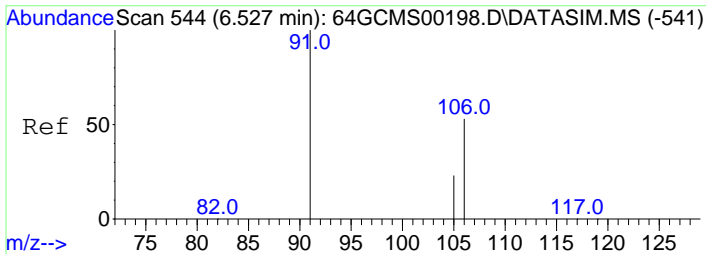


#15
Ethyl Benzene
Concen: 0.37 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00200.D
Acq: 4 May 2016 6:16 am

Tgt Ion: 91 Resp: 169

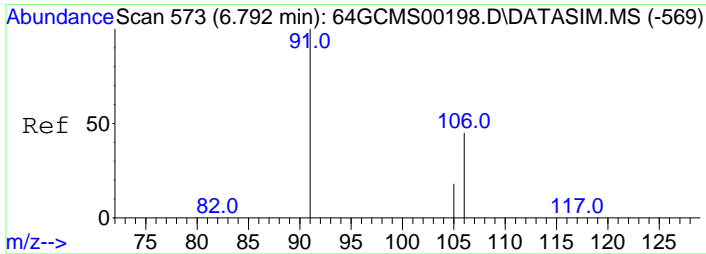
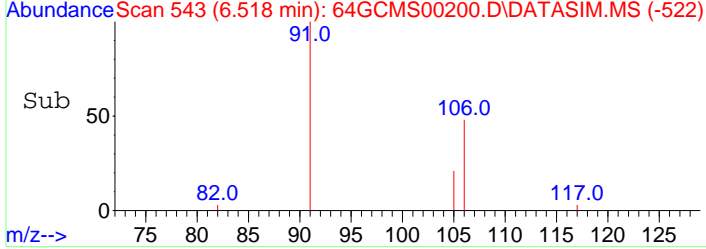
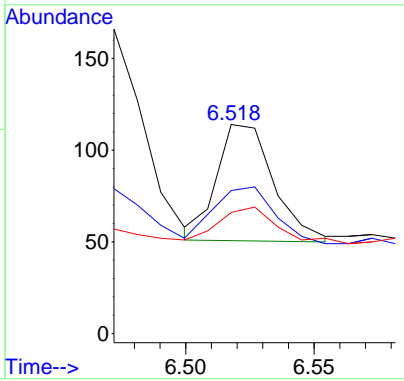
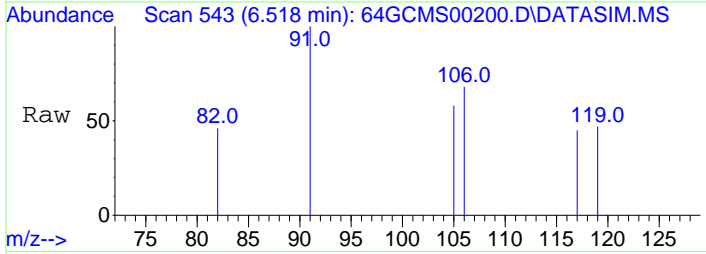
Ion	Ratio	Lower	Upper
91	100		
106	26.0	24.2	36.2





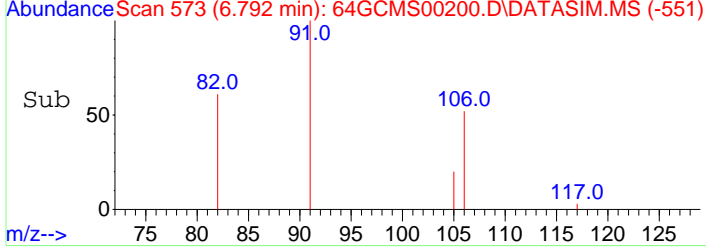
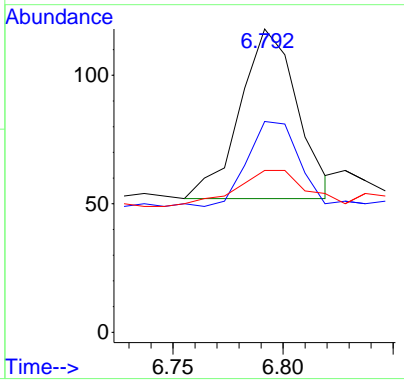
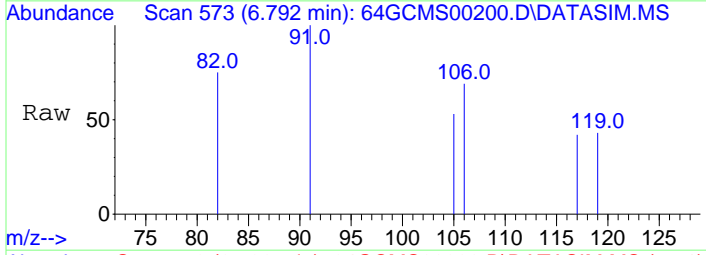
#16
 m,p-Xylene
 Concen: 0.26 ppbv
 RT: 6.518 min Scan# 543
 Delta R.T. -0.009 min
 Lab File: 64GCMS00200.D
 Acq: 4 May 2016 6:16 am

Tgt Ion	Resp	Lower	Upper
91	100		
106	53.1	37.7	56.5
105	32.7	17.0	25.4#



#17
 o-Xylene
 Concen: 0.30 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00200.D
 Acq: 4 May 2016 6:16 am

Tgt Ion	Resp	Lower	Upper
91	100		
106	46.2	35.4	53.2
105	26.1	14.0	21.0#



LABORATORY CONTROL SAMPLE

Data File 64GCMS00202
 Standard Number 20160504-LCS
 Standard Name 500 ppbv STD
 Loop Size 5 mL

Sample Multiplier: Units Date Analyzed	1 ppbv 5/4/2016	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %
Vinyl Chloride	412.65	500.00	83	70-130
1,1-Dichloroethene	396.96	500.00	79	70-130
Methyl Tert Butyl Ether	395.31	500.00	79	70-130
trans-1,2-Dichloroethene	464.75	520.00	89	70-130
1,1-Dichloroethane	430.36	510.00	84	70-130
cis-1,2-Dichloroethene	422.36	515.00	82	70-130
1,1,1-Trichloroethane	406.56	497.50	82	70-130
Benzene	488.47	505.00	97	70-130
Trichloroethene	436.45	500.00	87	70-130
Toluene	466.30	507.50	92	70-130
Tetrachloroethene	410.93	502.50	82	70-130
Ethyl Benzene	515.56	512.50	101	70-130
m,p-Xylene	512.90	505.00	102	70-130
o-Xylene	465.41	502.50	93	70-130

Secondary Standard Cylinder # CC-143609

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00202.D
 Acq On : 4 May 2016 6:46 am
 Operator : dlm
 Sample : 20160504-LCS \ 500 ppbv LCS
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

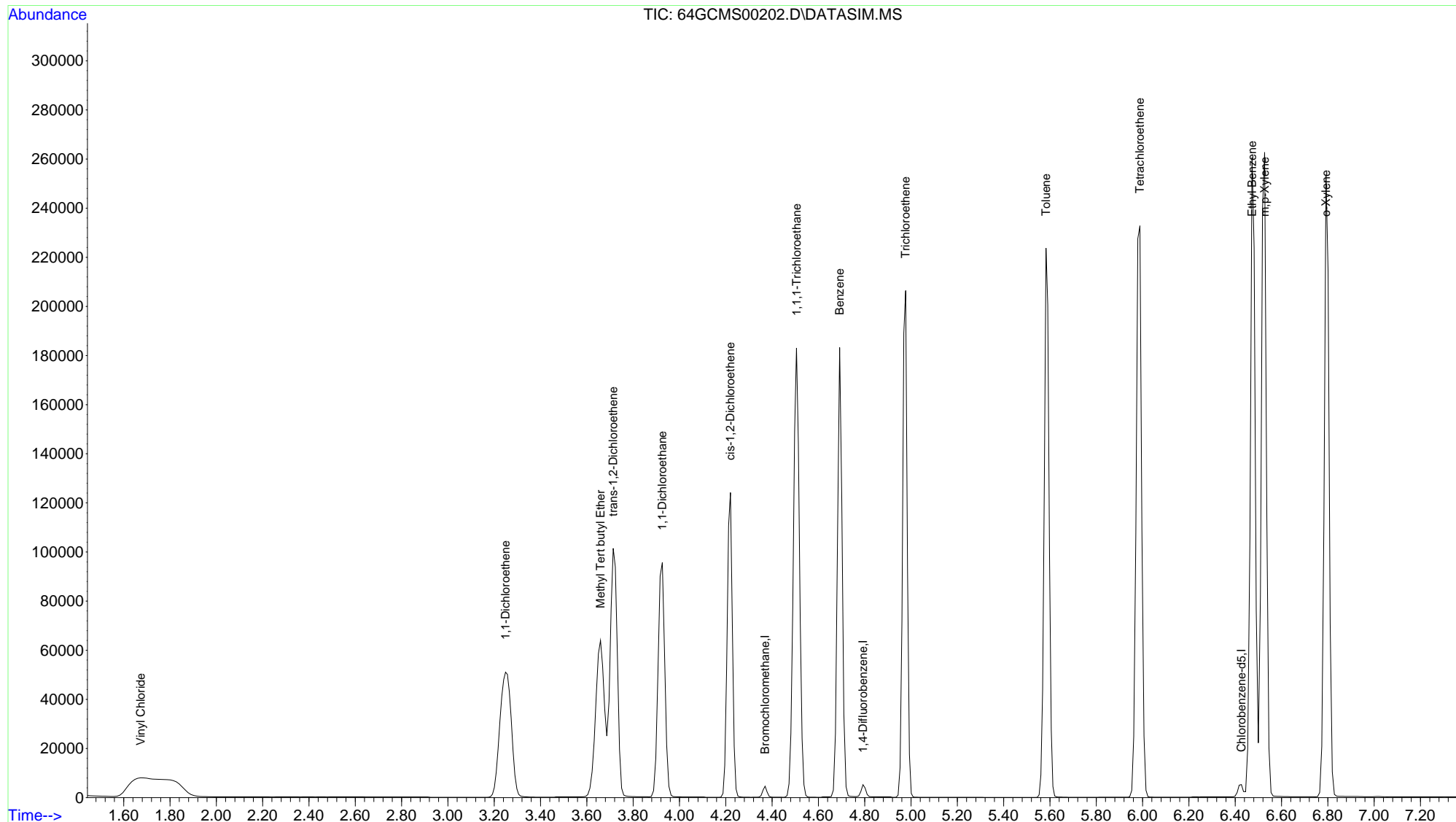
Quant Time: May 04 06:55:41 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

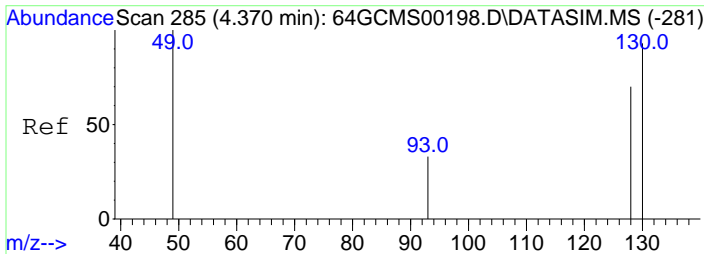
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2020	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	4574	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	4298	10.00	ppbv	0.00
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.673	62	54278m	412.65	ppbv	
3) 1,1-Dichloroethene	3.249	61	91751	396.96	ppbv	# 89
4) Methyl Tert butyl Ether	3.659	73	131068	395.31	ppbv	# 90
5) trans-1,2-Dichloroethene	3.714	61	95581	464.75	ppbv	# 82
6) 1,1-Dichloroethane	3.926	63	117179	430.36	ppbv	# 92
7) cis-1,2-Dichloroethene	4.220	61	82899	422.36	ppbv	# 82
8) 1,1,1-Trichloroethane	4.505	97	160975	406.56	ppbv	98
10) Benzene	4.692	78	178201	488.47	ppbv	96
11) Trichloroethene	4.977	130	98770	436.45	ppbv	95
13) Toluene	5.583	91	208025	466.30	ppbv	97
14) Tetrachloroethene	5.988	166	126502	410.93	ppbv	97
15) Ethyl Benzene	6.472	91	283805	515.56	ppbv	97
16) m,p-Xylene	6.527	91	229018	512.90	ppbv	97
17) o-Xylene	6.792	91	225427	465.41	ppbv	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00202.D
 Acq On : 4 May 2016 6:46 am
 Operator : dlm
 Sample : 20160504-LCS \ 500 ppbv LCS
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:55:41 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

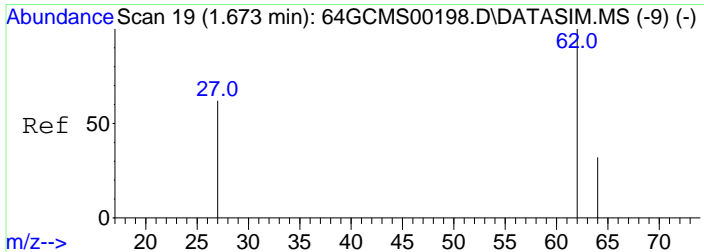
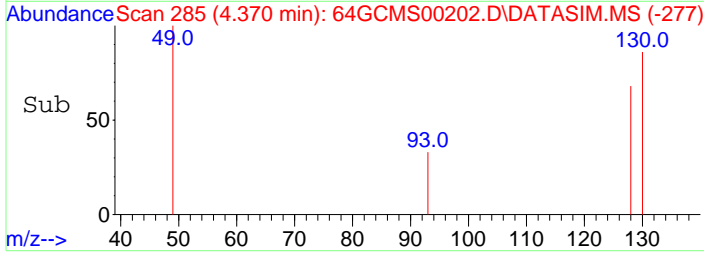
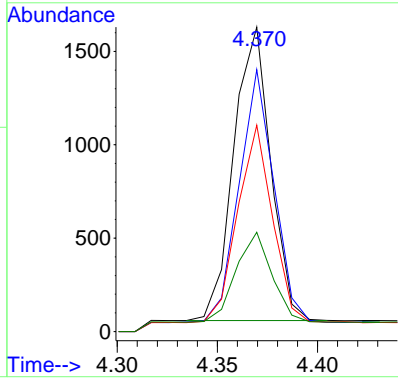
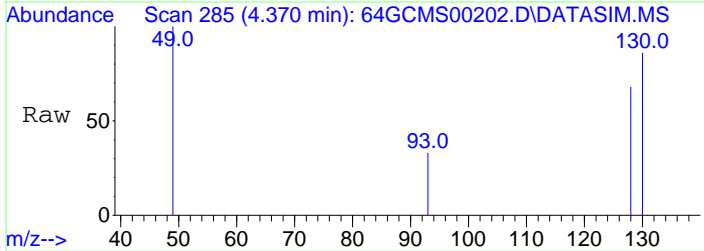




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00202.D
 Acq: 4 May 2016 6:46 am

Tgt Ion: 49 Resp: 2020

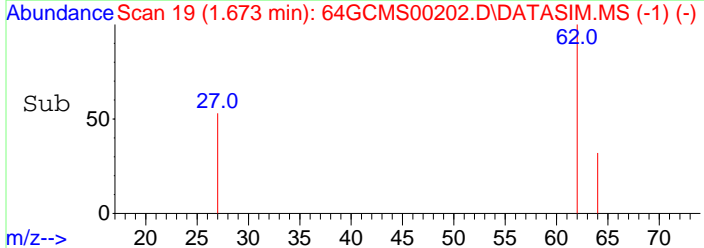
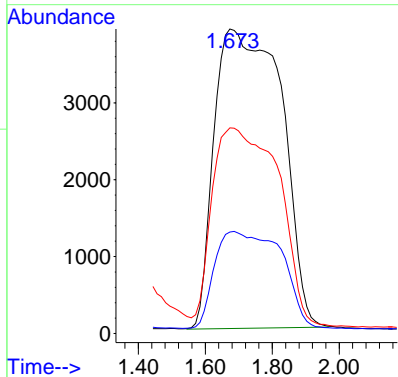
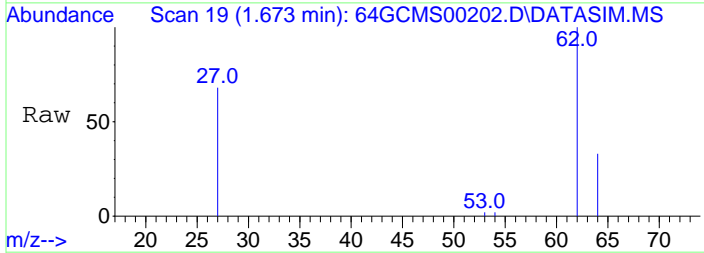
Ion	Ratio	Lower	Upper
49	100		
130	81.1	46.3	69.5#
128	63.6	35.7	53.5#
93	29.9	17.6	26.4#



#2
 Vinyl Chloride
 Concen: 412.65 ppbv m
 RT: 1.673 min Scan# 19
 Delta R.T. -0.013 min
 Lab File: 64GCMS00202.D
 Acq: 4 May 2016 6:46 am

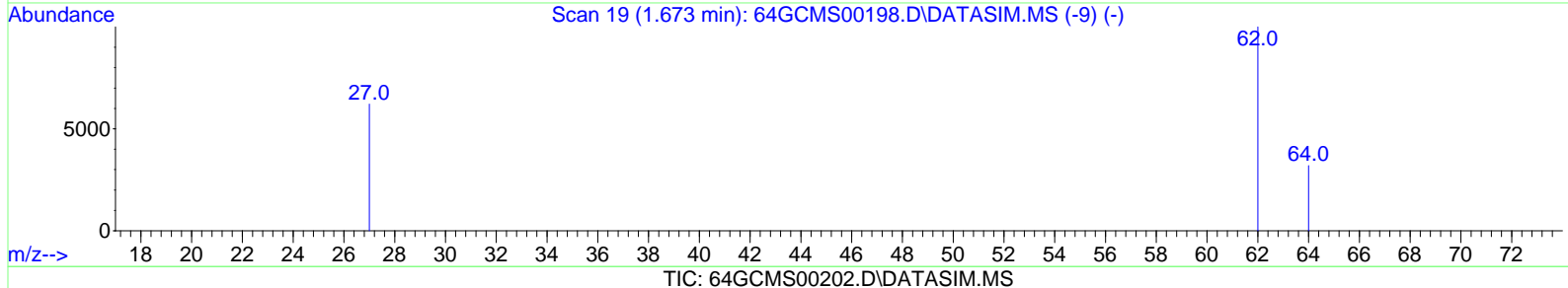
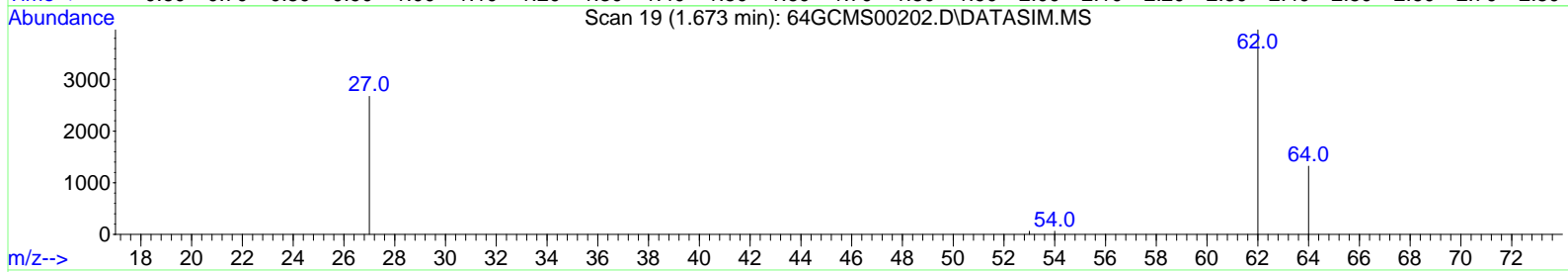
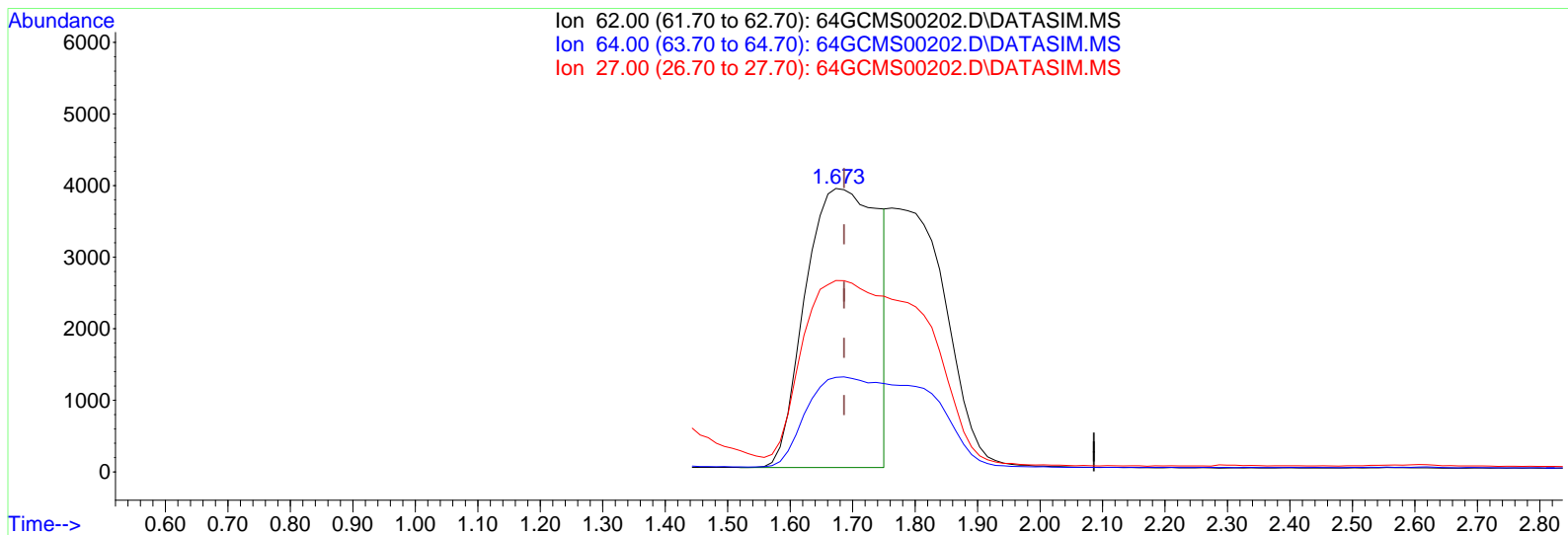
Tgt Ion: 62 Resp: 54278

Ion	Ratio	Lower	Upper
62	100		
64	32.2	23.7	35.5
27	65.6	38.0	57.0#



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00202.D
 Acq On : 4 May 2016 6:46 am
 Operator : dlm
 Sample : 20160504-LCS \ 500 ppbv LCS
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:54:34 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



(2) Vinyl Chloride

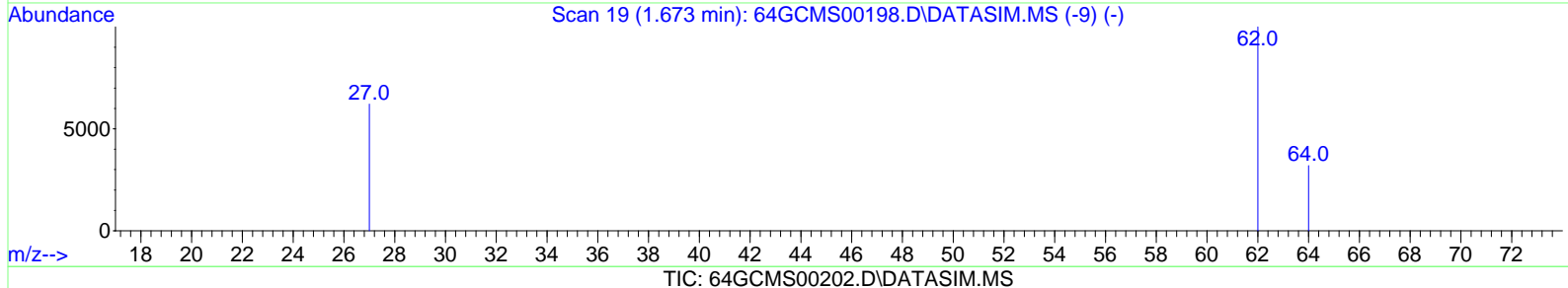
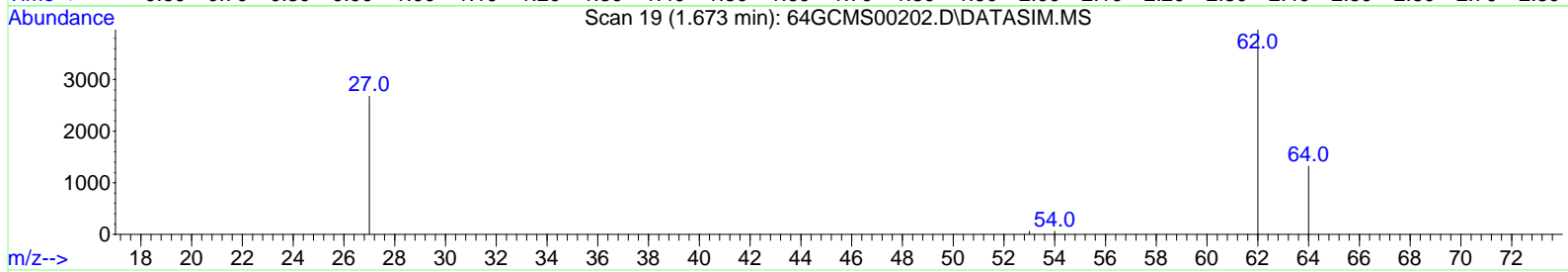
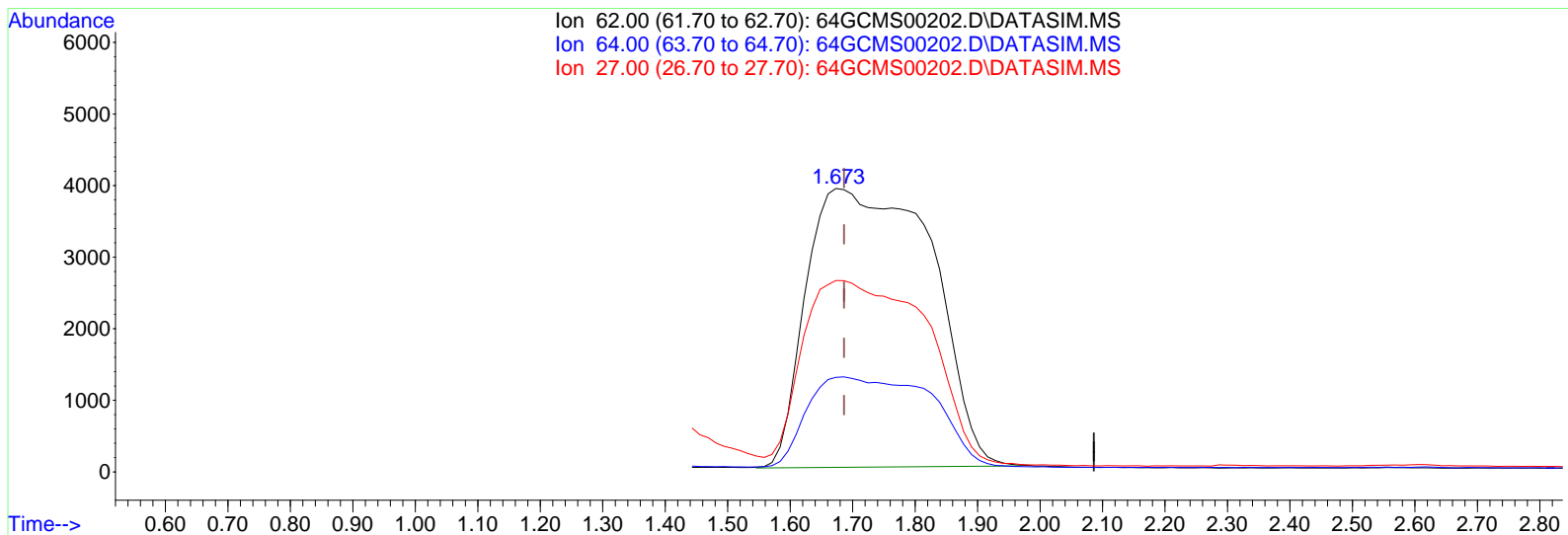
1.673min (-0.013) 242.21 ppbv

response 31859

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	54.87#
27.00	47.50	111.77#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00202.D
 Acq On : 4 May 2016 6:46 am
 Operator : dlm
 Sample : 20160504-LCS \ 500 ppbv LCS
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:54:34 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

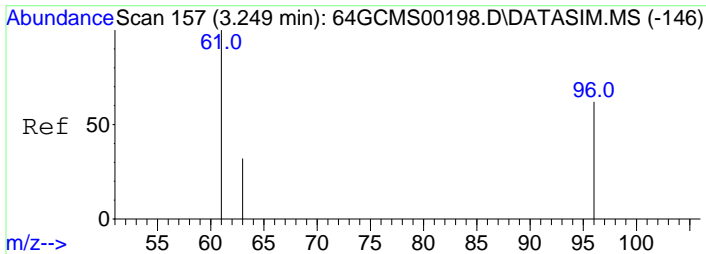


(2) Vinyl Chloride

1.673min (-0.013) 412.65 ppbv m

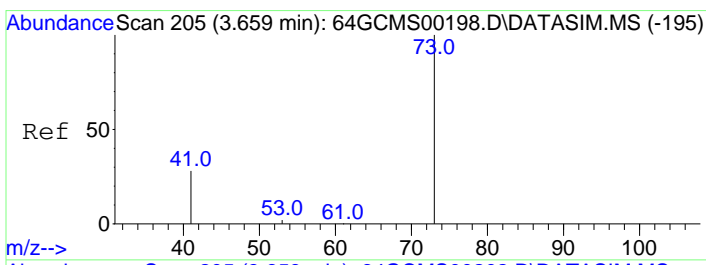
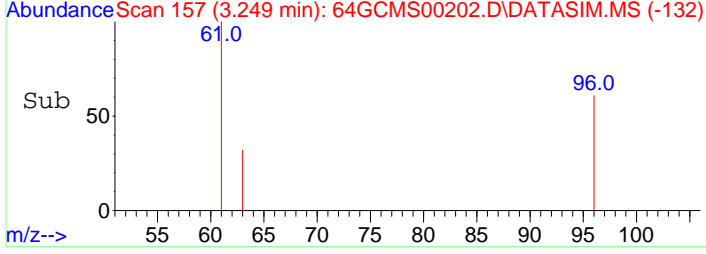
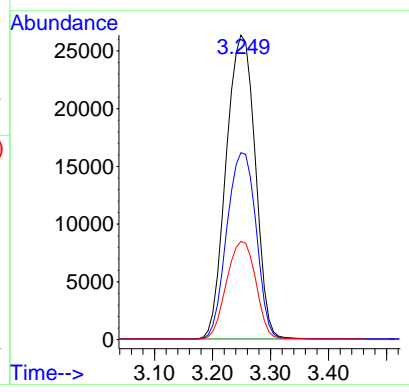
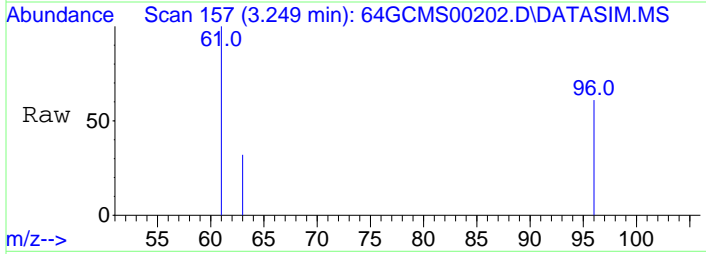
response 54278

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	29.60	32.21
27.00	47.50	65.61#
0.00	0.00	0.00



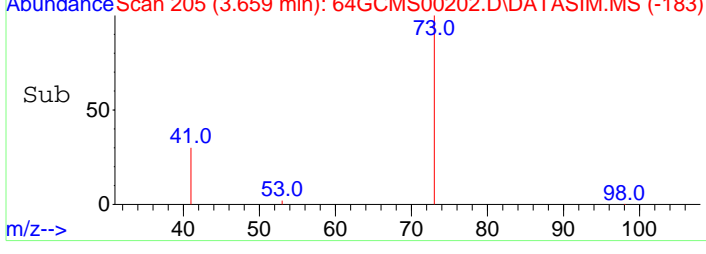
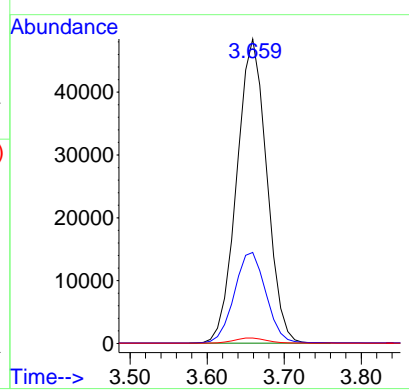
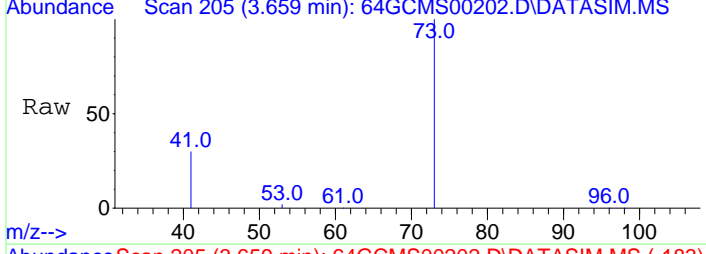
#3
 1,1-Dichloroethene
 Concen: 396.96 ppbv
 RT: 3.249 min Scan# 157
 Delta R.T. -0.000 min
 Lab File: 64GCMS00202.D
 Acq: 4 May 2016 6:46 am

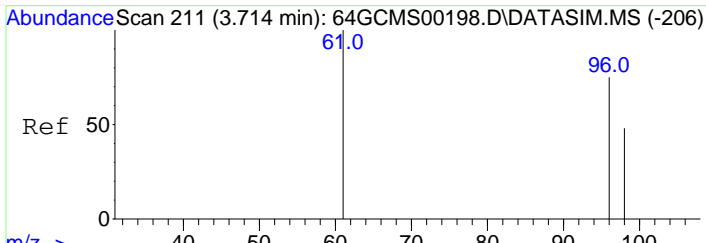
Tgt Ion:	Resp:	Lower	Upper
61	100		
96	61.8	40.9	61.3#
63	32.2	24.3	36.5



#4
 Methyl Tert butyl Ether
 Concen: 395.31 ppbv
 RT: 3.659 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 64GCMS00202.D
 Acq: 4 May 2016 6:46 am

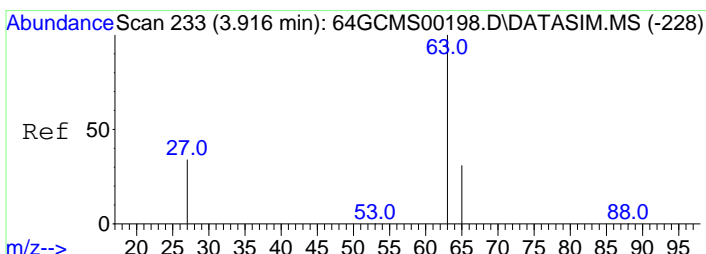
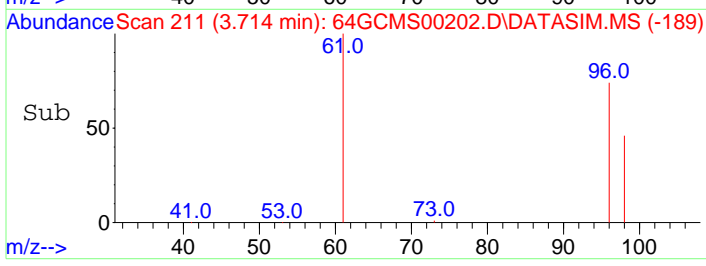
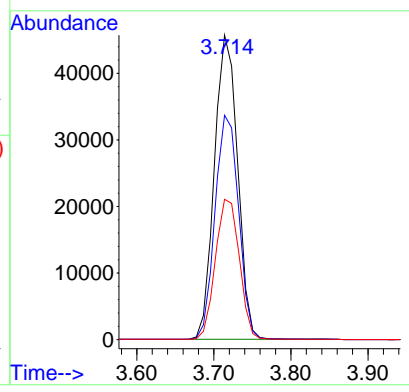
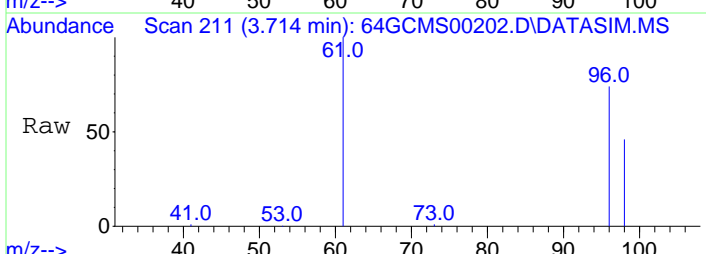
Tgt Ion:	Resp:	Lower	Upper
73	100		
41	31.3	20.6	30.8#
53	1.8	1.2	1.8





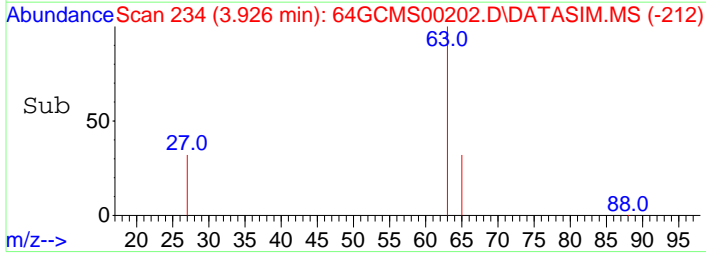
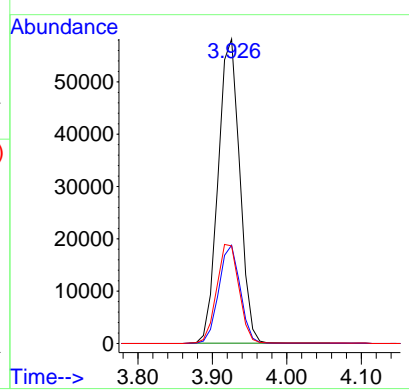
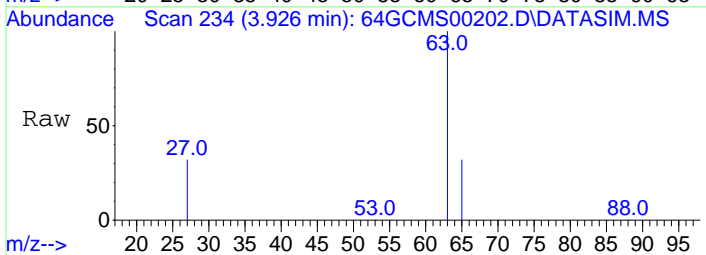
#5
 trans-1,2-Dichloroethene
 Concen: 464.75 ppbv
 RT: 3.714 min Scan# 211
 Delta R.T. -0.000 min
 Lab File: 64GCMS00202.D
 Acq: 4 May 2016 6:46 am

Tgt Ion	Resp	Lower	Upper
61	100		
96	74.8	47.8	71.6#
98	47.4	30.6	46.0#

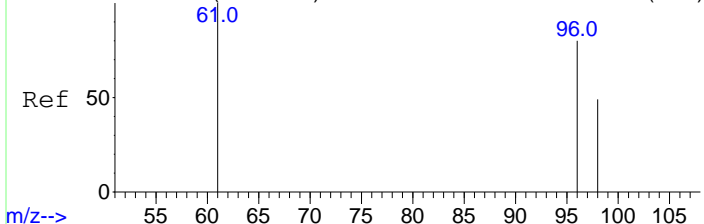


#6
 1,1-Dichloroethane
 Concen: 430.36 ppbv
 RT: 3.926 min Scan# 234
 Delta R.T. -0.000 min
 Lab File: 64GCMS00202.D
 Acq: 4 May 2016 6:46 am

Tgt Ion	Resp	Lower	Upper
63	100		
65	32.1	24.8	37.2
27	33.8	21.1	31.7#

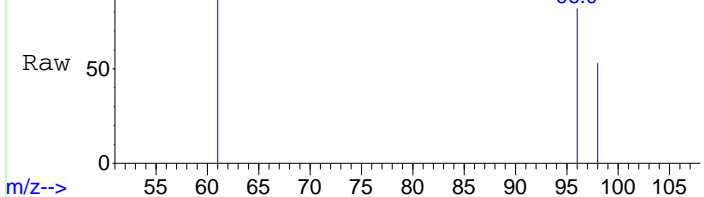


Abundance Scan 266 (4.212 min): 64GCMS00198.D\DATASIM.MS (-261)



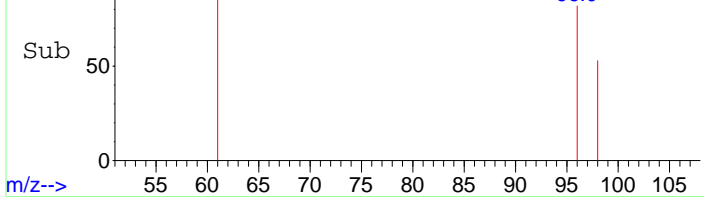
m/z-->

Abundance Scan 267 (4.220 min): 64GCMS00202.D\DATASIM.MS



m/z-->

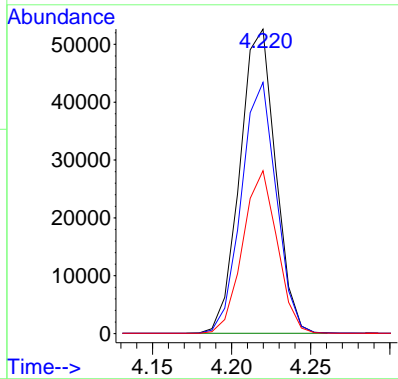
Abundance Scan 267 (4.220 min): 64GCMS00202.D\DATASIM.MS (-244)



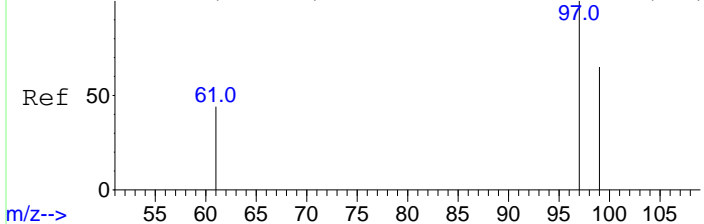
m/z-->

#7
cis-1,2-Dichloroethene
Concen: 422.36 ppbv
RT: 4.220 min Scan# 267
Delta R.T. -0.000 min
Lab File: 64GCMS00202.D
Acq: 4 May 2016 6:46 am

Tgt Ion:	61	Resp:	82899
Ion Ratio	Lower	Upper	
61	100		
96	80.6	52.0	78.0#
98	51.4	33.4	50.2#

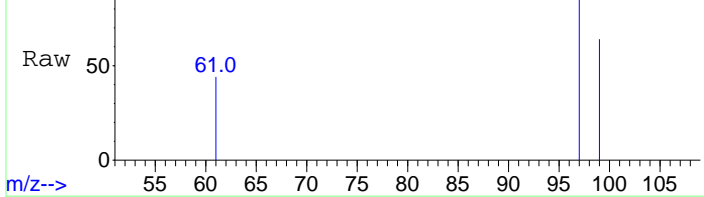


Abundance Scan 301 (4.505 min): 64GCMS00198.D\DATASIM.MS (-293)



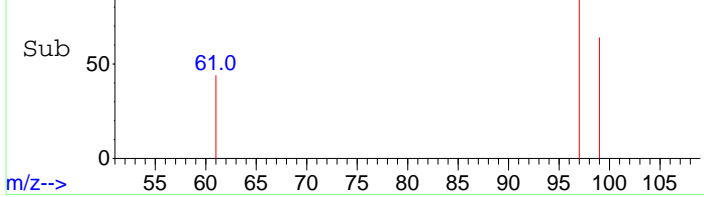
m/z-->

Abundance Scan 301 (4.505 min): 64GCMS00202.D\DATASIM.MS



m/z-->

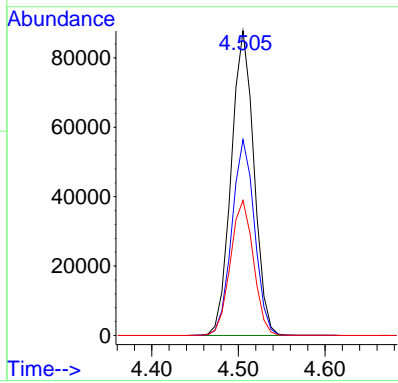
Abundance Scan 301 (4.505 min): 64GCMS00202.D\DATASIM.MS (-278)



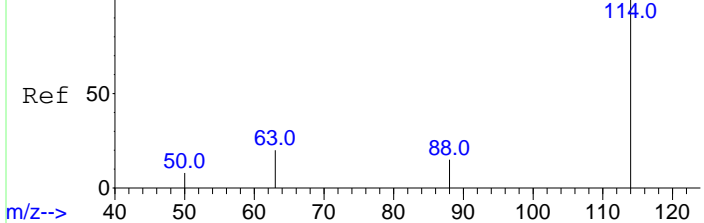
m/z-->

#8
1,1,1-Trichloroethane
Concen: 406.56 ppbv
RT: 4.505 min Scan# 301
Delta R.T. -0.000 min
Lab File: 64GCMS00202.D
Acq: 4 May 2016 6:46 am

Tgt Ion:	97	Resp:	160975
Ion Ratio	Lower	Upper	
97	100		
99	64.2	51.5	77.3
61	45.1	38.6	58.0

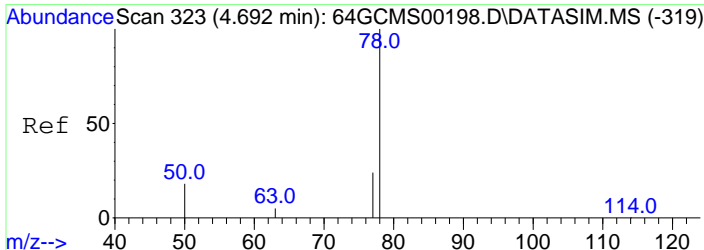
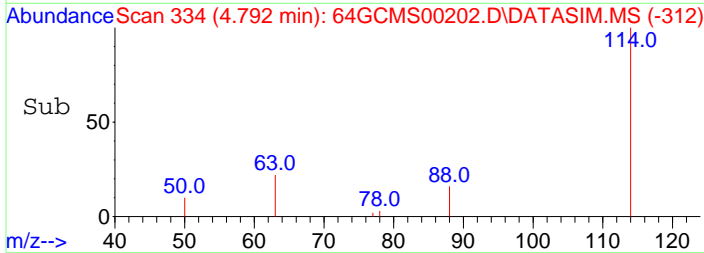
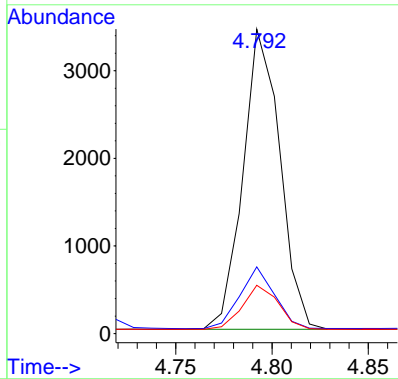
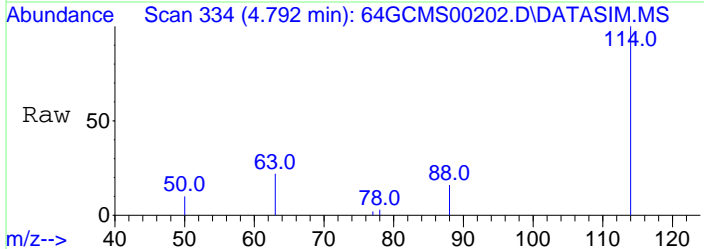


Abundance Scan 334 (4.792 min): 64GCMS00198.D\DATASIM.MS (-331)



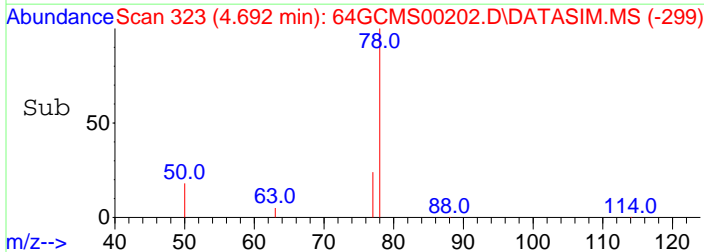
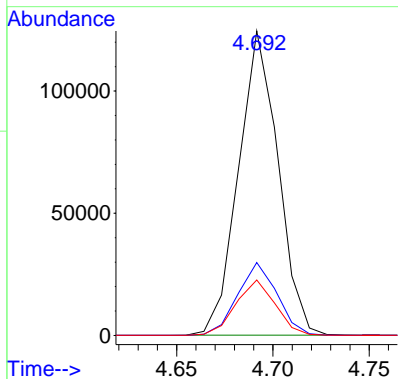
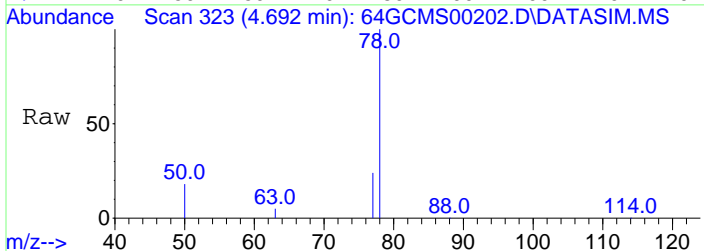
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00202.D
 Acq: 4 May 2016 6:46 am

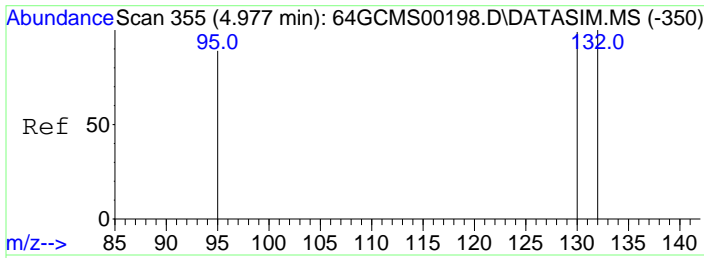
Tgt Ion	Resp	Lower	Upper
114	100		
63	19.3	19.2	28.8
88	14.4	13.7	20.5



#10
 Benzene
 Concen: 488.47 ppbv
 RT: 4.692 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00202.D
 Acq: 4 May 2016 6:46 am

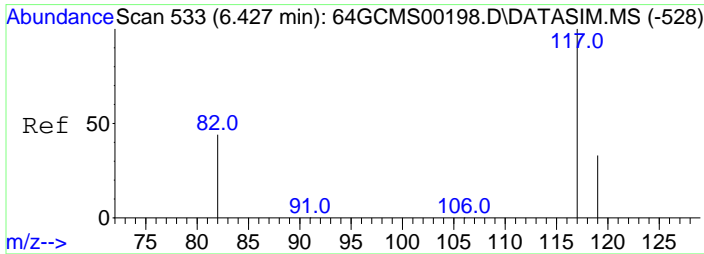
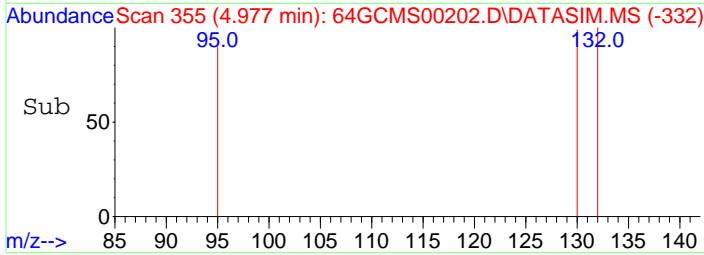
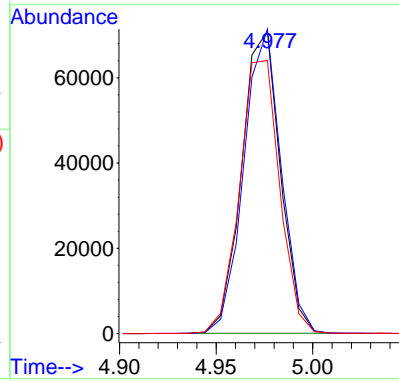
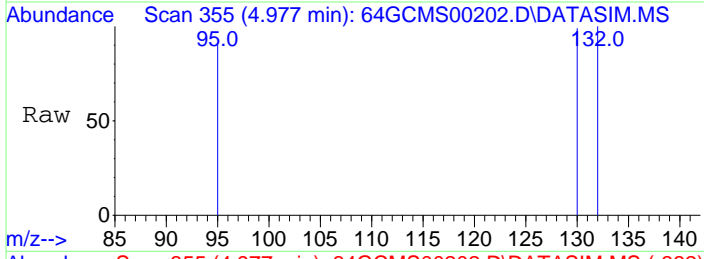
Tgt Ion	Resp	Lower	Upper
78	100		
77	23.8	18.2	27.4
50	18.1	16.6	24.8





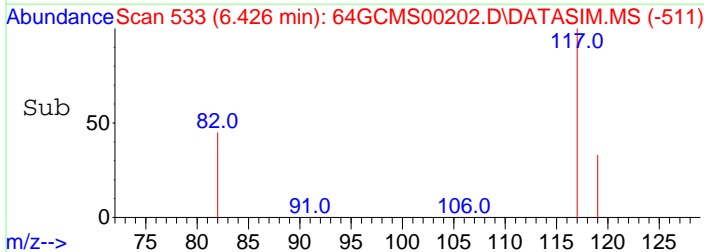
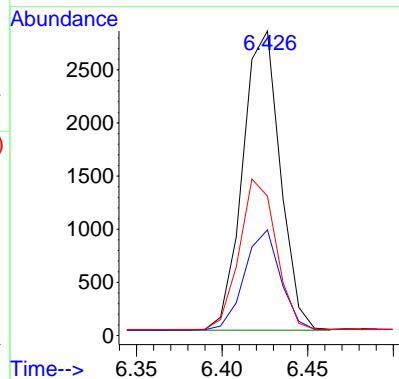
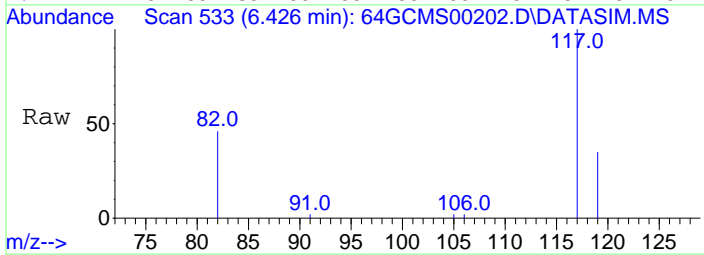
#11
 Trichloroethene
 Concen: 436.45 ppbv
 RT: 4.977 min Scan# 355
 Delta R.T. -0.000 min
 Lab File: 64GCMS00202.D
 Acq: 4 May 2016 6:46 am

Tgt Ion	Resp	Lower	Upper
130	100		
132	97.3	76.9	115.3
95	93.5	81.5	122.3

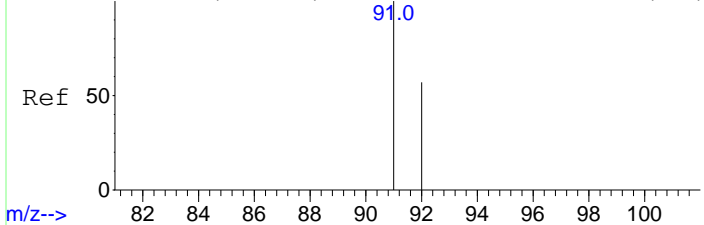


#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00202.D
 Acq: 4 May 2016 6:46 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.0	25.8	38.6
82	49.3	45.6	68.4



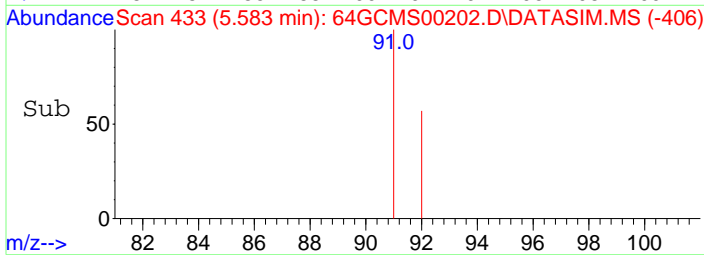
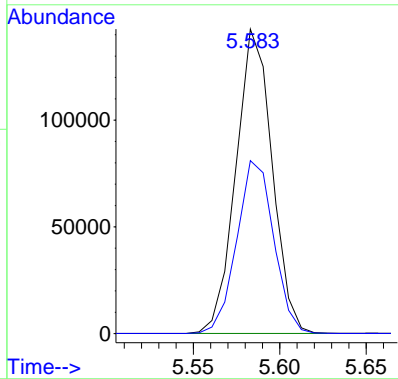
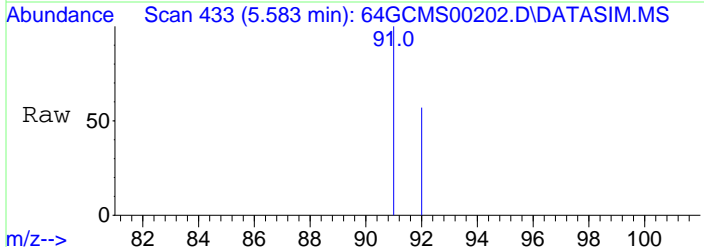
Abundance Scan 433 (5.583 min): 64GCMS00198.D\DATASIM.MS (-428)



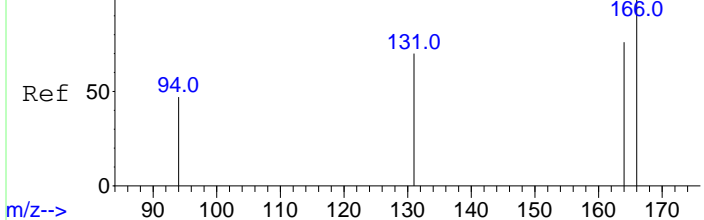
#13

Toluene
Concen: 466.30 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00202.D
Acq: 4 May 2016 6:46 am

Tgt Ion	Resp	Lower	Upper
91	100		
92	57.9	48.0	72.0



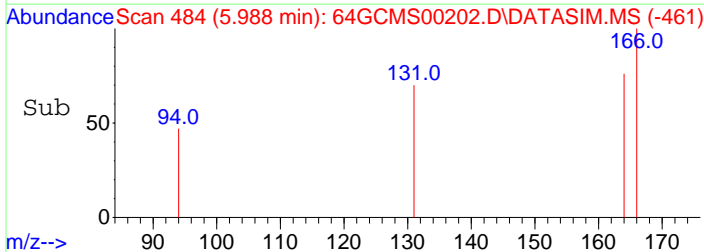
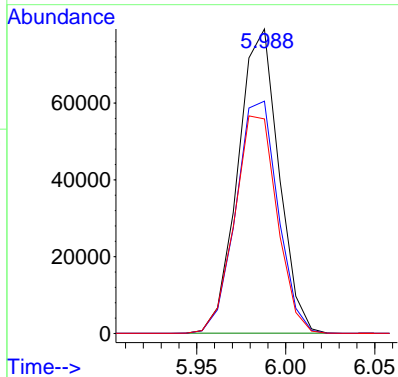
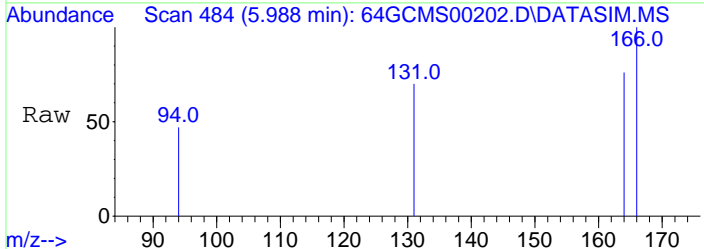
Abundance Scan 484 (5.988 min): 64GCMS00198.D\DATASIM.MS (-479)



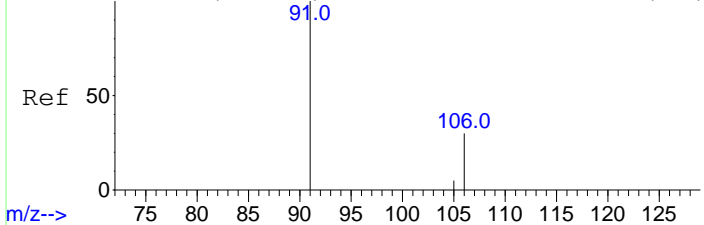
#14

Tetrachloroethene
Concen: 410.93 ppbv
RT: 5.988 min Scan# 484
Delta R.T. -0.000 min
Lab File: 64GCMS00202.D
Acq: 4 May 2016 6:46 am

Tgt Ion	Resp	Lower	Upper
166	100		
164	78.6	63.4	95.0
131	74.2	63.4	95.0

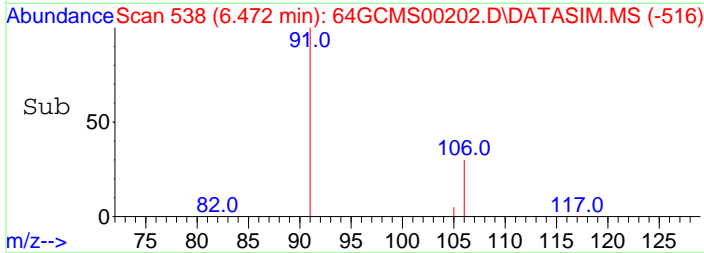
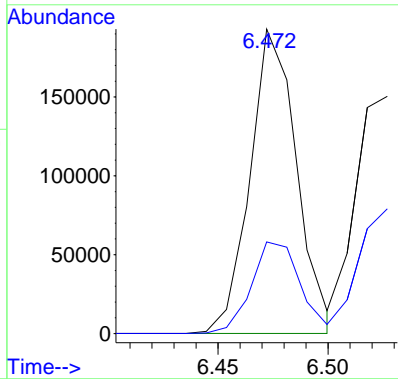
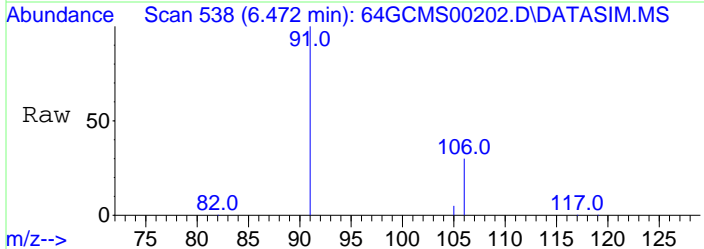


Abundance Scan 538 (6.472 min): 64GCMS00198.D\DATASIM.MS (-534)

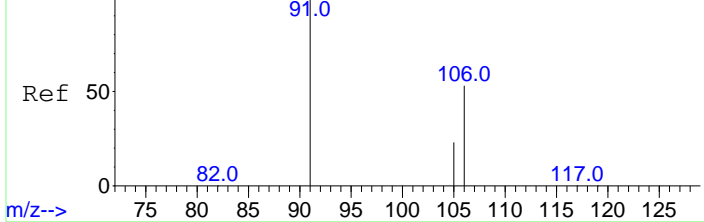


#15
Ethyl Benzene
Concen: 515.56 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00202.D
Acq: 4 May 2016 6:46 am

Tgt Ion	Resp	Lower	Upper
91	100		
106	31.7	24.2	36.2

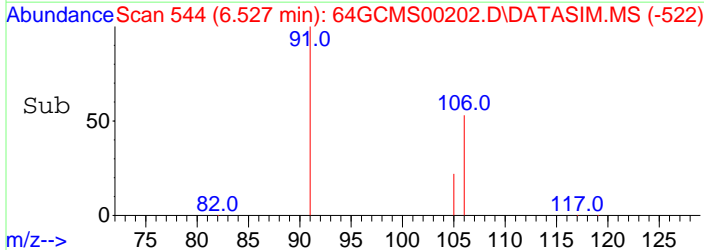
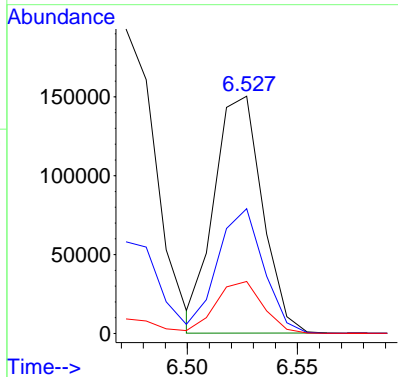
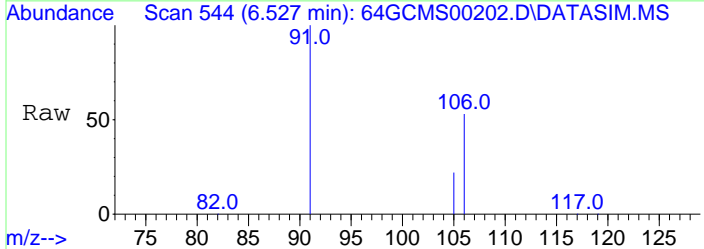


Abundance Scan 544 (6.527 min): 64GCMS00198.D\DATASIM.MS (-541)

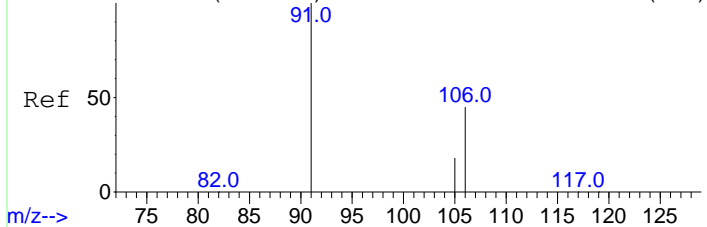


#16
m,p-Xylene
Concen: 512.90 ppbv
RT: 6.527 min Scan# 544
Delta R.T. -0.000 min
Lab File: 64GCMS00202.D
Acq: 4 May 2016 6:46 am

Tgt Ion	Resp	Lower	Upper
91	100		
106	50.2	37.7	56.5
105	21.4	17.0	25.4



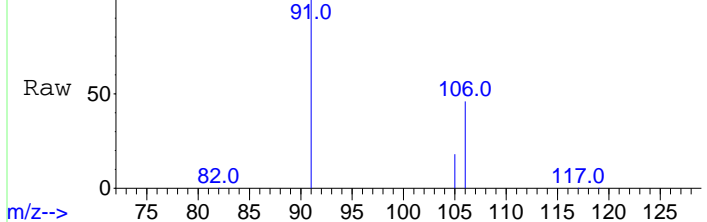
Abundance Scan 573 (6.792 min): 64GCMS00198.D\DATASIM.MS (-569)



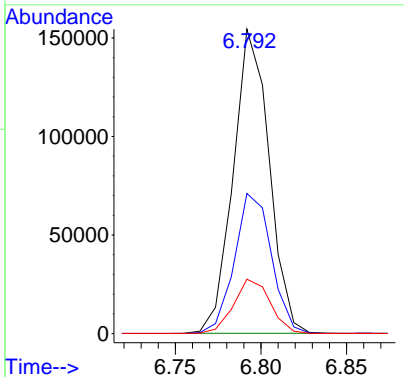
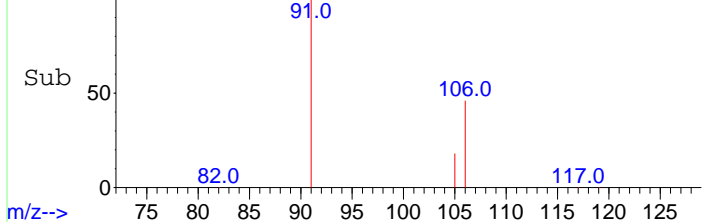
#17
 o-Xylene
 Concen: 465.41 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00202.D
 Acq: 4 May 2016 6:46 am

Tgt Ion:	Resp:	Lower	Upper
91	225427		
106	47.3	35.4	53.2
105	18.2	14.0	21.0

Abundance Scan 573 (6.792 min): 64GCMS00202.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00202.D\DATASIM.MS (-551)



APPENDIX D

Quantitation Reports

**Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)**

GC/MS Analytical Report

June 2016

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00182.D
 Acq On : 3 May 2016 6:41 am
 Operator : dlm
 Sample : 20160503-MB \ Method Blank
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 08:04:39 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Sun May 01 19:36:10 2016
 Response via : Initial Calibration

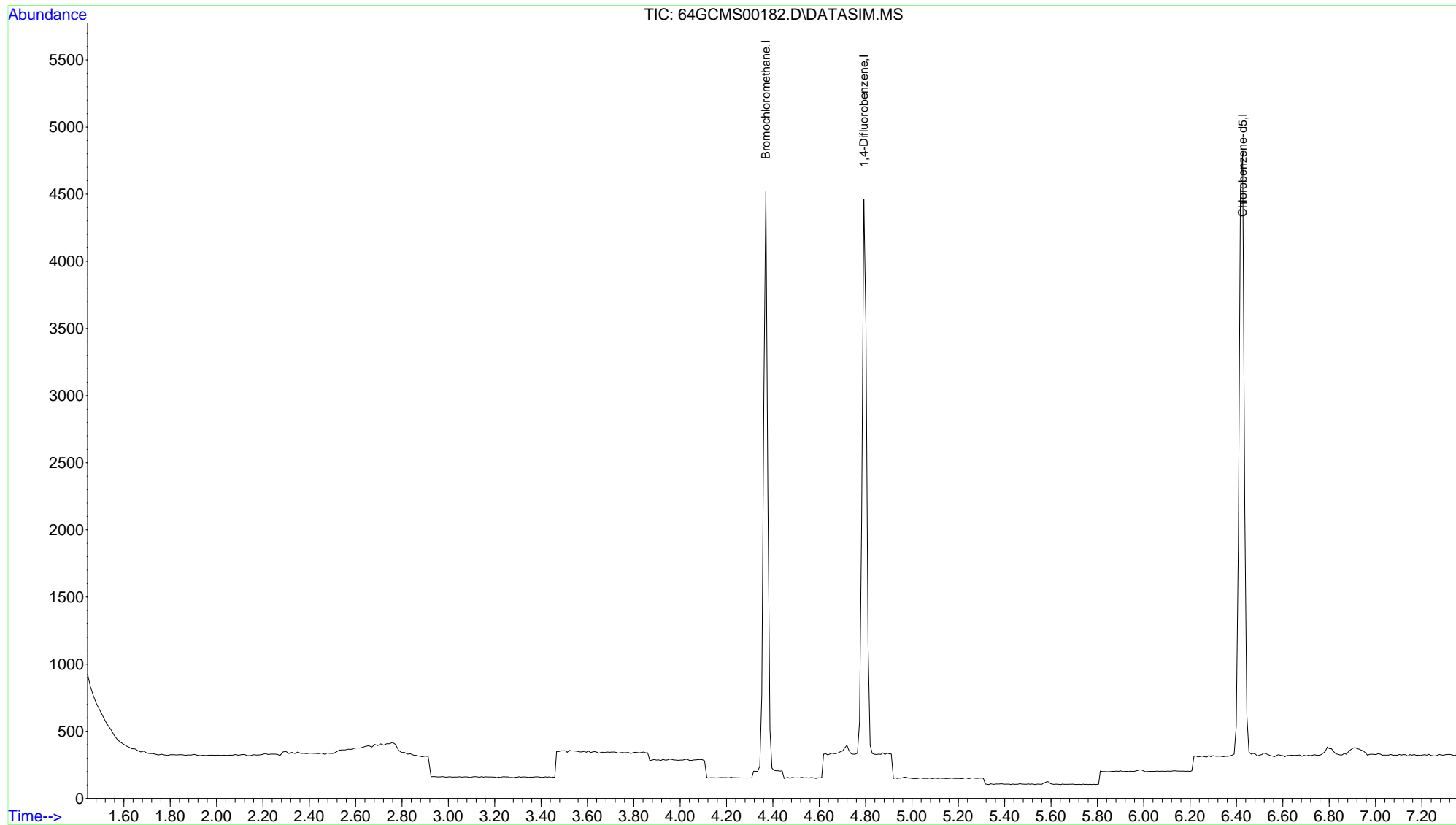
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	1941	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3920	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3854	10.00	ppbv	0.00

Target Compounds	Qvalue

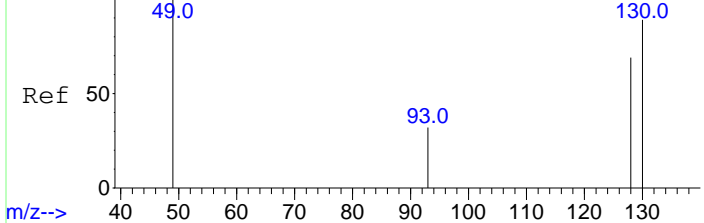
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00182.D
Acq On : 3 May 2016 6:41 am
Operator : dlm
Sample : 20160503-MB \ Method Blank
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 08:04:39 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Sun May 01 19:36:10 2016
Response via : Initial Calibration



Abundance Scan 285 (4.370 min): 64GCMS00179.D\DATASIM.MS (-281)



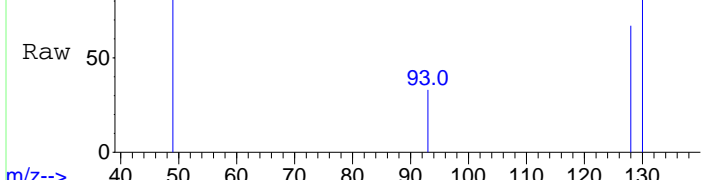
#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00182.D
Acq: 3 May 2016 6:41 am

Tgt Ion: 49 Resp: 1941

Ion	Ratio	Lower	Upper
49	100		
130	81.9	46.3	69.5#
128	65.1	35.7	53.5#
93	29.9	17.6	26.4#

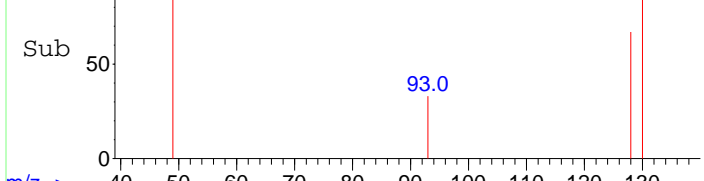
m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00182.D\DATASIM.MS

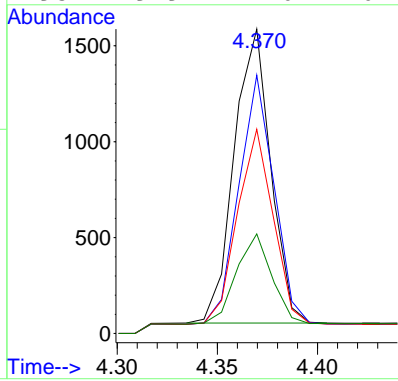


m/z-->

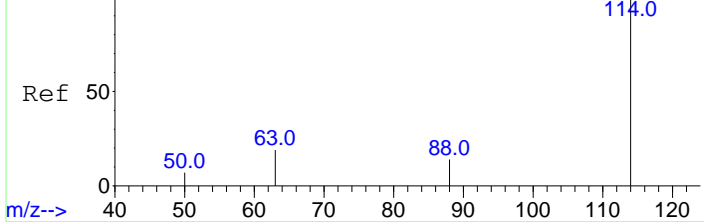
Abundance Scan 285 (4.370 min): 64GCMS00182.D\DATASIM.MS (-277)



m/z-->



Abundance Scan 334 (4.792 min): 64GCMS00179.D\DATASIM.MS (-331)



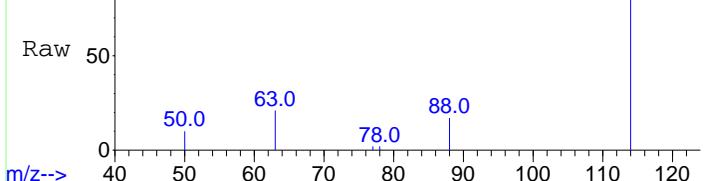
#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. -0.000 min
Lab File: 64GCMS00182.D
Acq: 3 May 2016 6:41 am

Tgt Ion: 114 Resp: 3920

Ion	Ratio	Lower	Upper
114	100		
63	19.7	19.2	28.8
88	14.8	13.7	20.5

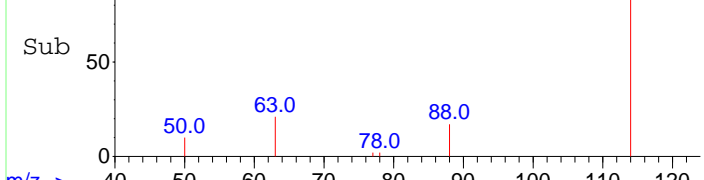
m/z-->

Abundance Scan 334 (4.792 min): 64GCMS00182.D\DATASIM.MS

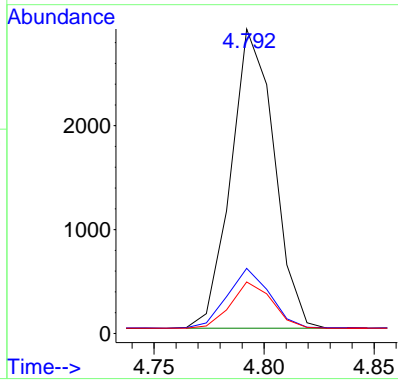


m/z-->

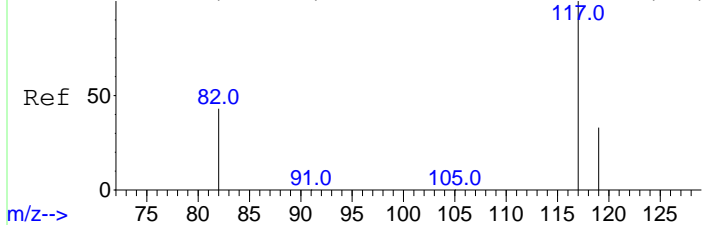
Abundance Scan 334 (4.792 min): 64GCMS00182.D\DATASIM.MS (-312)



m/z-->



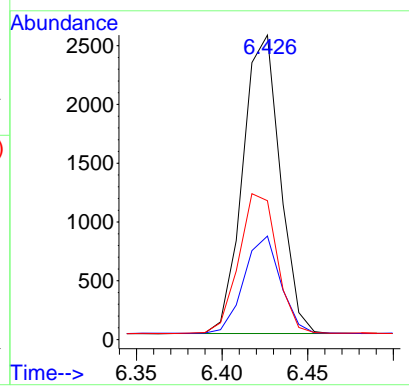
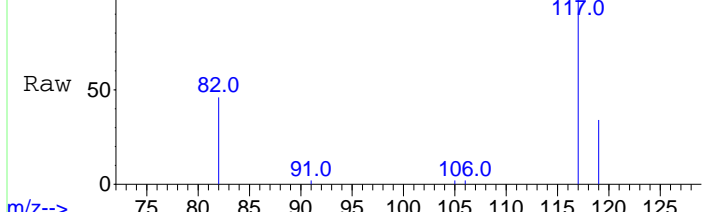
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



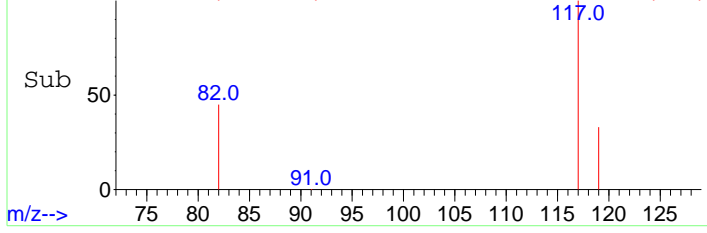
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00182.D
Acq: 3 May 2016 6:41 am

Tgt Ion	Resp	Lower	Upper
117	3854		
117	100		
119	32.0	25.8	38.6
82	47.8	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00182.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00182.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00184.D
Acq On : 3 May 2016 8:58 am
Operator : dlm
Sample : 4430 \ Unit 10
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 09:08:31 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration

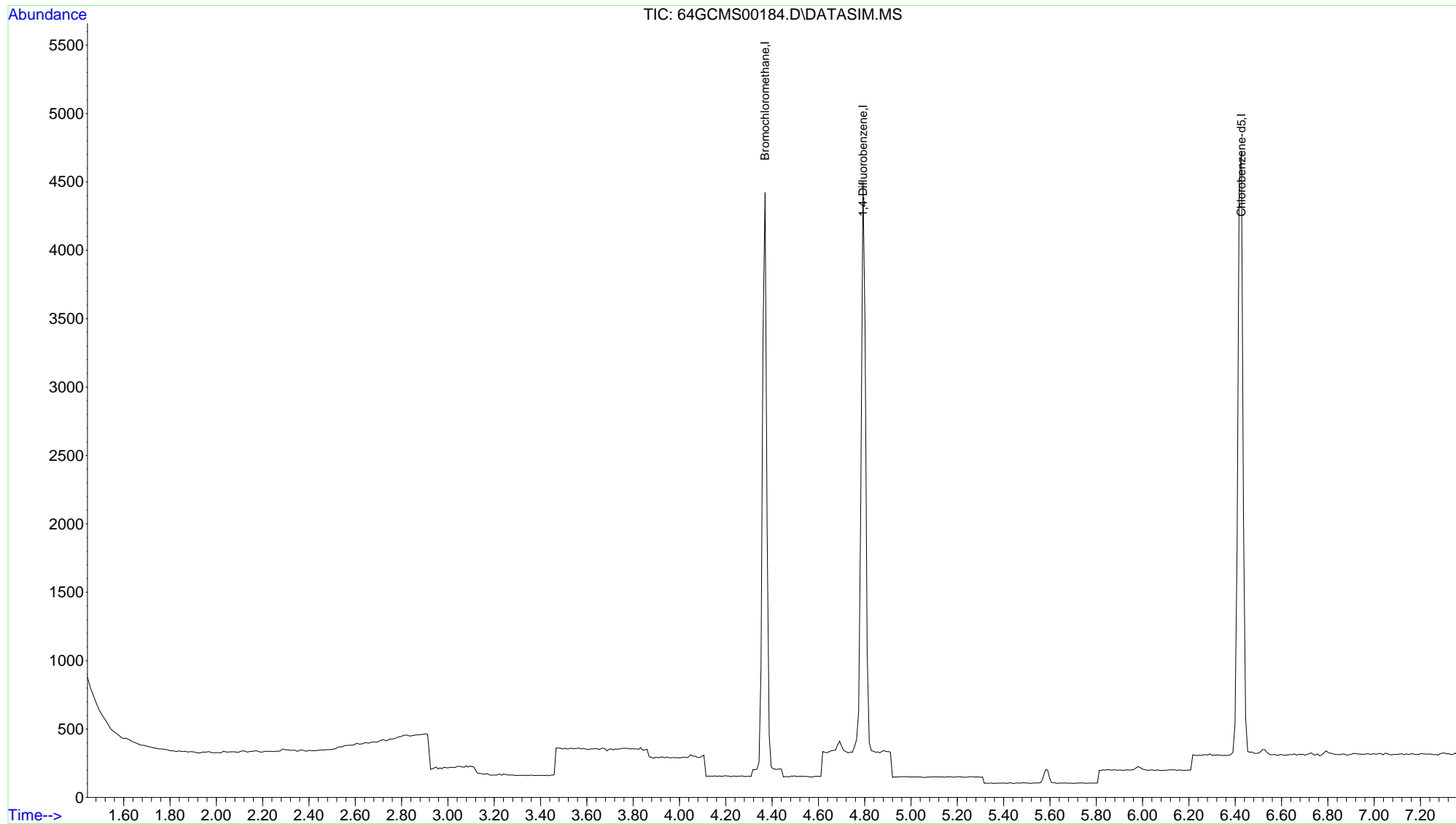
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	1964	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3927	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.426	117	3710	10.00	ppbv	0.00

Target Compounds	Qvalue
------------------	--------

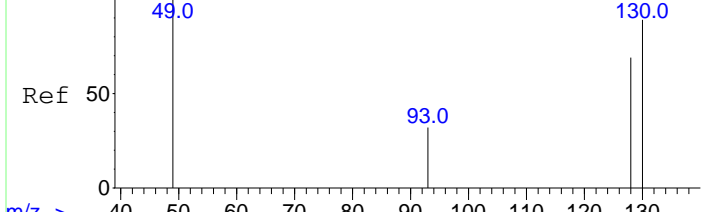
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00184.D
Acq On : 3 May 2016 8:58 am
Operator : dlm
Sample : 4430 \ Unit 10
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 09:08:31 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration

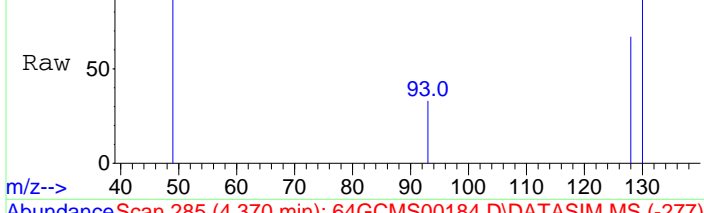


Abundance Scan 285 (4.370 min): 64GCMS00179.D\DATASIM.MS (-281)



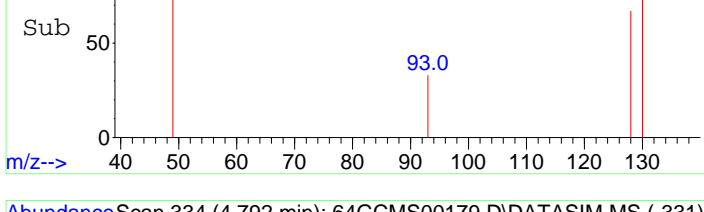
m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00184.D\DATASIM.MS (-277)



m/z-->

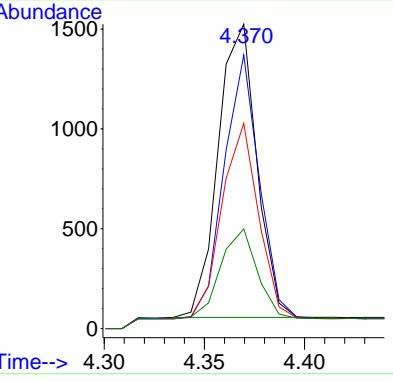
Abundance Scan 285 (4.370 min): 64GCMS00184.D\DATASIM.MS (-277)



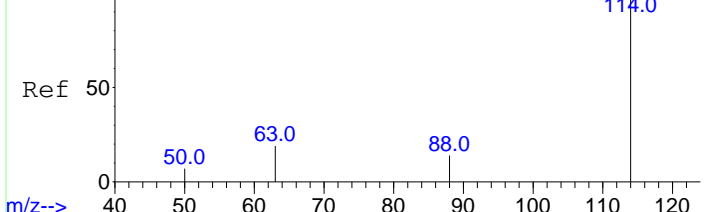
m/z-->

#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00184.D
Acq: 3 May 2016 8:58 am

Tgt Ion	Resp	Lower	Upper
49	100		
130	82.3	46.3	69.5#
128	63.3	35.7	53.5#
93	29.1	17.6	26.4#

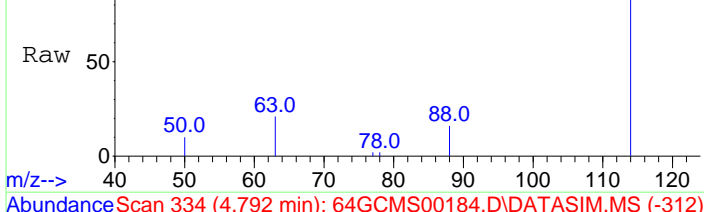


Abundance Scan 334 (4.792 min): 64GCMS00179.D\DATASIM.MS (-331)



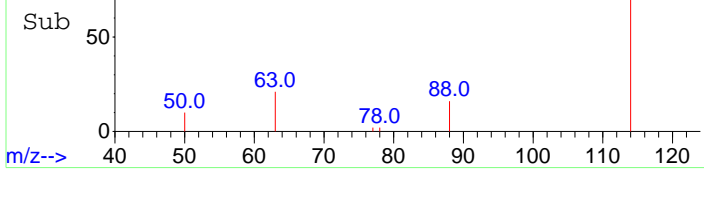
m/z-->

Abundance Scan 334 (4.792 min): 64GCMS00184.D\DATASIM.MS (-331)



m/z-->

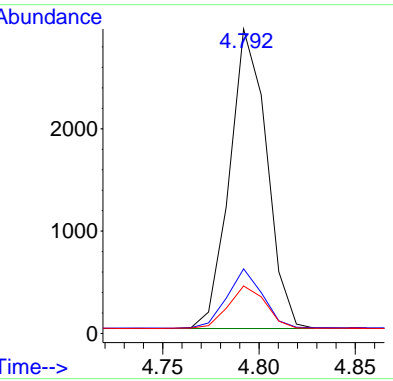
Abundance Scan 334 (4.792 min): 64GCMS00184.D\DATASIM.MS (-312)



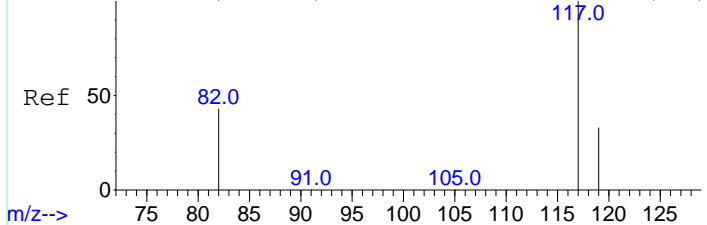
m/z-->

#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. -0.000 min
Lab File: 64GCMS00184.D
Acq: 3 May 2016 8:58 am

Tgt Ion	Resp	Lower	Upper
114	100		
63	19.0	19.2	28.8#
88	14.1	13.7	20.5



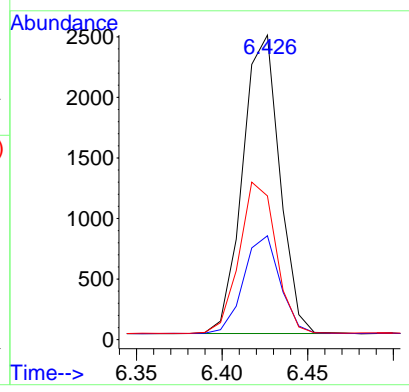
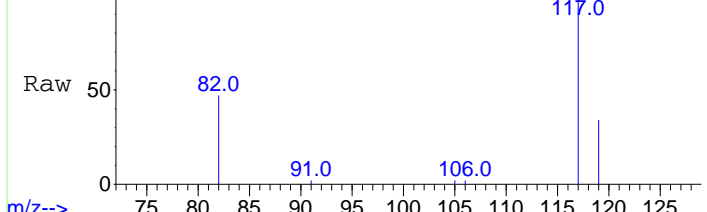
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



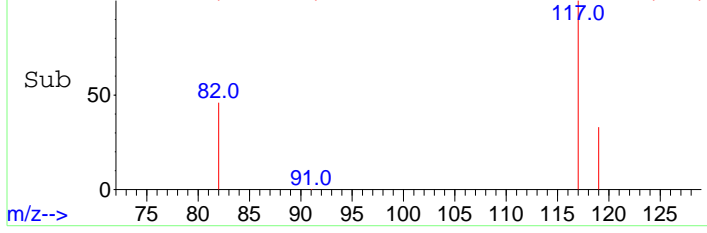
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00184.D
Acq: 3 May 2016 8:58 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.2	25.8	38.6
82	50.4	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00184.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00184.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00185.D
 Acq On : 3 May 2016 10:17 am
 Operator : dlm
 Sample : 4431 \ Unit 14
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 10:27:46 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

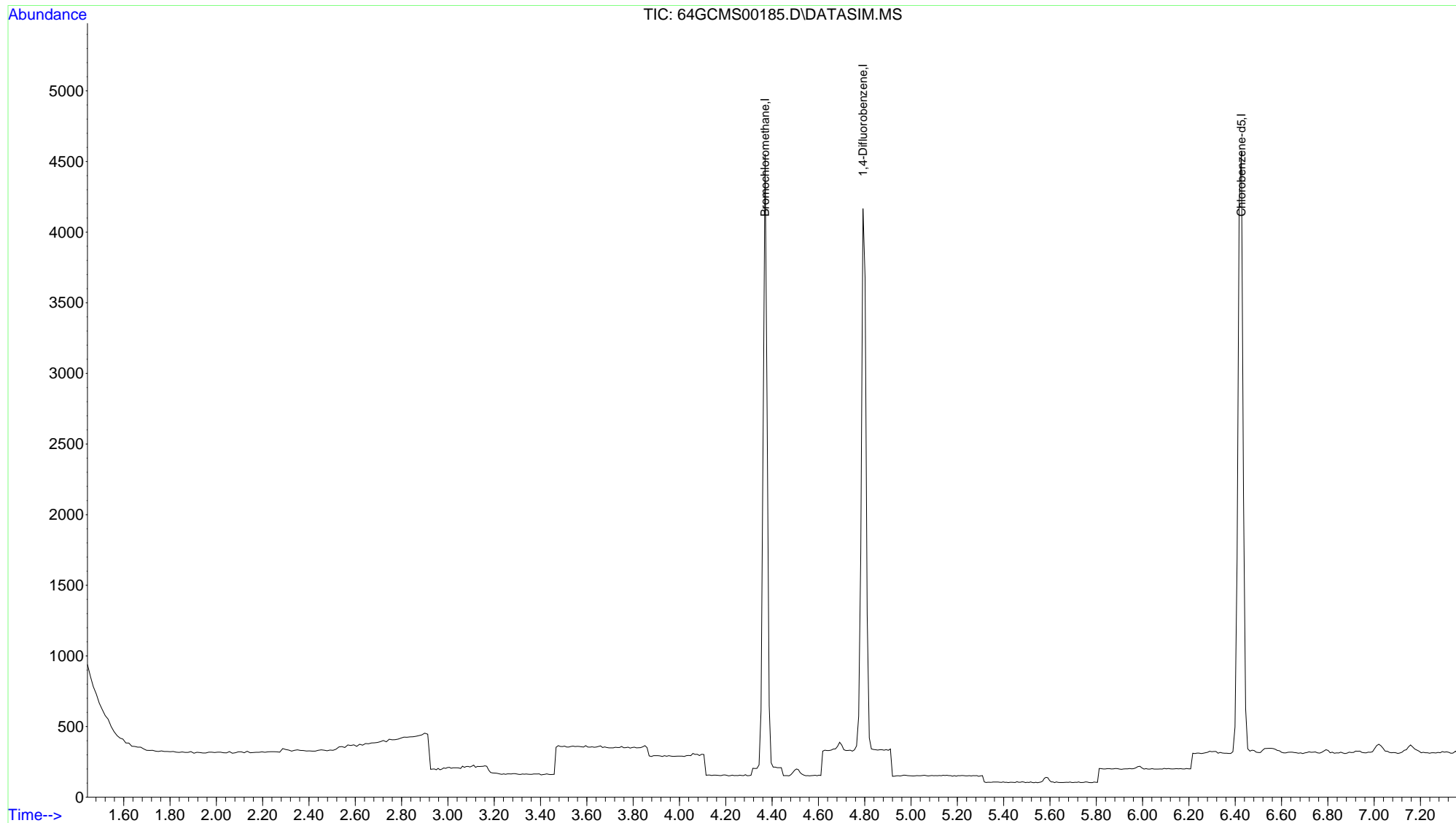
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	1957	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3781	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.427	117	3578	10.00	ppbv	0.00

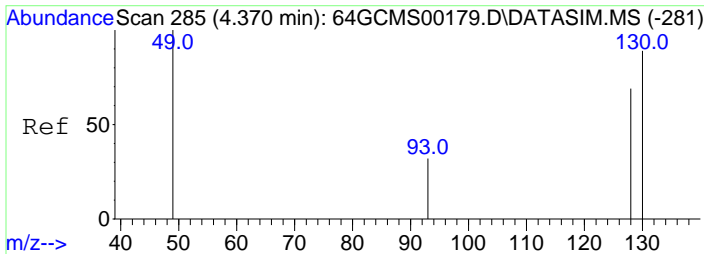
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00185.D
 Acq On : 3 May 2016 10:17 am
 Operator : dlm
 Sample : 4431 \ Unit 14
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 10:27:46 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

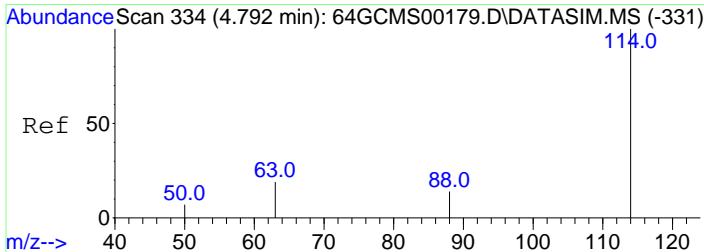
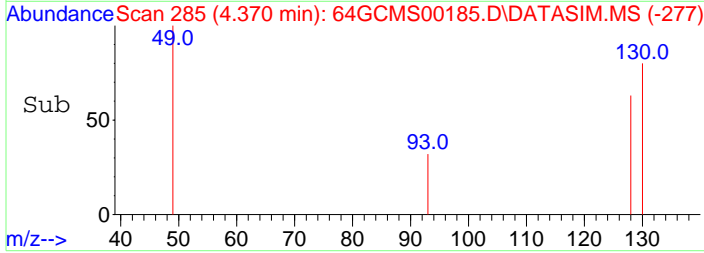
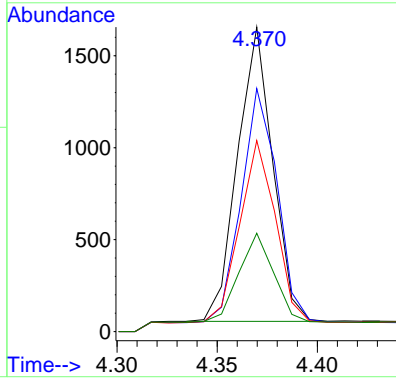
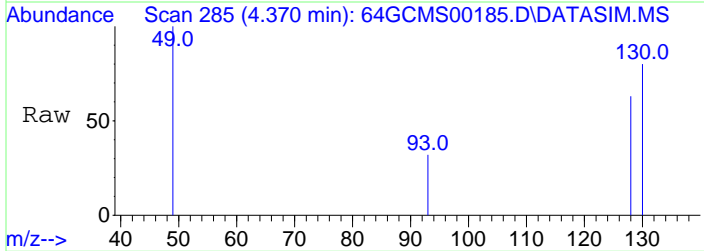




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00185.D
 Acq: 3 May 2016 10:17 am

Tgt Ion: 49 Resp: 1957

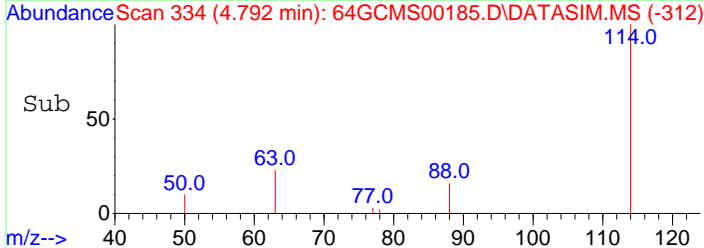
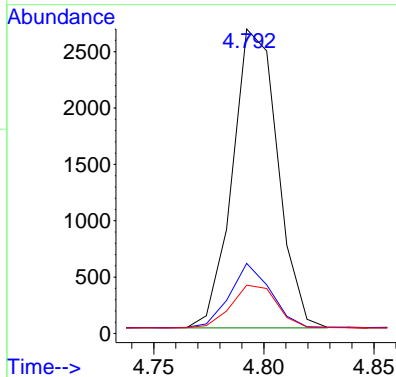
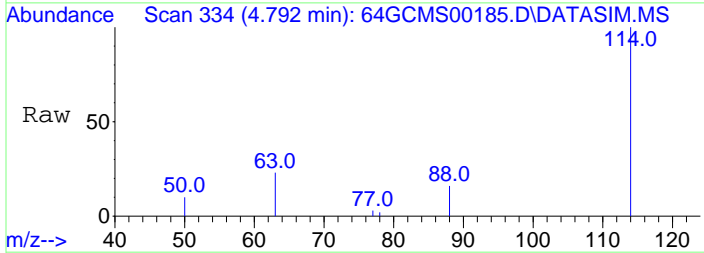
Ion	Ratio	Lower	Upper
49	100		
130	81.5	46.3	69.5#
128	62.7	35.7	53.5#
93	30.1	17.6	26.4#



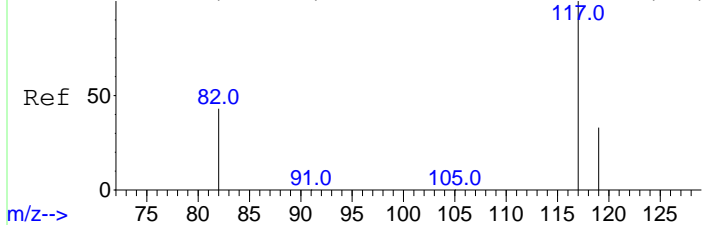
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. 0.000 min
 Lab File: 64GCMS00185.D
 Acq: 3 May 2016 10:17 am

Tgt Ion: 114 Resp: 3781

Ion	Ratio	Lower	Upper
114	100		
63	19.5	19.2	28.8
88	14.2	13.7	20.5



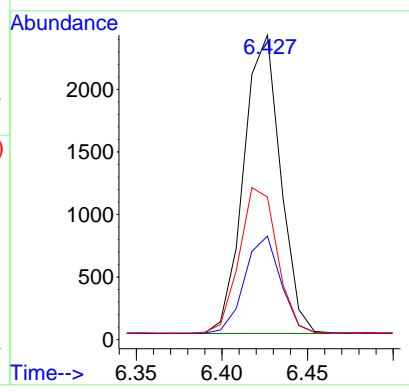
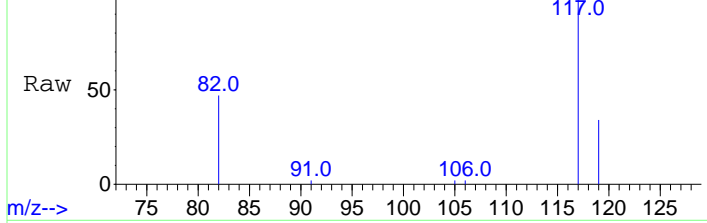
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



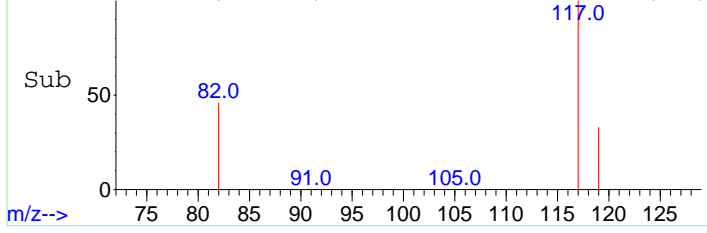
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.427 min Scan# 533
Delta R.T. 0.000 min
Lab File: 64GCMS00185.D
Acq: 3 May 2016 10:17 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.0	25.8	38.6
82	50.3	45.6	68.4

Abundance Scan 533 (6.427 min): 64GCMS00185.D\DATASIM.MS



Abundance Scan 533 (6.427 min): 64GCMS00185.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00186.D
Acq On : 3 May 2016 11:14 am
Operator : dlm
Sample : 4432 \ Unit 15
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 11:26:33 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration

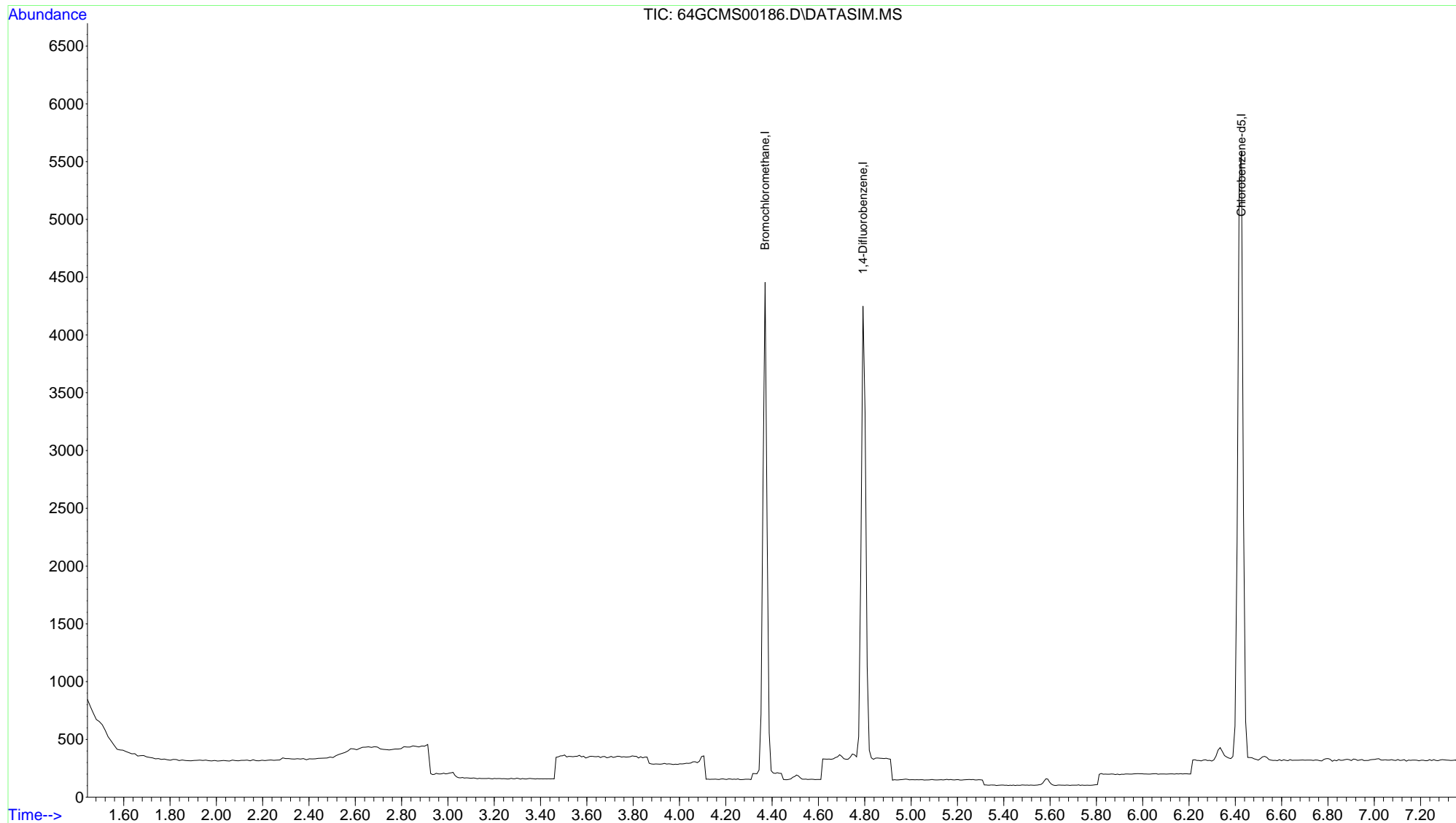
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	1923	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3689	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	4470	10.00	ppbv	0.00

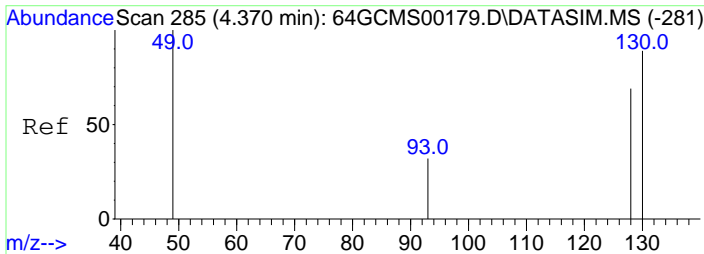
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

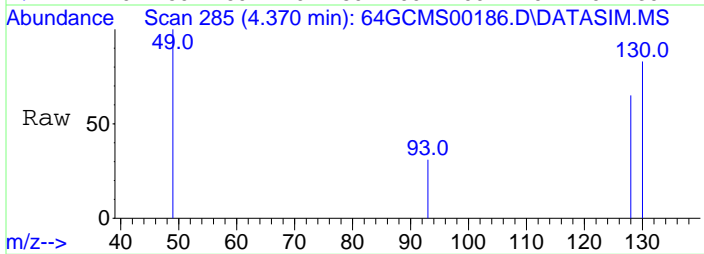
Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00186.D
Acq On : 3 May 2016 11:14 am
Operator : dlm
Sample : 4432 \ Unit 15
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 11:26:33 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration



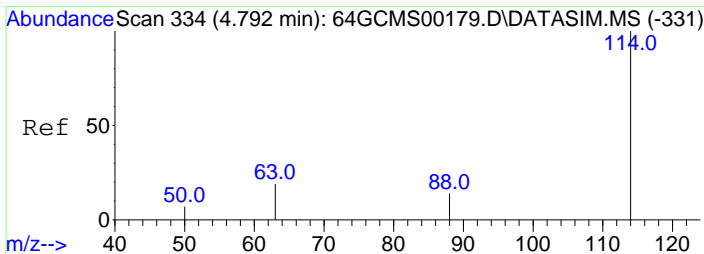
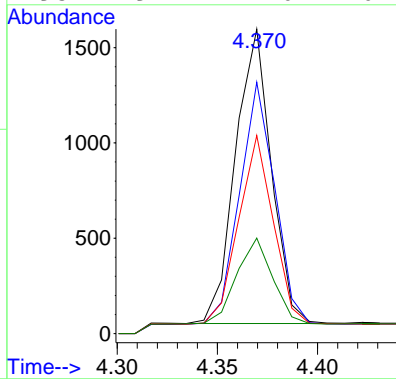
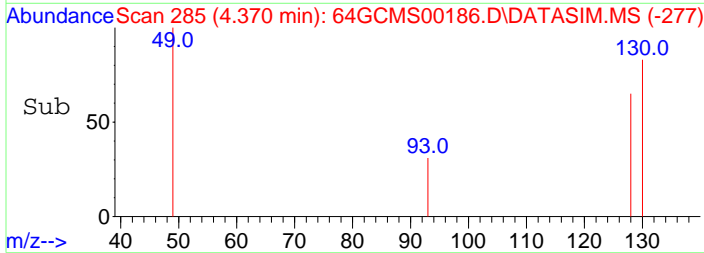


#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00186.D
 Acq: 3 May 2016 11:14 am

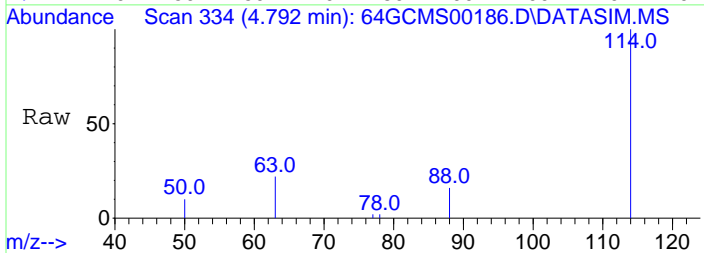


Tgt Ion: 49 Resp: 1923

Ion	Ratio	Lower	Upper
49	100		
130	80.7	46.3	69.5#
128	62.3	35.7	53.5#
93	29.4	17.6	26.4#

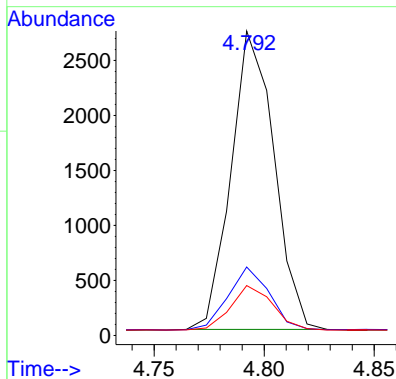
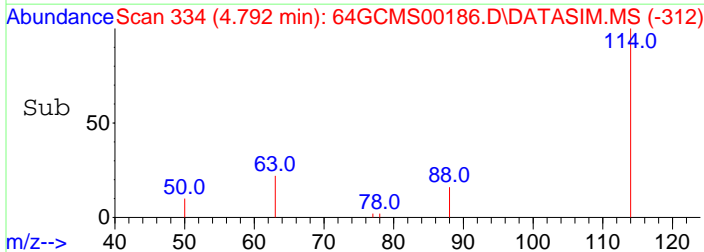


#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00186.D
 Acq: 3 May 2016 11:14 am

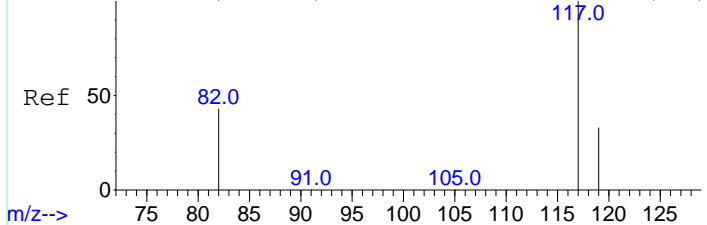


Tgt Ion: 114 Resp: 3689

Ion	Ratio	Lower	Upper
114	100		
63	20.3	19.2	28.8
88	14.6	13.7	20.5



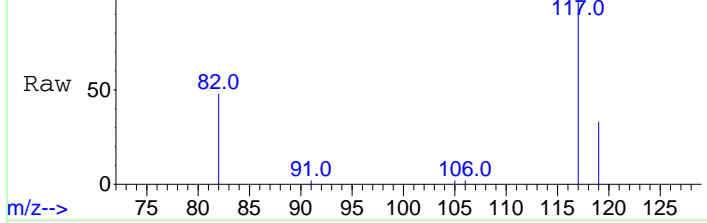
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



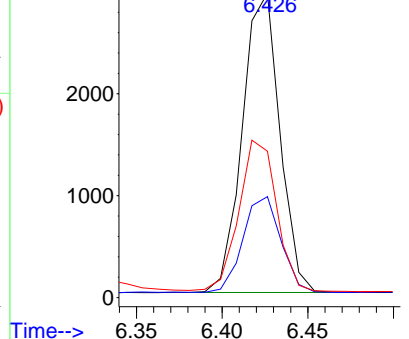
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00186.D
Acq: 3 May 2016 11:14 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.3	25.8	38.6
82	50.9	45.6	68.4

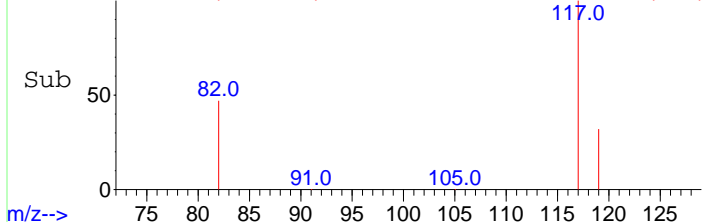
Abundance Scan 533 (6.426 min): 64GCMS00186.D\DATASIM.MS



Abundance



Abundance Scan 533 (6.426 min): 64GCMS00186.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00187.D
Acq On : 3 May 2016 12:09 pm
Operator : dlm
Sample : 4433 \ Unit 7
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 12:18:52 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration

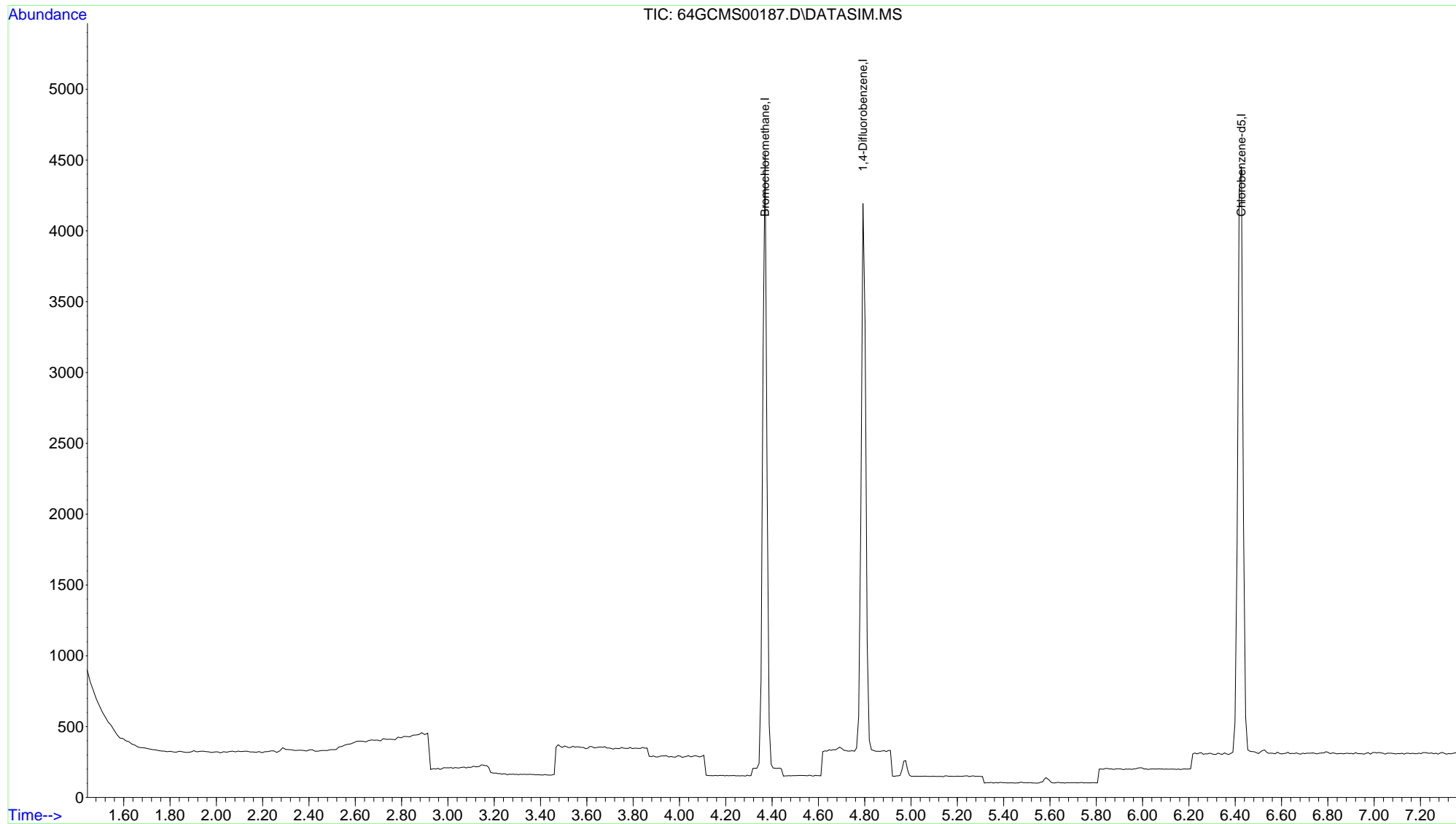
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2011	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3676	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.427	117	3500	10.00	ppbv	0.00

Target Compounds	Qvalue
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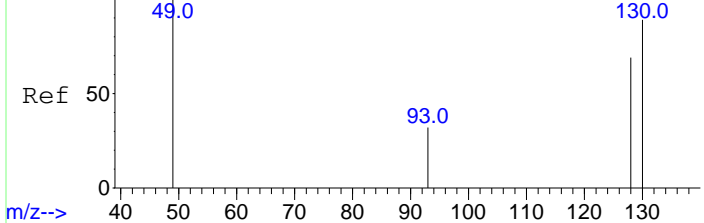
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00187.D
Acq On : 3 May 2016 12:09 pm
Operator : dlm
Sample : 4433 \ Unit 7
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 12:18:52 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration



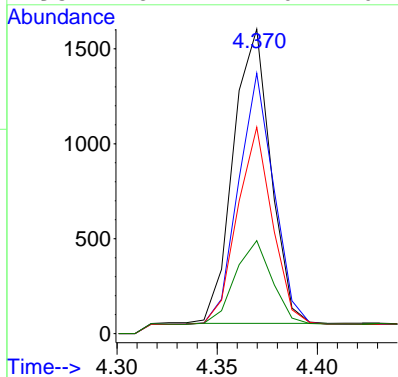
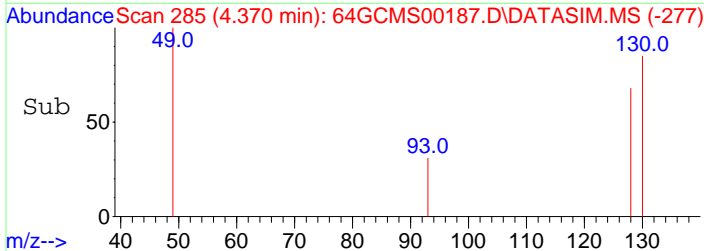
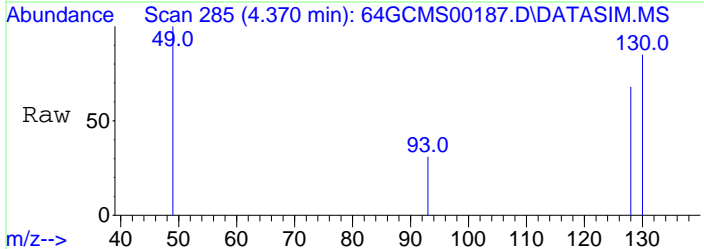
Abundance Scan 285 (4.370 min): 64GCMS00179.D\DATASIM.MS (-281)



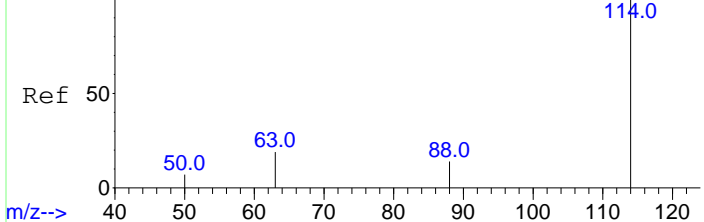
#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00187.D
 Acq: 3 May 2016 12:09 pm

Tgt Ion: 49 Resp: 2011

Ion	Ratio	Lower	Upper
49	100		
130	80.2	46.3	69.5#
128	62.6	35.7	53.5#
93	28.2	17.6	26.4#



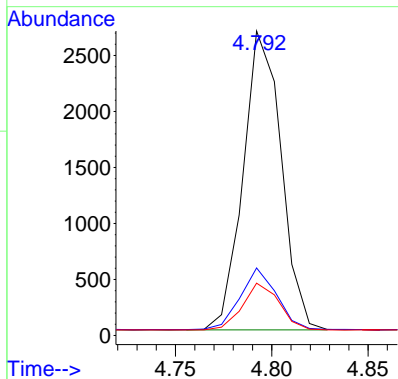
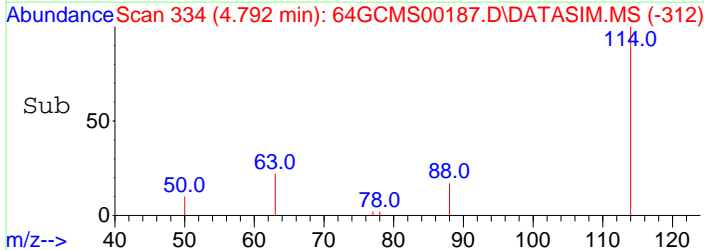
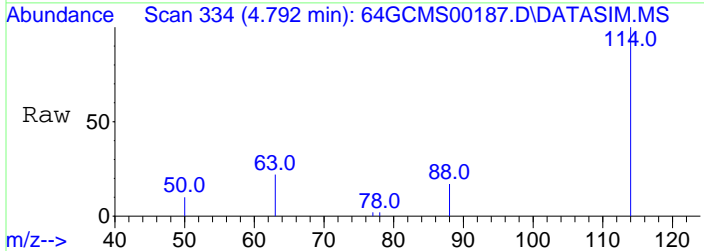
Abundance Scan 334 (4.792 min): 64GCMS00179.D\DATASIM.MS (-331)



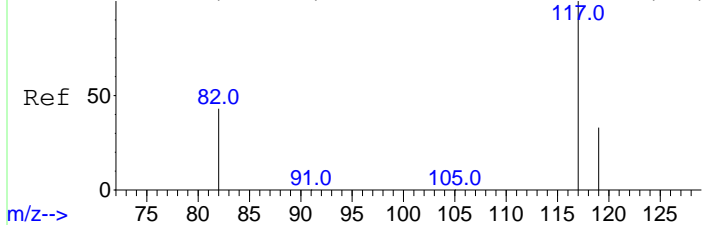
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. 0.000 min
 Lab File: 64GCMS00187.D
 Acq: 3 May 2016 12:09 pm

Tgt Ion: 114 Resp: 3676

Ion	Ratio	Lower	Upper
114	100		
63	19.5	19.2	28.8
88	15.0	13.7	20.5



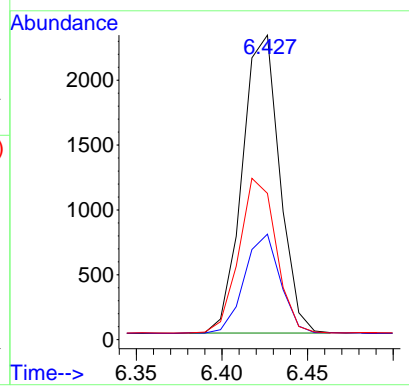
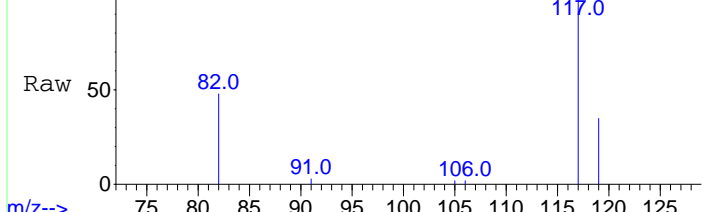
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



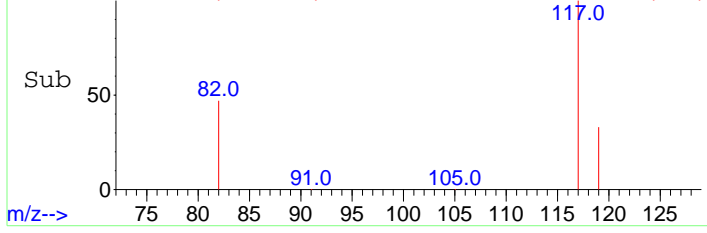
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.427 min Scan# 533
Delta R.T. 0.000 min
Lab File: 64GCMS00187.D
Acq: 3 May 2016 12:09 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	31.8	25.8	38.6
82	51.4	45.6	68.4

Abundance Scan 533 (6.427 min): 64GCMS00187.D\DATASIM.MS



Abundance Scan 533 (6.427 min): 64GCMS00187.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00188.D
 Acq On : 3 May 2016 2:13 pm
 Operator : dlm
 Sample : GM-SG-05 \ GMEH05
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

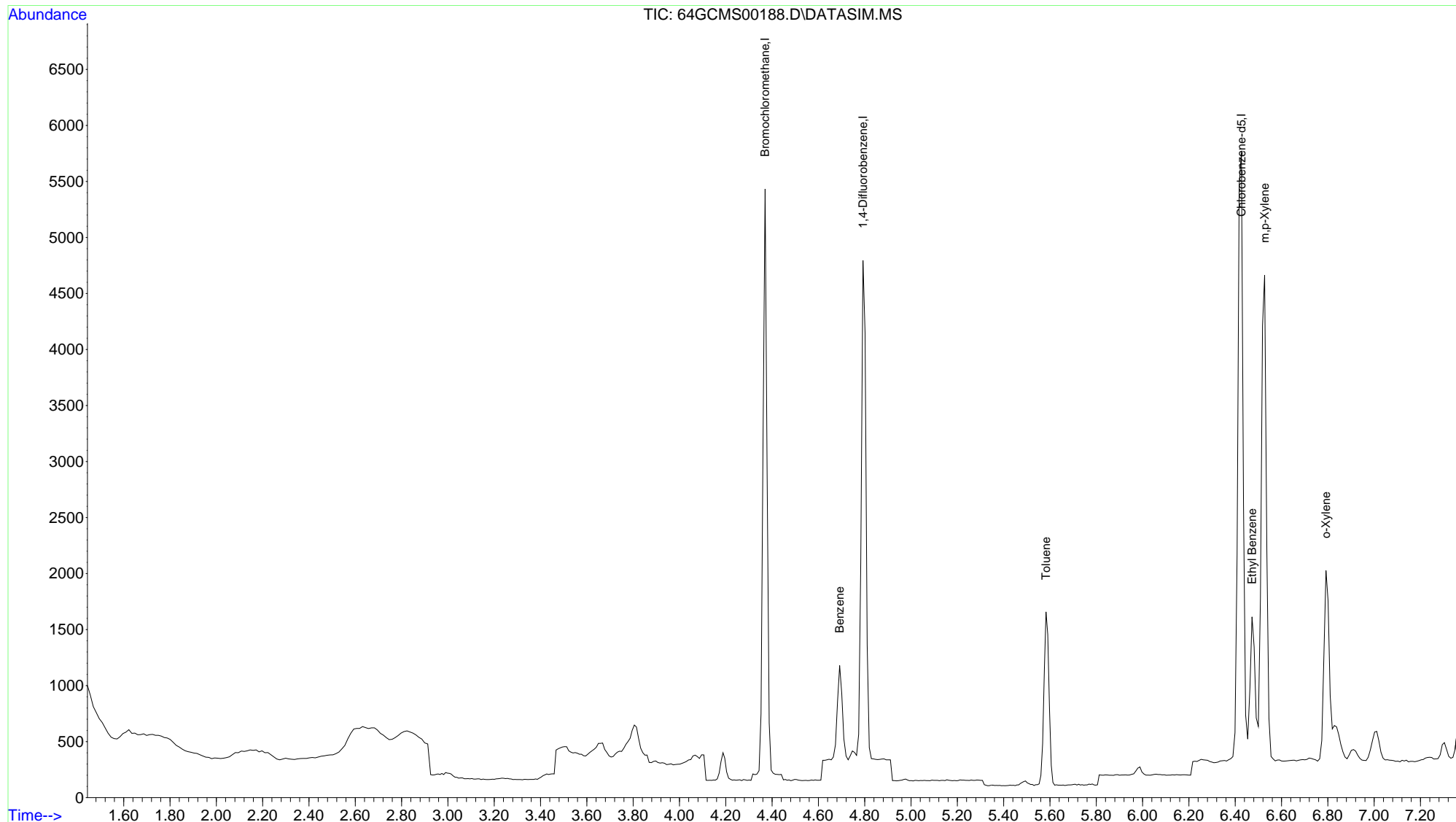
Quant Time: May 23 10:12:53 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2329	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	4362	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	4561	10.00	ppbv	0.00
Target Compounds						
10) Benzene	4.692	78	847m	2.43	ppbv	Qvalue
13) Toluene	5.583	91	1497	3.16	ppbv	95
15) Ethyl Benzene	6.472	91	1434	2.45	ppbv	96
16) m,p-Xylene	6.527	91	3793	8.00	ppbv	98
17) o-Xylene	6.792	91	1550	3.02	ppbv	# 94

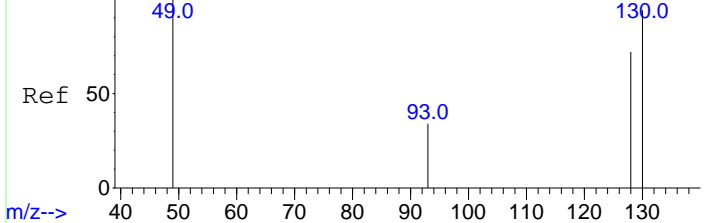
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00188.D
 Acq On : 3 May 2016 2:13 pm
 Operator : dlm
 Sample : GM-SG-05 \ GMEH05
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 23 10:12:53 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



Abundance Scan 285 (4.370 min): 64GCMS00232.D\DATASIM.MS (-281)

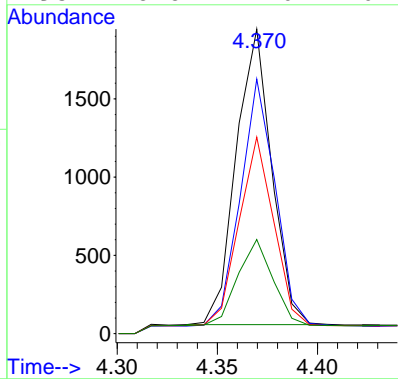
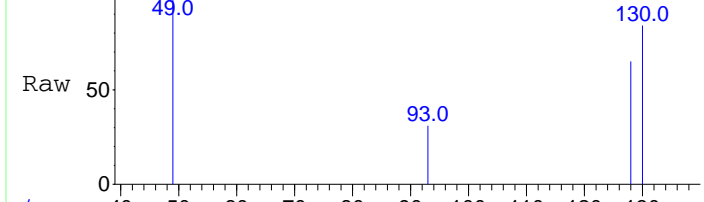


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00188.D
Acq: 3 May 2016 2:13 pm

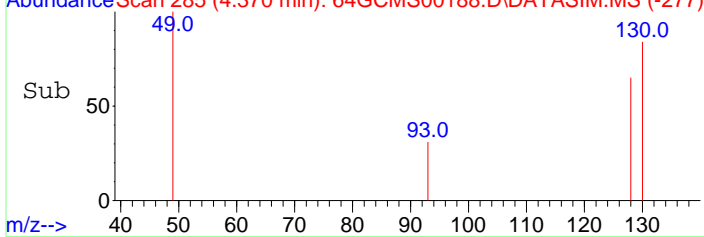
Tgt Ion: 49 Resp: 2329

Ion	Ratio	Lower	Upper
49	100		
130	82.3	46.3	69.5#
128	62.3	35.7	53.5#
93	28.8	17.6	26.4#

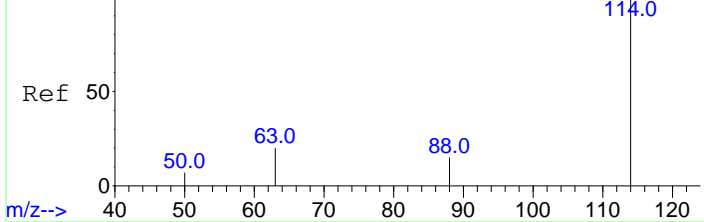
Abundance Scan 285 (4.370 min): 64GCMS00188.D\DATASIM.MS



Abundance Scan 285 (4.370 min): 64GCMS00188.D\DATASIM.MS (-277)



Abundance Scan 334 (4.792 min): 64GCMS00232.D\DATASIM.MS (-330)

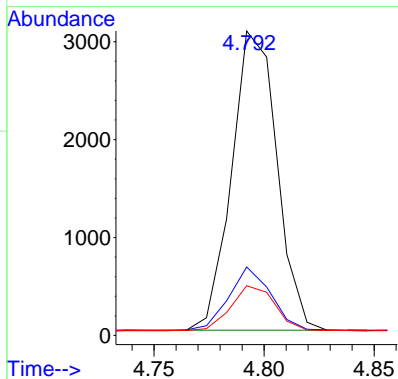
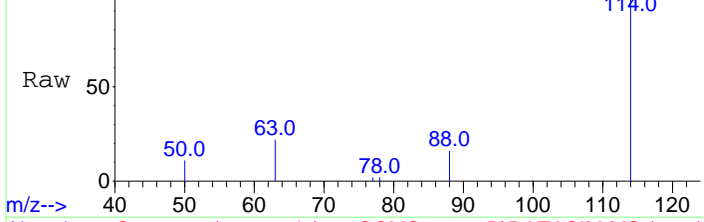


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. -0.000 min
Lab File: 64GCMS00188.D
Acq: 3 May 2016 2:13 pm

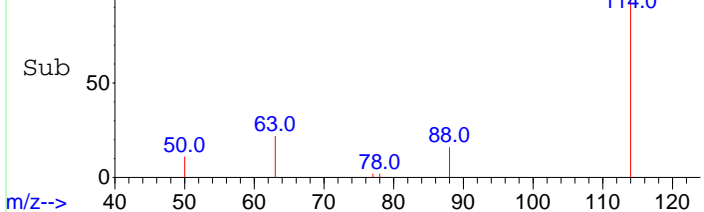
Tgt Ion: 114 Resp: 4362

Ion	Ratio	Lower	Upper
114	100		
63	20.2	19.2	28.8
88	14.5	13.7	20.5

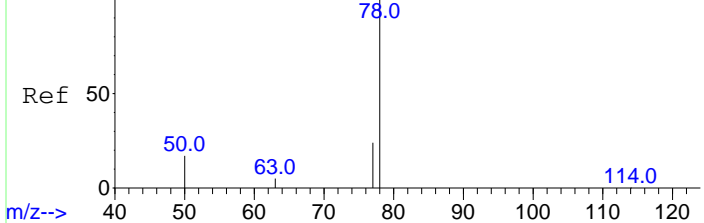
Abundance Scan 334 (4.792 min): 64GCMS00188.D\DATASIM.MS



Abundance Scan 334 (4.792 min): 64GCMS00188.D\DATASIM.MS (-312)

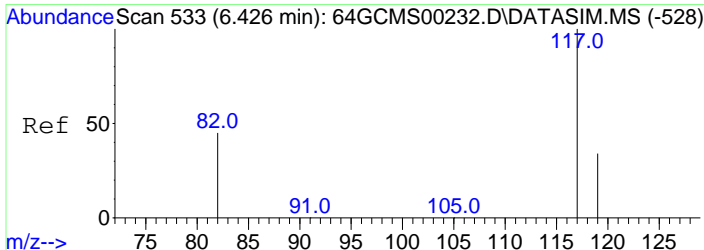
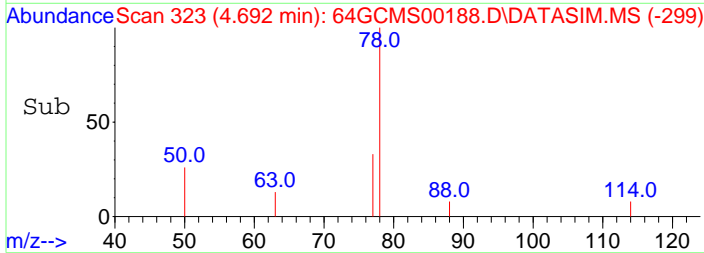
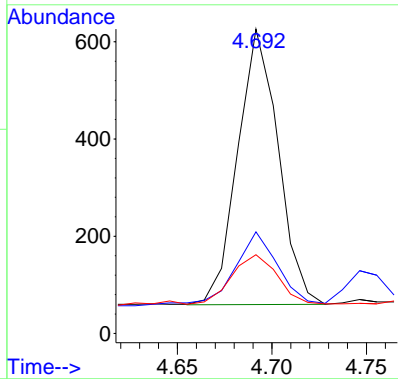
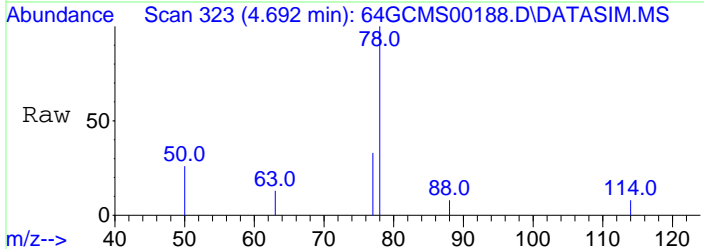


Abundance Scan 323 (4.691 min): 64GCMS00232.D\DATASIM.MS (-319)



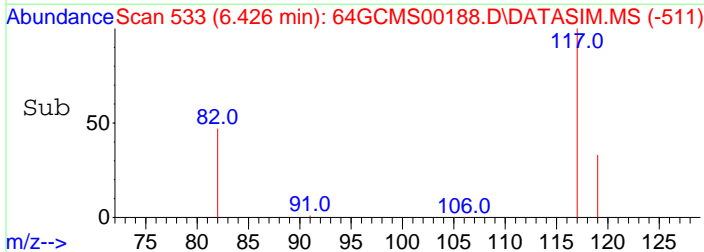
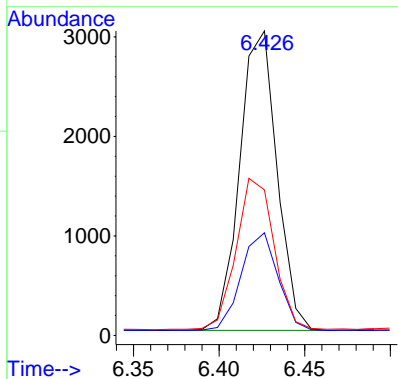
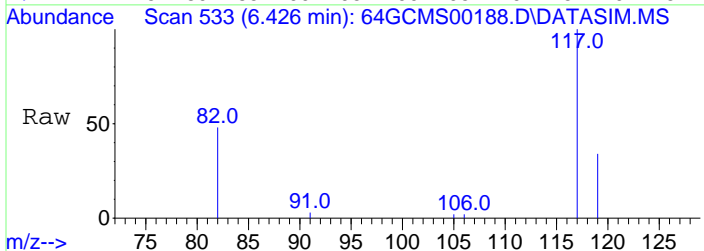
#10
Benzene
Concen: 2.43 ppbv m
RT: 4.692 min Scan# 323
Delta R.T. -0.000 min
Lab File: 64GCMS00188.D
Acq: 3 May 2016 2:13 pm

Tgt Ion	Resp	Lower	Upper
78	100		
77	51.7	18.2	27.4#
50	39.4	16.6	24.8#



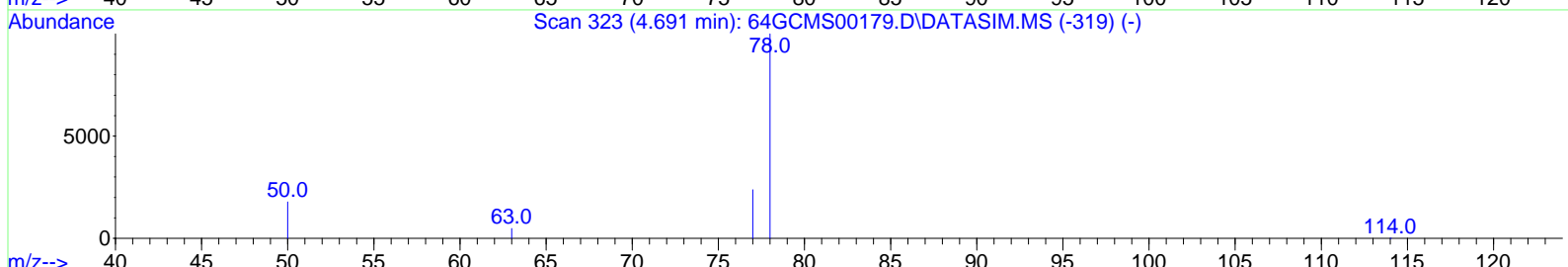
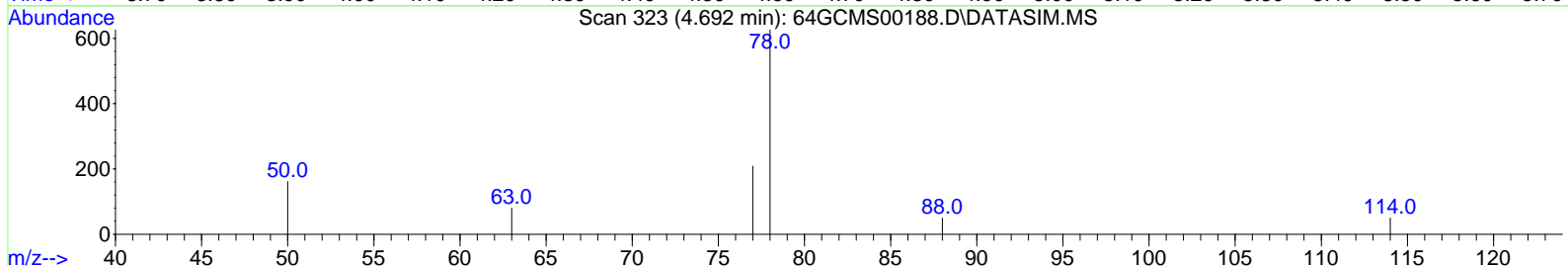
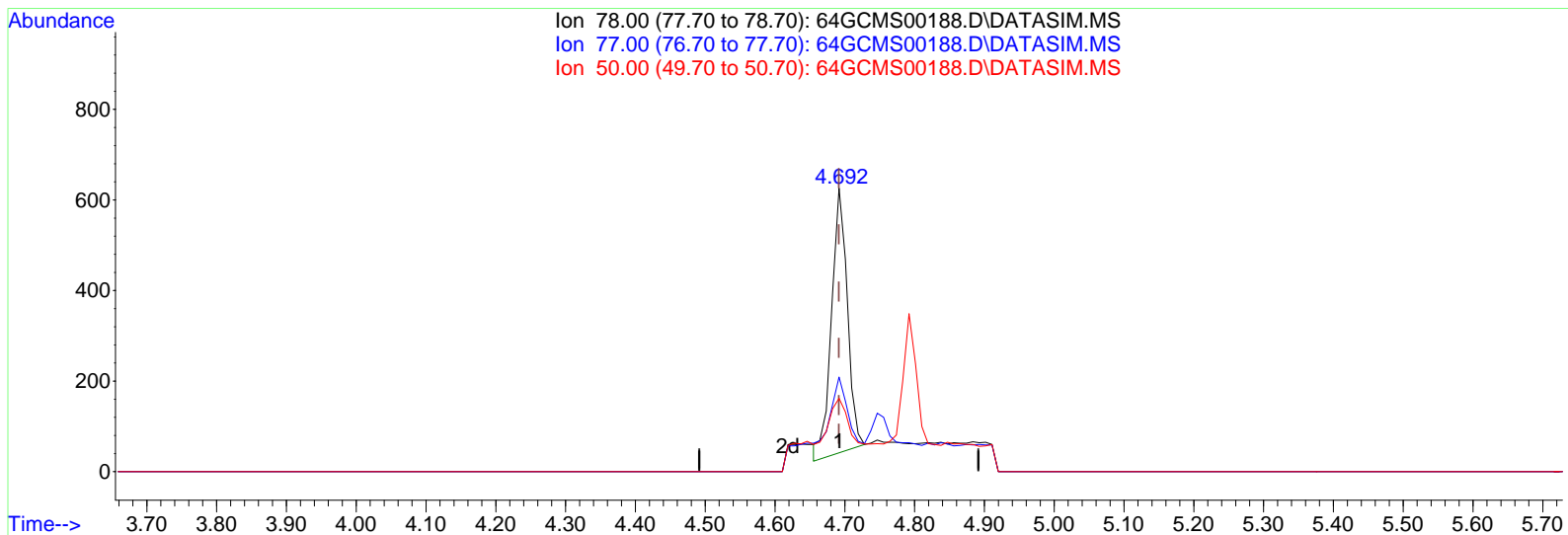
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00188.D
Acq: 3 May 2016 2:13 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.4	25.8	38.6
82	51.2	45.6	68.4



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00188.D
 Acq On : 3 May 2016 2:13 pm
 Operator : dlm
 Sample : GM-SG-05 \ GMEH05
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 14:21:25 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



TIC: 64GCMS00188.D\DATASIM.MS

(10) Benzene

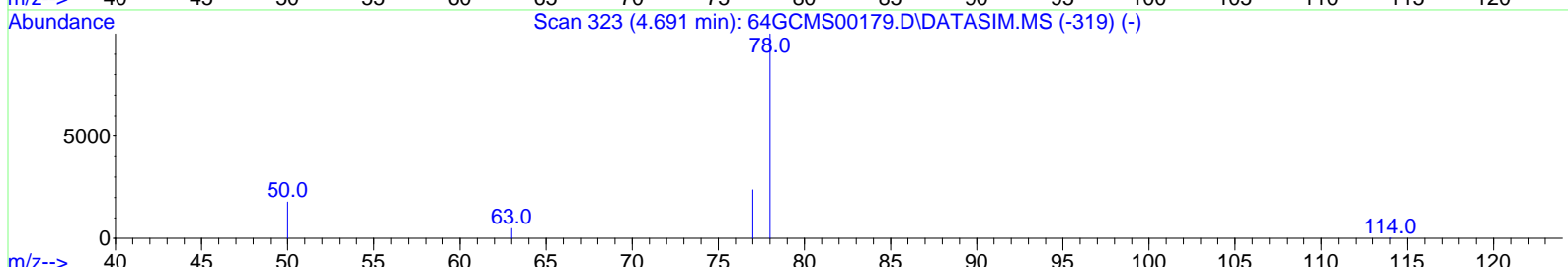
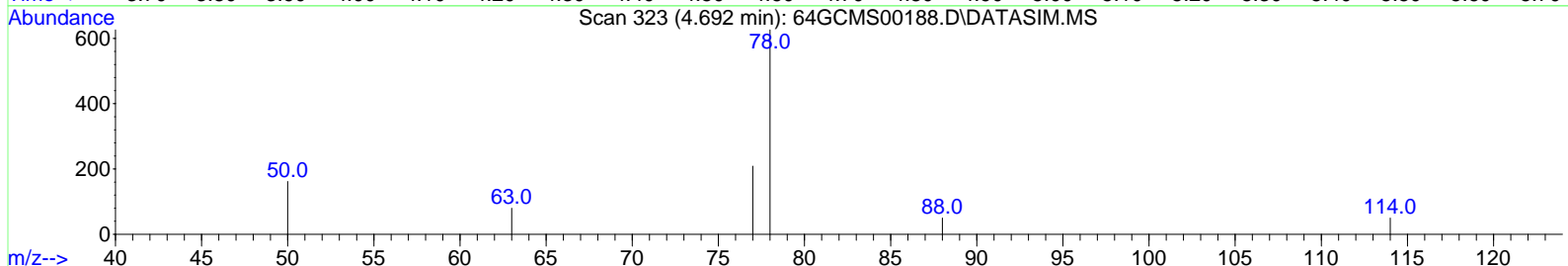
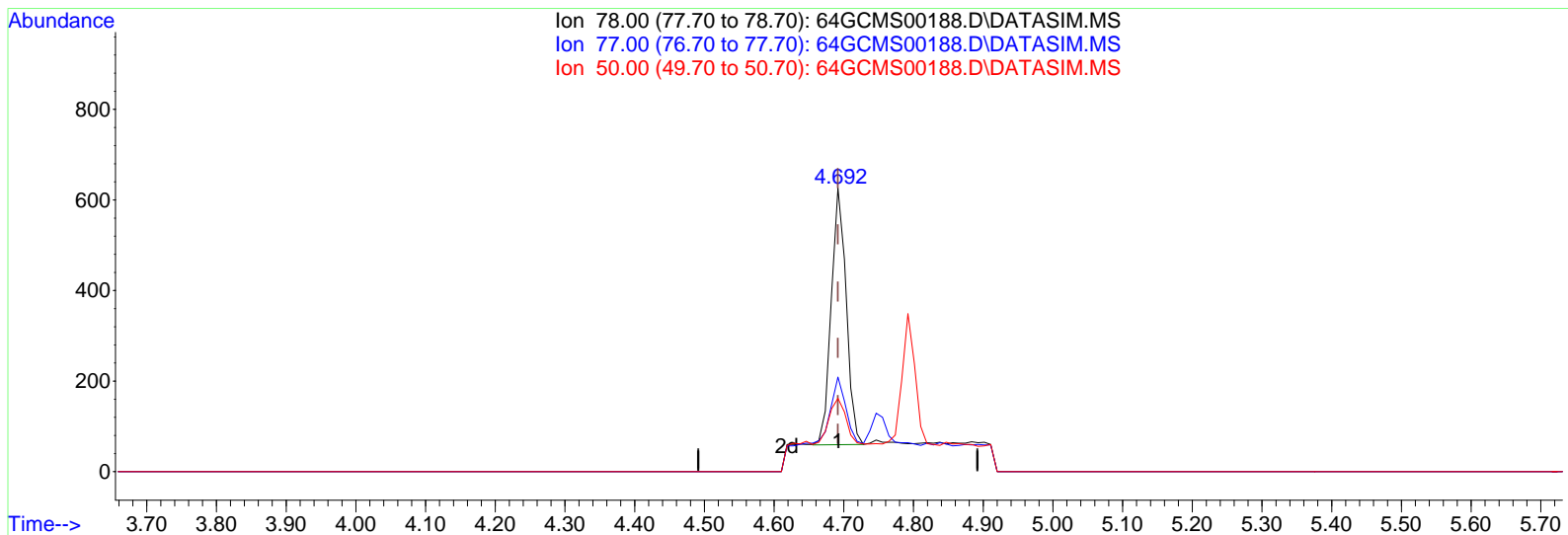
4.692min (-0.000) 2.66 ppbv

response 926

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	47.30#
50.00	20.70	36.07#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00188.D
 Acq On : 3 May 2016 2:13 pm
 Operator : dlm
 Sample : GM-SG-05 \ GMEH05
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 14:21:25 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



TIC: 64GCMS00188.D\DATASIM.MS

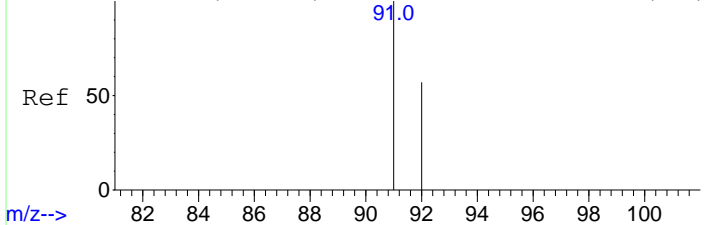
(10) Benzene

4.692min (-0.000) 2.43 ppbv m

response 847

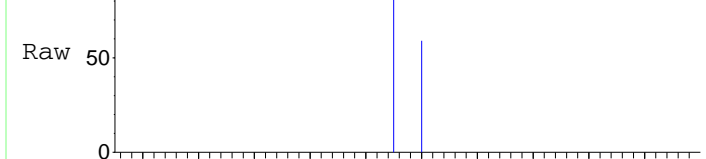
Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	51.71#
50.00	20.70	39.43#
0.00	0.00	0.00

Abundance Scan 433 (5.583 min): 64GCMS00232.D\DATASIM.MS (-428)



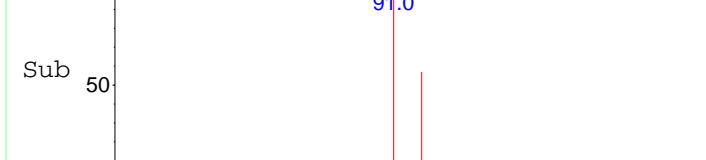
m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00188.D\DATASIM.MS



m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00188.D\DATASIM.MS (-406)

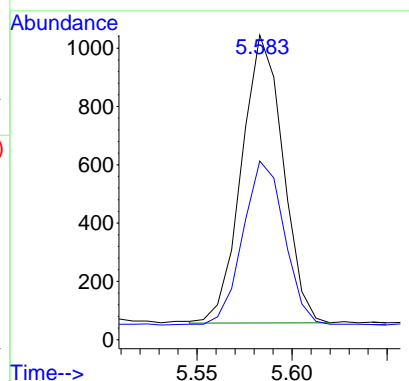


m/z-->

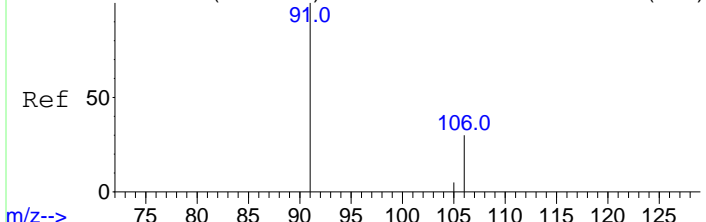
#13
Toluene
Concen: 3.16 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00188.D
Acq: 3 May 2016 2:13 pm

Tgt Ion: 91 Resp: 1497

Ion	Ratio	Lower	Upper
91	100		
92	56.5	48.0	72.0

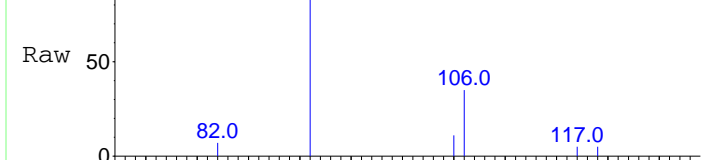


Abundance Scan 538 (6.472 min): 64GCMS00232.D\DATASIM.MS (-534)



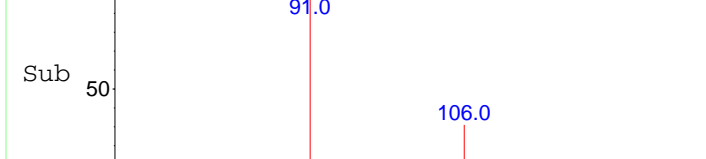
m/z-->

Abundance Scan 538 (6.472 min): 64GCMS00188.D\DATASIM.MS



m/z-->

Abundance Scan 538 (6.472 min): 64GCMS00188.D\DATASIM.MS (-516)

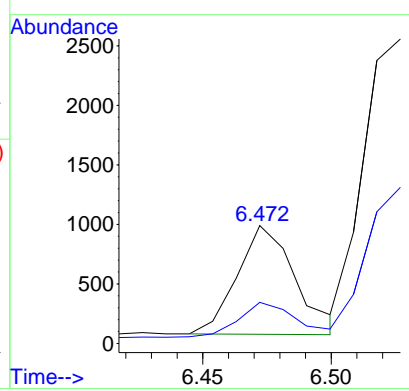


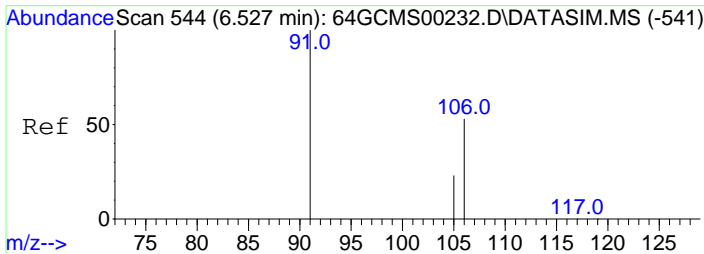
m/z-->

#15
Ethyl Benzene
Concen: 2.45 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00188.D
Acq: 3 May 2016 2:13 pm

Tgt Ion: 91 Resp: 1434

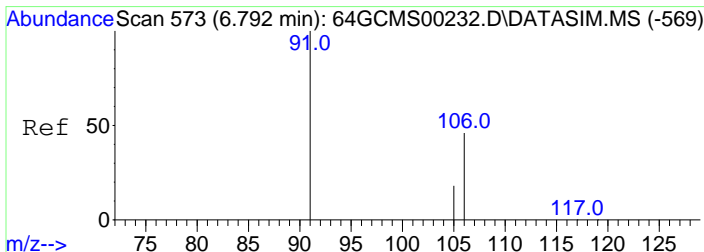
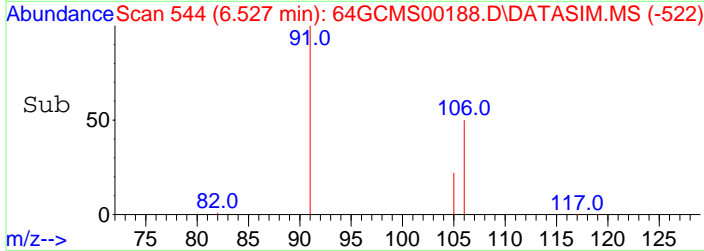
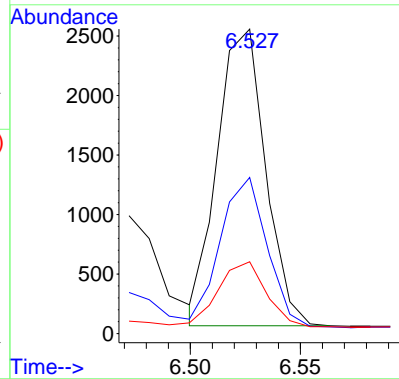
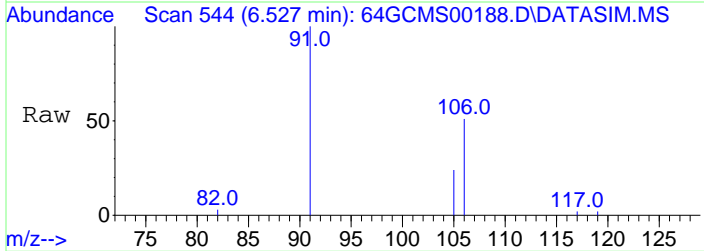
Ion	Ratio	Lower	Upper
91	100		
106	32.6	24.2	36.2





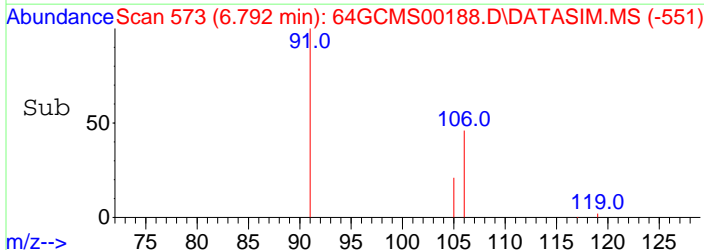
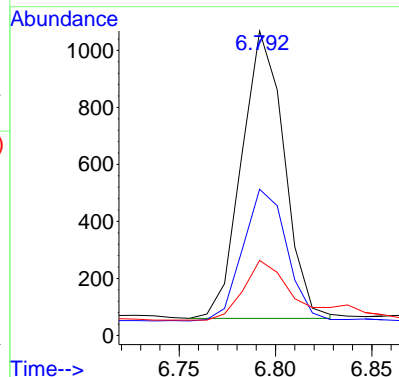
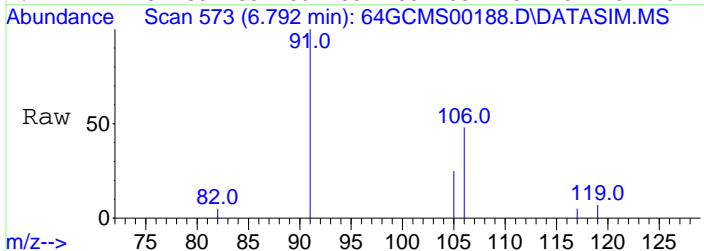
#16
 m,p-Xylene
 Concen: 8.00 ppbv
 RT: 6.527 min Scan# 544
 Delta R.T. -0.000 min
 Lab File: 64GCMS00188.D
 Acq: 3 May 2016 2:13 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	48.8	37.7	56.5
105	21.8	17.0	25.4



#17
 o-Xylene
 Concen: 3.02 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00188.D
 Acq: 3 May 2016 2:13 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	47.4	35.4	53.2
105	21.8	14.0	21.0#



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00189.D
 Acq On : 3 May 2016 2:26 pm
 Operator : dlm
 Sample : GM-SG-01 \ GMEH01
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

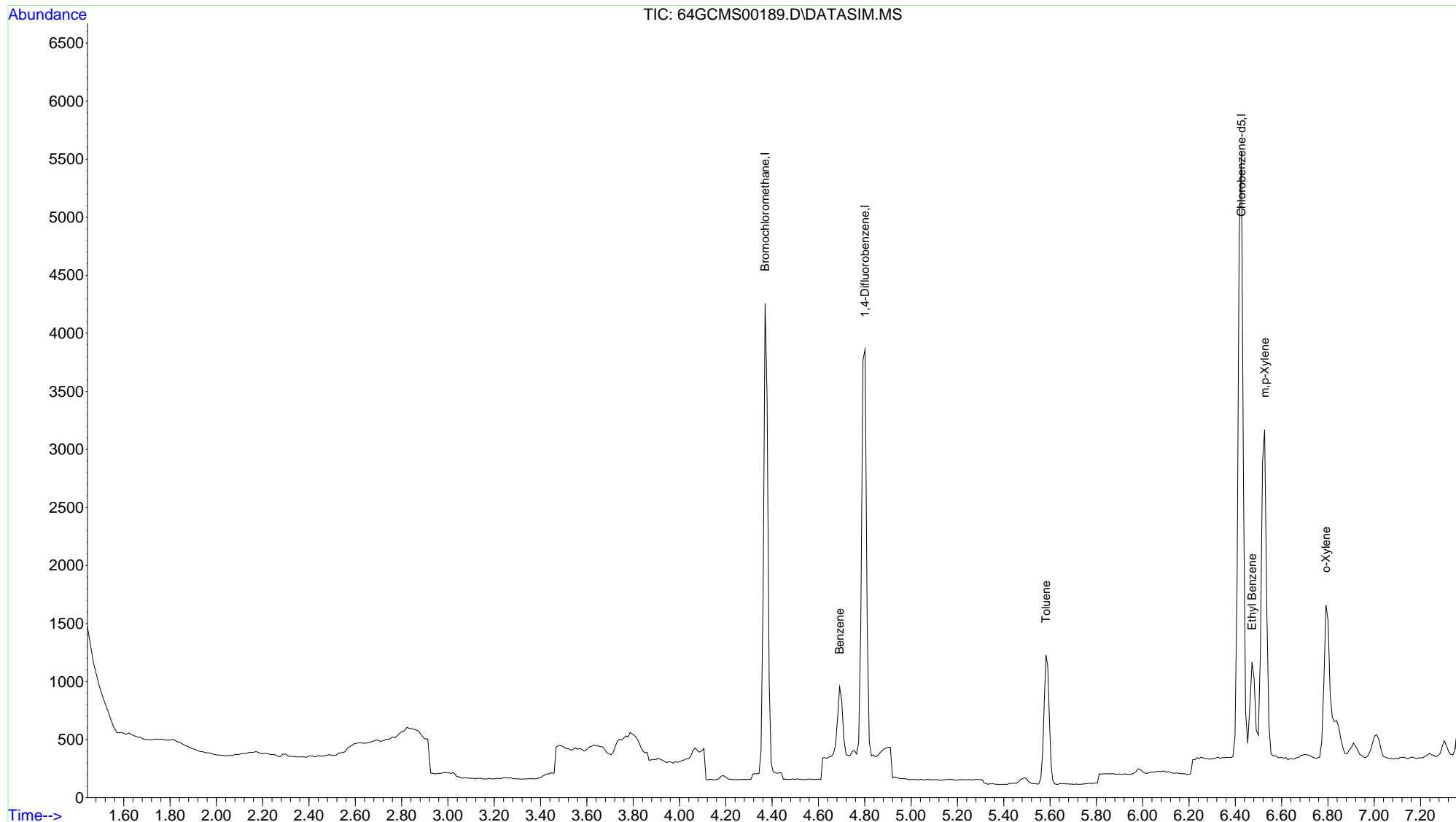
Quant Time: May 03 14:42:08 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

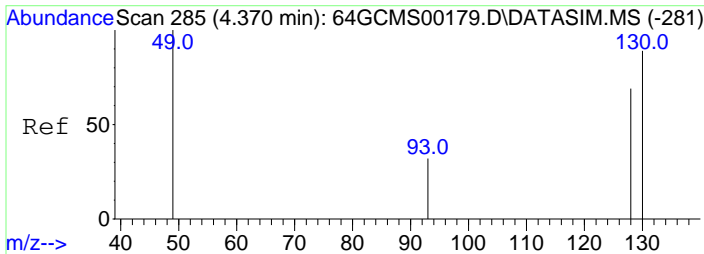
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	1950	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.801	114	3631	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	4237	10.00	ppbv	0.00
Target Compounds						
10) Benzene	4.692	78	598m	2.06	ppbv	Qvalue
13) Toluene	5.583	91	1114	2.53	ppbv	96
15) Ethyl Benzene	6.472	91	949	1.75	ppbv	97
16) m,p-Xylene	6.527	91	2474	5.62	ppbv	97
17) o-Xylene	6.792	91	1172	2.45	ppbv	# 93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00189.D
 Acq On : 3 May 2016 2:26 pm
 Operator : dlm
 Sample : GM-SG-01 \ GMEH01
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 14:42:08 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

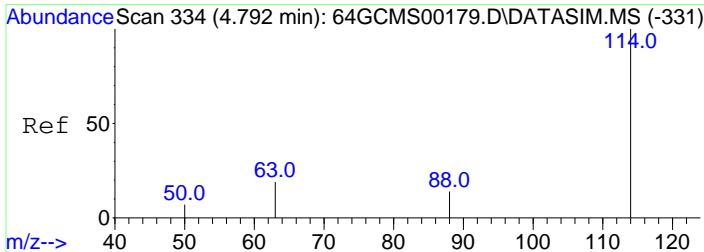
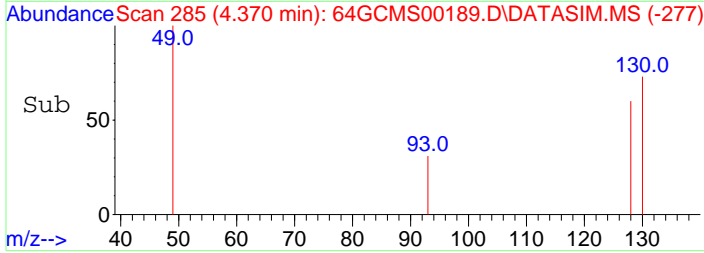
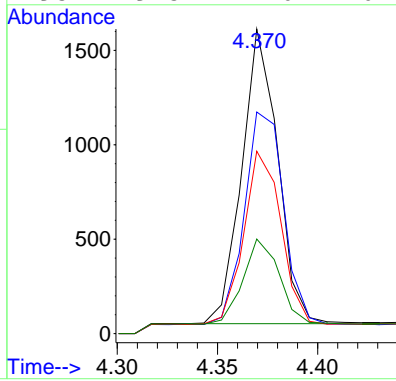
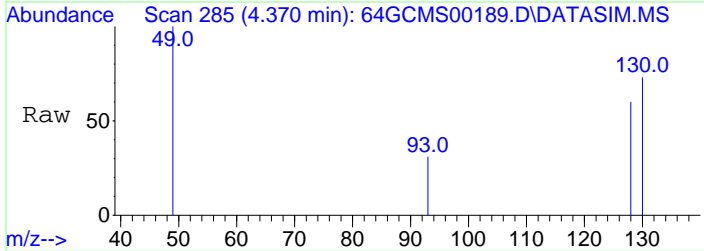




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00189.D
 Acq: 3 May 2016 2:26 pm

Tgt Ion: 49 Resp: 1950

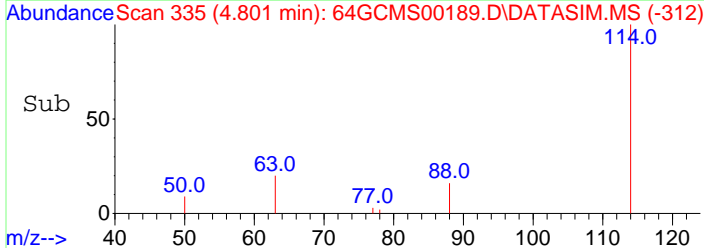
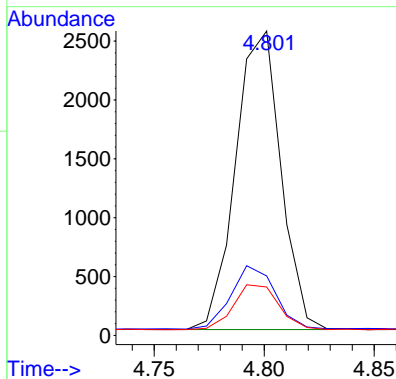
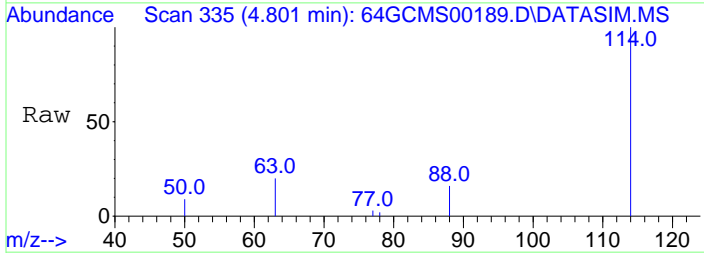
Ion	Ratio	Lower	Upper
49	100		
130	78.9	46.3	69.5#
128	60.7	35.7	53.5#
93	29.3	17.6	26.4#



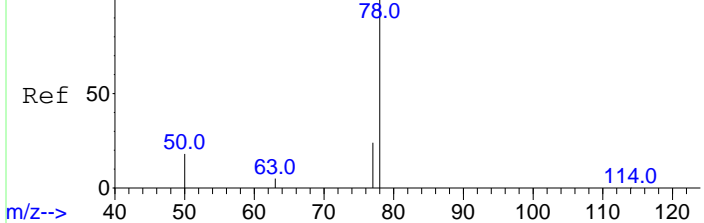
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.801 min Scan# 335
 Delta R.T. 0.009 min
 Lab File: 64GCMS00189.D
 Acq: 3 May 2016 2:26 pm

Tgt Ion: 114 Resp: 3631

Ion	Ratio	Lower	Upper
114	100		
63	21.4	19.2	28.8
88	15.0	13.7	20.5



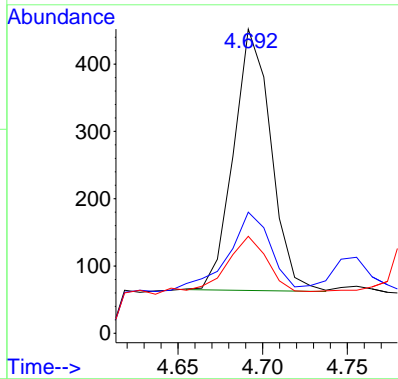
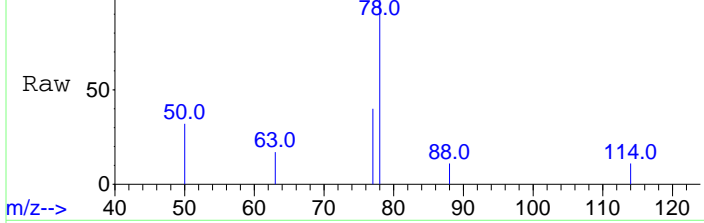
Abundance Scan 323 (4.691 min): 64GCMS00179.D\DATASIM.MS (-319)



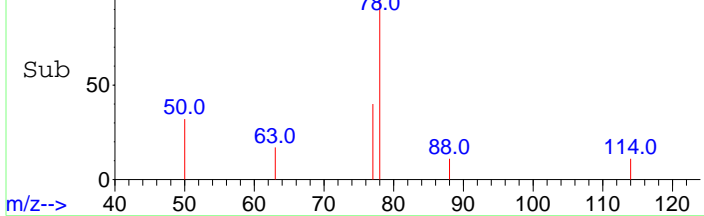
#10
Benzene
Concen: 2.06 ppbv m
RT: 4.692 min Scan# 323
Delta R.T. -0.000 min
Lab File: 64GCMS00189.D
Acq: 3 May 2016 2:26 pm

Tgt Ion	Resp	Lower	Upper
78	100		
77	70.4	18.2	27.4#
50	61.9	16.6	24.8#

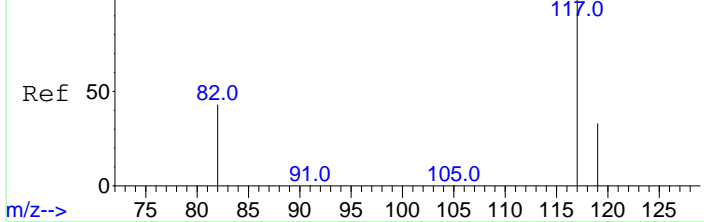
Abundance Scan 323 (4.692 min): 64GCMS00189.D\DATASIM.MS



Abundance Scan 323 (4.692 min): 64GCMS00189.D\DATASIM.MS (-299)



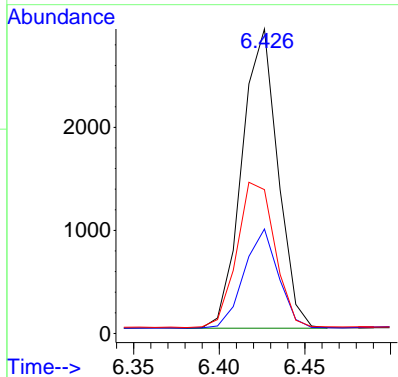
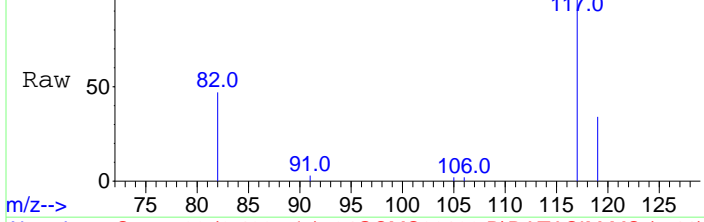
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



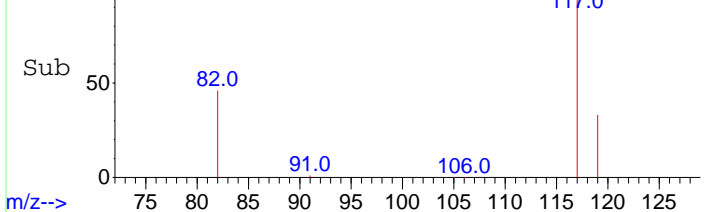
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00189.D
Acq: 3 May 2016 2:26 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	31.4	25.8	38.6
82	51.6	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00189.D\DATASIM.MS

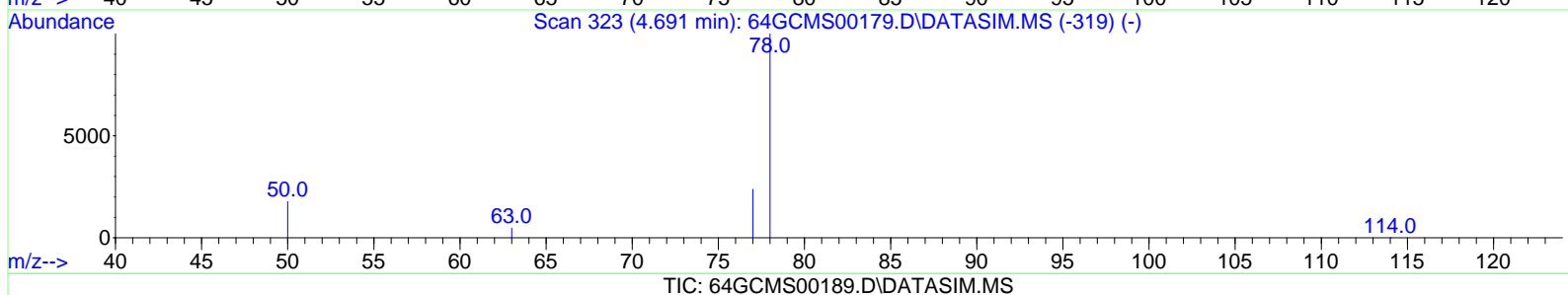
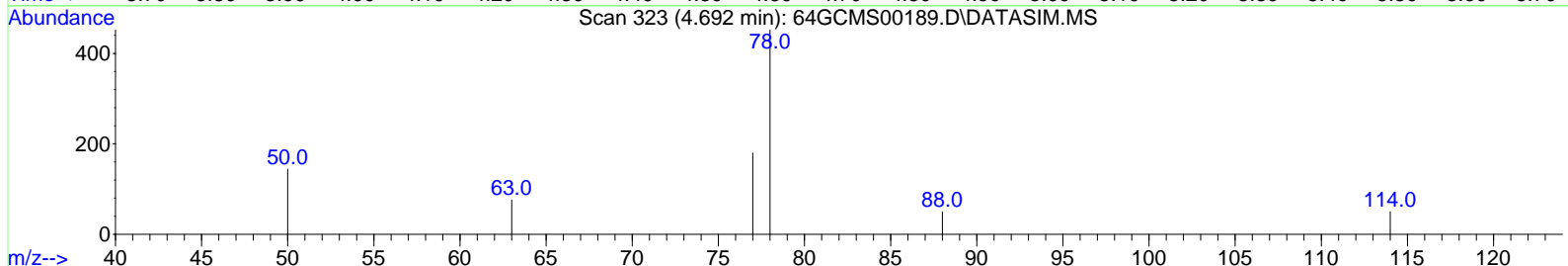
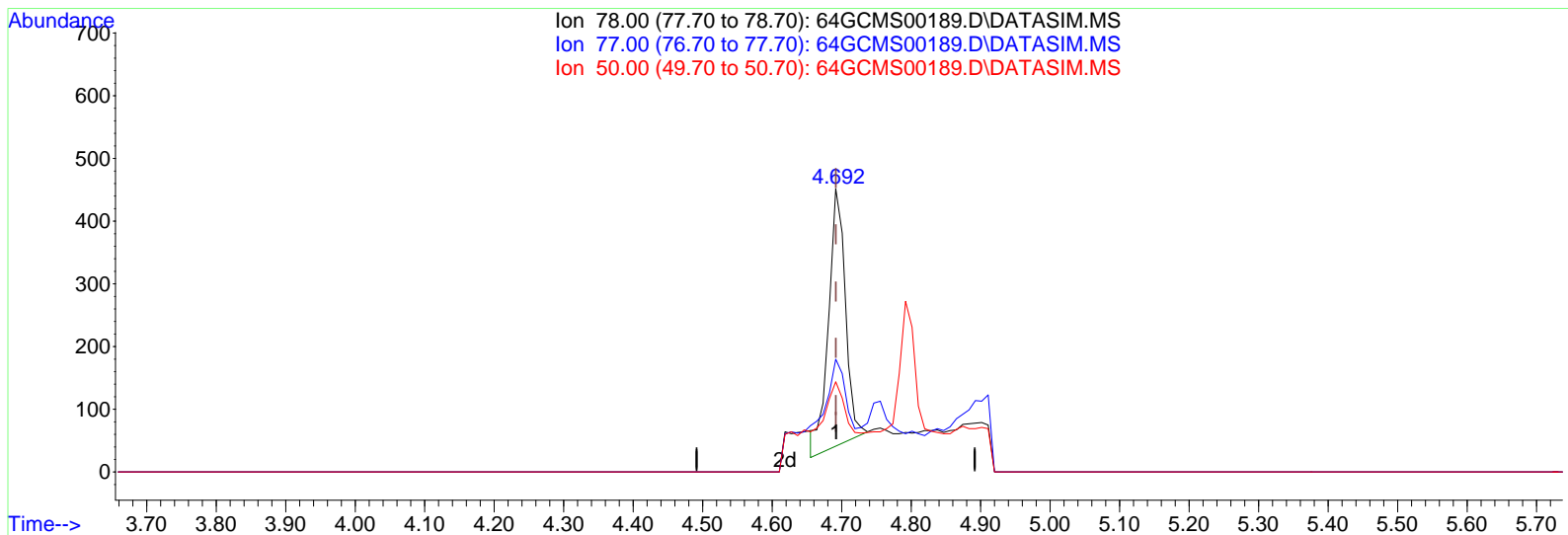


Abundance Scan 533 (6.426 min): 64GCMS00189.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00189.D
 Acq On : 3 May 2016 2:26 pm
 Operator : dlm
 Sample : GM-SG-01 \ GMEH01
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 14:34:19 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



(10) Benzene

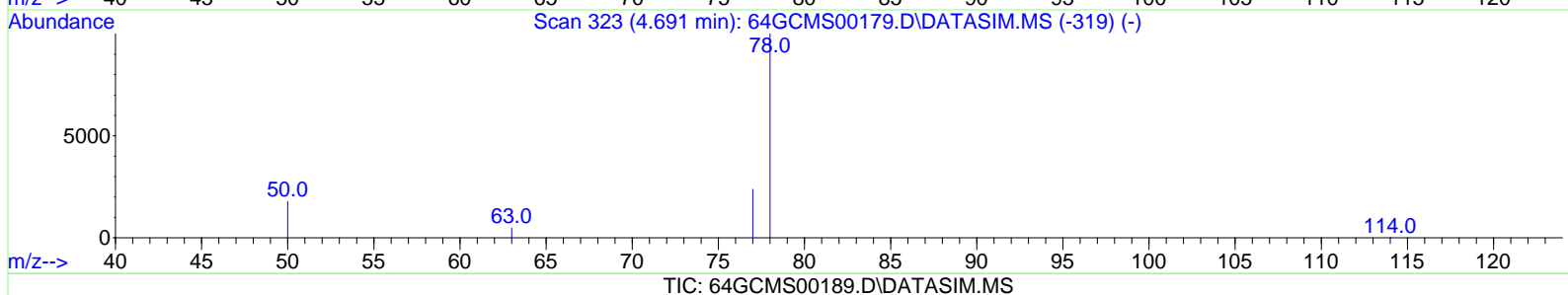
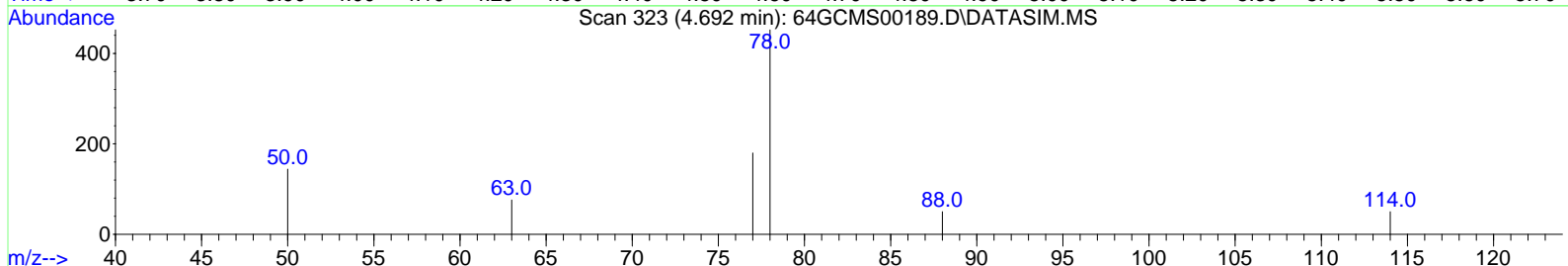
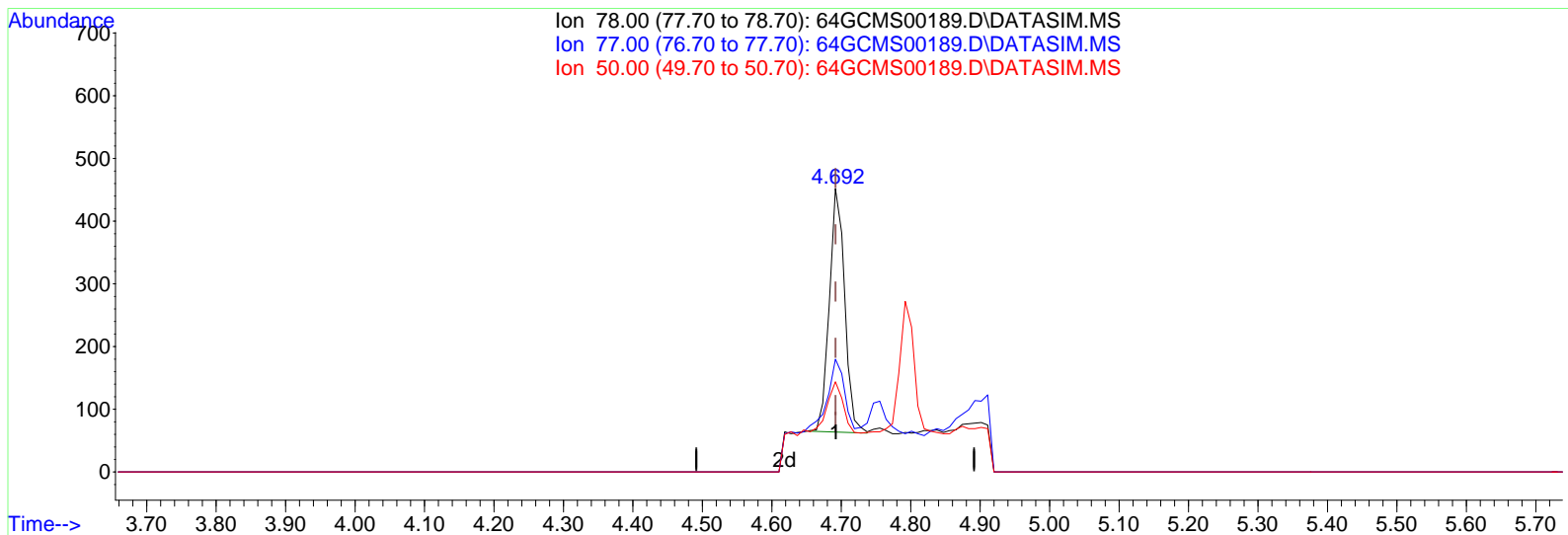
4.692min (-0.000) 2.40 ppbv

response 696

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	60.49#
50.00	20.70	53.16#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00189.D
 Acq On : 3 May 2016 2:26 pm
 Operator : dlm
 Sample : GM-SG-01 \ GMEH01
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 14:34:19 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



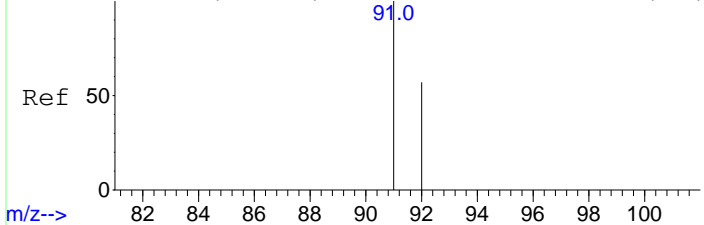
(10) Benzene

4.692min (-0.000) 2.06 ppbv m

response 598

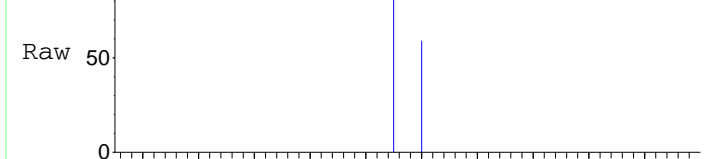
Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	70.40#
50.00	20.70	61.87#
0.00	0.00	0.00

Abundance Scan 433 (5.583 min): 64GCMS00179.D\DATASIM.MS (-428)



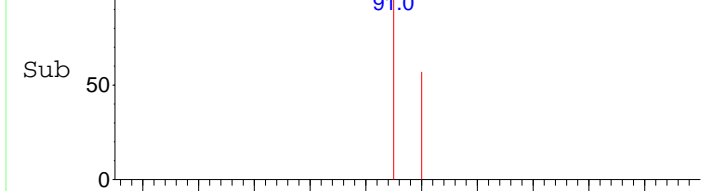
m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00189.D\DATASIM.MS



m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00189.D\DATASIM.MS (-406)

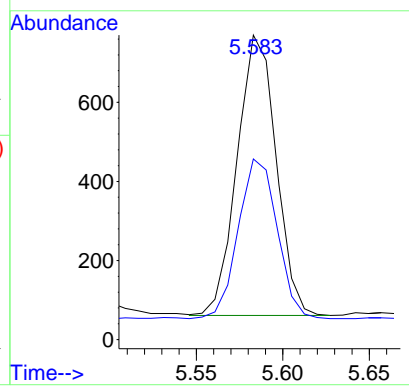


m/z-->

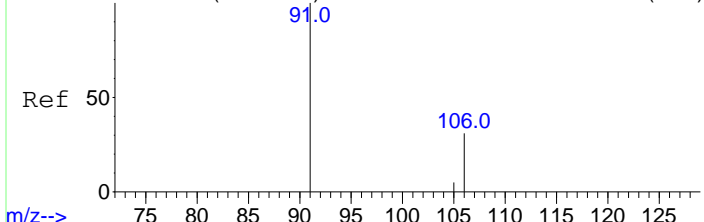
#13
Toluene
Concen: 2.53 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00189.D
Acq: 3 May 2016 2:26 pm

Tgt Ion: 91 Resp: 1114

Ion	Ratio	Lower	Upper
91	100		
92	56.8	48.0	72.0

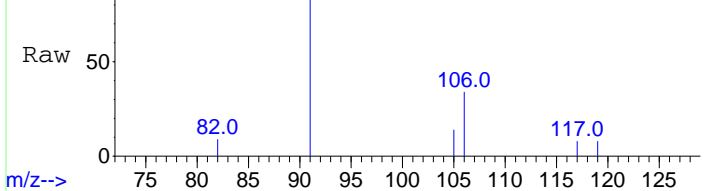


Abundance Scan 538 (6.472 min): 64GCMS00179.D\DATASIM.MS (-534)



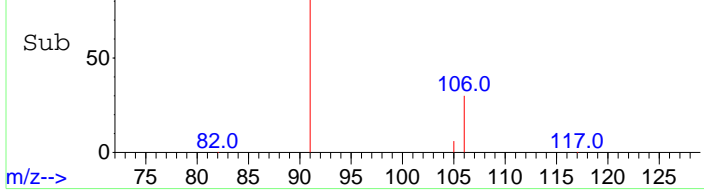
m/z-->

Abundance Scan 538 (6.472 min): 64GCMS00189.D\DATASIM.MS



m/z-->

Abundance Scan 538 (6.472 min): 64GCMS00189.D\DATASIM.MS (-516)

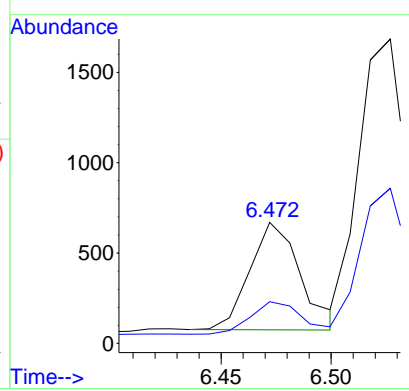


m/z-->

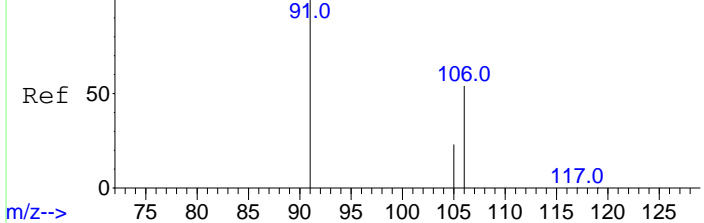
#15
Ethyl Benzene
Concen: 1.75 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00189.D
Acq: 3 May 2016 2:26 pm

Tgt Ion: 91 Resp: 949

Ion	Ratio	Lower	Upper
91	100		
106	31.6	24.2	36.2

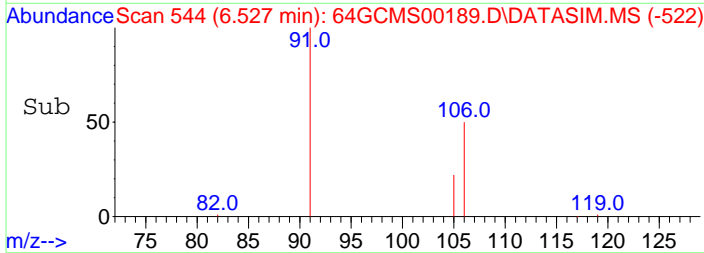
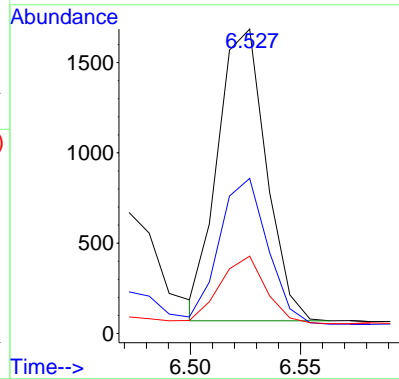
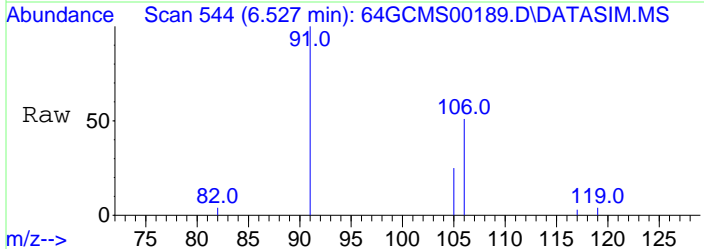


Abundance Scan 544 (6.527 min): 64GCMS00179.D\DATASIM.MS (-541)

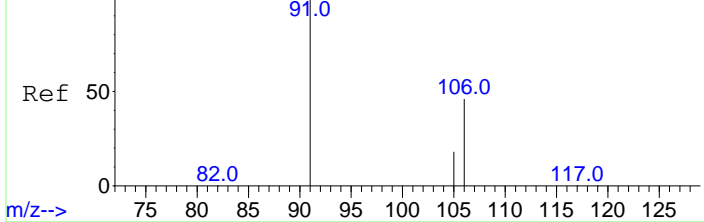


#16
 m,p-Xylene
 Concen: 5.62 ppbv
 RT: 6.527 min Scan# 544
 Delta R.T. -0.000 min
 Lab File: 64GCMS00189.D
 Acq: 3 May 2016 2:26 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	49.6	37.7	56.5
105	22.4	17.0	25.4

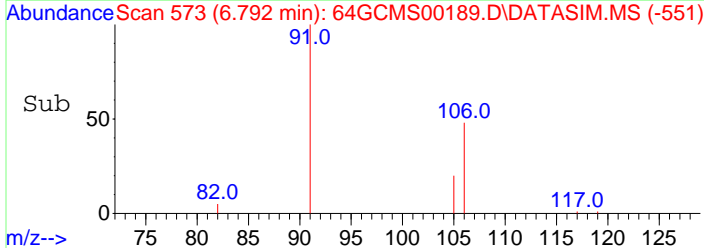
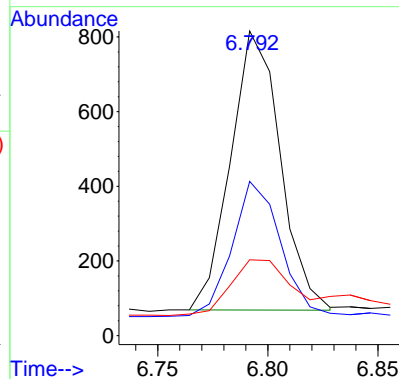
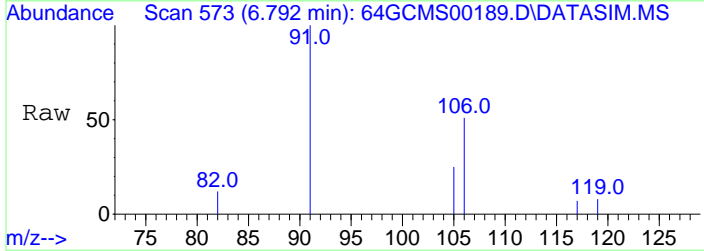


Abundance Scan 573 (6.792 min): 64GCMS00179.D\DATASIM.MS (-569)



#17
 o-Xylene
 Concen: 2.45 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00189.D
 Acq: 3 May 2016 2:26 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	47.1	35.4	53.2
105	24.1	14.0	21.0#



Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00190.D
Acq On : 3 May 2016 2:38 pm
Operator : dlm
Sample : 4434 \ Unit 9
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 14:51:20 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration

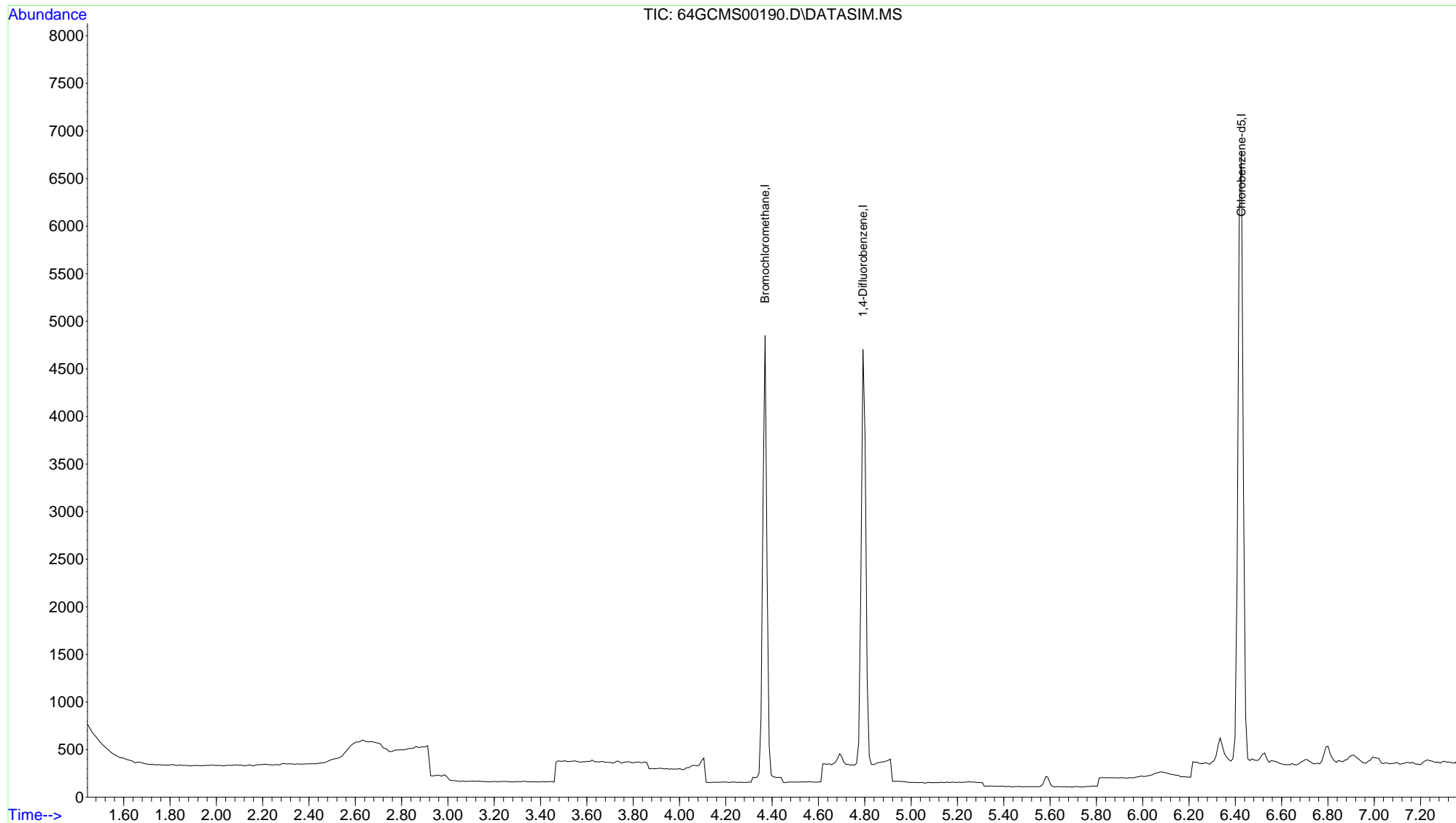
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2123	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	4131	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	5336	10.00	ppbv	0.00

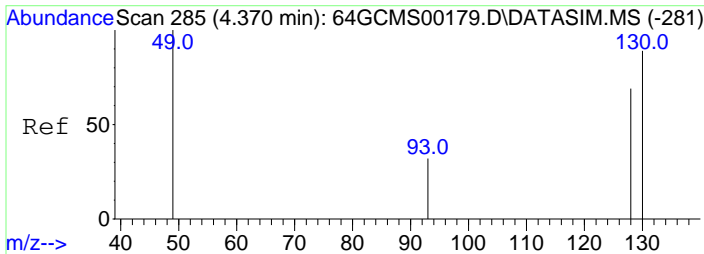
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00190.D
 Acq On : 3 May 2016 2:38 pm
 Operator : dlm
 Sample : 4434 \ Unit 9
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 14:51:20 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

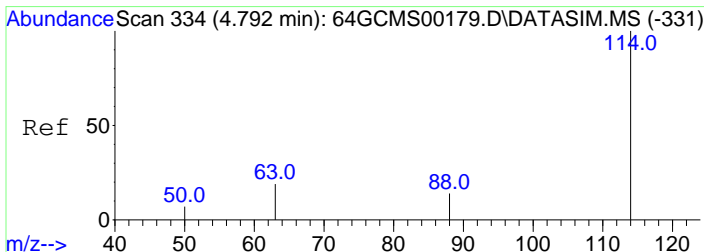
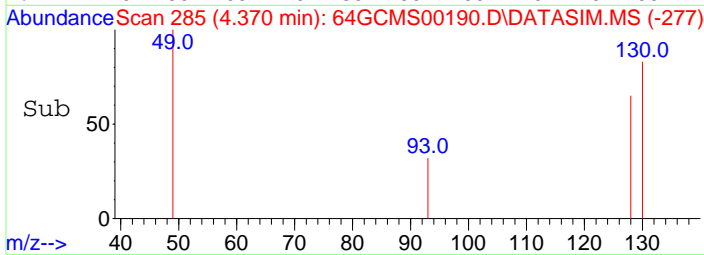
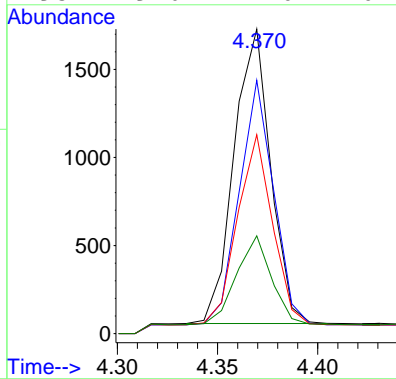
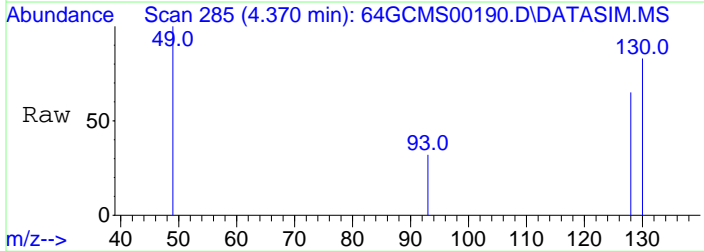




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00190.D
 Acq: 3 May 2016 2:38 pm

Tgt Ion: 49 Resp: 2123

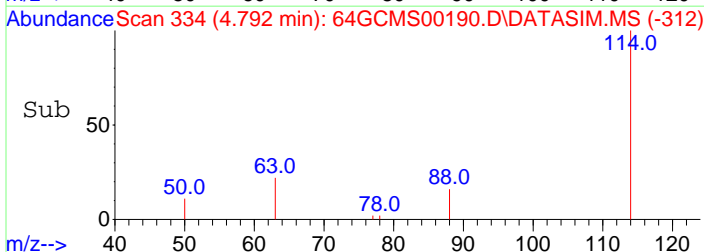
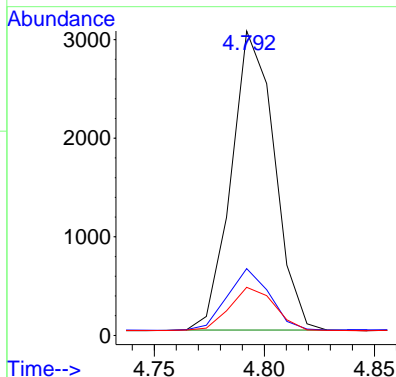
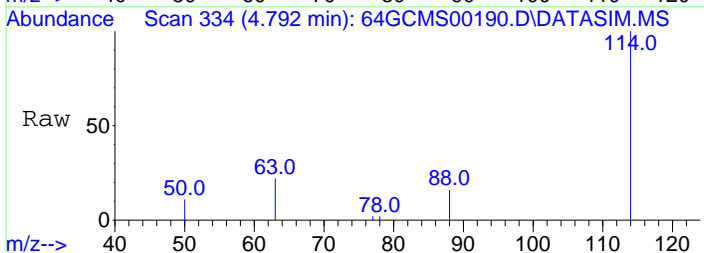
Ion	Ratio	Lower	Upper
49	100		
130	78.0	46.3	69.5#
128	61.9	35.7	53.5#
93	29.0	17.6	26.4#



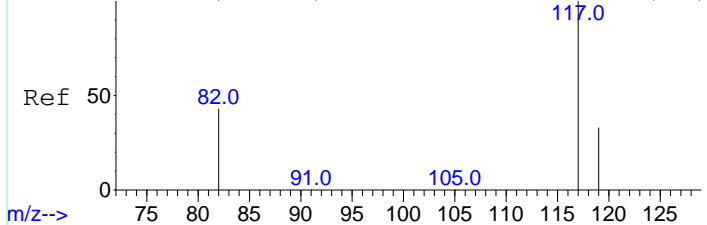
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00190.D
 Acq: 3 May 2016 2:38 pm

Tgt Ion: 114 Resp: 4131

Ion	Ratio	Lower	Upper
114	100		
63	20.4	19.2	28.8
88	14.9	13.7	20.5



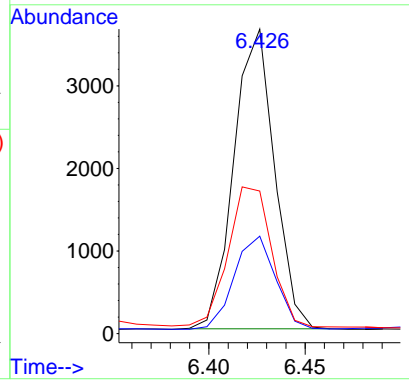
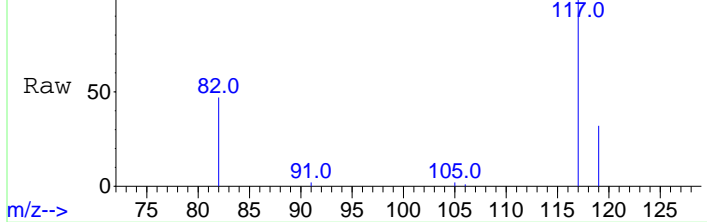
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



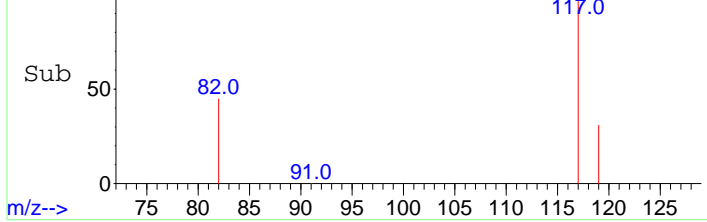
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00190.D
Acq: 3 May 2016 2:38 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	31.6	25.8	38.6
82	50.3	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00190.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00190.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00191.D
Acq On : 3 May 2016 3:13 pm
Operator : dlm
Sample : 51077 \ Unit 12
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 15:23:36 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration

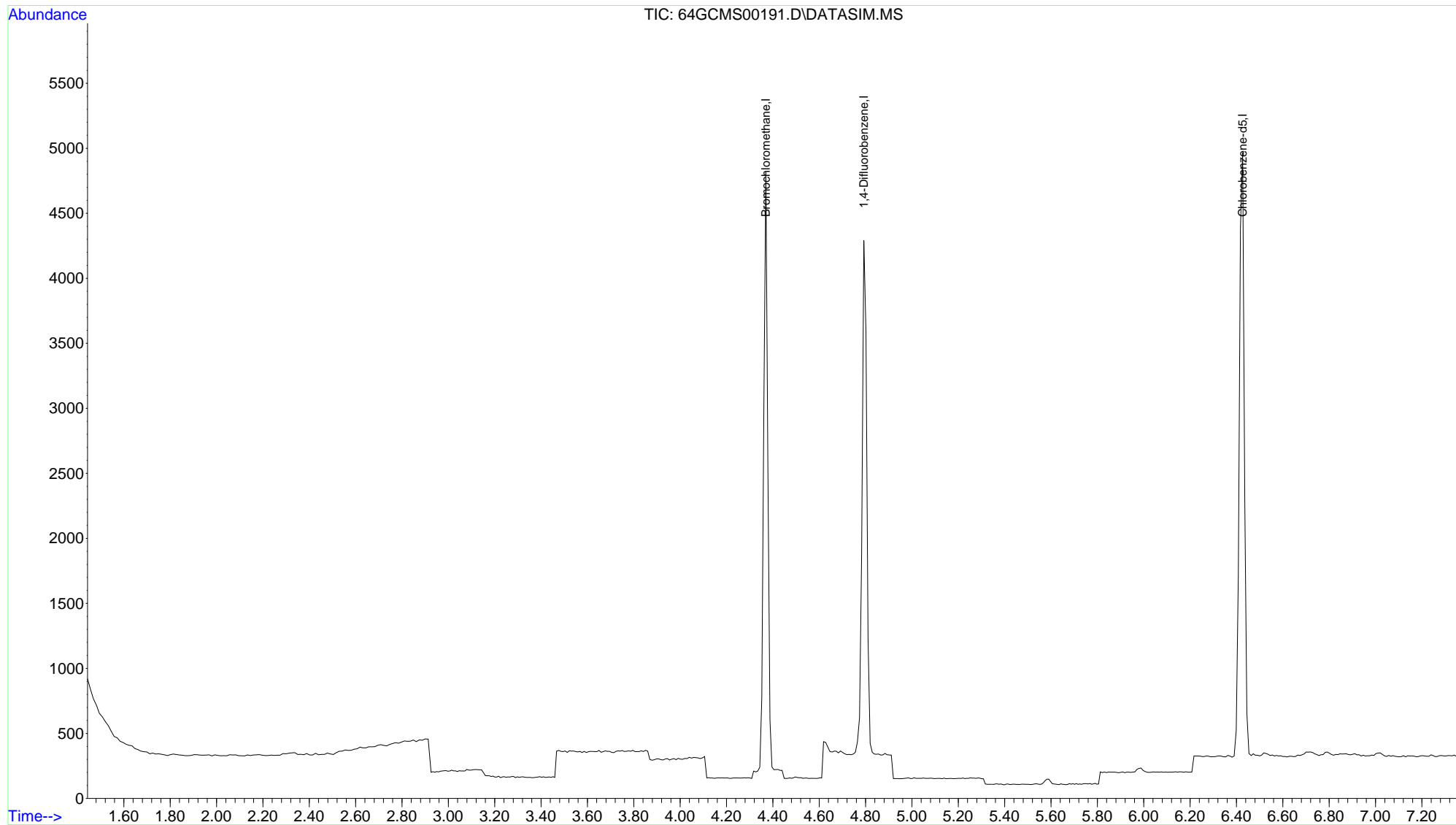
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2127	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3755	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.427	117	3793	10.00	ppbv	0.00

Target Compounds	Qvalue
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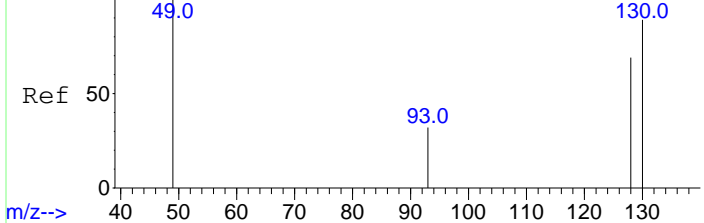
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00191.D
Acq On : 3 May 2016 3:13 pm
Operator : dlm
Sample : 51077 \ Unit 12
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 15:23:36 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration



Abundance Scan 285 (4.370 min): 64GCMS00179.D\DATASIM.MS (-281)

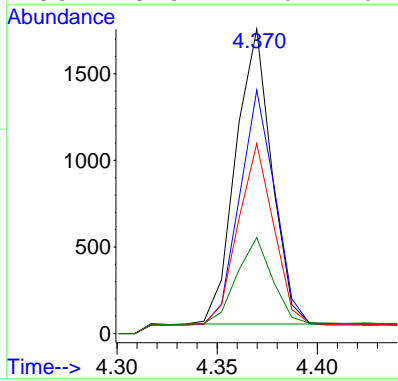
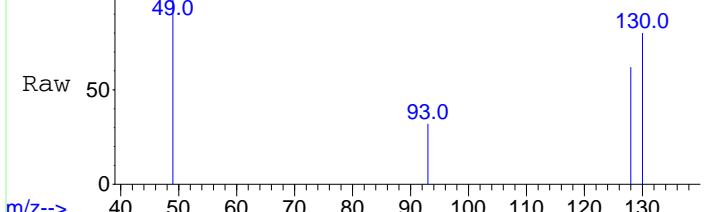


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00191.D
Acq: 3 May 2016 3:13 pm

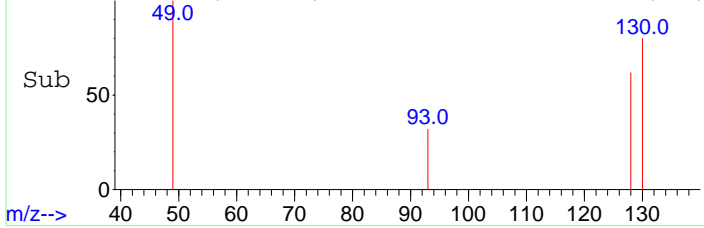
Tgt Ion: 49 Resp: 2127

Ion	Ratio	Lower	Upper
49	100		
130	78.6	46.3	69.5#
128	60.5	35.7	53.5#
93	29.3	17.6	26.4#

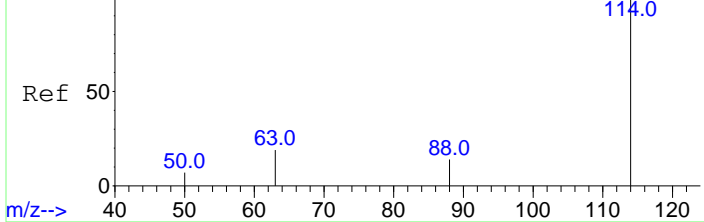
Abundance Scan 285 (4.370 min): 64GCMS00191.D\DATASIM.MS



Abundance Scan 285 (4.370 min): 64GCMS00191.D\DATASIM.MS (-277)



Abundance Scan 334 (4.792 min): 64GCMS00179.D\DATASIM.MS (-331)

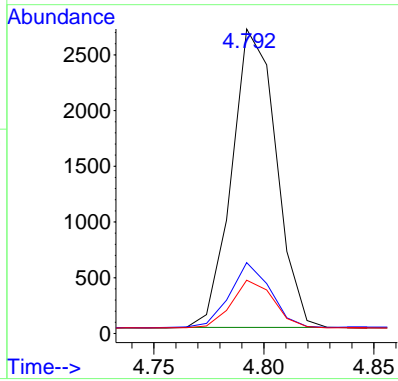
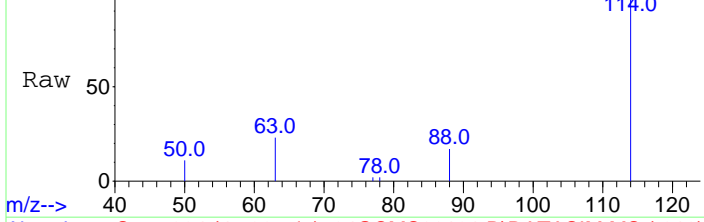


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. 0.000 min
Lab File: 64GCMS00191.D
Acq: 3 May 2016 3:13 pm

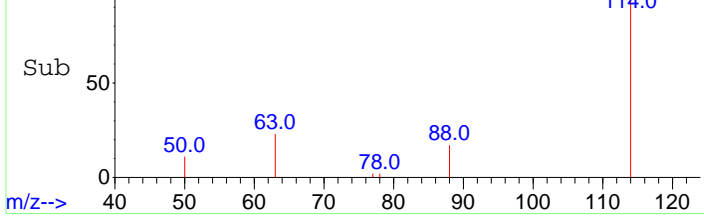
Tgt Ion: 114 Resp: 3755

Ion	Ratio	Lower	Upper
114	100		
63	19.8	19.2	28.8
88	15.2	13.7	20.5

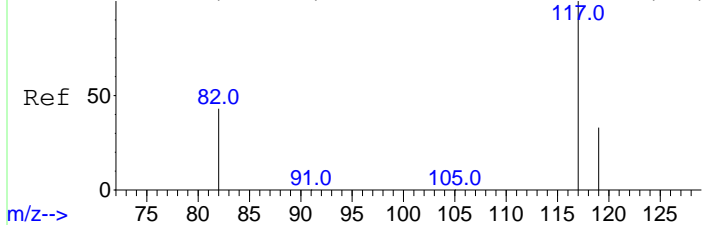
Abundance Scan 334 (4.792 min): 64GCMS00191.D\DATASIM.MS



Abundance Scan 334 (4.792 min): 64GCMS00191.D\DATASIM.MS (-312)



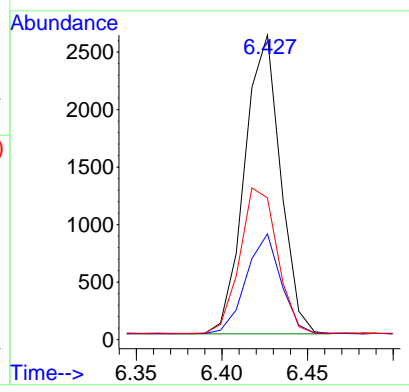
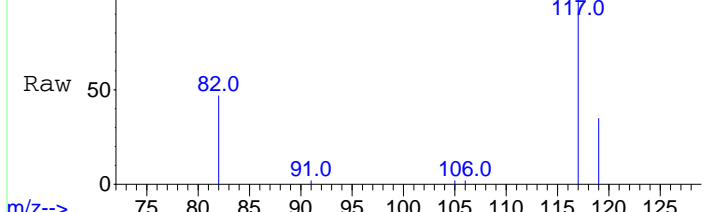
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



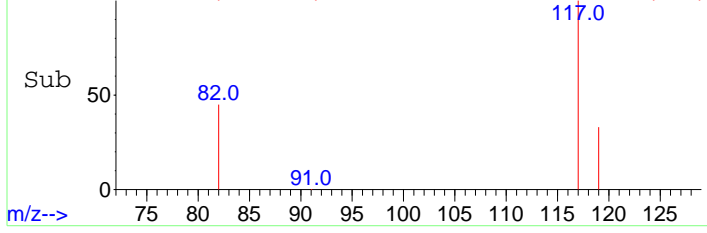
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.427 min Scan# 533
Delta R.T. 0.000 min
Lab File: 64GCMS00191.D
Acq: 3 May 2016 3:13 pm

Tgt Ion	Resp	Lower	Upper
117	3793		
117	100		
119	32.2	25.8	38.6
82	50.9	45.6	68.4

Abundance Scan 533 (6.427 min): 64GCMS00191.D\DATASIM.MS



Abundance Scan 533 (6.427 min): 64GCMS00191.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00192.D
Acq On : 3 May 2016 3:25 pm
Operator : dlm
Sample : 51077 \ Unit 12 Rep
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 15:34:02 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration

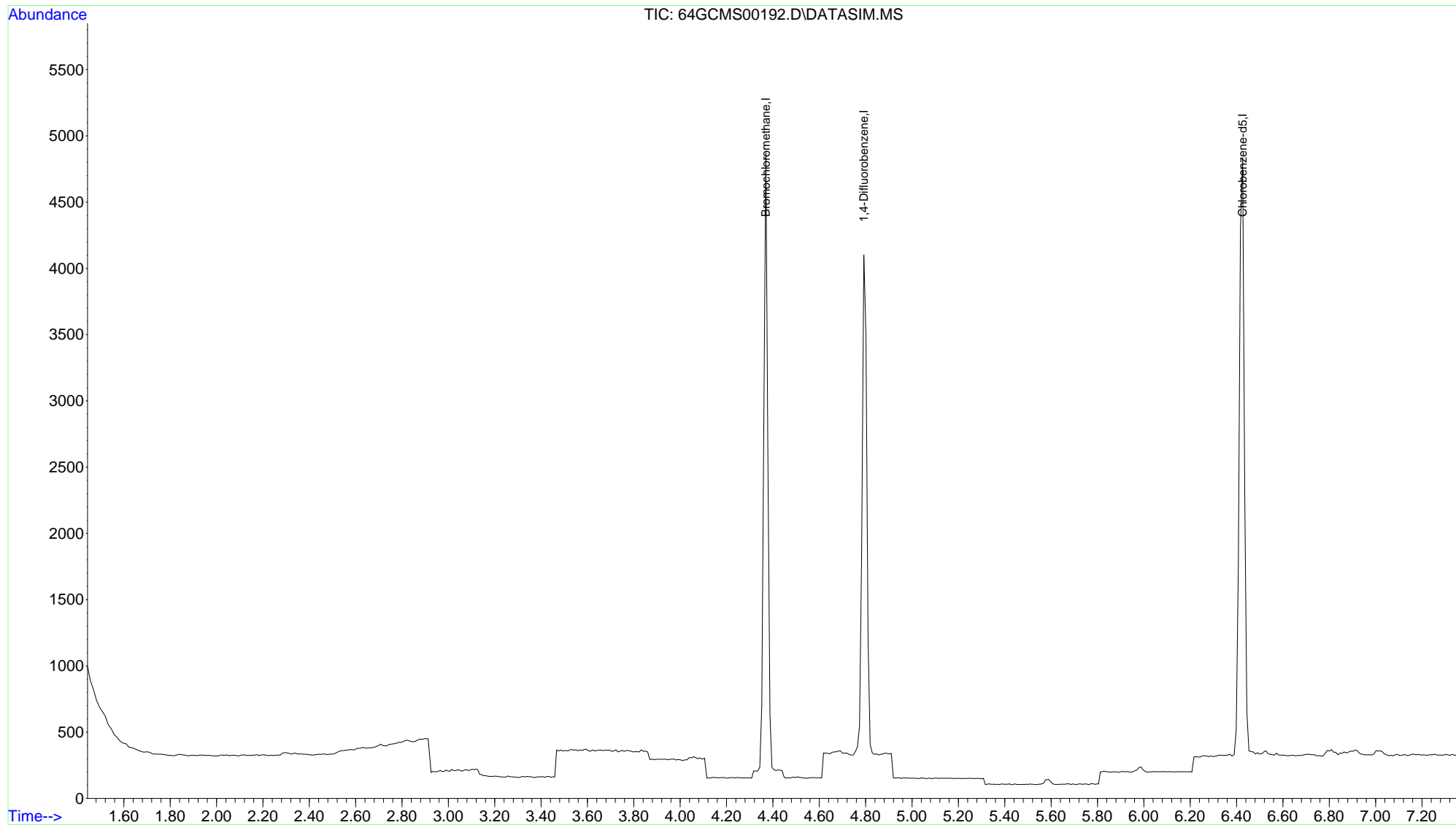
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2088	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3656	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3725	10.00	ppbv	0.00

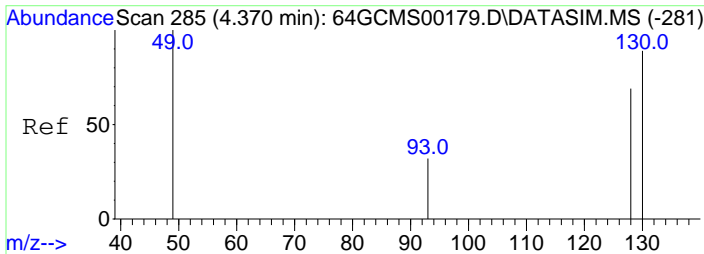
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00192.D
Acq On : 3 May 2016 3:25 pm
Operator : dlm
Sample : 51077 \ Unit 12 Rep
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

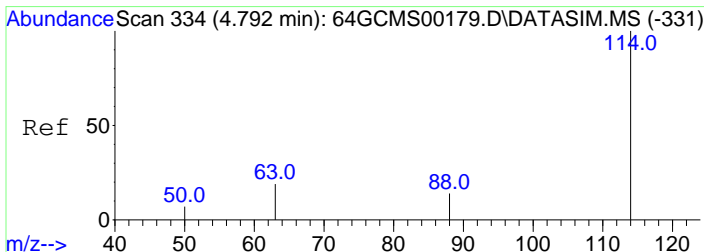
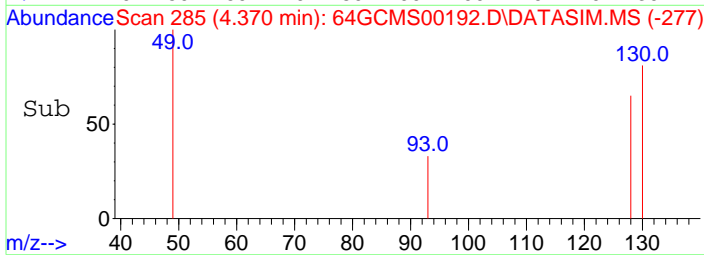
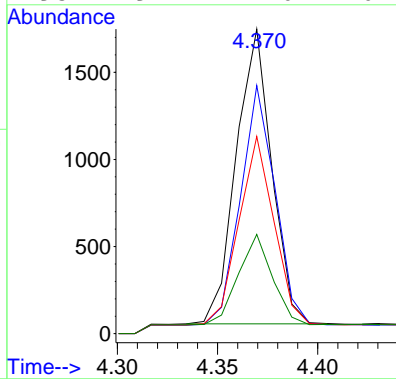
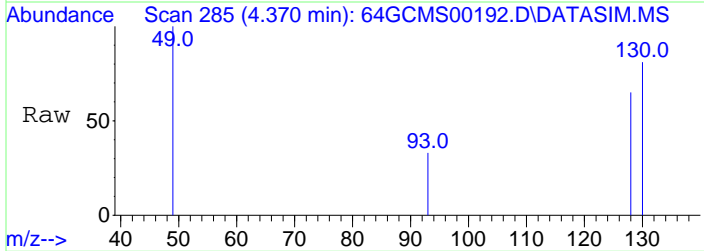
Quant Time: May 03 15:34:02 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration





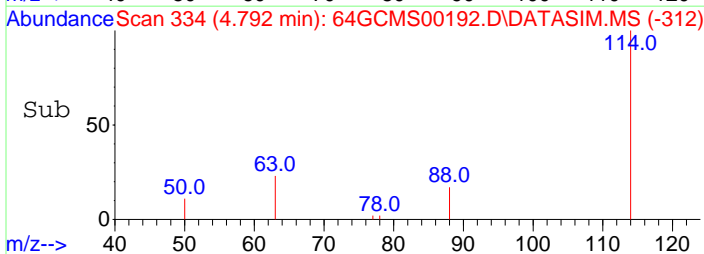
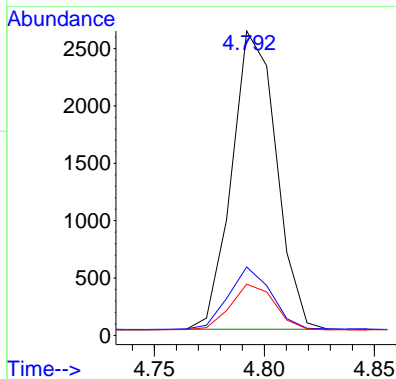
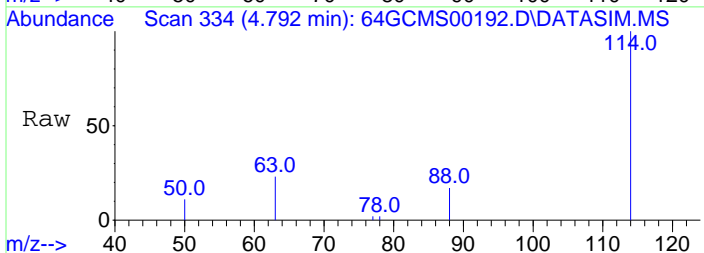
#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00192.D
 Acq: 3 May 2016 3:25 pm

Tgt Ion	Resp	Lower	Upper
49	100		
130	79.3	46.3	69.5#
128	63.2	35.7	53.5#
93	29.4	17.6	26.4#

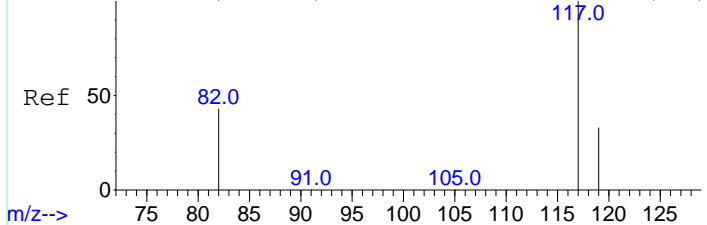


#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00192.D
 Acq: 3 May 2016 3:25 pm

Tgt Ion	Resp	Lower	Upper
114	100		
63	19.7	19.2	28.8
88	15.2	13.7	20.5



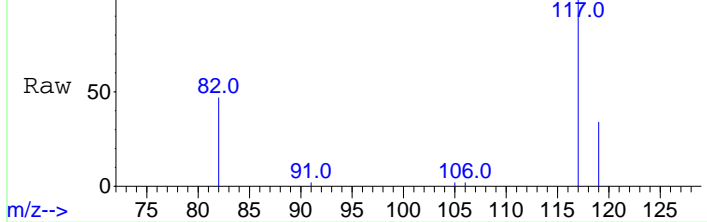
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



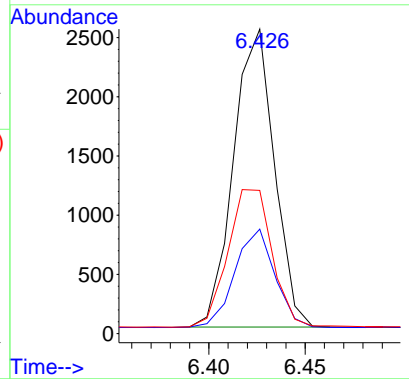
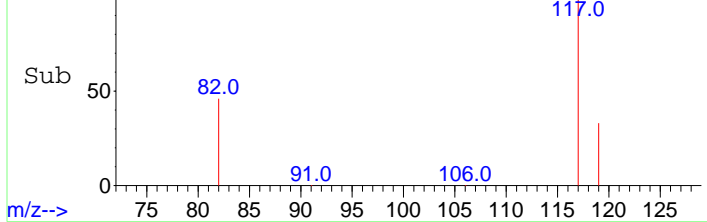
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00192.D
Acq: 3 May 2016 3:25 pm

Tgt Ion	Resp	Lower	Upper
117	3725		
117	100		
119	32.3	25.8	38.6
82	50.1	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00192.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00192.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00193.D
Acq On : 3 May 2016 4:15 pm
Operator : dlm
Sample : 51078 \ Unit 17
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 16:23:29 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration

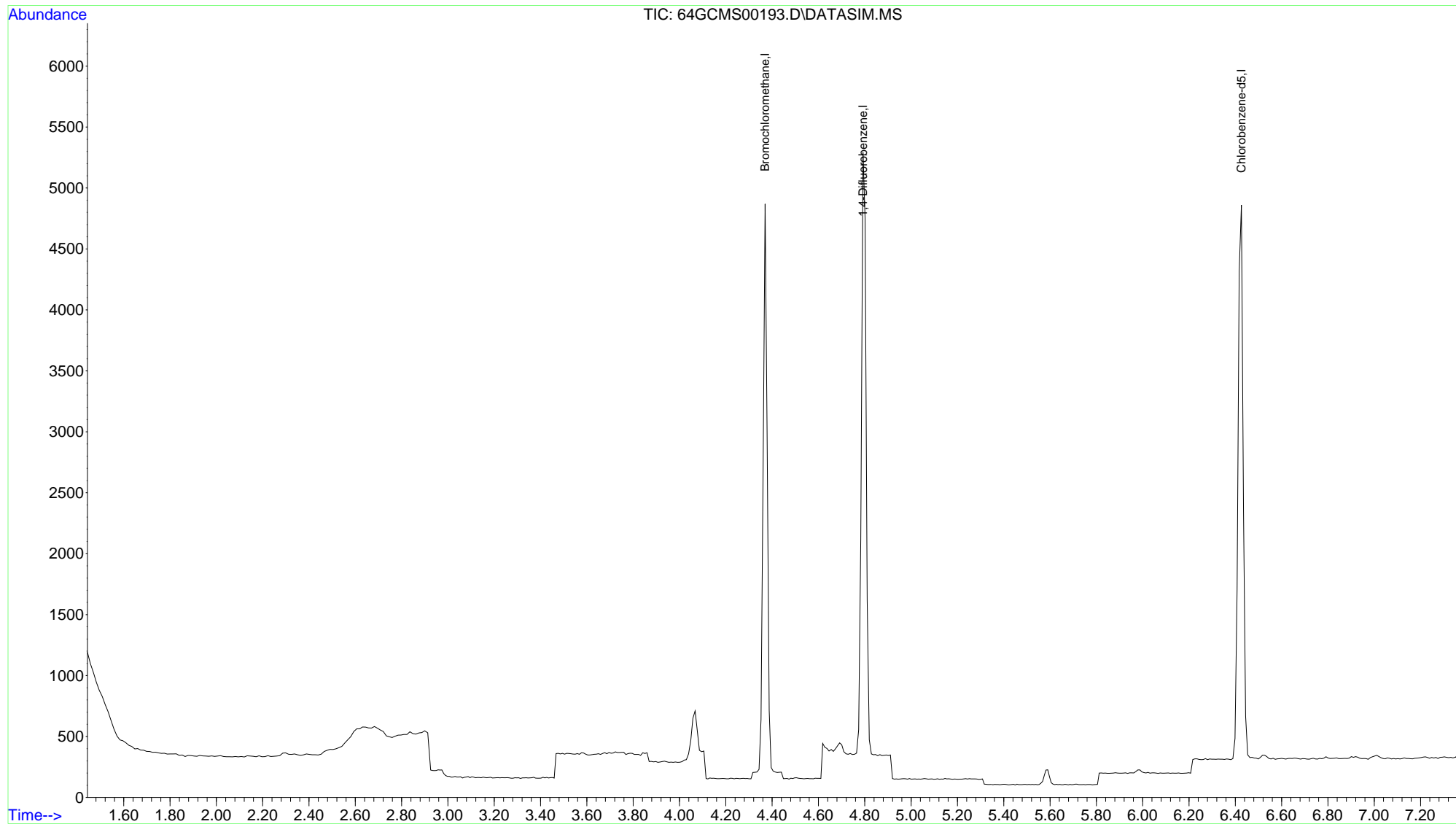
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2144	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	4856	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3749	10.00	ppbv	0.00

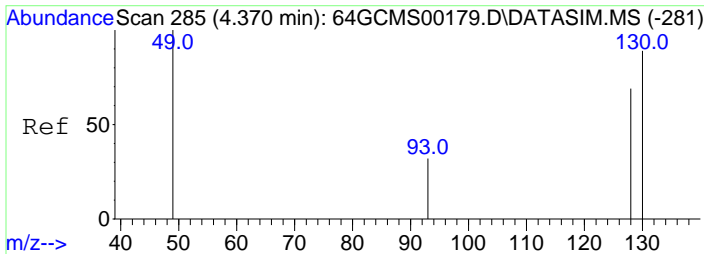
Target Compounds	Qvalue
------------------	--------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00193.D
Acq On : 3 May 2016 4:15 pm
Operator : dlm
Sample : 51078 \ Unit 17
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 16:23:29 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration

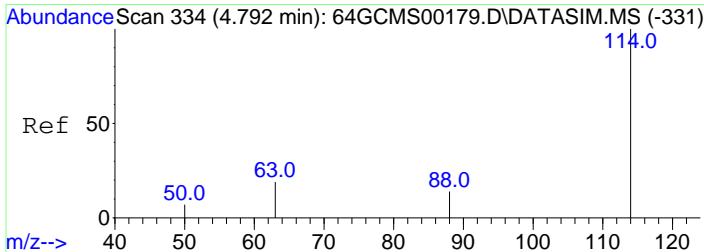
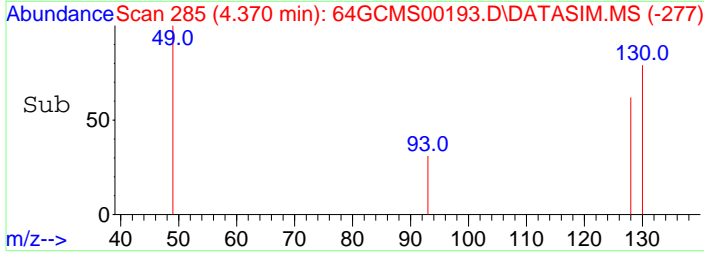
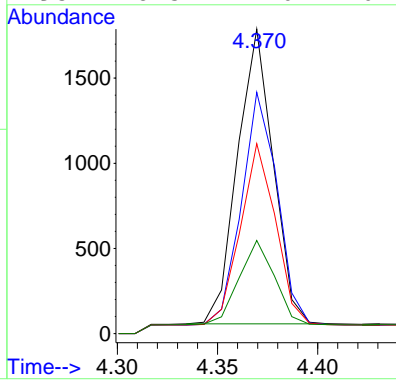
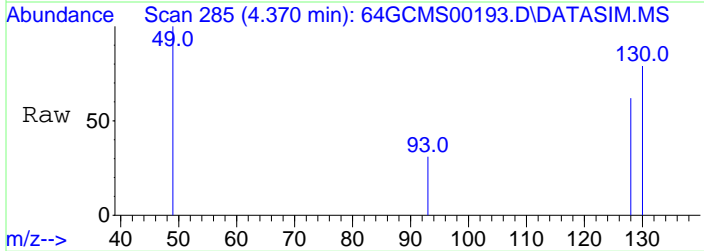




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00193.D
 Acq: 3 May 2016 4:15 pm

Tgt Ion: 49 Resp: 2144

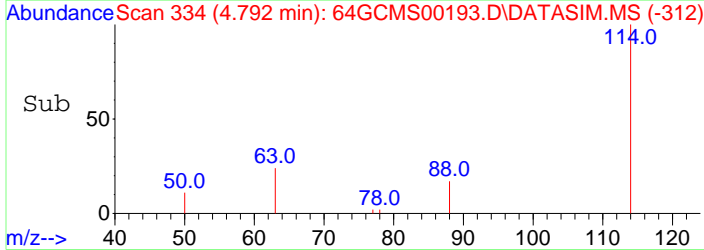
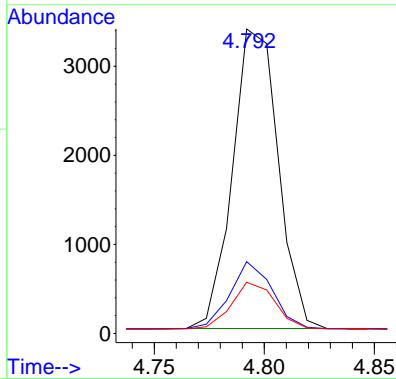
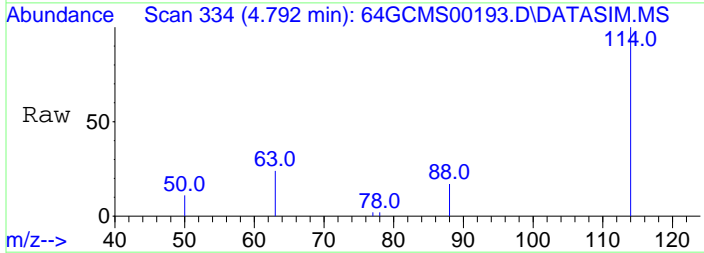
Ion	Ratio	Lower	Upper
49	100		
130	79.4	46.3	69.5#
128	61.1	35.7	53.5#
93	28.5	17.6	26.4#



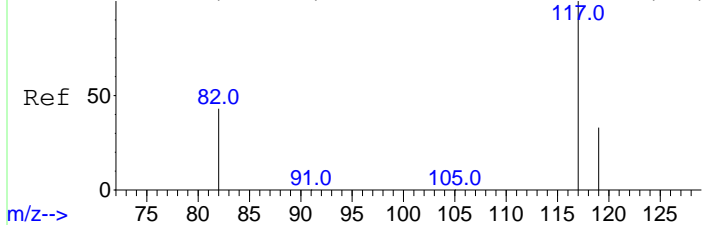
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00193.D
 Acq: 3 May 2016 4:15 pm

Tgt Ion: 114 Resp: 4856

Ion	Ratio	Lower	Upper
114	100		
63	20.6	19.2	28.8
88	14.8	13.7	20.5



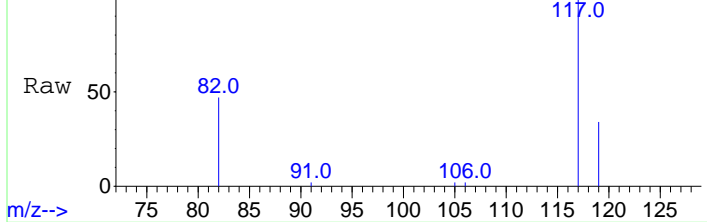
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



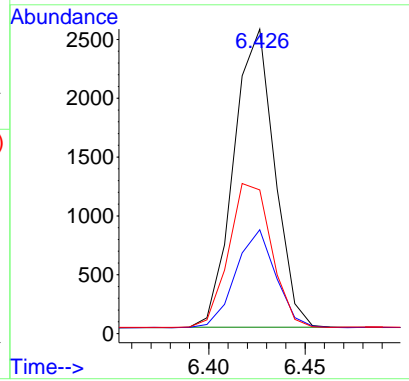
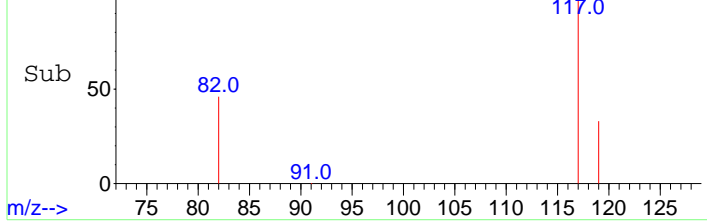
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00193.D
 Acq: 3 May 2016 4:15 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.3	25.8	38.6
82	50.7	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00193.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00193.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00194.D
 Acq On : 3 May 2016 5:13 pm
 Operator : dlm
 Sample : 51079 \ Unit 20
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

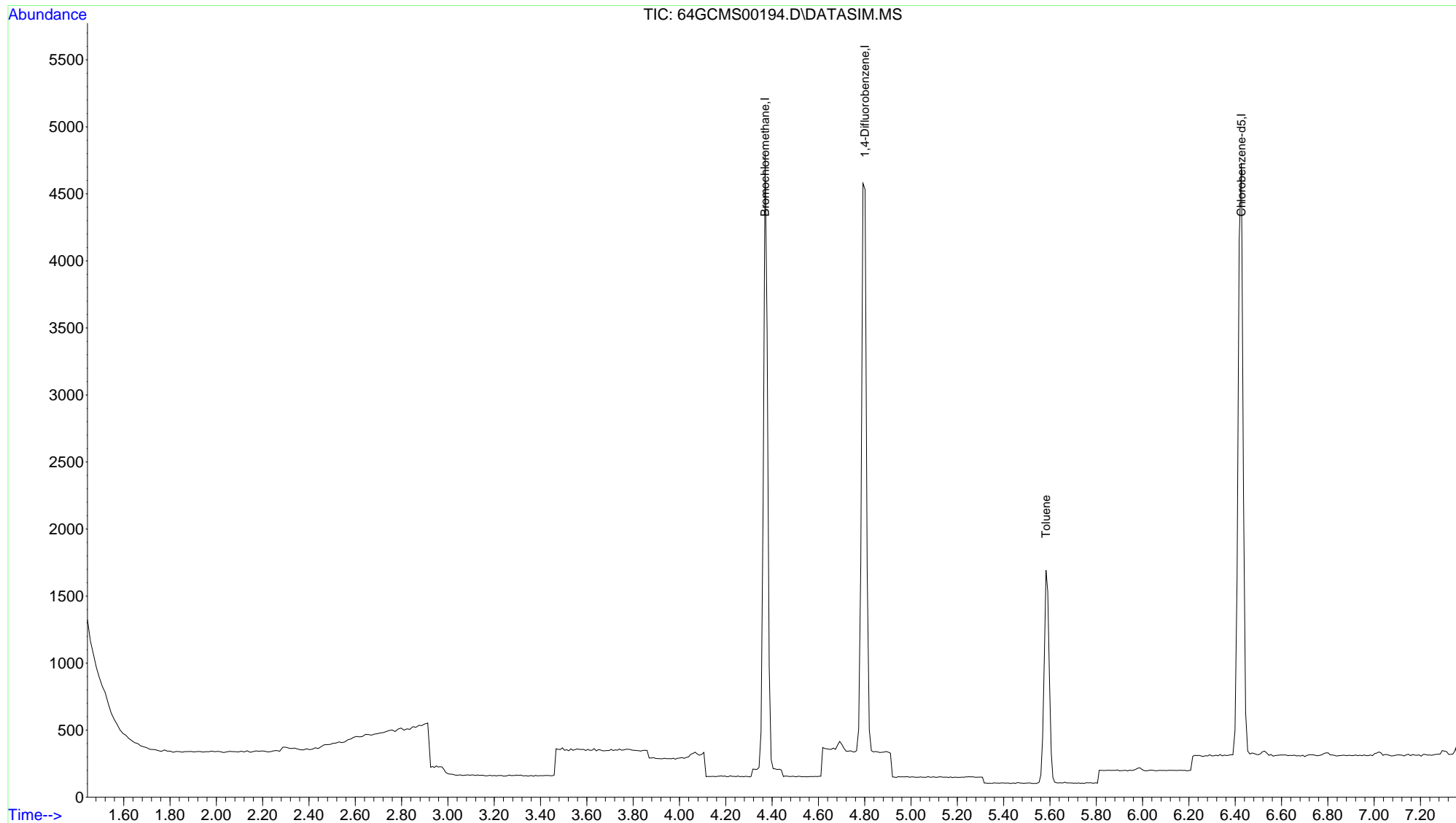
Quant Time: May 03 17:23:32 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

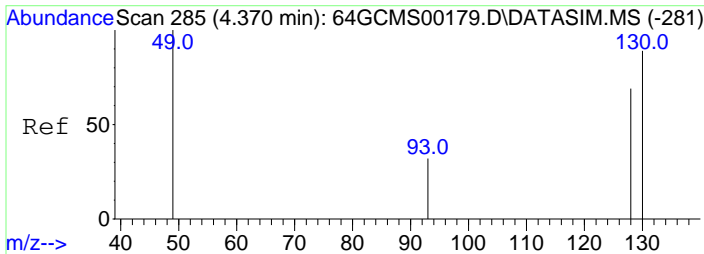
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2134	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.801	114	4441	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3643	10.00	ppbv	0.00
Target Compounds						Qvalue
13) Toluene	5.583	91	1522	4.03	ppbv	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00194.D
 Acq On : 3 May 2016 5:13 pm
 Operator : dlm
 Sample : 51079 \ Unit 20
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 17:23:32 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

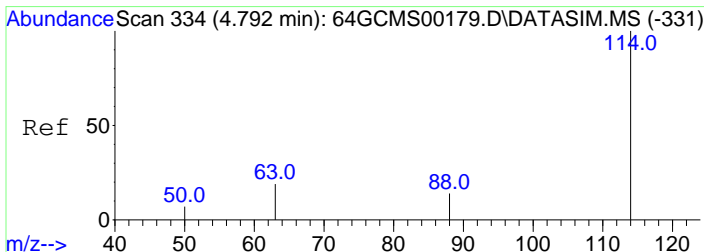
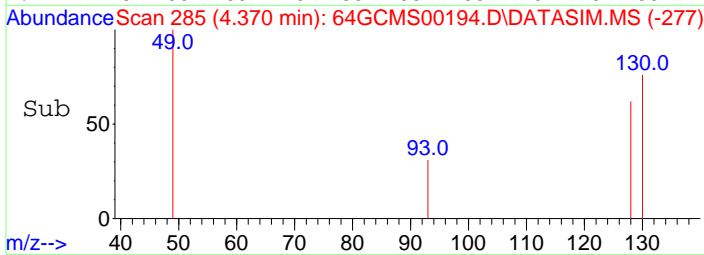
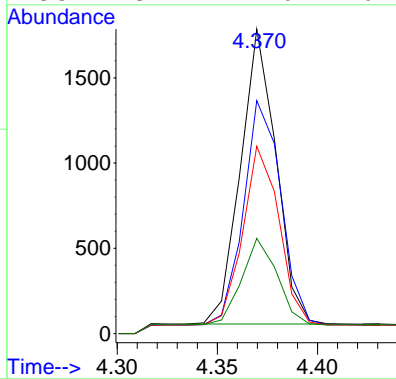
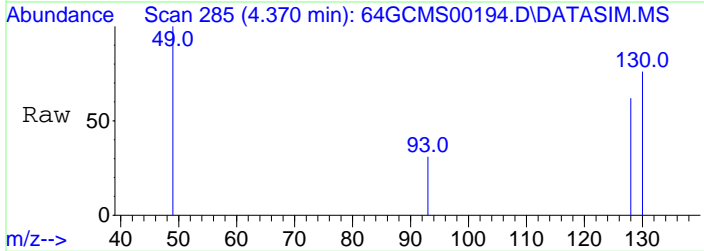




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00194.D
 Acq: 3 May 2016 5:13 pm

Tgt Ion: 49 Resp: 2134

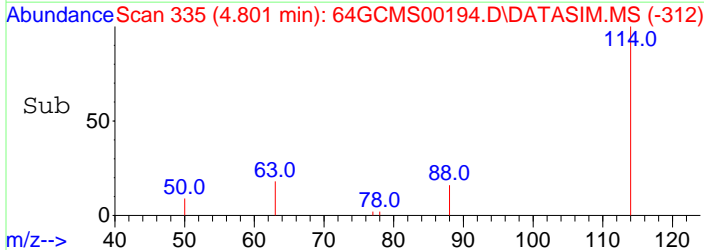
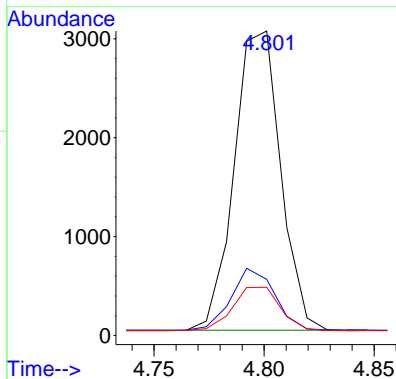
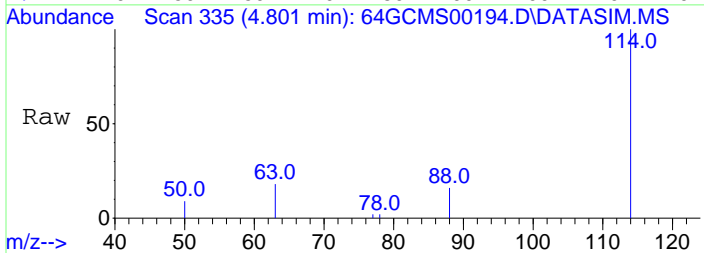
Ion	Ratio	Lower	Upper
49	100		
130	79.9	46.3	69.5#
128	61.7	35.7	53.5#
93	29.4	17.6	26.4#



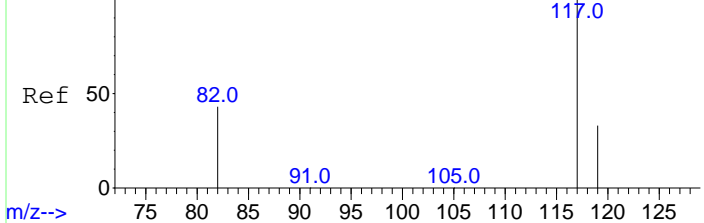
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.801 min Scan# 335
 Delta R.T. 0.009 min
 Lab File: 64GCMS00194.D
 Acq: 3 May 2016 5:13 pm

Tgt Ion: 114 Resp: 4441

Ion	Ratio	Lower	Upper
114	100		
63	19.5	19.2	28.8
88	14.9	13.7	20.5

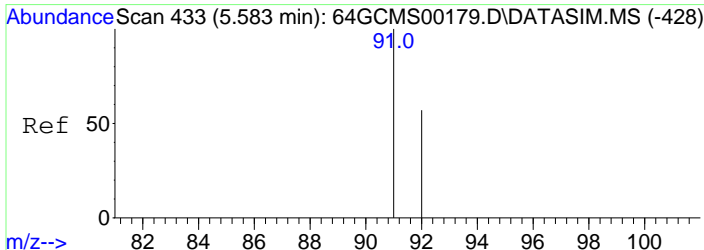
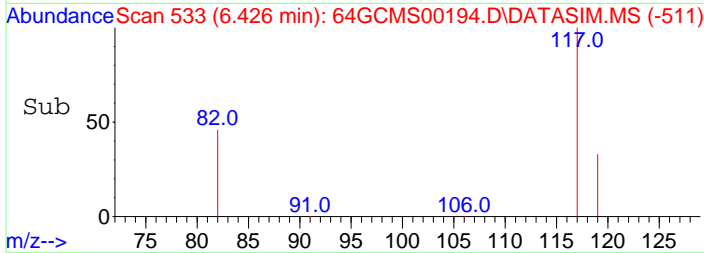
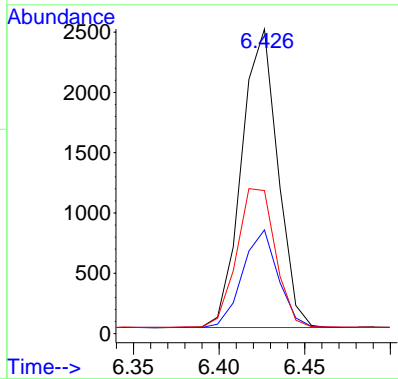
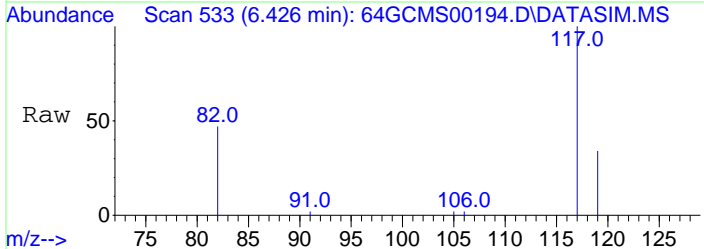


Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



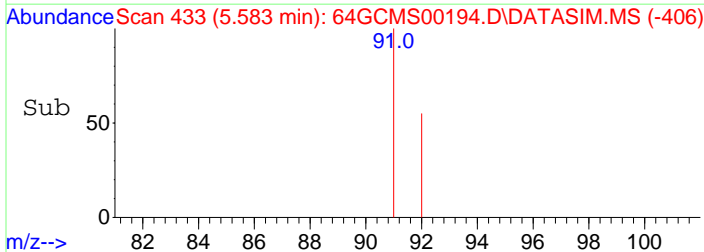
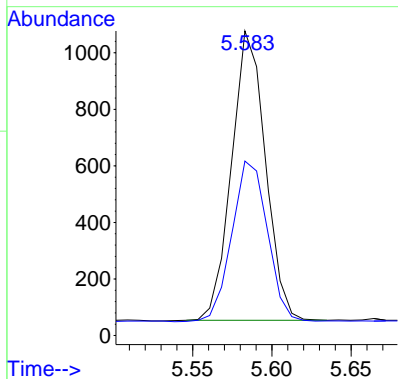
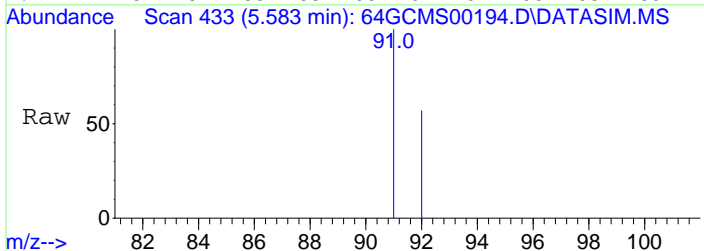
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00194.D
 Acq: 3 May 2016 5:13 pm

Tgt Ion	Resp	Lower	Upper
117	3643		
119	32.1	25.8	38.6
82	49.6	45.6	68.4



#13
 Toluene
 Concen: 4.03 ppbv
 RT: 5.583 min Scan# 433
 Delta R.T. -0.000 min
 Lab File: 64GCMS00194.D
 Acq: 3 May 2016 5:13 pm

Tgt Ion	Resp	Lower	Upper
91	1522		
92	58.5	48.0	72.0



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00195.D
 Acq On : 3 May 2016 5:26 pm
 Operator : dlm
 Sample : GM-SG-09 \ GMEH09
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

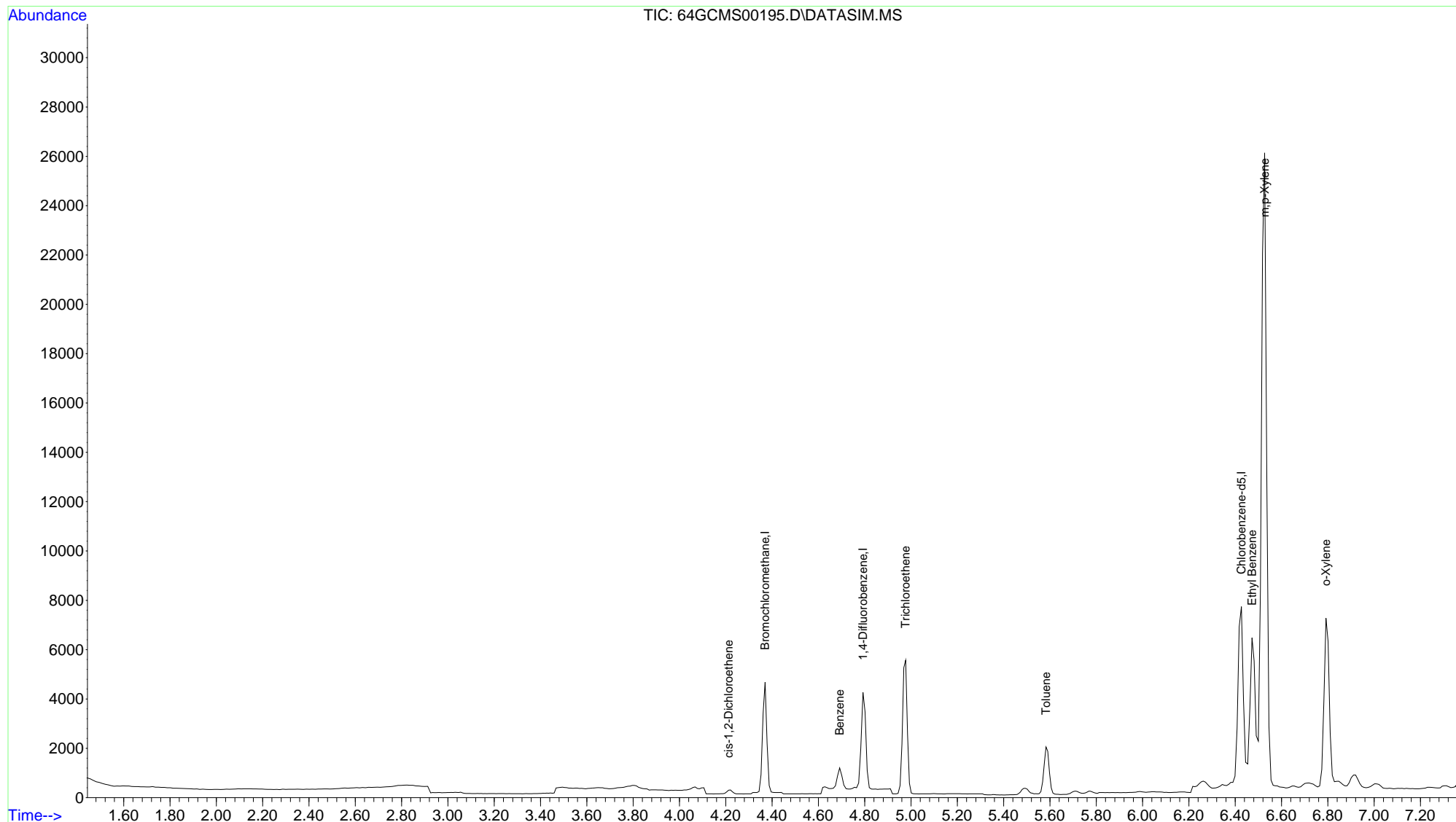
Quant Time: May 03 17:37:08 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

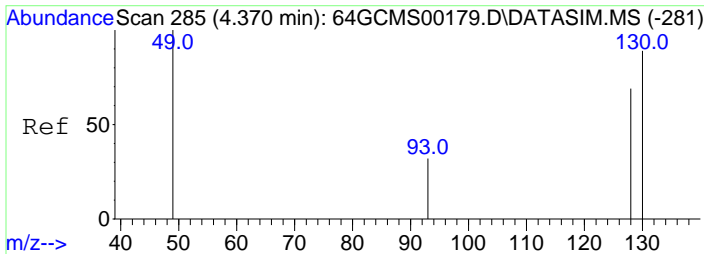
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2126	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3794	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	5273	10.00	ppbv	# 0.00
Target Compounds						
						Qvalue
7) cis-1,2-Dichloroethene	4.212	61	122m	0.59	ppbv	
10) Benzene	4.692	78	852m	2.82	ppbv	
11) Trichloroethene	4.977	130	2618	13.95	ppbv	97
13) Toluene	5.583	91	1985	3.63	ppbv	91
15) Ethyl Benzene	6.472	91	6801	10.07	ppbv	95
16) m,p-Xylene	6.527	91	21883	39.95	ppbv	97
17) o-Xylene	6.792	91	6511	10.96	ppbv	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00195.D
 Acq On : 3 May 2016 5:26 pm
 Operator : dlm
 Sample : GM-SG-09 \ GMEH09
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 17:37:08 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

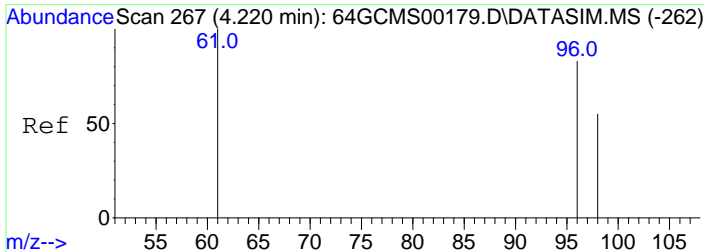
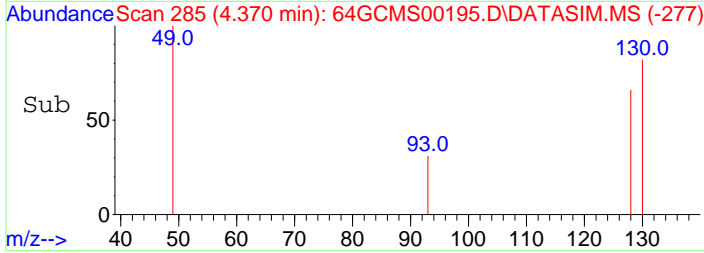
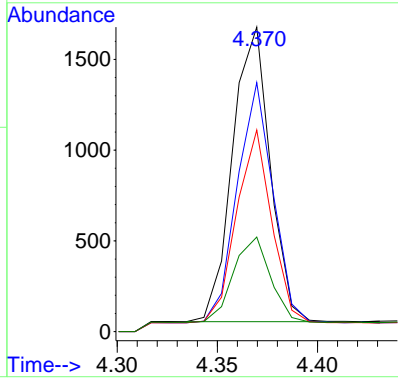
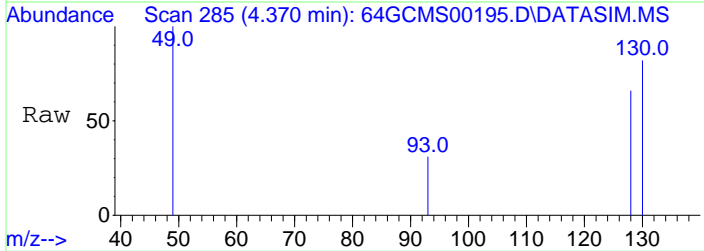




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00195.D
 Acq: 3 May 2016 5:26 pm

Tgt Ion: 49 Resp: 2126

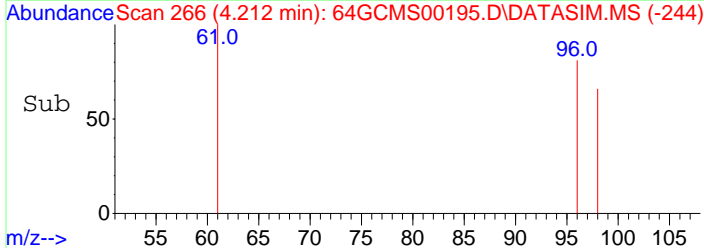
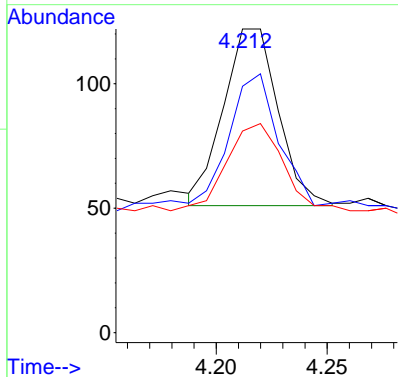
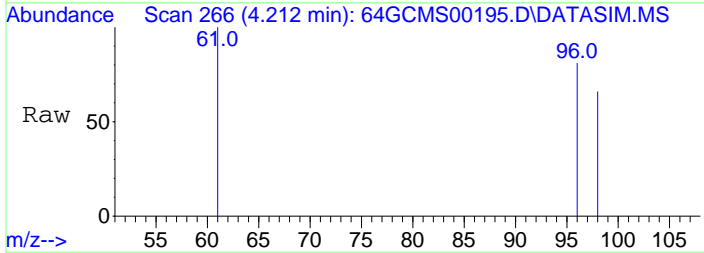
Ion	Ratio	Lower	Upper
49	100		
130	77.4	46.3	69.5#
128	61.0	35.7	53.5#
93	28.6	17.6	26.4#



#7
 cis-1,2-Dichloroethene
 Concen: 0.59 ppbv m
 RT: 4.212 min Scan# 266
 Delta R.T. -0.008 min
 Lab File: 64GCMS00195.D
 Acq: 3 May 2016 5:26 pm

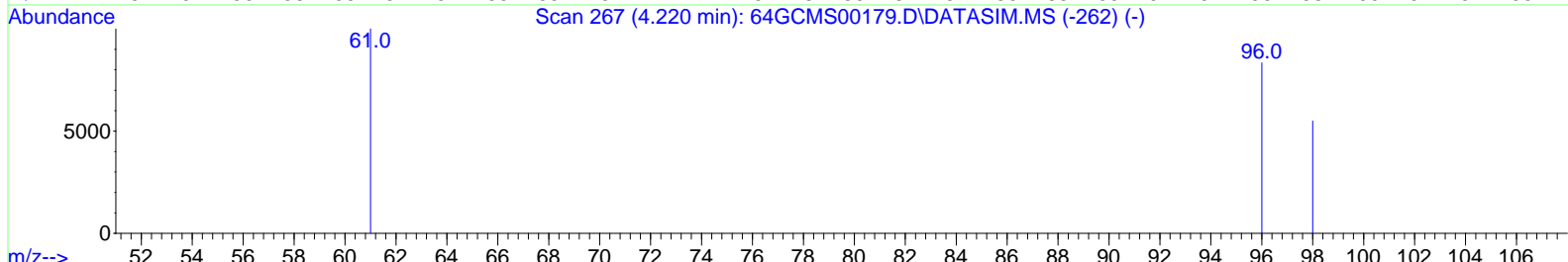
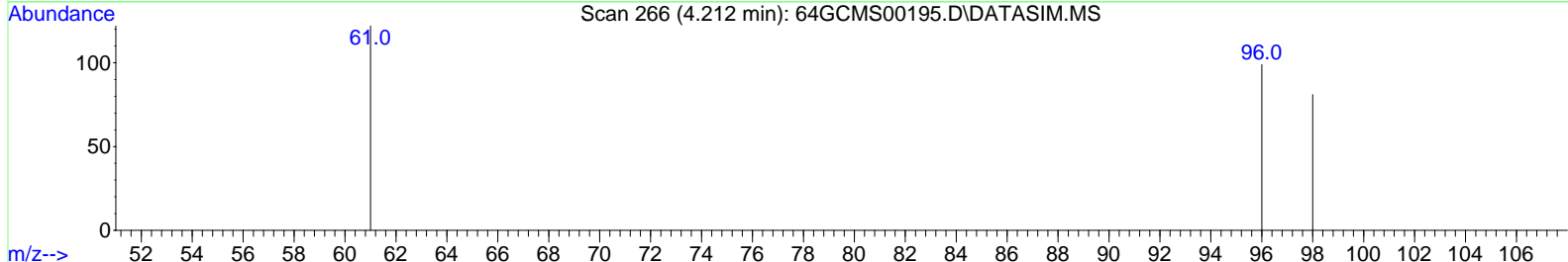
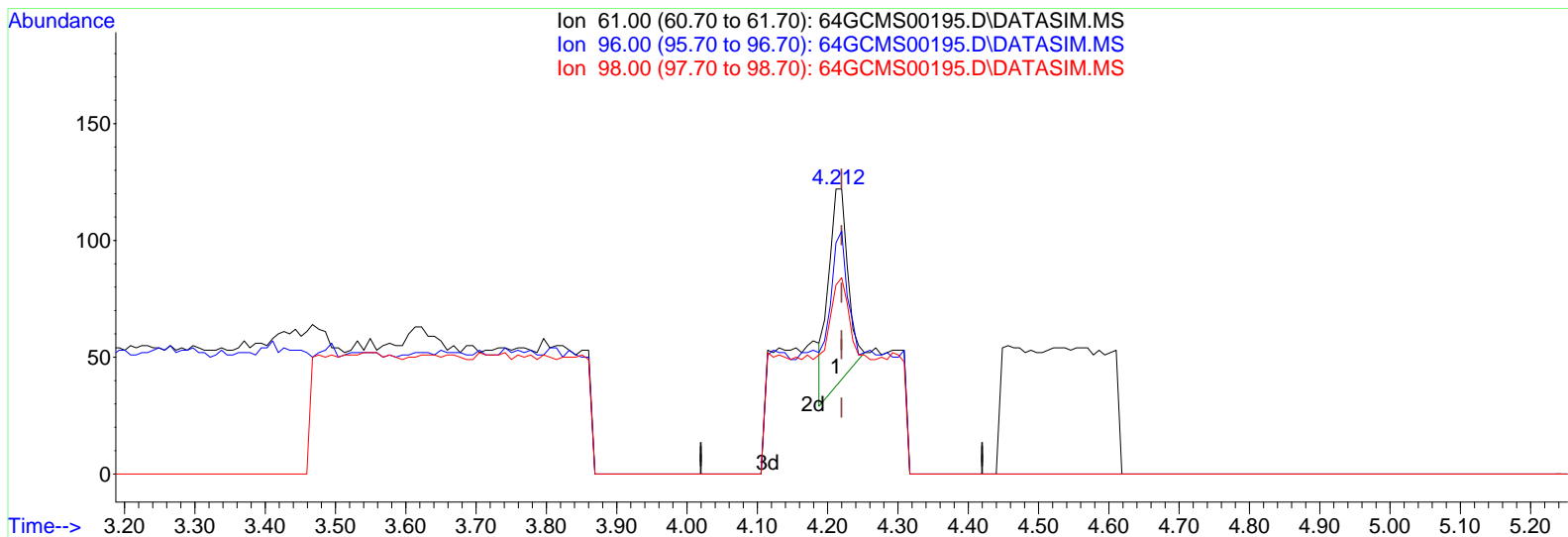
Tgt Ion: 61 Resp: 122

Ion	Ratio	Lower	Upper
61	100		
96	95.9	52.0	78.0#
98	50.0	33.4	50.2



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00195.D
 Acq On : 3 May 2016 5:26 pm
 Operator : dlm
 Sample : GM-SG-09 \ GMEH09
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 17:34:44 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



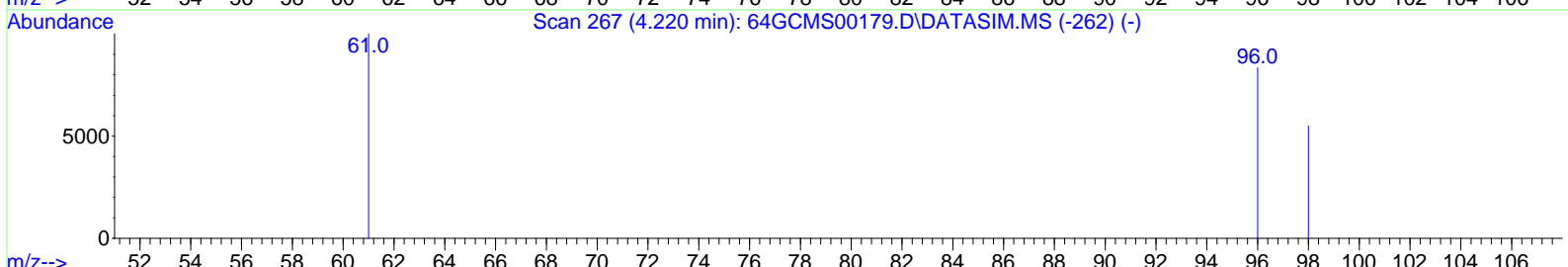
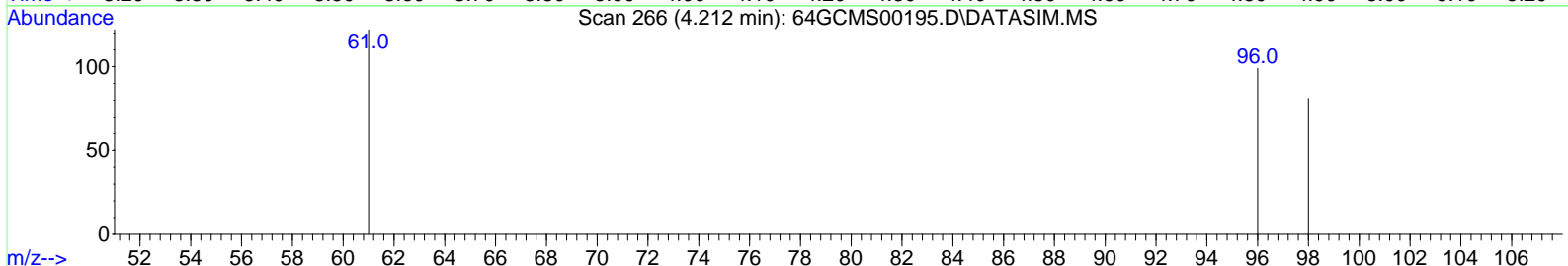
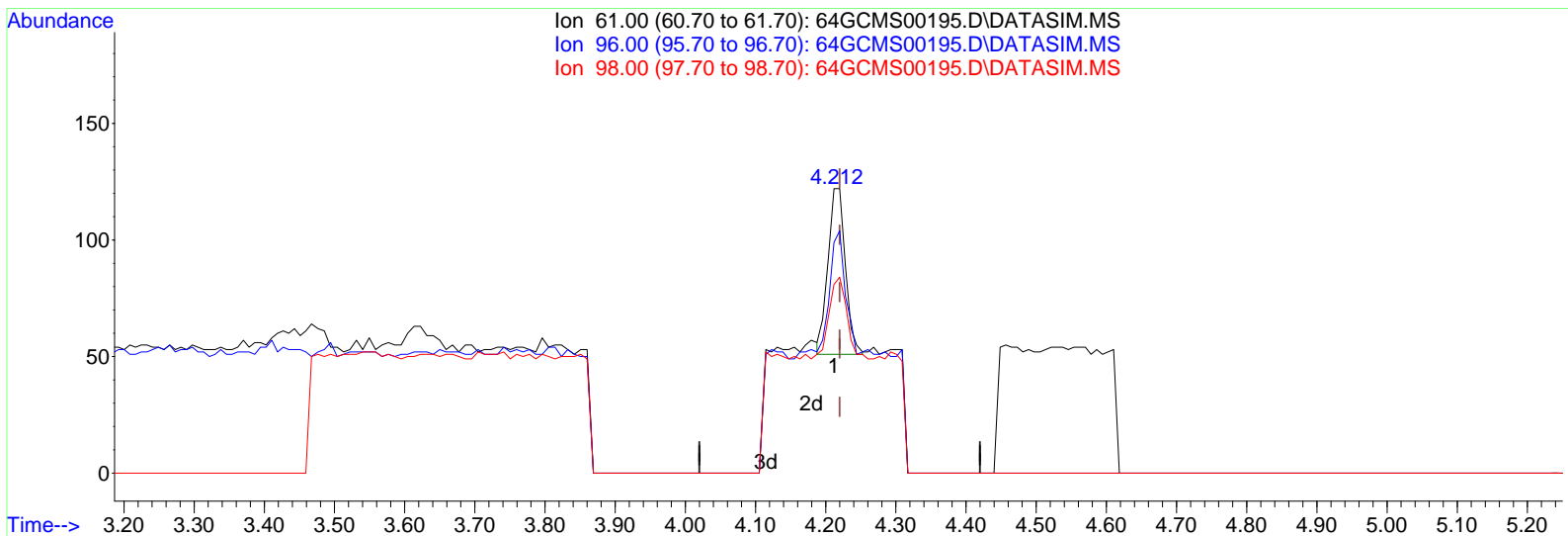
(7) cis-1,2-Dichloroethene

4.212min (-0.008) 0.79 ppbv

response	163
Ion	Exp% Act%
61.00	100.00 100.00
96.00	65.00 71.78
98.00	41.80 37.42
0.00	0.00 0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00195.D
 Acq On : 3 May 2016 5:26 pm
 Operator : dlm
 Sample : GM-SG-09 \ GMEH09
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

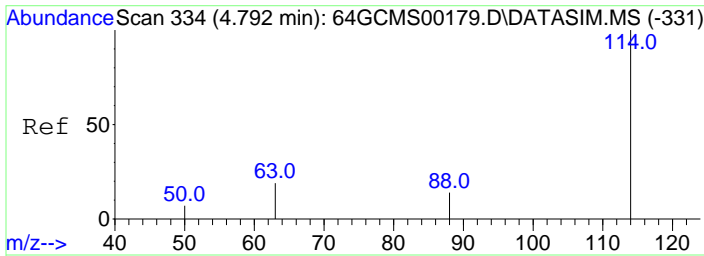
Quant Time: May 03 17:34:44 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



(7) cis-1,2-Dichloroethene

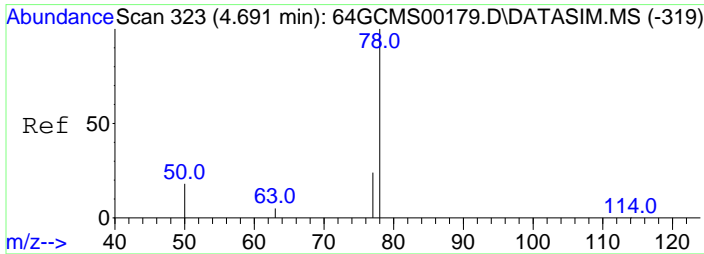
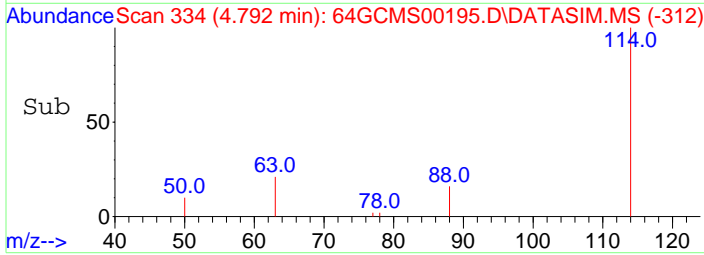
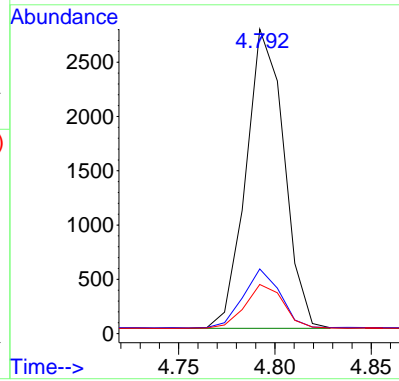
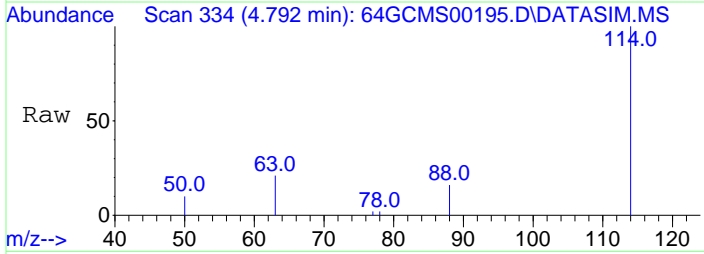
4.212min (-0.008) 0.59 ppbv m

response	122
Ion	Exp% Act%
61.00	100.00 100.00
96.00	65.00 95.90#
98.00	41.80 50.00
0.00	0.00 0.00



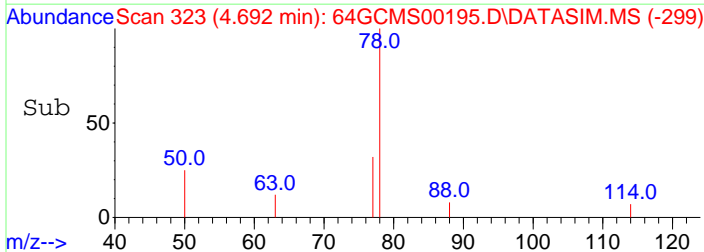
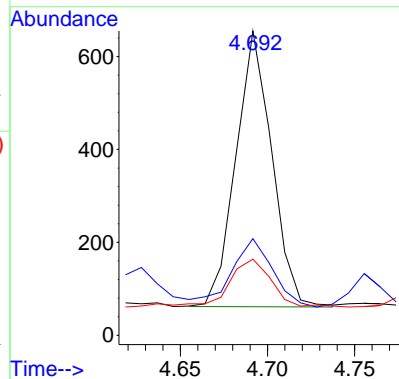
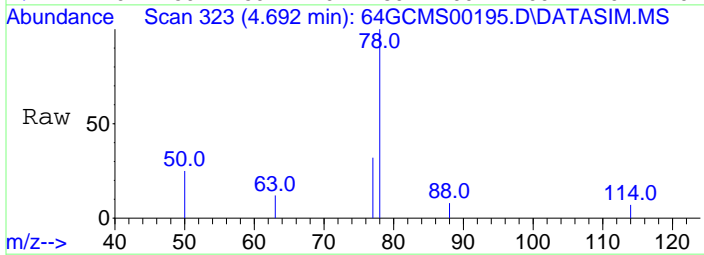
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00195.D
 Acq: 3 May 2016 5:26 pm

Tgt Ion	Resp	Lower	Upper
114	100		
63	20.0	19.2	28.8
88	14.7	13.7	20.5



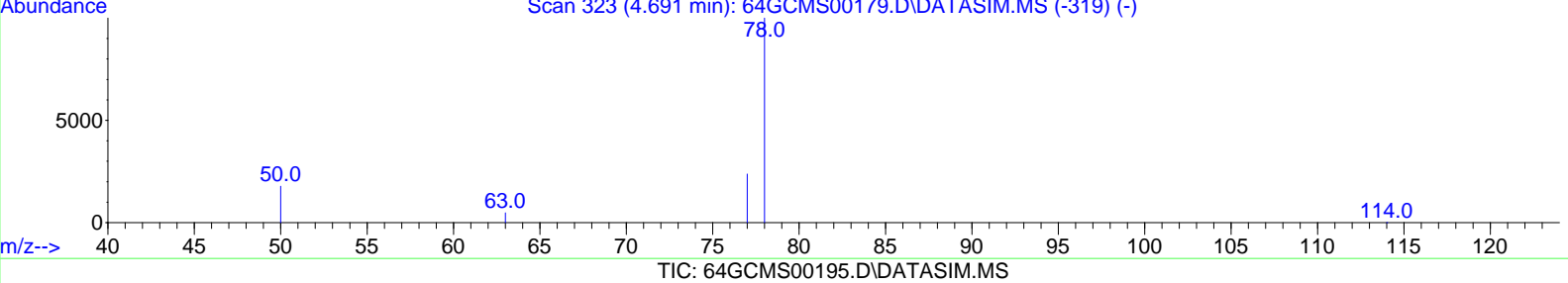
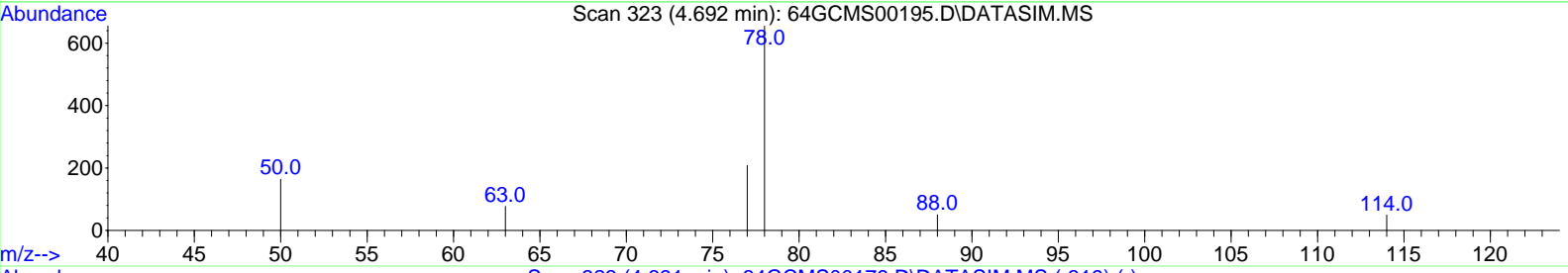
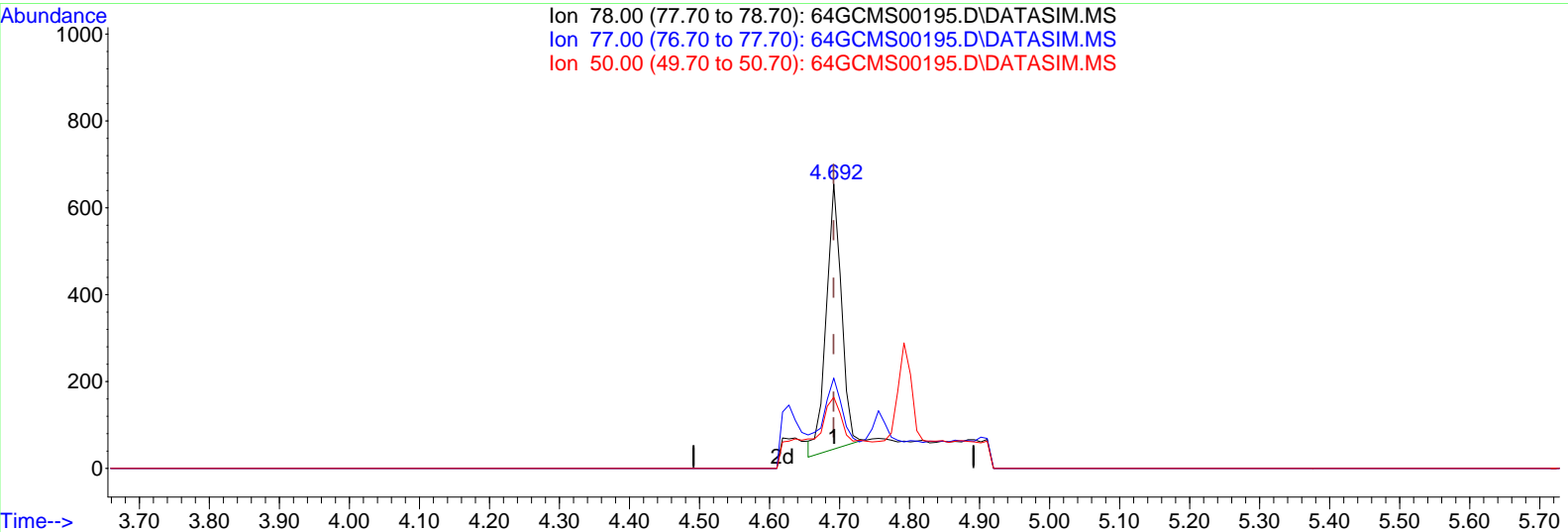
#10
 Benzene
 Concen: 2.82 ppbv m
 RT: 4.692 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00195.D
 Acq: 3 May 2016 5:26 pm

Tgt Ion	Resp	Lower	Upper
78	100		
77	45.5	18.2	27.4#
50	17.8	16.6	24.8



Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00195.D
 Acq On : 3 May 2016 5:26 pm
 Operator : dlm
 Sample : GM-SG-09 \ GMEH09
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 17:34:44 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration



(10) Benzene

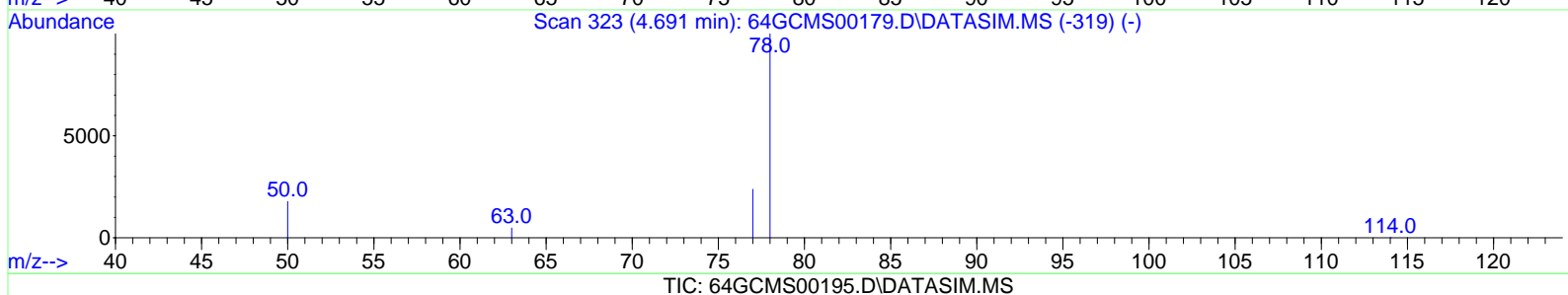
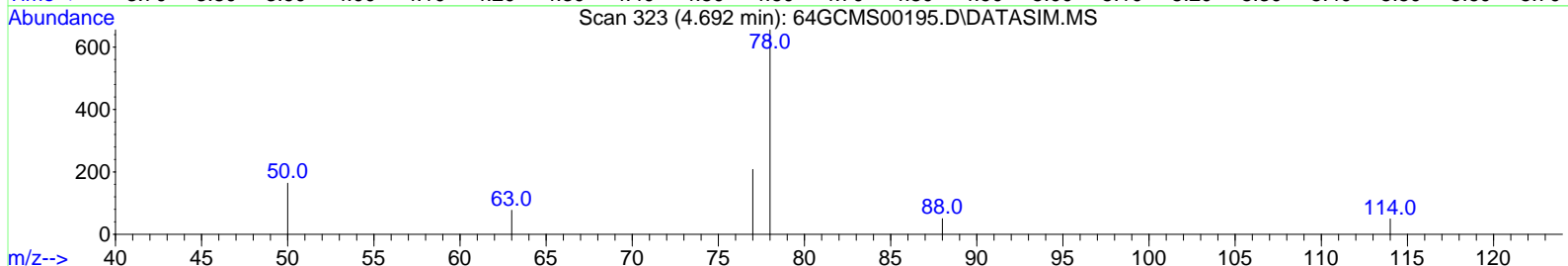
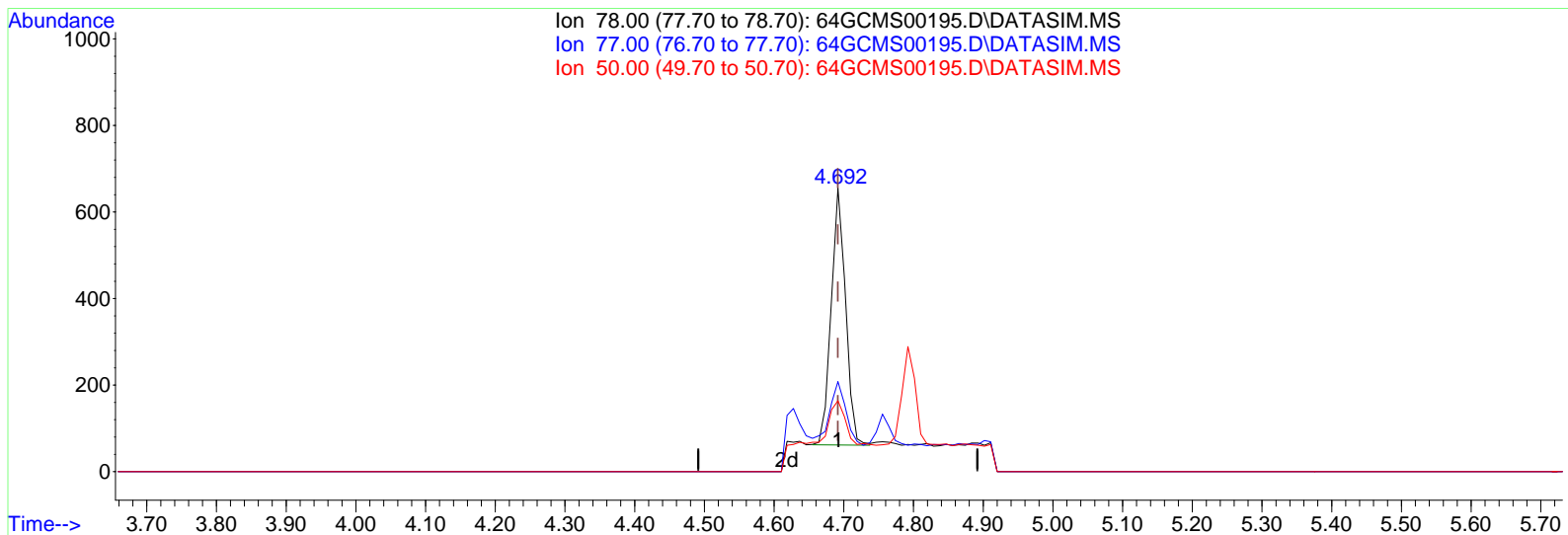
4.692min (-0.000) 3.06 ppbv

response 925

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	41.95#
50.00	20.70	16.43#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00195.D
 Acq On : 3 May 2016 5:26 pm
 Operator : dlm
 Sample : GM-SG-09 \ GMEH09
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 17:34:44 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

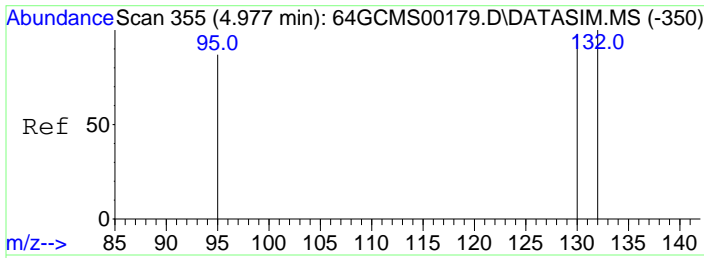


(10) Benzene

4.692min (-0.000) 2.82 ppbv m

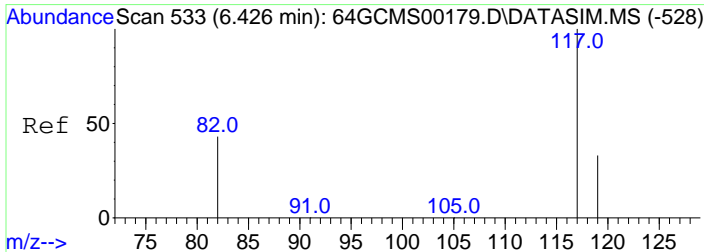
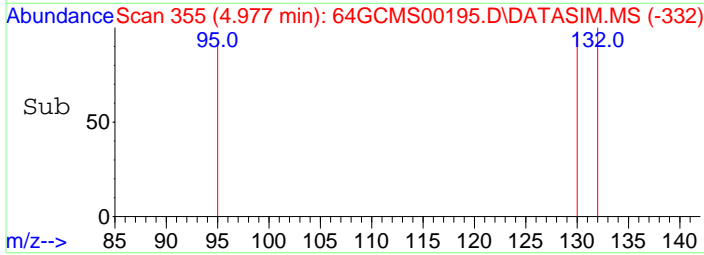
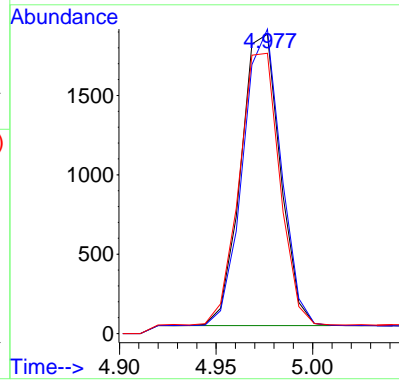
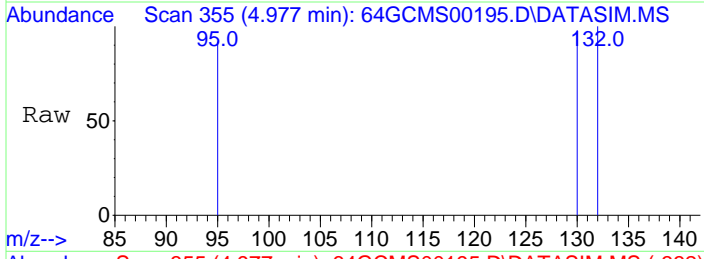
response 852

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	45.54#
50.00	20.70	17.84
0.00	0.00	0.00



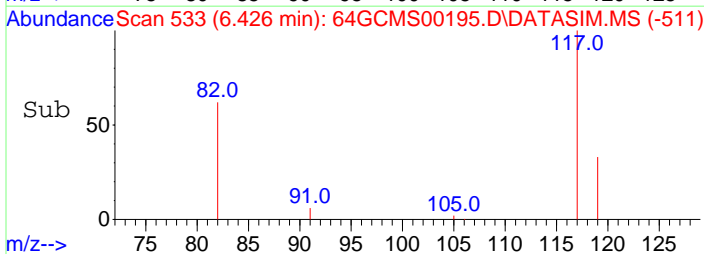
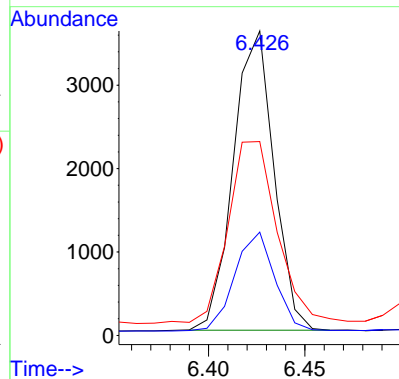
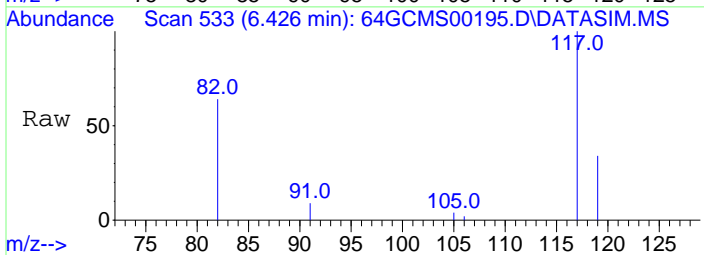
#11
 Trichloroethene
 Concen: 13.95 ppbv
 RT: 4.977 min Scan# 355
 Delta R.T. -0.000 min
 Lab File: 64GCMS00195.D
 Acq: 3 May 2016 5:26 pm

Tgt Ion	Resp	Lower	Upper
130	100		
132	97.9	76.9	115.3
95	98.4	81.5	122.3

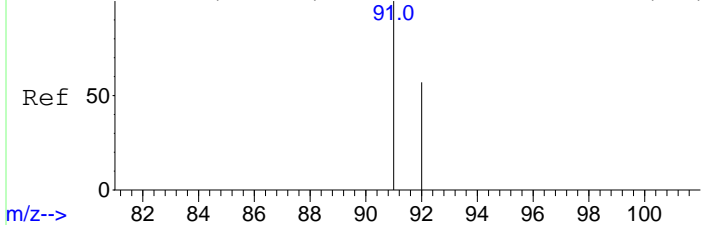


#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00195.D
 Acq: 3 May 2016 5:26 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.1	25.8	38.6
82	80.5	45.6	68.4#

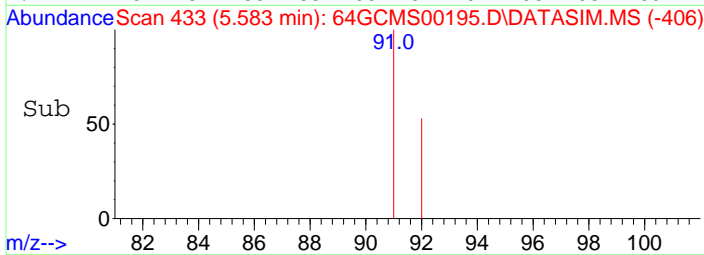
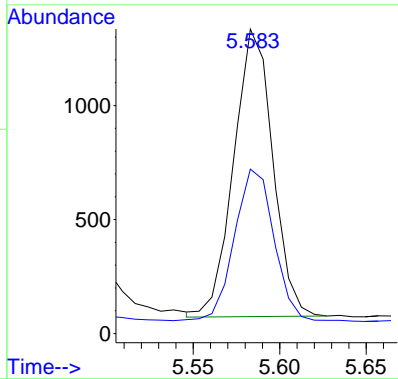
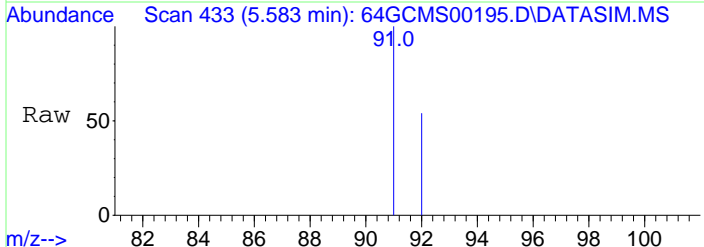


Abundance Scan 433 (5.583 min): 64GCMS00179.D\DATASIM.MS (-428)

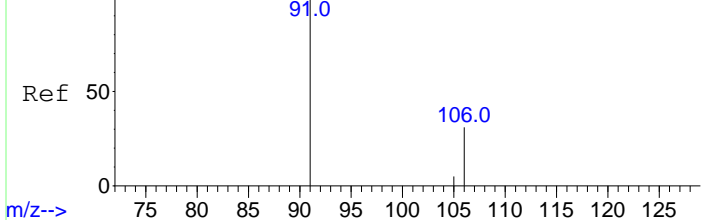


#13
Toluene
Concen: 3.63 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00195.D
Acq: 3 May 2016 5:26 pm

Tgt Ion	Resp	Lower	Upper
91	100		
92	53.1	48.0	72.0

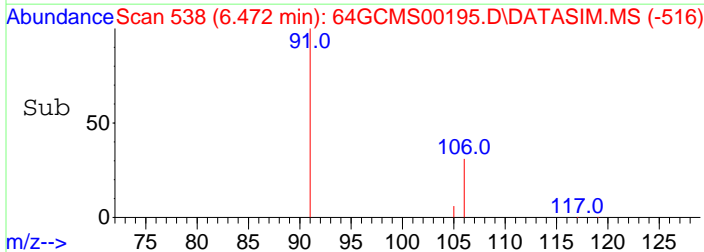
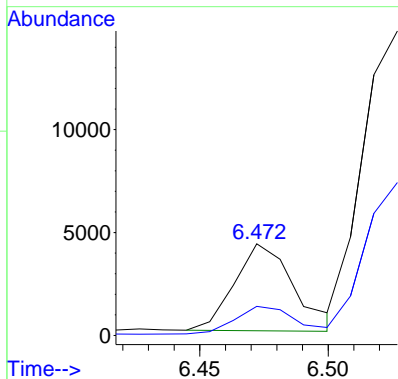
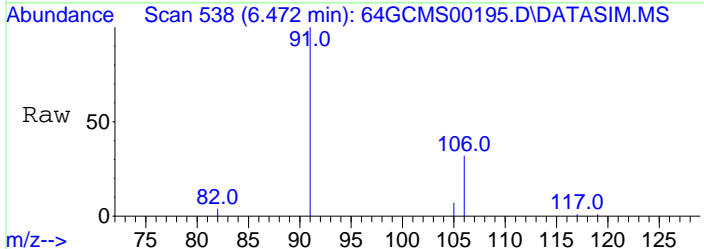


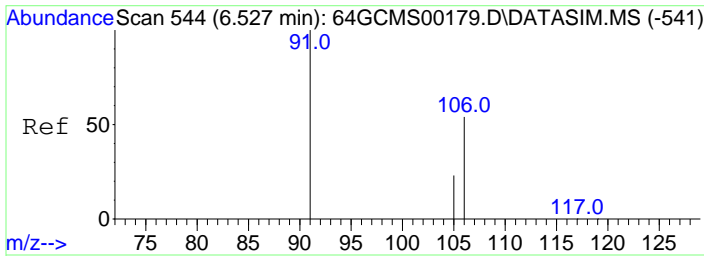
Abundance Scan 538 (6.472 min): 64GCMS00179.D\DATASIM.MS (-534)



#15
Ethyl Benzene
Concen: 10.07 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00195.D
Acq: 3 May 2016 5:26 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	33.1	24.2	36.2

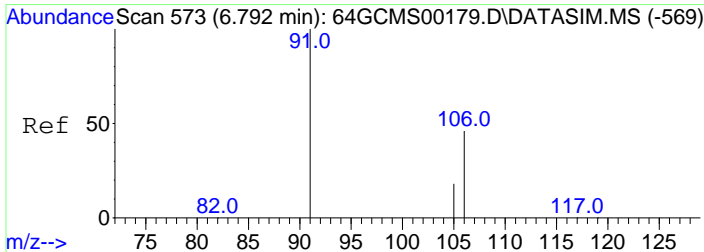
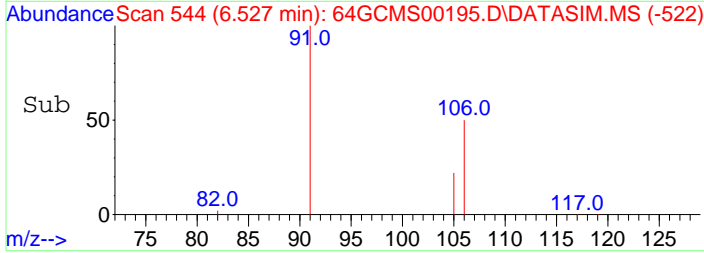
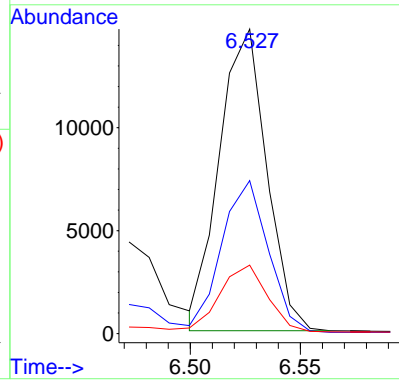
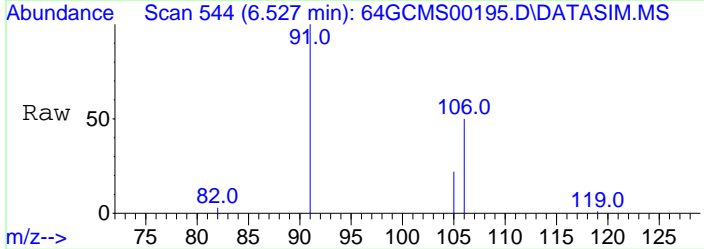




#16
 m,p-Xylene
 Concen: 39.95 ppbv
 RT: 6.527 min Scan# 544
 Delta R.T. -0.000 min
 Lab File: 64GCMS00195.D
 Acq: 3 May 2016 5:26 pm

Tgt Ion: 91 Resp: 21883

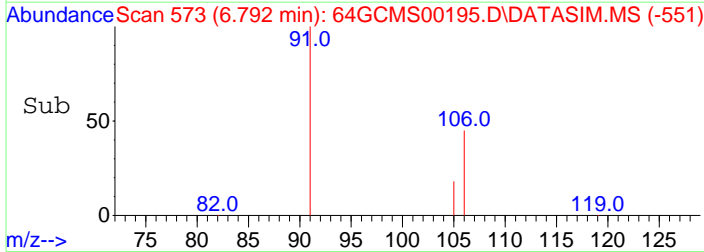
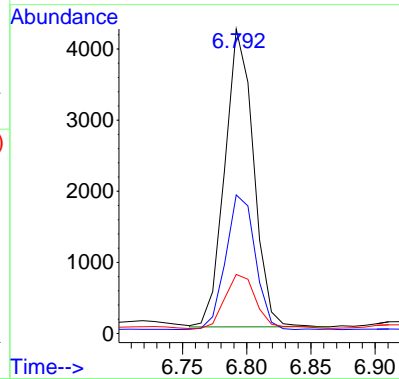
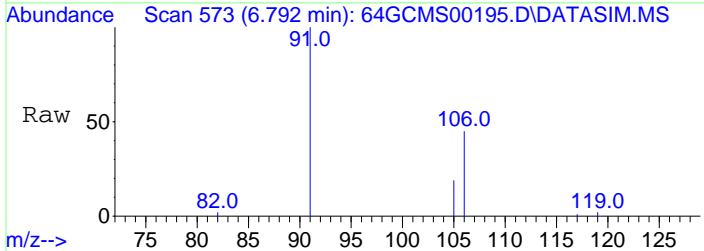
Ion	Ratio	Lower	Upper
91	100		
106	49.4	37.7	56.5
105	22.4	17.0	25.4



#17
 o-Xylene
 Concen: 10.96 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00195.D
 Acq: 3 May 2016 5:26 pm

Tgt Ion: 91 Resp: 6511

Ion	Ratio	Lower	Upper
91	100		
106	46.4	35.4	53.2
105	19.7	14.0	21.0



Data Path : D:\msdchem\1\data\20160503\
Data File : 64GCMS00196.D
Acq On : 3 May 2016 6:10 pm
Operator : dlm
Sample : 51080 \ Unit 21
Misc : 5 mL \ 3 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 18:21:37 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Tue May 03 08:37:26 2016
Response via : Initial Calibration

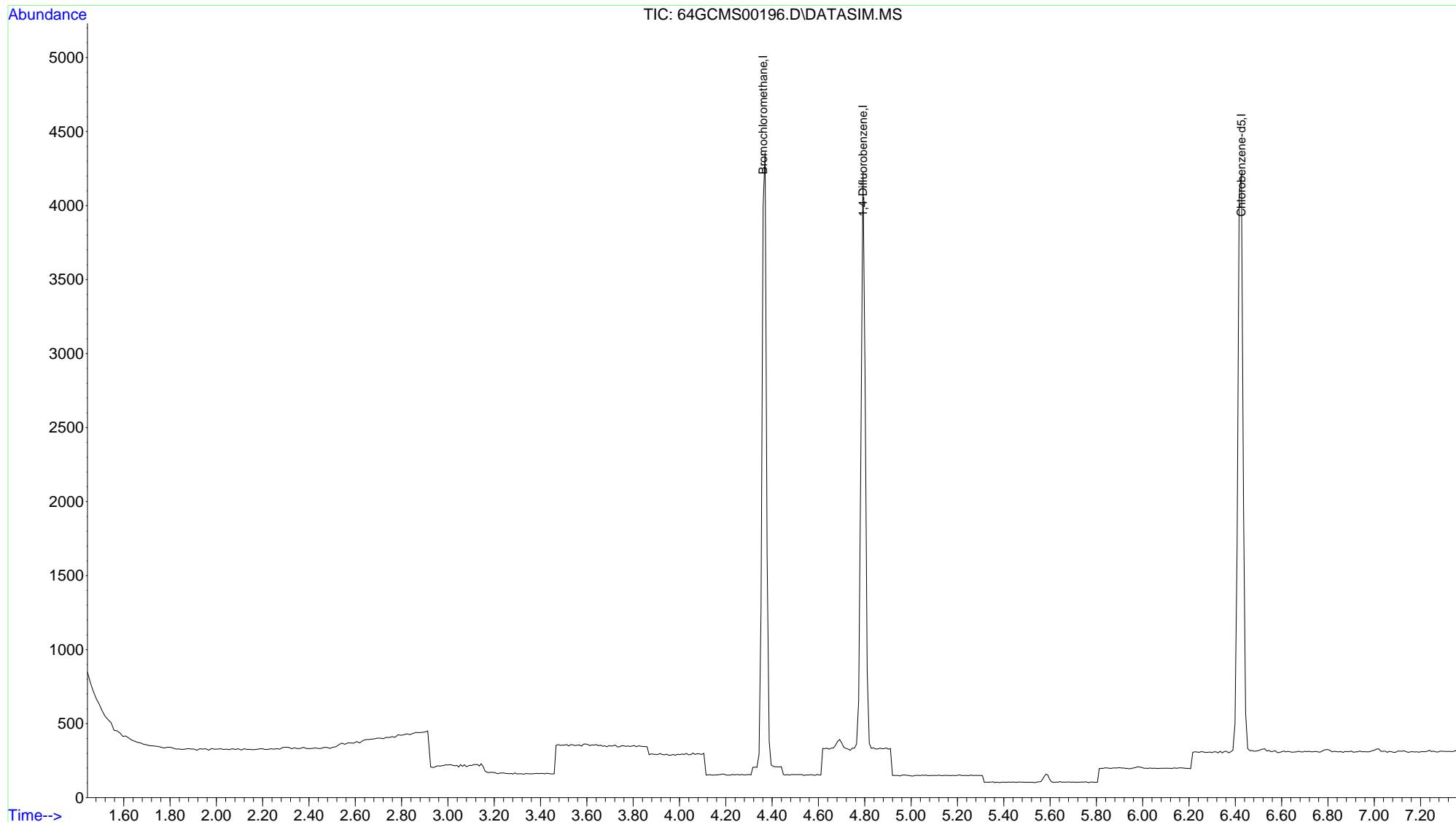
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.361	49	2099	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3522	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3343	10.00	ppbv	0.00

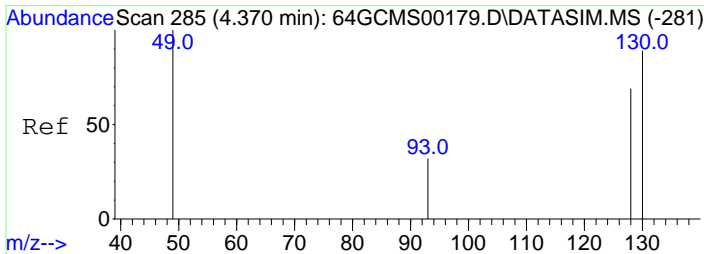
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160503\
 Data File : 64GCMS00196.D
 Acq On : 3 May 2016 6:10 pm
 Operator : dlm
 Sample : 51080 \ Unit 21
 Misc : 5 mL \ 3 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 18:21:37 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Tue May 03 08:37:26 2016
 Response via : Initial Calibration

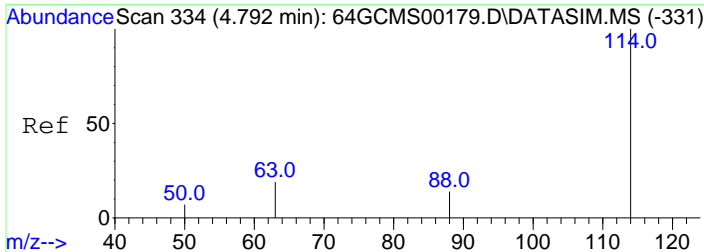
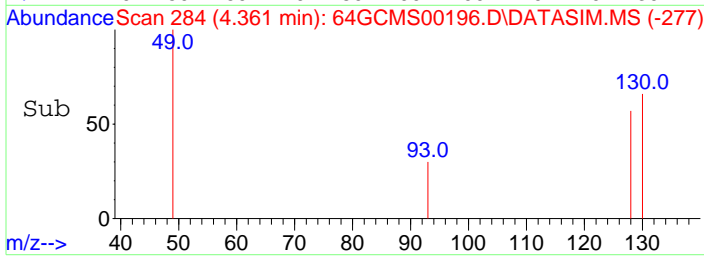
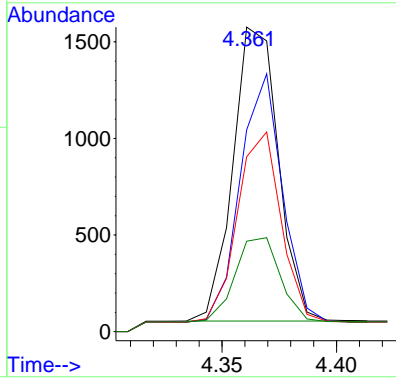
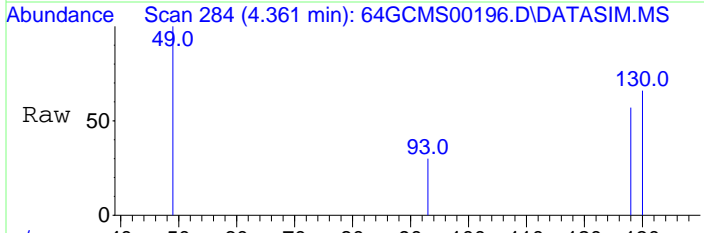




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.361 min Scan# 284
 Delta R.T. -0.009 min
 Lab File: 64GCMS00196.D
 Acq: 3 May 2016 6:10 pm

Tgt Ion: 49 Resp: 2099

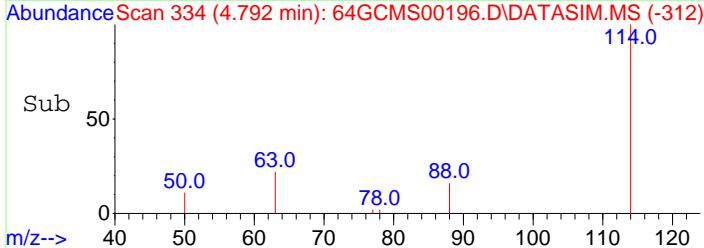
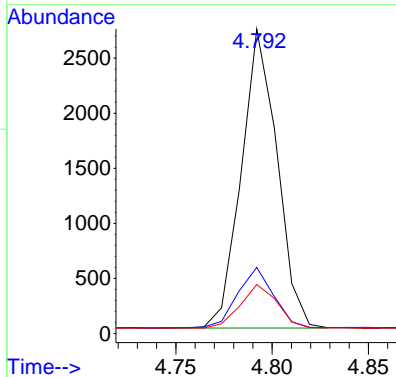
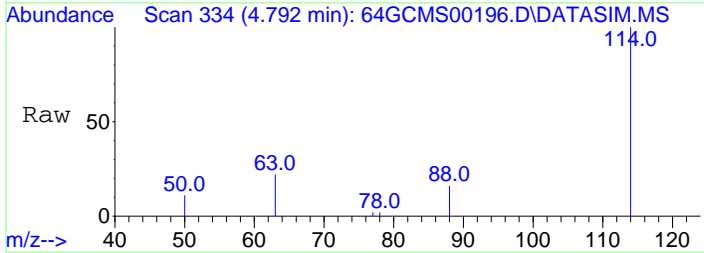
Ion	Ratio	Lower	Upper
49	100		
130	78.4	46.3	69.5#
128	62.3	35.7	53.5#
93	28.8	17.6	26.4#



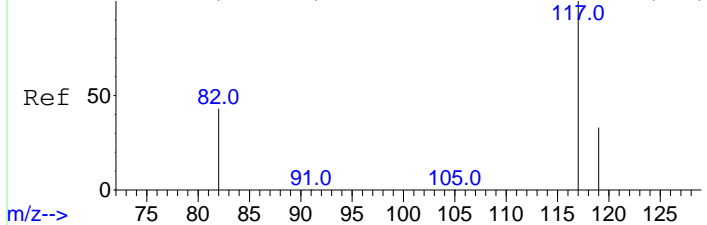
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00196.D
 Acq: 3 May 2016 6:10 pm

Tgt Ion: 114 Resp: 3522

Ion	Ratio	Lower	Upper
114	100		
63	20.1	19.2	28.8
88	14.8	13.7	20.5



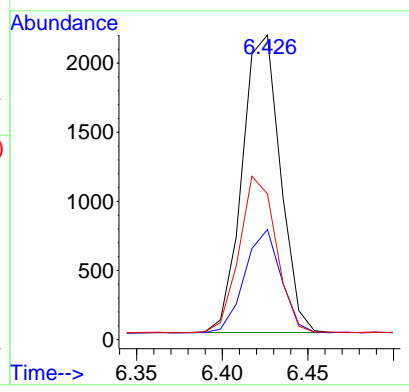
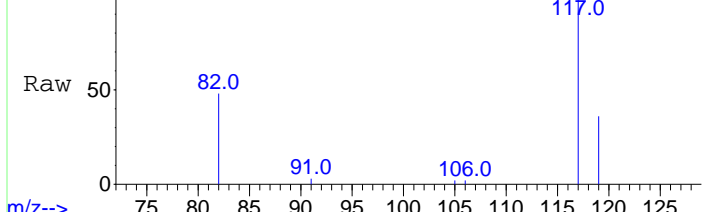
Abundance Scan 533 (6.426 min): 64GCMS00179.D\DATASIM.MS (-528)



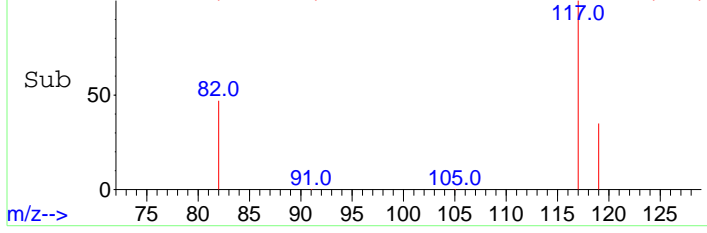
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00196.D
Acq: 3 May 2016 6:10 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.9	25.8	38.6
82	50.8	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00196.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00196.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00201.D
 Acq On : 4 May 2016 6:33 am
 Operator : dlm
 Sample : 20160504-MB \ Method Blank
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:42:03 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

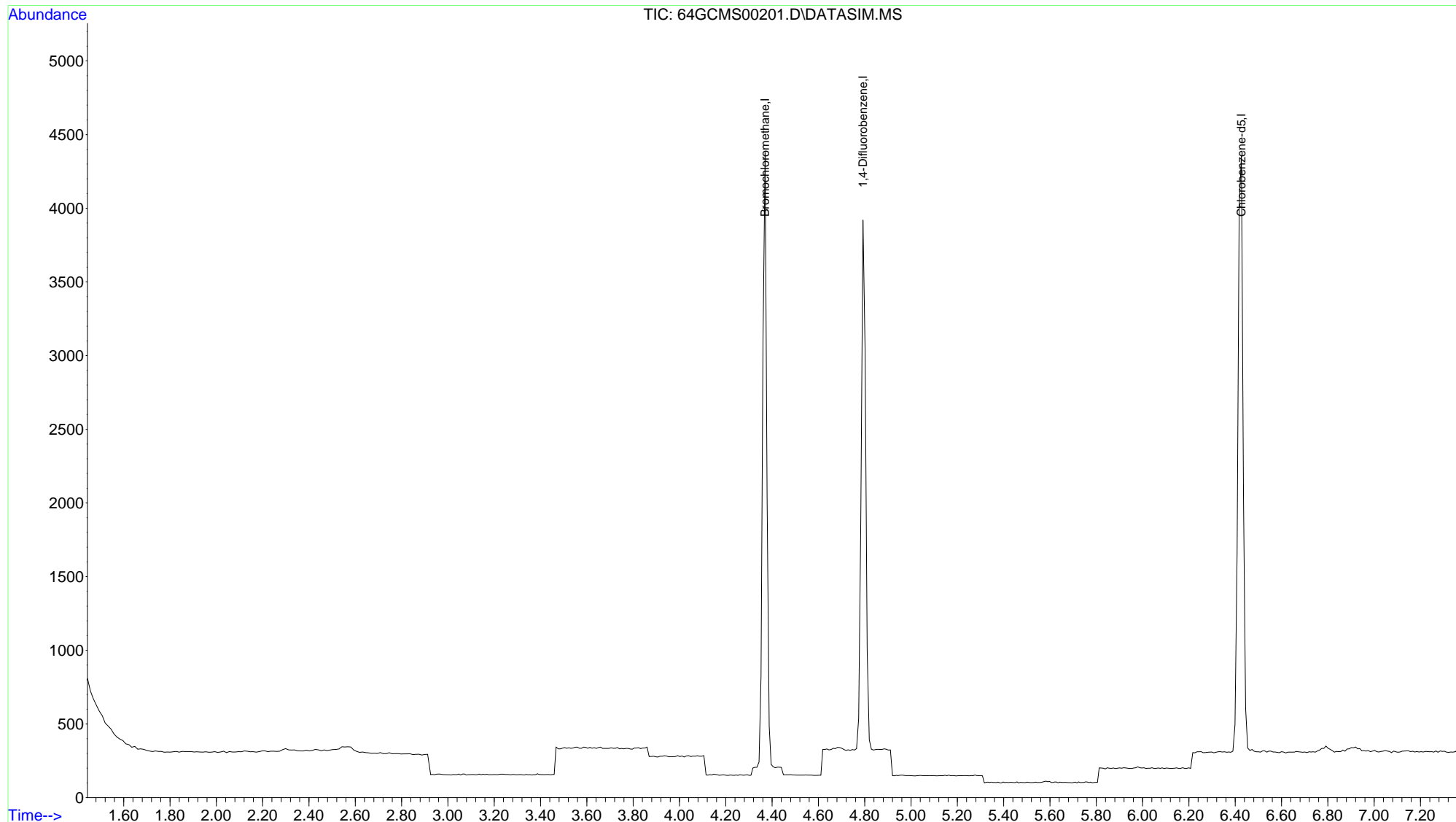
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	1907	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3408	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.427	117	3399	10.00	ppbv	0.00

Target Compounds	Qvalue

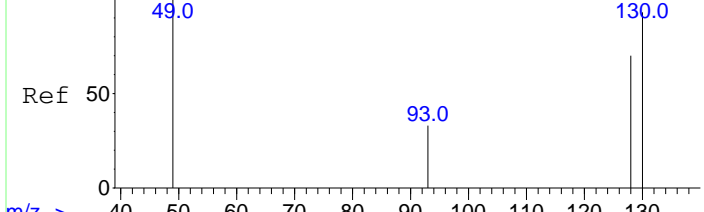
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00201.D
 Acq On : 4 May 2016 6:33 am
 Operator : dlm
 Sample : 20160504-MB \ Method Blank
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 06:42:03 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

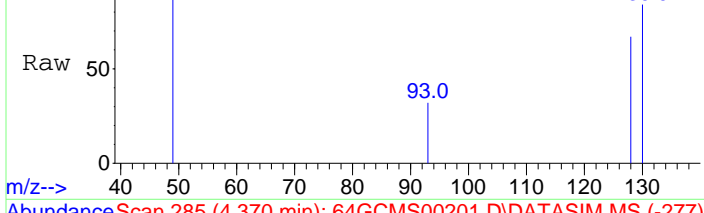


Abundance Scan 285 (4.370 min): 64GCMS00198.D\DATASIM.MS (-281)



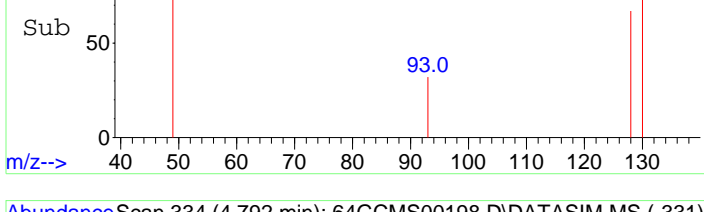
m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00201.D\DATASIM.MS



m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00201.D\DATASIM.MS (-277)

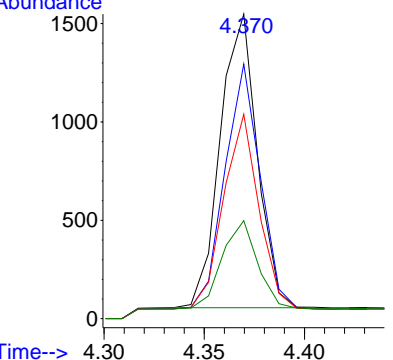


m/z-->

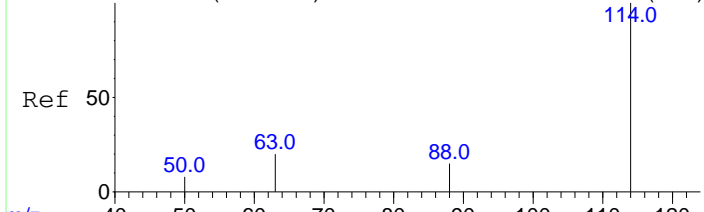
#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00201.D
Acq: 4 May 2016 6:33 am

Tgt Ion: 49 Resp: 1907

Ion	Ratio	Lower	Upper
49	100		
130	79.8	46.3	69.5#
128	63.6	35.7	53.5#
93	29.0	17.6	26.4#

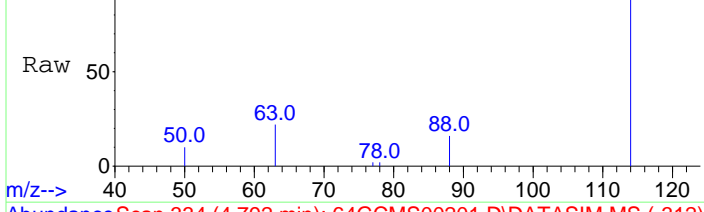


Abundance Scan 334 (4.792 min): 64GCMS00198.D\DATASIM.MS (-331)



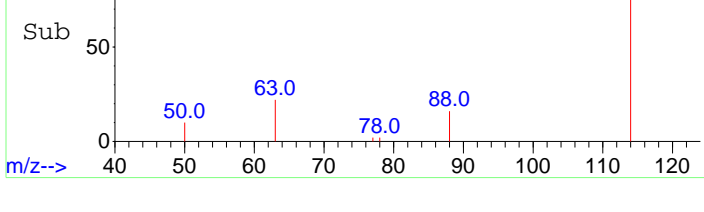
m/z-->

Abundance Scan 334 (4.792 min): 64GCMS00201.D\DATASIM.MS



m/z-->

Abundance Scan 334 (4.792 min): 64GCMS00201.D\DATASIM.MS (-312)

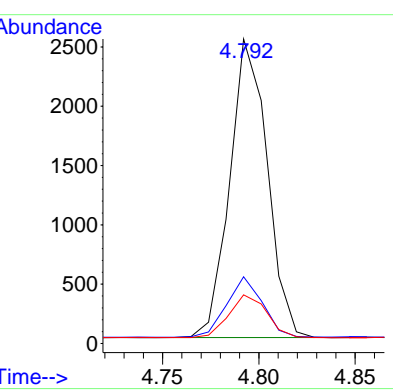


m/z-->

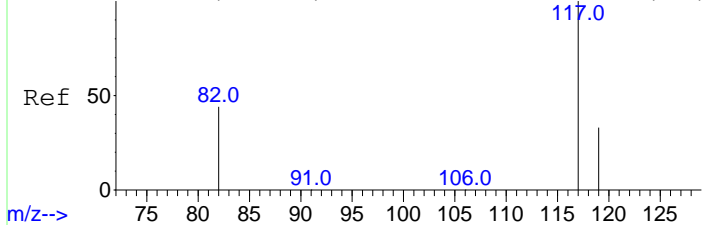
#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. 0.000 min
Lab File: 64GCMS00201.D
Acq: 4 May 2016 6:33 am

Tgt Ion: 114 Resp: 3408

Ion	Ratio	Lower	Upper
114	100		
63	19.4	19.2	28.8
88	14.4	13.7	20.5



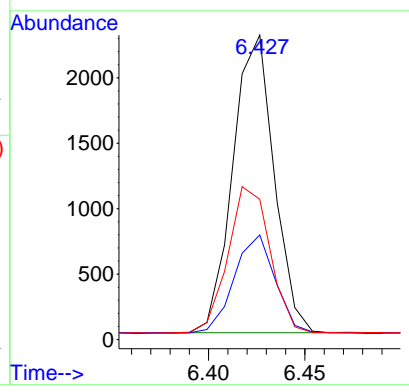
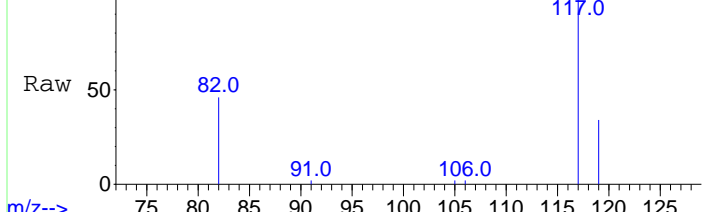
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



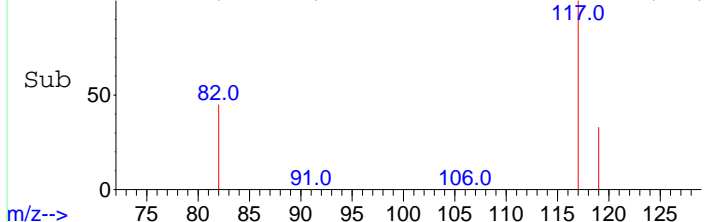
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.427 min Scan# 533
Delta R.T. 0.000 min
Lab File: 64GCMS00201.D
Acq: 4 May 2016 6:33 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.7	25.8	38.6
82	50.0	45.6	68.4

Abundance Scan 533 (6.427 min): 64GCMS00201.D\DATASIM.MS



Abundance Scan 533 (6.427 min): 64GCMS00201.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00203.D
 Acq On : 4 May 2016 8:49 am
 Operator : dlm
 Sample : 51060 \ Unit 13
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

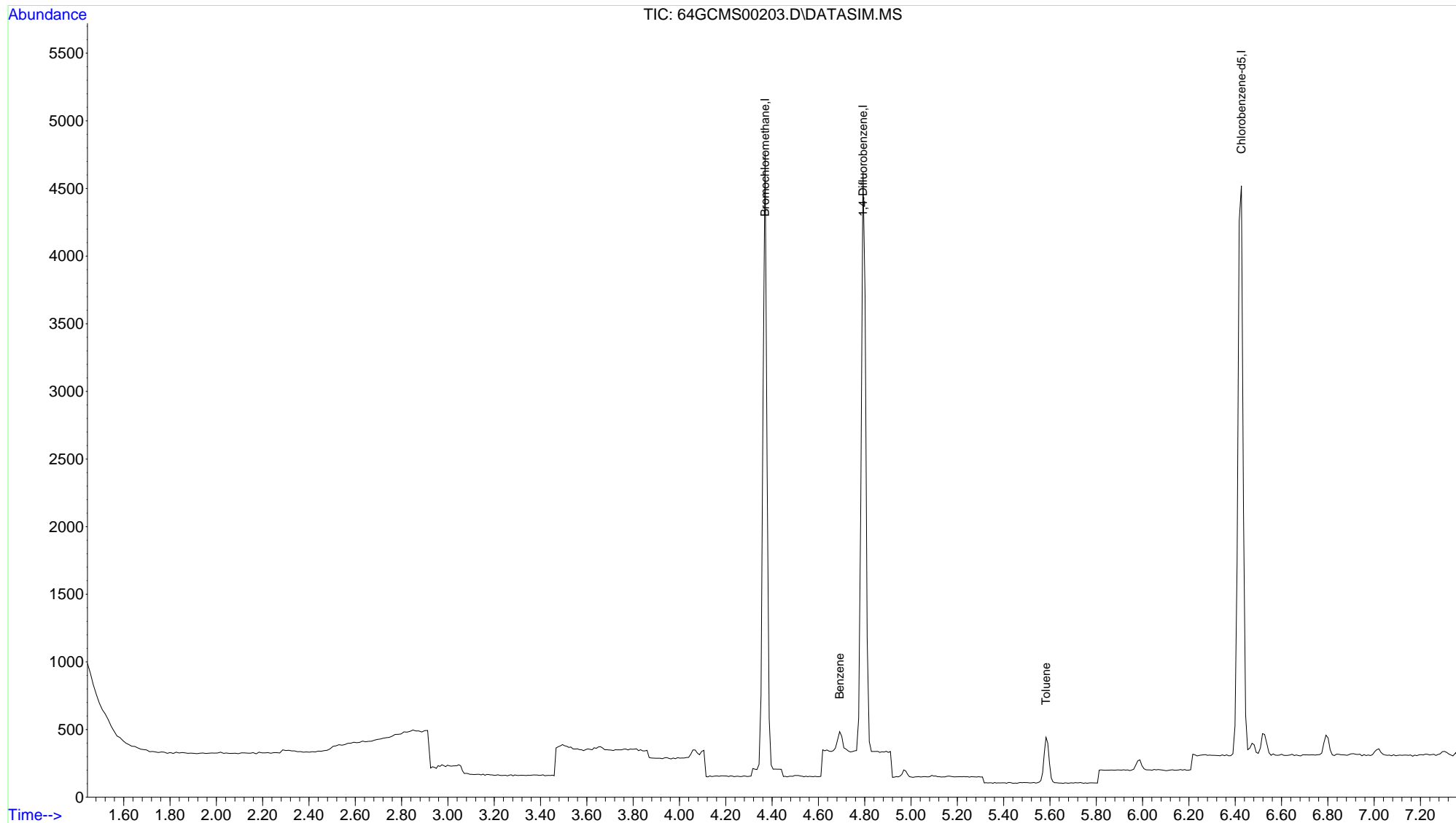
Quant Time: May 04 09:05:26 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

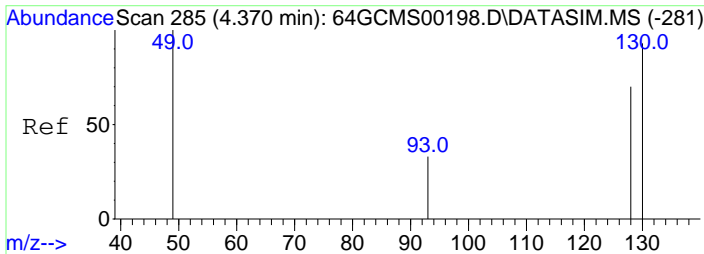
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2066	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	4104	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3626	10.00	ppbv	0.00
Target Compounds						
						Qvalue
10) Benzene	4.692	78	168m	0.51	ppbv	
13) Toluene	5.583	91	341	0.91	ppbv	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00203.D
 Acq On : 4 May 2016 8:49 am
 Operator : dlm
 Sample : 51060 \ Unit 13
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 09:05:26 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

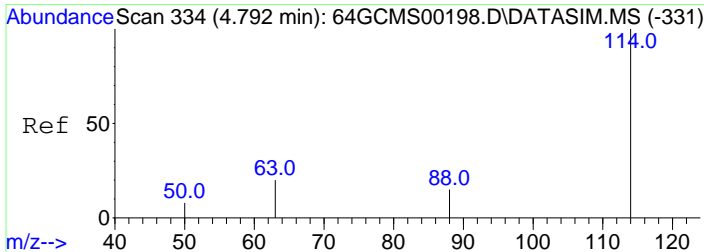
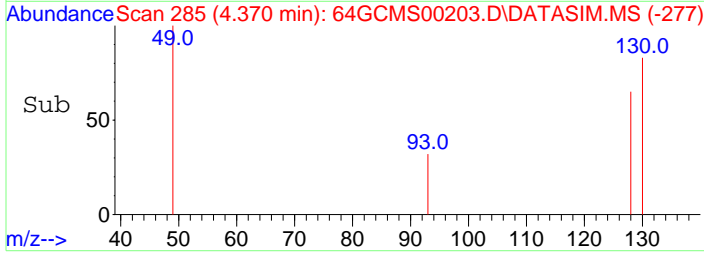
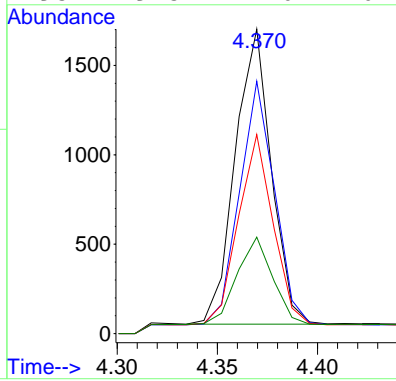
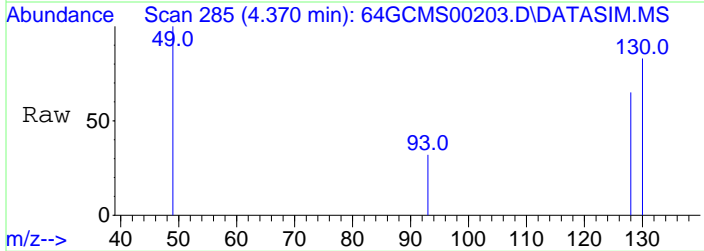




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00203.D
 Acq: 4 May 2016 8:49 am

Tgt Ion: 49 Resp: 2066

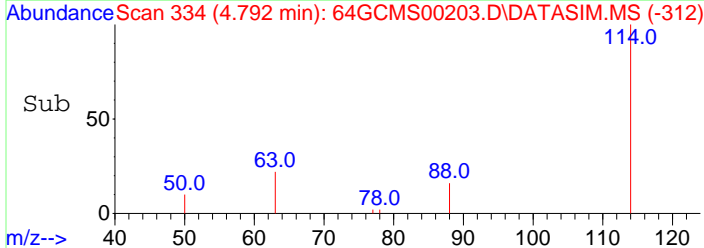
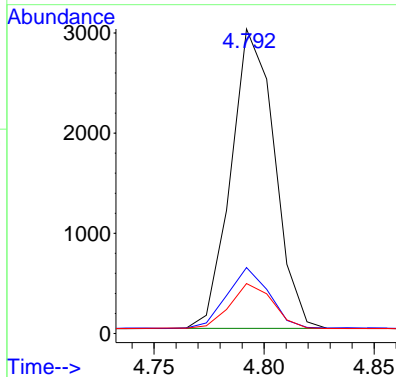
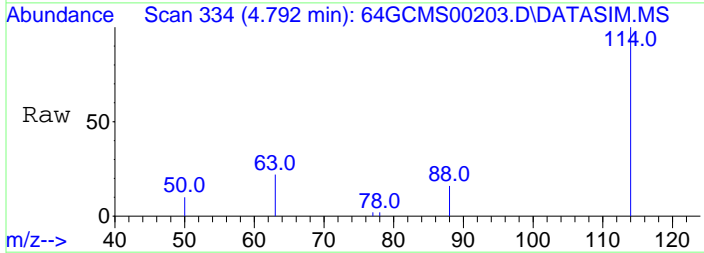
Ion	Ratio	Lower	Upper
49	100		
130	79.9	46.3	69.5#
128	62.2	35.7	53.5#
93	29.3	17.6	26.4#



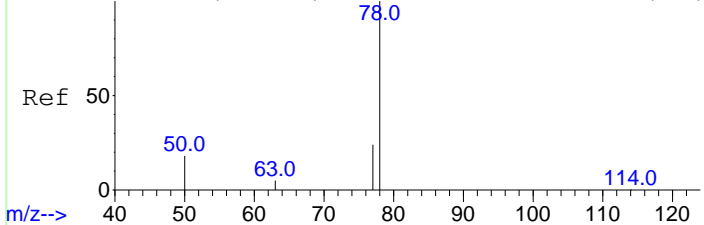
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00203.D
 Acq: 4 May 2016 8:49 am

Tgt Ion: 114 Resp: 4104

Ion	Ratio	Lower	Upper
114	100		
63	20.4	19.2	28.8
88	14.7	13.7	20.5



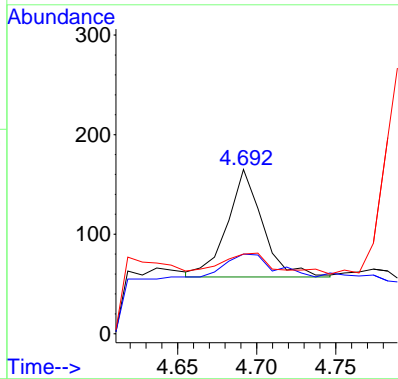
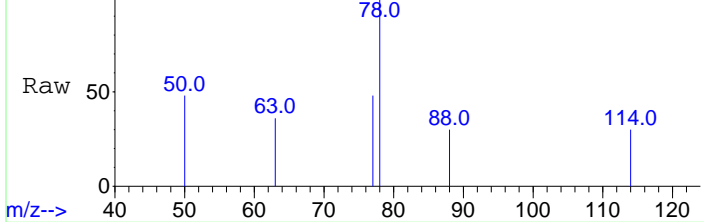
Abundance Scan 323 (4.692 min): 64GCMS00198.D\DATASIM.MS (-319)



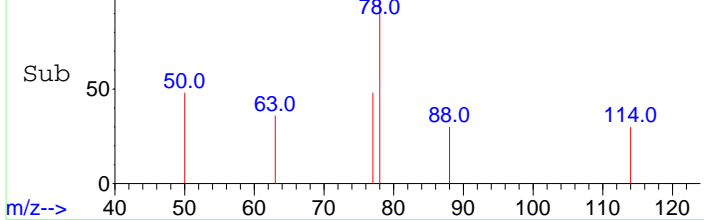
#10
Benzene
Concen: 0.51 ppbv m
RT: 4.692 min Scan# 323
Delta R.T. -0.000 min
Lab File: 64GCMS00203.D
Acq: 4 May 2016 8:49 am

Tgt Ion:	Resp:	Lower	Upper
78	100		
77	42.3	18.2	27.4#
50	47.0	16.6	24.8#

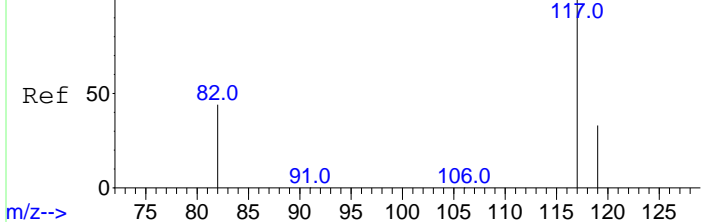
Abundance Scan 323 (4.692 min): 64GCMS00203.D\DATASIM.MS



Abundance Scan 323 (4.692 min): 64GCMS00203.D\DATASIM.MS (-299)



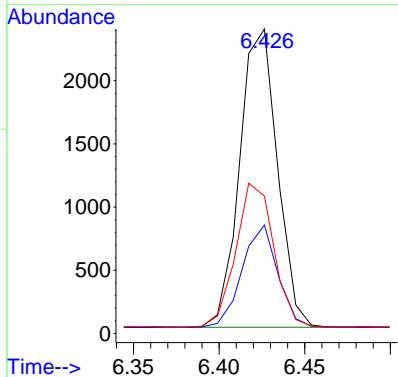
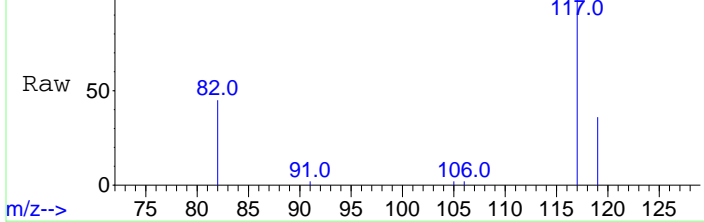
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



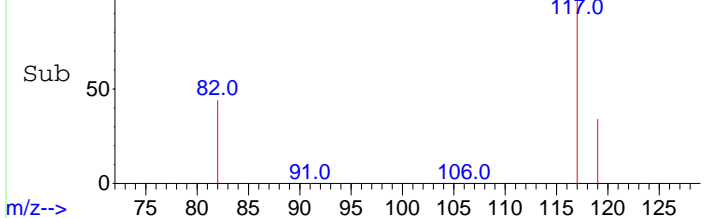
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00203.D
Acq: 4 May 2016 8:49 am

Tgt Ion:	Resp:	Lower	Upper
117	100		
119	32.2	25.8	38.6
82	48.3	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00203.D\DATASIM.MS

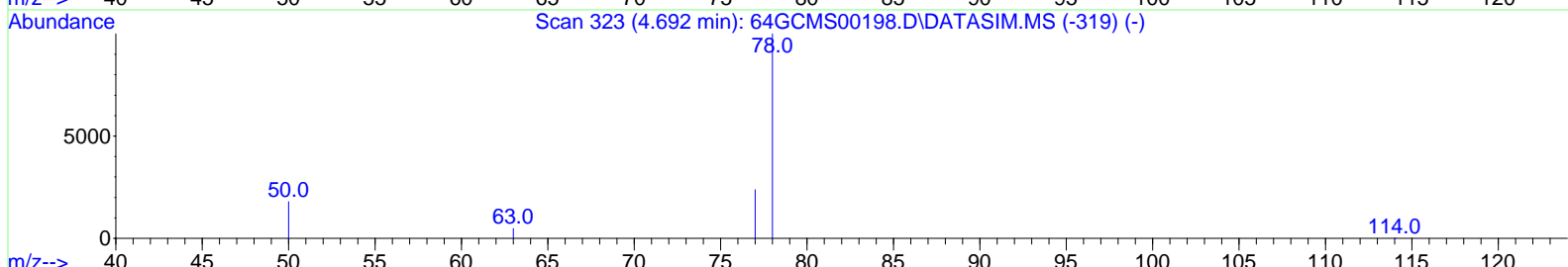
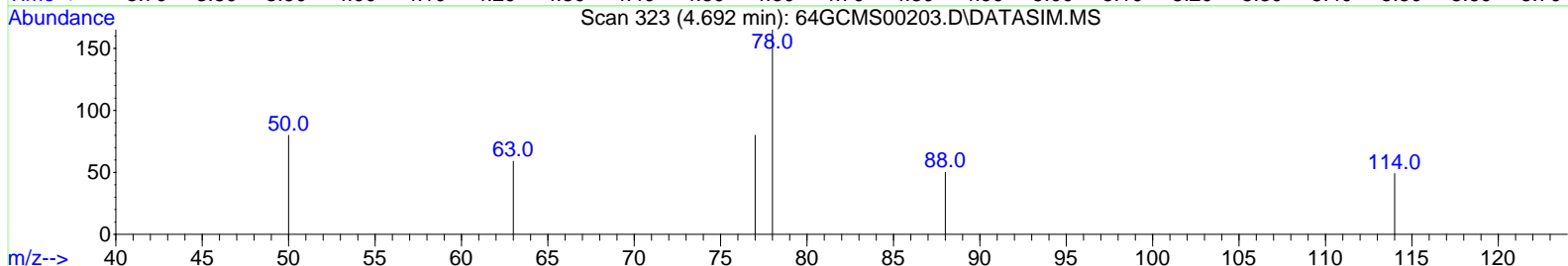
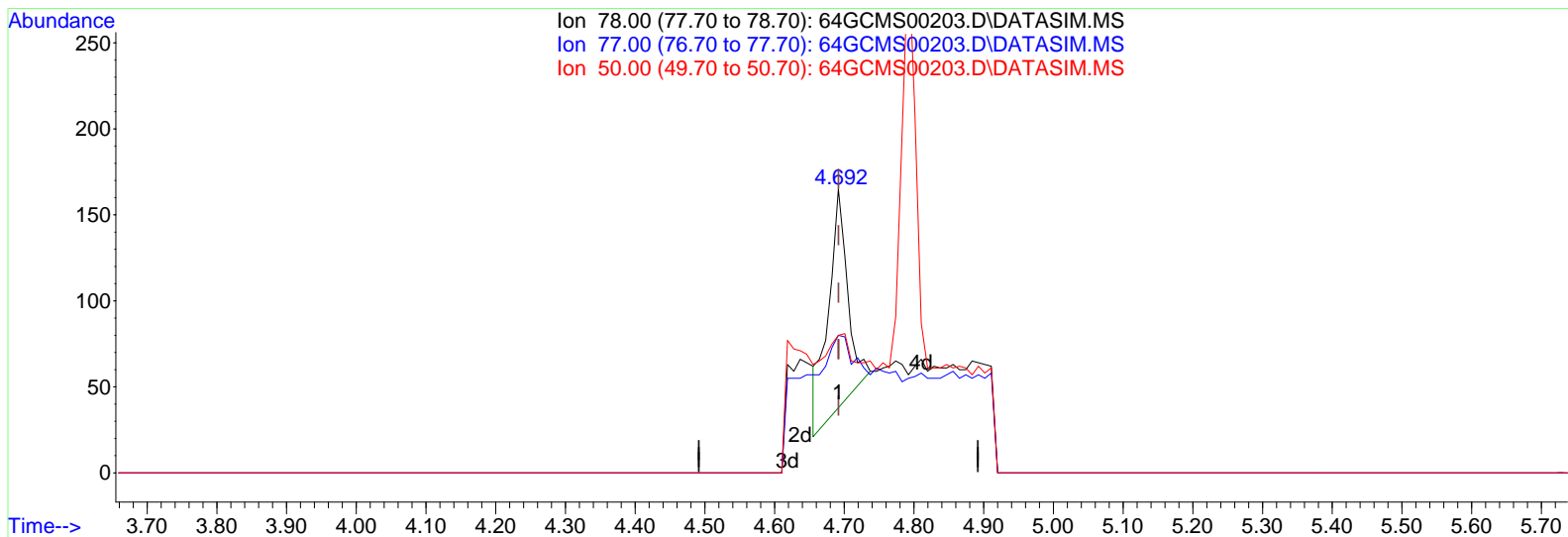


Abundance Scan 533 (6.426 min): 64GCMS00203.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00203.D
 Acq On : 4 May 2016 8:49 am
 Operator : dlm
 Sample : 51060 \ Unit 13
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 08:58:44 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



TIC: 64GCMS00203.D\DATASIM.MS

(10) Benzene

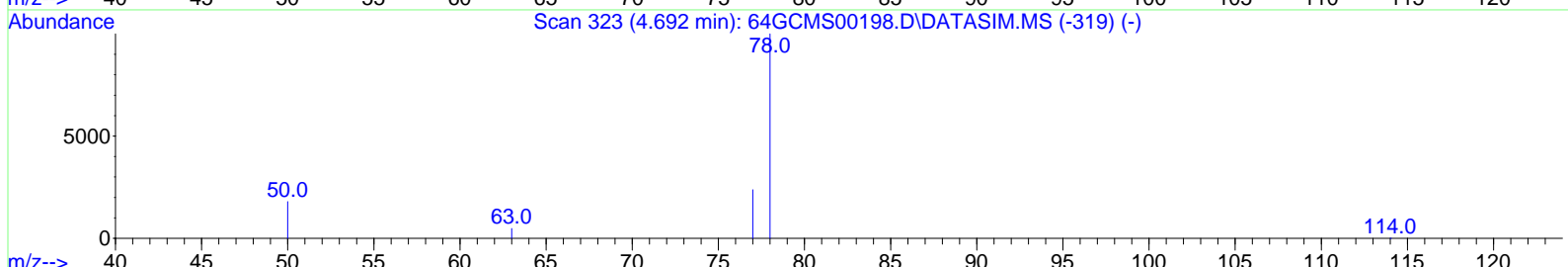
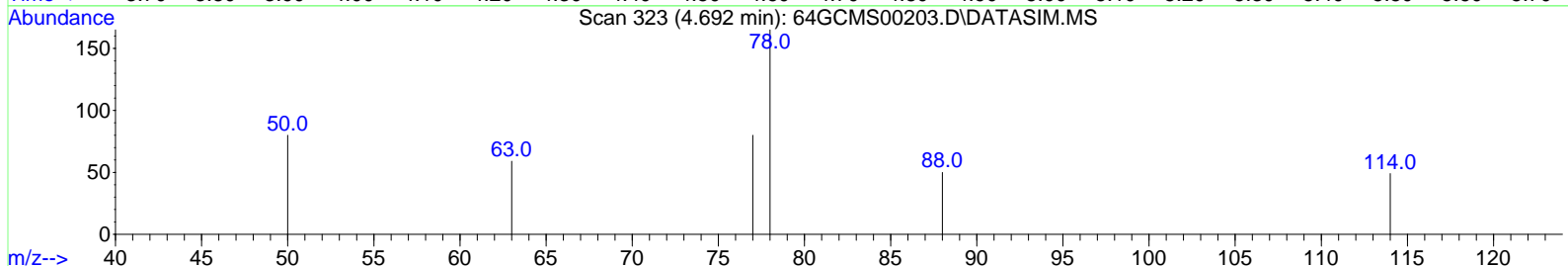
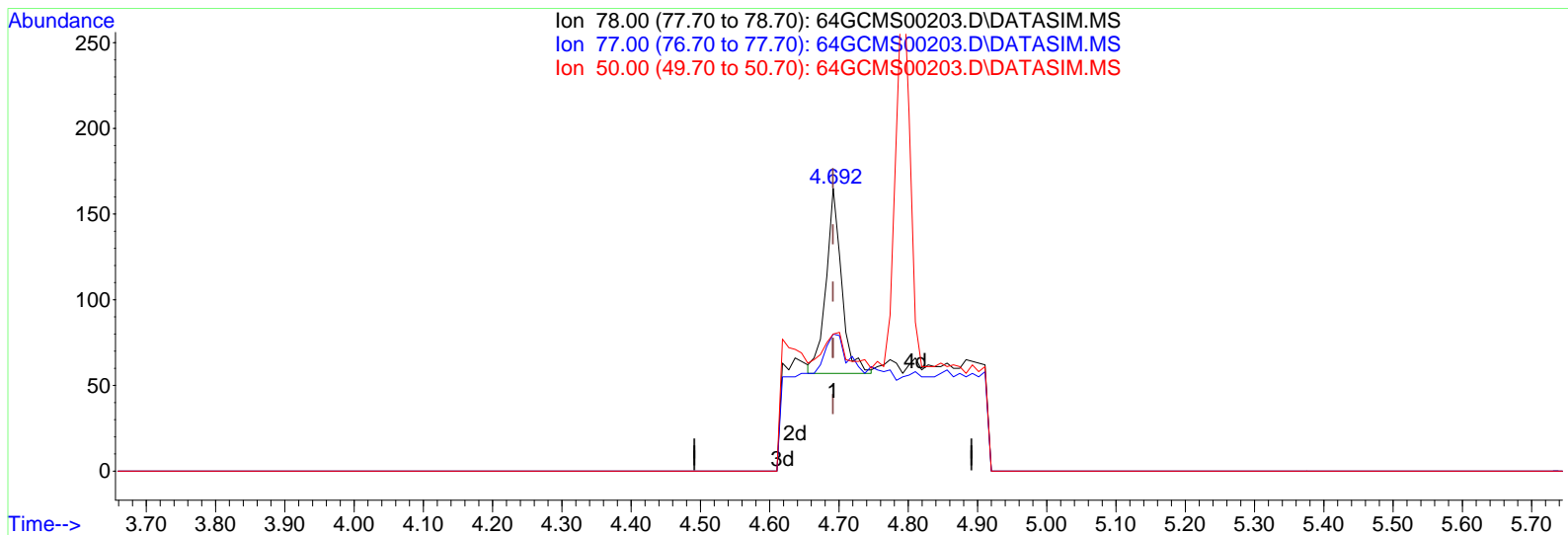
4.692min (-0.000) 0.77 ppbv

response 251

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	28.29#
50.00	20.70	31.47#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00203.D
 Acq On : 4 May 2016 8:49 am
 Operator : dlm
 Sample : 51060 \ Unit 13
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 08:58:44 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



TIC: 64GCMS00203.D\DATASIM.MS

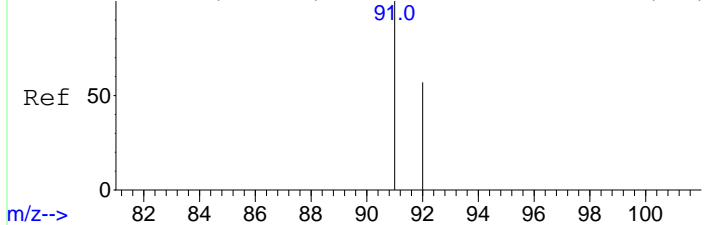
(10) Benzene

4.692min (-0.000) 0.51 ppbv m

response 168

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	42.26#
50.00	20.70	47.02#
0.00	0.00	0.00

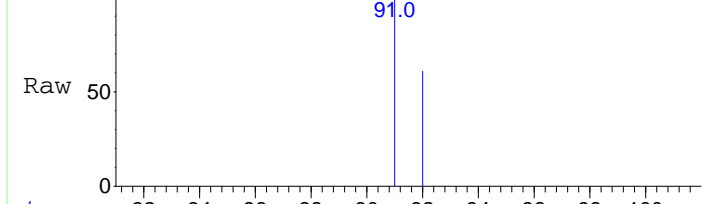
Abundance Scan 433 (5.583 min): 64GCMS00198.D\DATASIM.MS (-428)



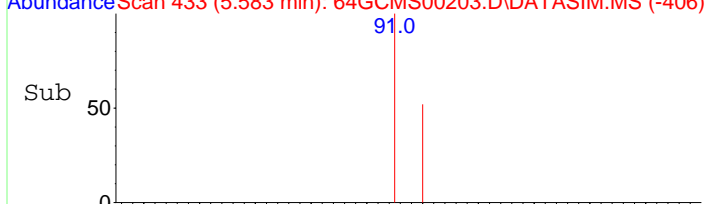
#13

Toluene
 Concen: 0.91 ppbv
 RT: 5.583 min Scan# 433
 Delta R.T. -0.000 min
 Lab File: 64GCMS00203.D
 Acq: 4 May 2016 8:49 am

m/z-->

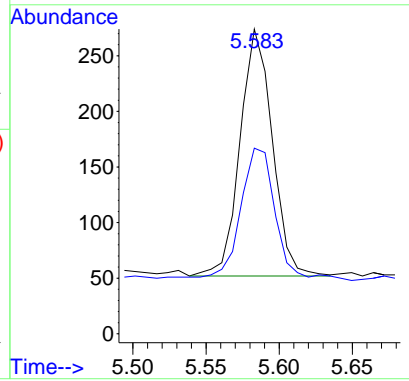


Abundance Scan 433 (5.583 min): 64GCMS00203.D\DATASIM.MS (-406)



m/z-->

Tgt Ion	91	92	Resp	341	Lower	Upper
Ion Ratio	100	53.7			48.0	72.0



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00204.D
 Acq On : 4 May 2016 9:02 am
 Operator : dlm
 Sample : GM-SG-10 \ GMEH10
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

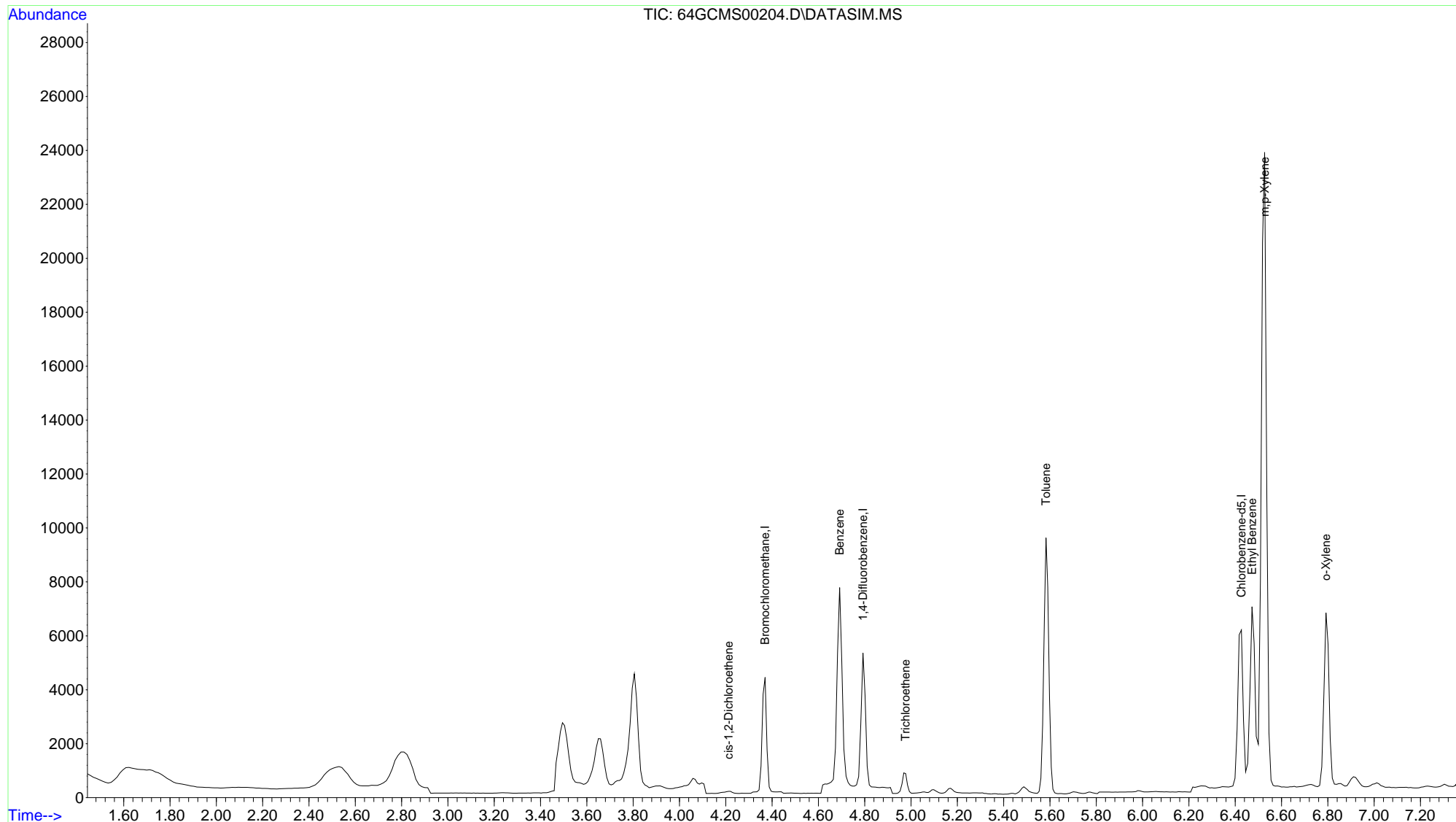
Quant Time: May 04 09:16:13 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2074	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	4574	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.427	117	4762	10.00	ppbv	0.00
Target Compounds						
						Qvalue
7) cis-1,2-Dichloroethene	4.212	61	157m	0.78	ppbv	
10) Benzene	4.692	78	7226	19.81	ppbv	# 90
11) Trichloroethene	4.977	130	355m	1.57	ppbv	
13) Toluene	5.583	91	8932	18.07	ppbv	96
15) Ethyl Benzene	6.472	91	7549	12.38	ppbv	95
16) m,p-Xylene	6.527	91	20224	40.88	ppbv	96
17) o-Xylene	6.792	91	5953	11.09	ppbv	96

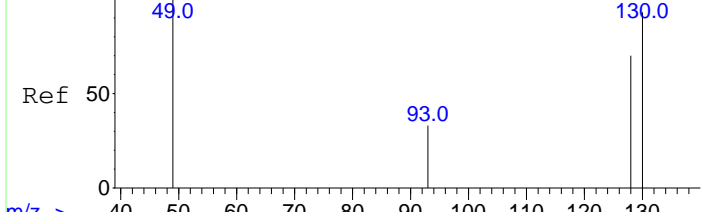
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00204.D
 Acq On : 4 May 2016 9:02 am
 Operator : dlm
 Sample : GM-SG-10 \ GMEH10
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 09:16:13 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

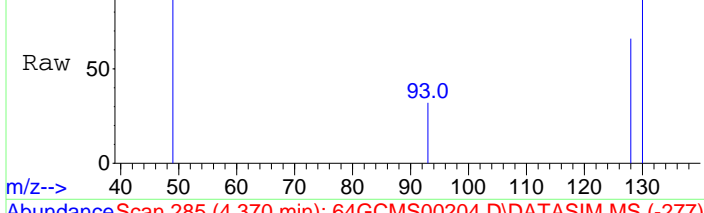


Abundance Scan 285 (4.370 min): 64GCMS00198.D\DATASIM.MS (-281)



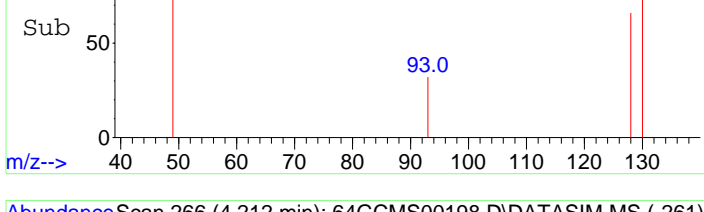
m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00204.D\DATASIM.MS



m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00204.D\DATASIM.MS (-277)

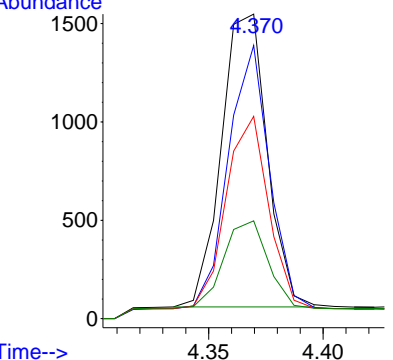


m/z-->

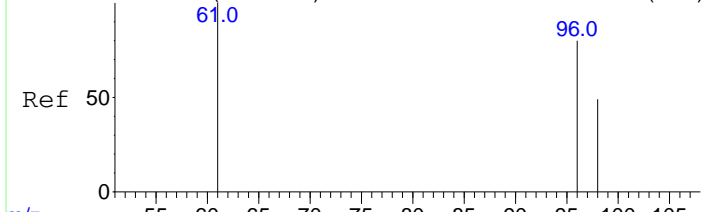
#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00204.D
Acq: 4 May 2016 9:02 am

Tgt Ion: 49 Resp: 2074

Ion	Ratio	Lower	Upper
49	100		
130	80.4	46.3	69.5#
128	60.8	35.7	53.5#
93	28.9	17.6	26.4#

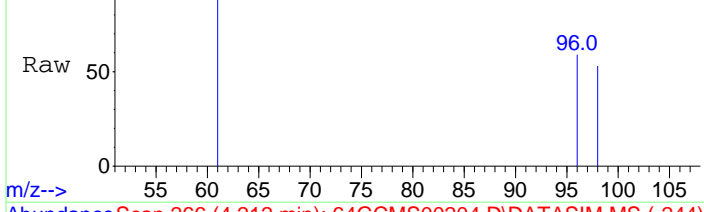


Abundance Scan 266 (4.212 min): 64GCMS00198.D\DATASIM.MS (-261)



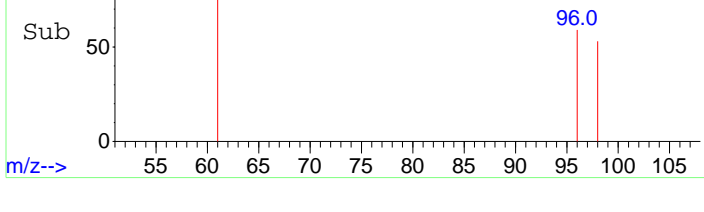
m/z-->

Abundance Scan 266 (4.212 min): 64GCMS00204.D\DATASIM.MS



m/z-->

Abundance Scan 266 (4.212 min): 64GCMS00204.D\DATASIM.MS (-244)

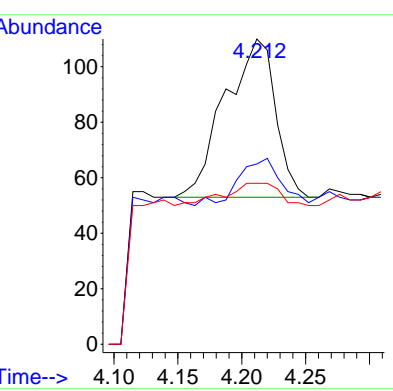


m/z-->

#7
cis-1,2-Dichloroethene
Concen: 0.78 ppbv m
RT: 4.212 min Scan# 266
Delta R.T. -0.008 min
Lab File: 64GCMS00204.D
Acq: 4 May 2016 9:02 am

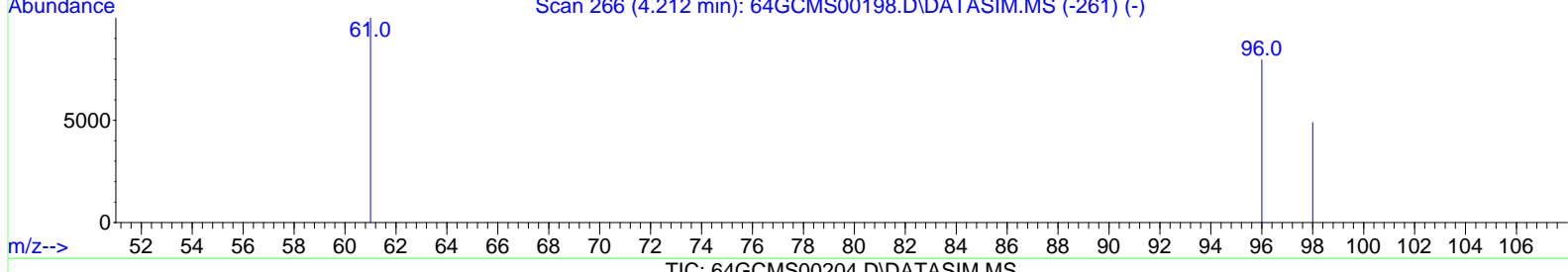
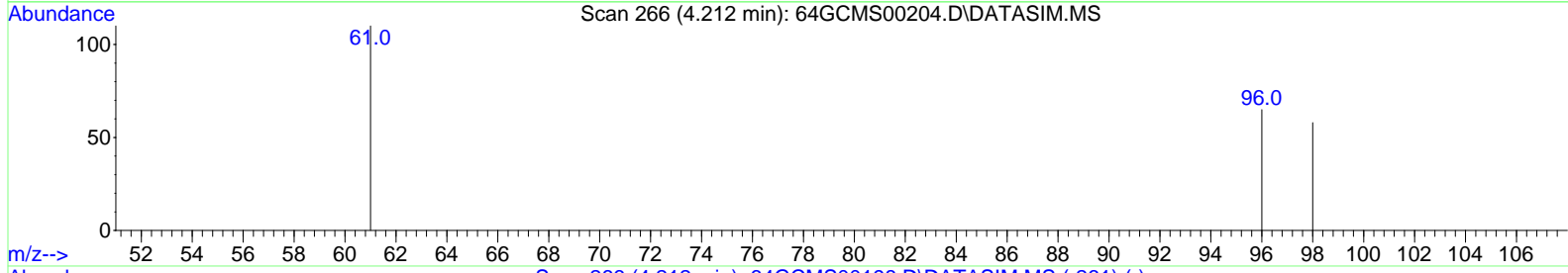
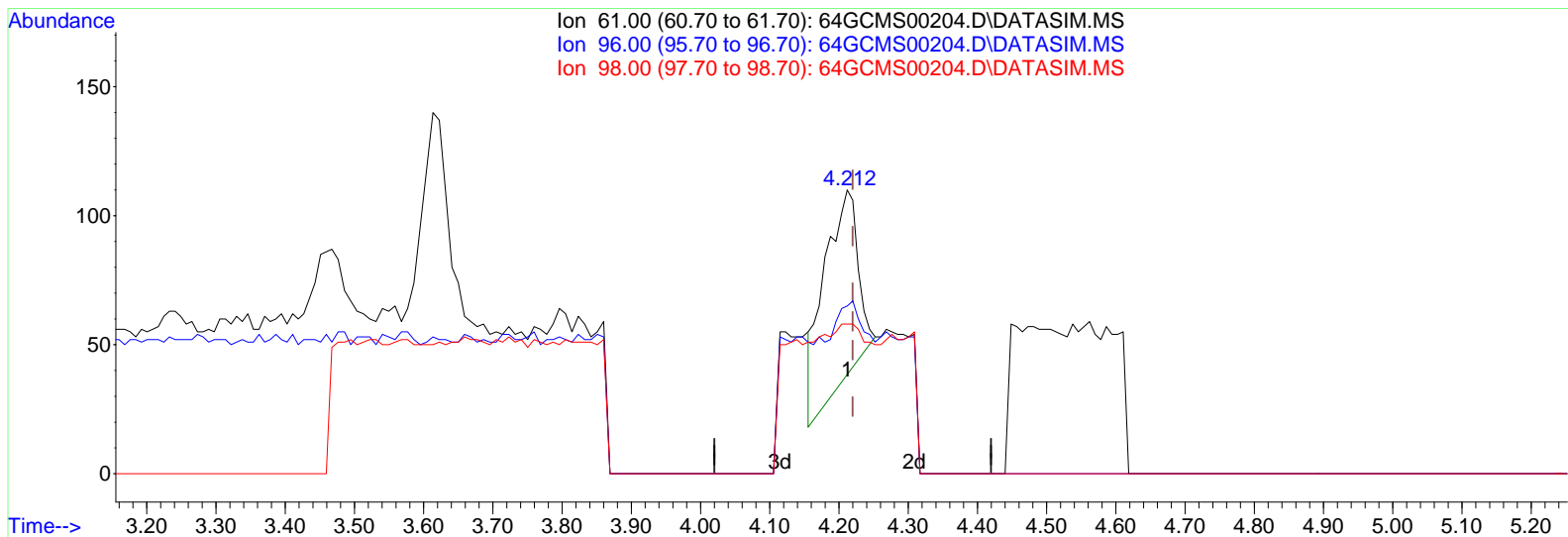
Tgt Ion: 61 Resp: 157

Ion	Ratio	Lower	Upper
61	100		
96	58.6	52.0	78.0
98	11.5	33.4	50.2#



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00204.D
 Acq On : 4 May 2016 9:02 am
 Operator : dlm
 Sample : GM-SG-10 \ GMEH10
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 09:11:07 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



(7) cis-1,2-Dichloroethene

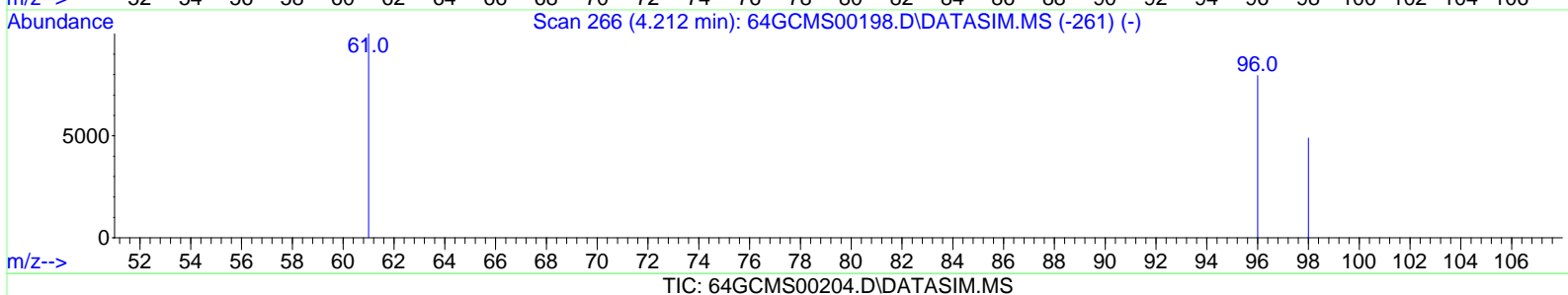
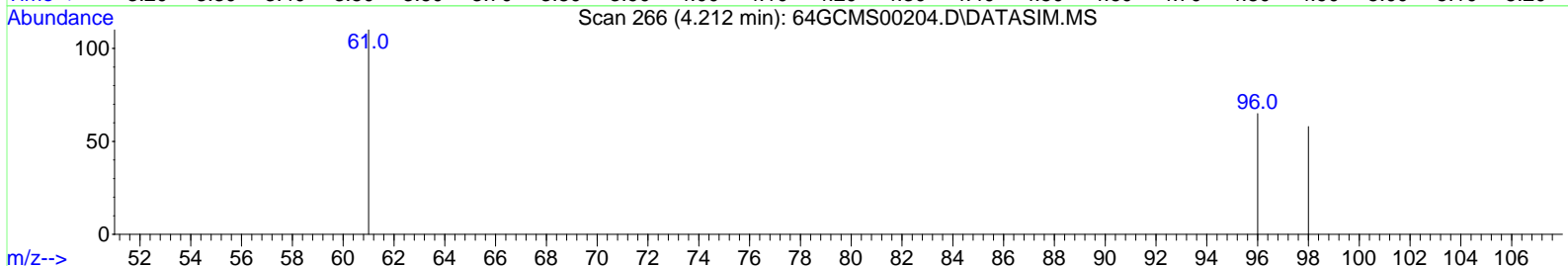
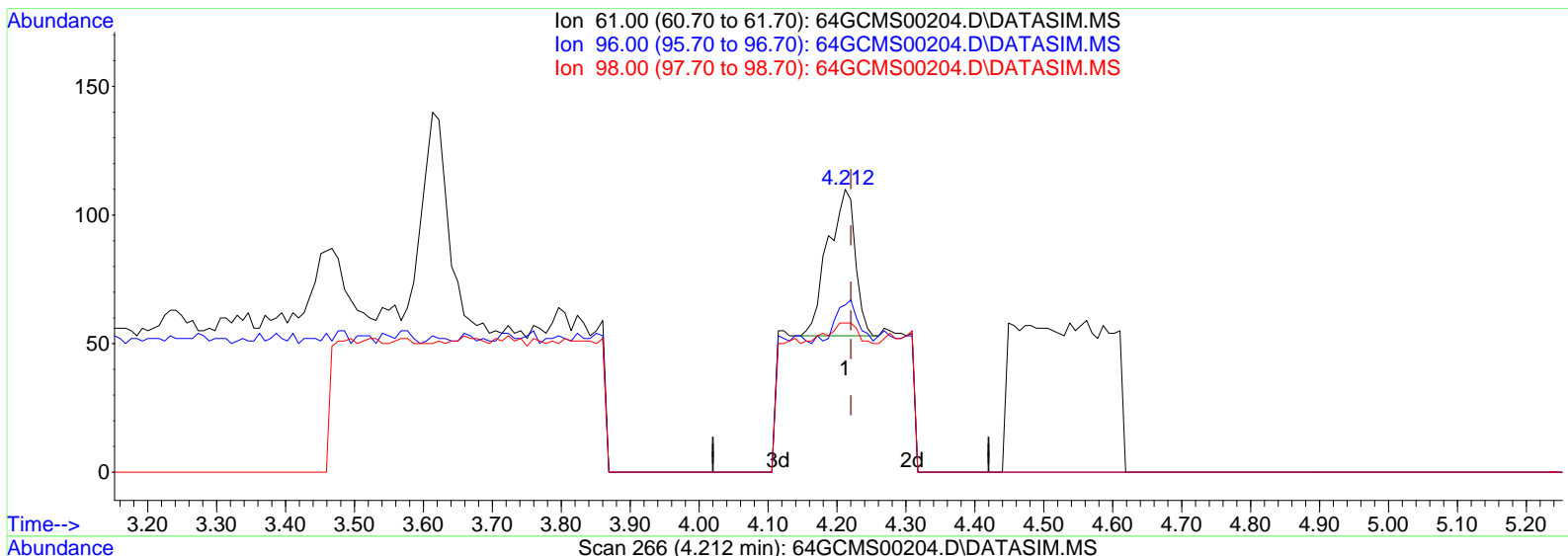
4.212min (-0.008) 1.28 ppbv

response 258

Ion	Exp%	Act%
61.00	100.00	100.00
96.00	65.00	35.66#
98.00	41.80	6.98#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00204.D
 Acq On : 4 May 2016 9:02 am
 Operator : dlm
 Sample : GM-SG-10 \ GMEH10
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

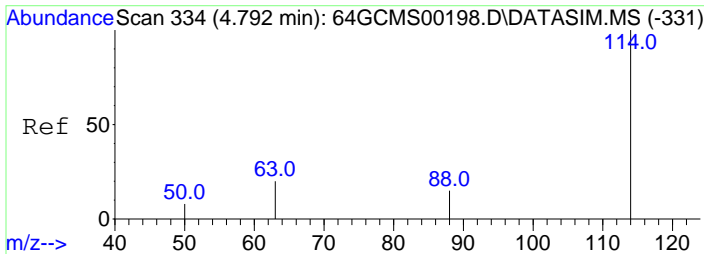
Quant Time: May 04 09:11:07 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



(7) *cis*-1,2-Dichloroethene

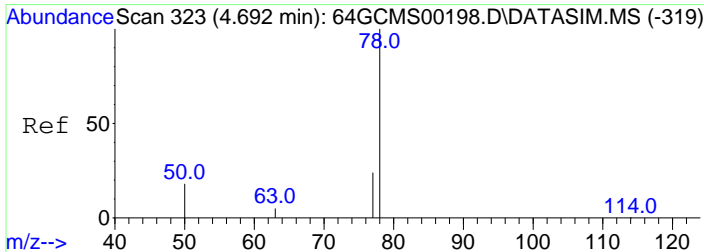
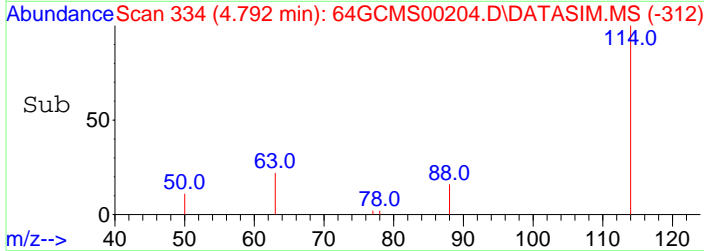
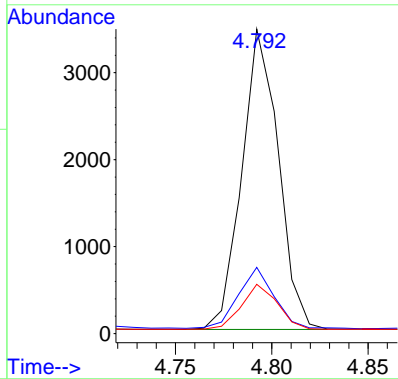
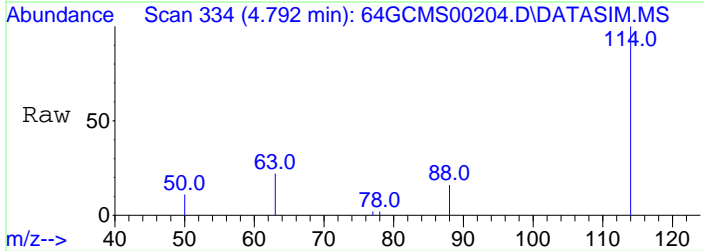
4.212min (-0.008) 0.78 ppbv m

response	157	
Ion	Exp%	Act%
61.00	100.00	100.00
96.00	65.00	58.60
98.00	41.80	11.46#
0.00	0.00	0.00



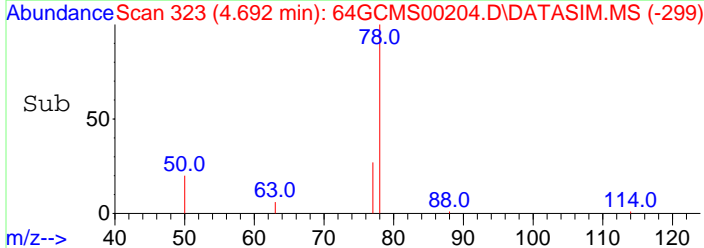
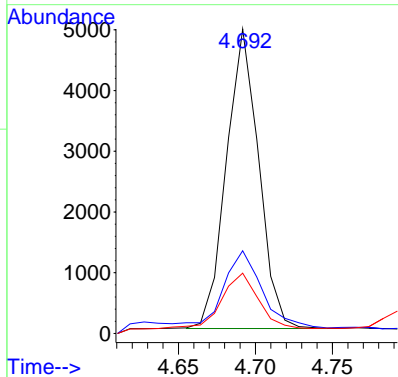
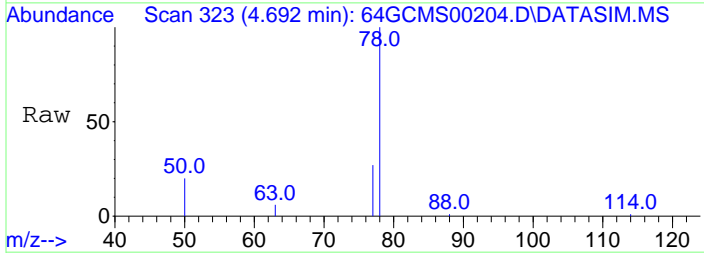
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. 0.000 min
 Lab File: 64GCMS00204.D
 Acq: 4 May 2016 9:02 am

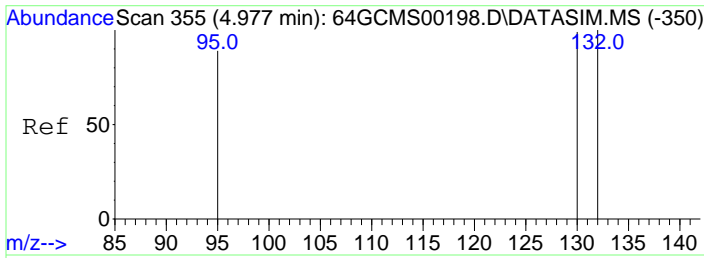
Tgt Ion	Resp	Lower	Upper
114	4574		
114	100		
63	20.4	19.2	28.8
88	14.8	13.7	20.5



#10
 Benzene
 Concen: 19.81 ppbv
 RT: 4.692 min Scan# 323
 Delta R.T. 0.000 min
 Lab File: 64GCMS00204.D
 Acq: 4 May 2016 9:02 am

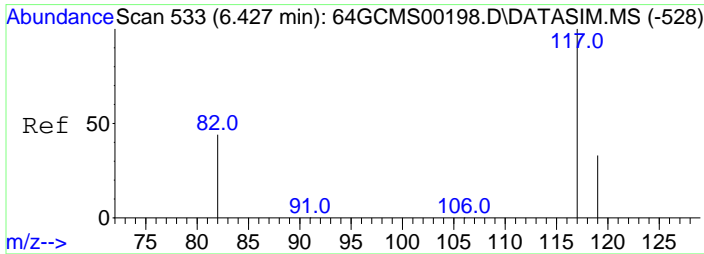
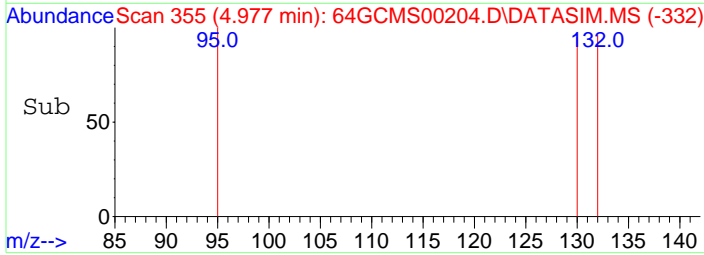
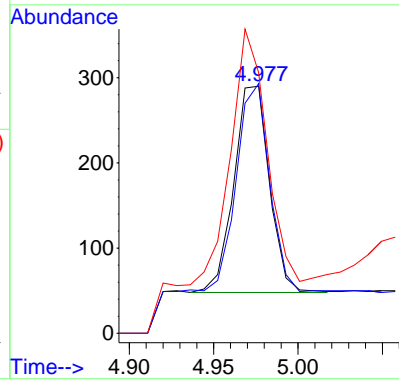
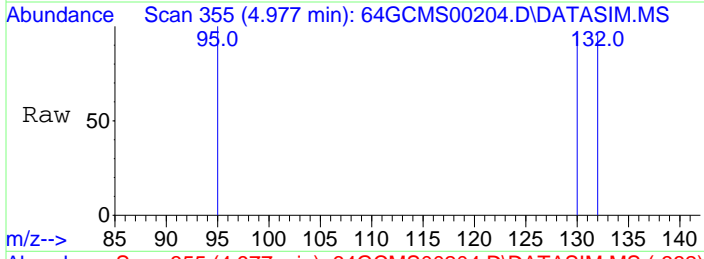
Tgt Ion	Resp	Lower	Upper
78	7226		
78	100		
77	31.1	18.2	27.4#
50	21.2	16.6	24.8





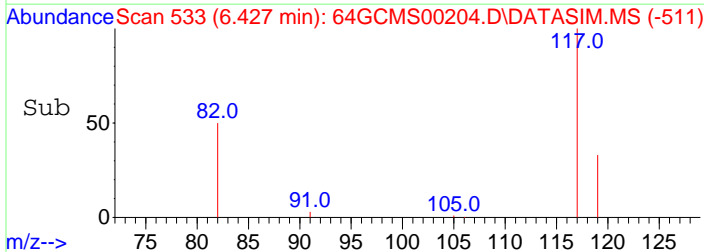
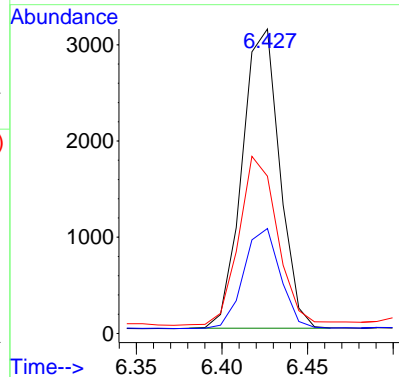
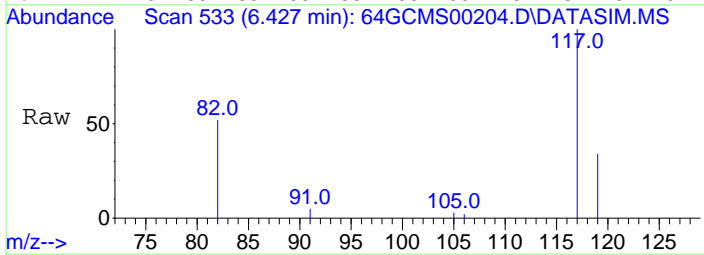
#11
 Trichloroethene
 Concen: 1.57 ppbv m
 RT: 4.977 min Scan# 355
 Delta R.T. 0.000 min
 Lab File: 64GCMS00204.D
 Acq: 4 May 2016 9:02 am

Tgt Ion	Resp	Lower	Upper
130	100		
132	108.5	76.9	115.3
95	176.1	81.5	122.3#



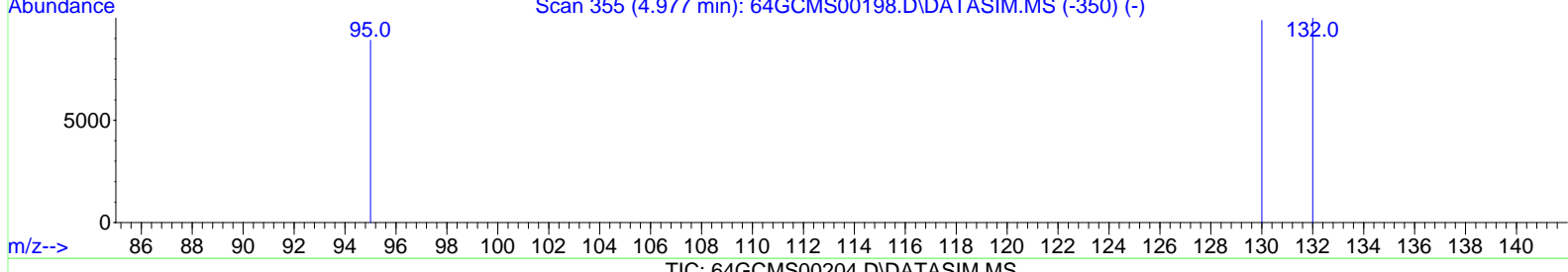
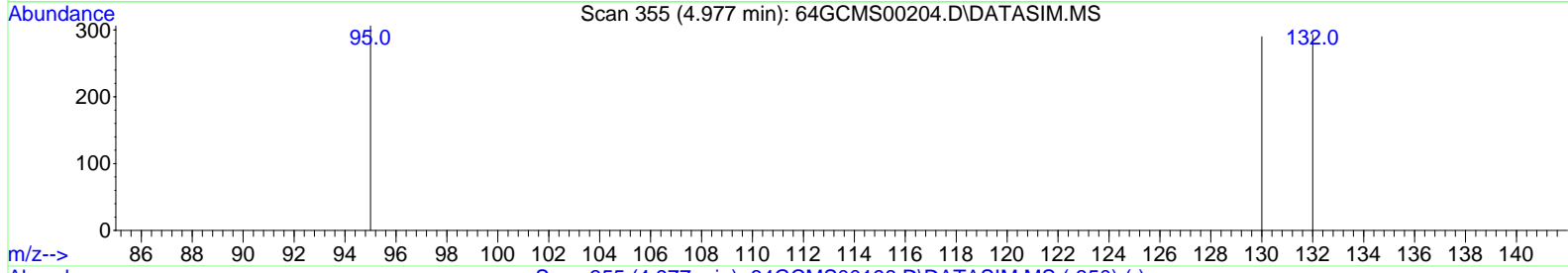
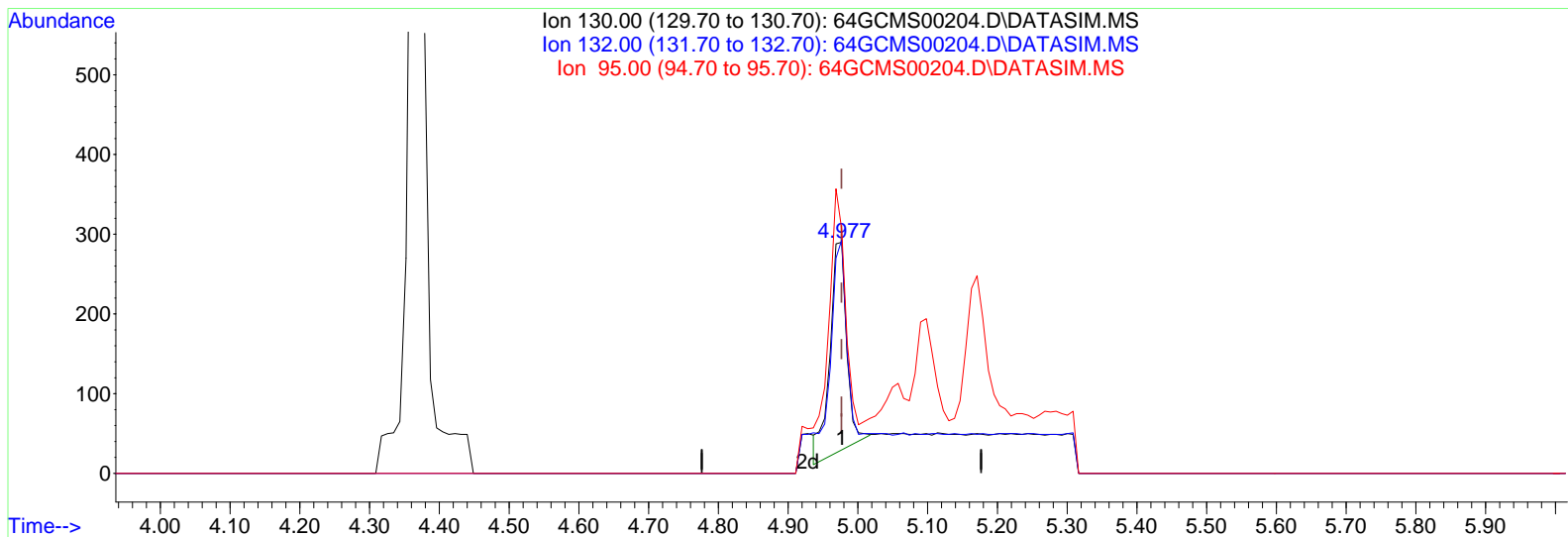
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.427 min Scan# 533
 Delta R.T. 0.000 min
 Lab File: 64GCMS00204.D
 Acq: 4 May 2016 9:02 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.4	25.8	38.6
82	60.5	45.6	68.4



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00204.D
 Acq On : 4 May 2016 9:02 am
 Operator : dlm
 Sample : GM-SG-10 \ GMEH10
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 09:11:07 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



(11) Trichloroethene

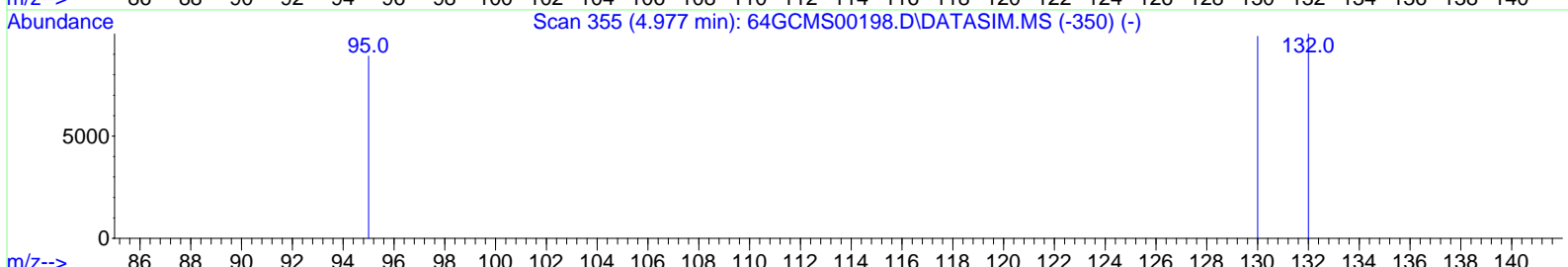
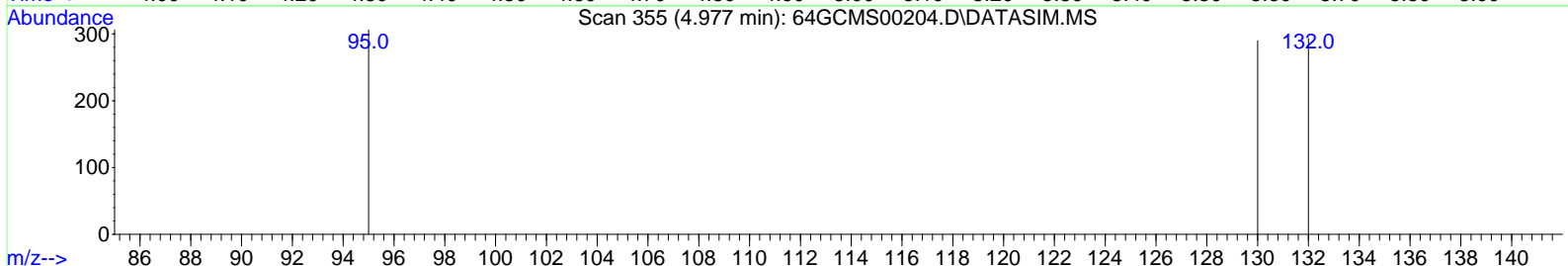
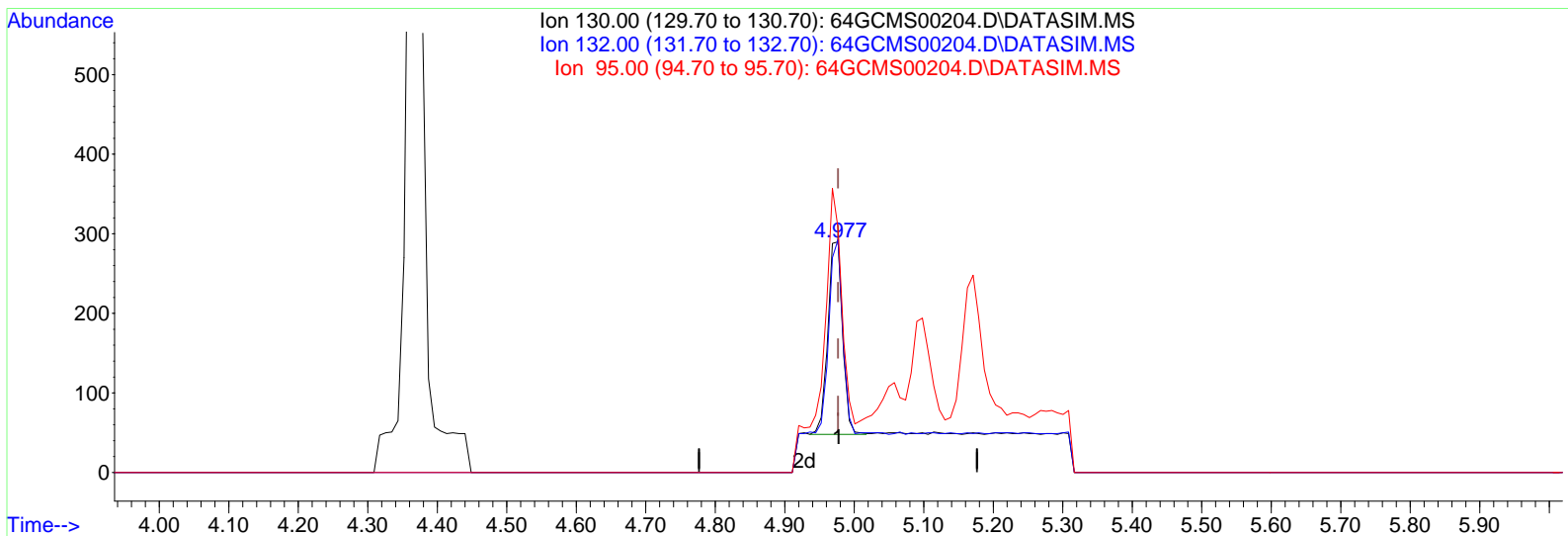
4.977min (+ 0.000) 1.97 ppbv

response 445

Ion	Exp%	Act%
130.00	100.00	100.00
132.00	96.10	86.52
95.00	101.90	140.45#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00204.D
 Acq On : 4 May 2016 9:02 am
 Operator : dlm
 Sample : GM-SG-10 \ GMEH10
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 09:11:07 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



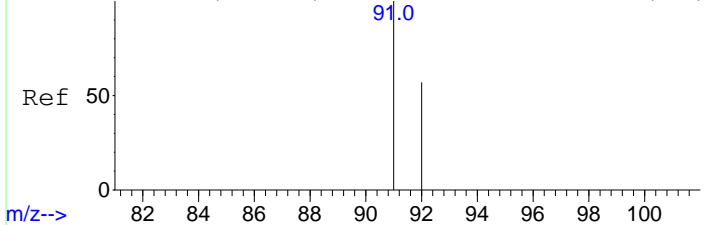
(11) Trichloroethene

4.977min (+ 0.000) 1.57 ppbv m

response 355

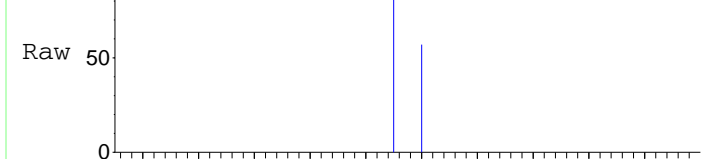
Ion	Exp%	Act%
130.00	100.00	100.00
132.00	96.10	108.45
95.00	101.90	176.06#
0.00	0.00	0.00

Abundance Scan 433 (5.583 min): 64GCMS00198.D\DATASIM.MS (-428)



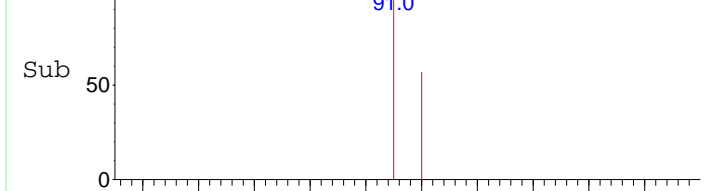
m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00204.D\DATASIM.MS



m/z-->

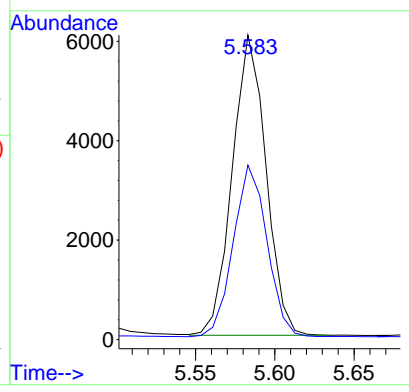
Abundance Scan 433 (5.583 min): 64GCMS00204.D\DATASIM.MS (-406)



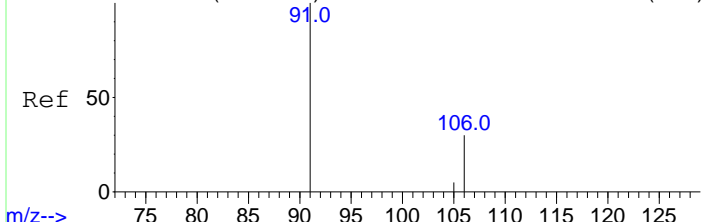
m/z-->

#13
Toluene
Concen: 18.07 ppbv
RT: 5.583 min Scan# 433
Delta R.T. 0.000 min
Lab File: 64GCMS00204.D
Acq: 4 May 2016 9:02 am

Tgt Ion: 91 Resp: 8932
Ion Ratio Lower Upper
91 100
92 57.2 48.0 72.0

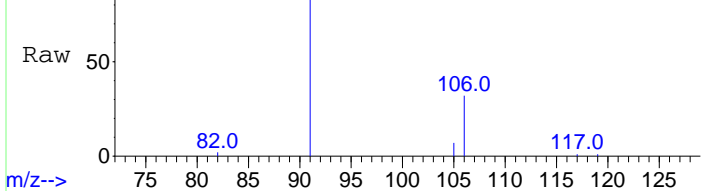


Abundance Scan 538 (6.472 min): 64GCMS00198.D\DATASIM.MS (-534)



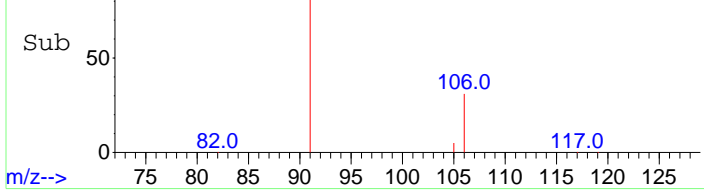
m/z-->

Abundance Scan 538 (6.472 min): 64GCMS00204.D\DATASIM.MS



m/z-->

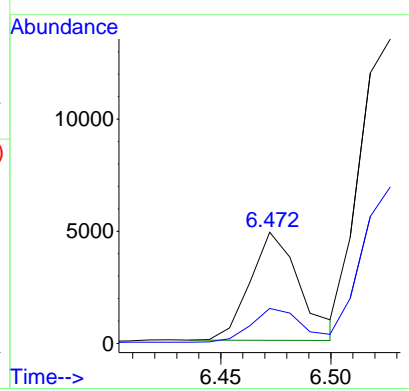
Abundance Scan 538 (6.472 min): 64GCMS00204.D\DATASIM.MS (-516)

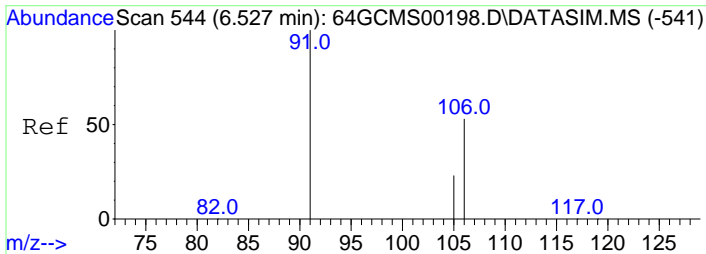


m/z-->

#15
Ethyl Benzene
Concen: 12.38 ppbv
RT: 6.472 min Scan# 538
Delta R.T. 0.000 min
Lab File: 64GCMS00204.D
Acq: 4 May 2016 9:02 am

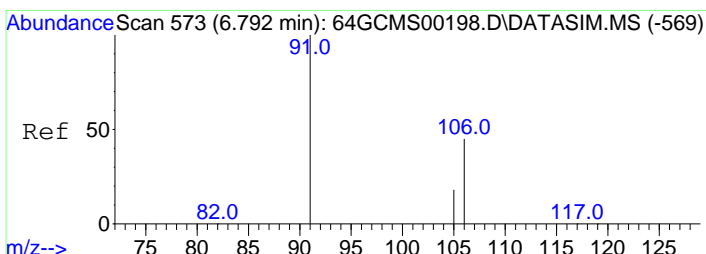
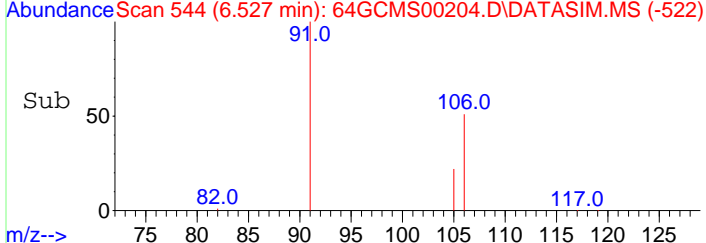
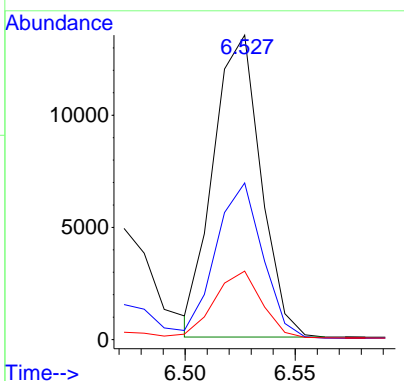
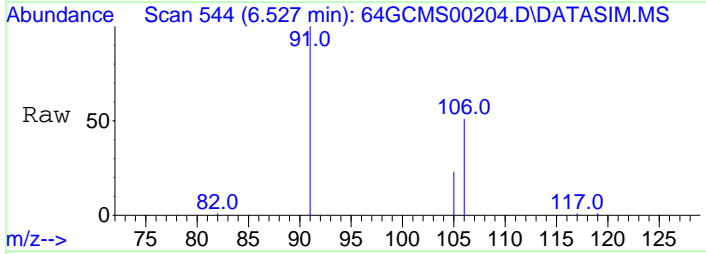
Tgt Ion: 91 Resp: 7549
Ion Ratio Lower Upper
91 100
106 32.7 24.2 36.2





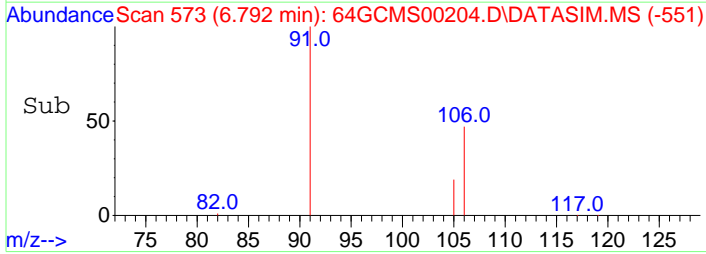
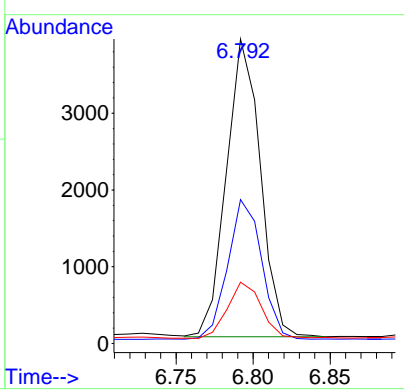
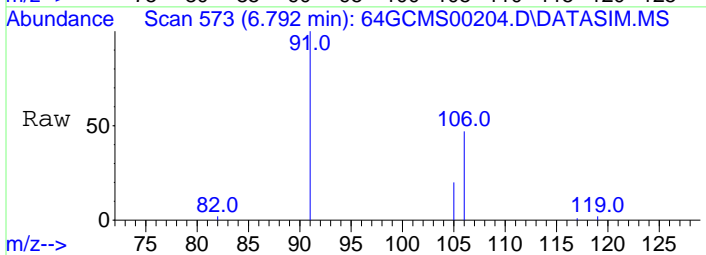
#16
 m,p-Xylene
 Concen: 40.88 ppbv
 RT: 6.527 min Scan# 544
 Delta R.T. 0.000 min
 Lab File: 64GCMS00204.D
 Acq: 4 May 2016 9:02 am

Tgt Ion	91	106	105	Resp	20224	Lower	Upper
Ion Ratio	100	50.3	22.3			37.7	56.5
						17.0	25.4



#17
 o-Xylene
 Concen: 11.09 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. 0.000 min
 Lab File: 64GCMS00204.D
 Acq: 4 May 2016 9:02 am

Tgt Ion	91	106	105	Resp	5953	Lower	Upper
Ion Ratio	100	46.7	19.5			35.4	53.2
						14.0	21.0



Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00205.D
Acq On : 4 May 2016 9:35 am
Operator : dlm
Sample : 51061 \ Unit 11
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 10:17:16 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration

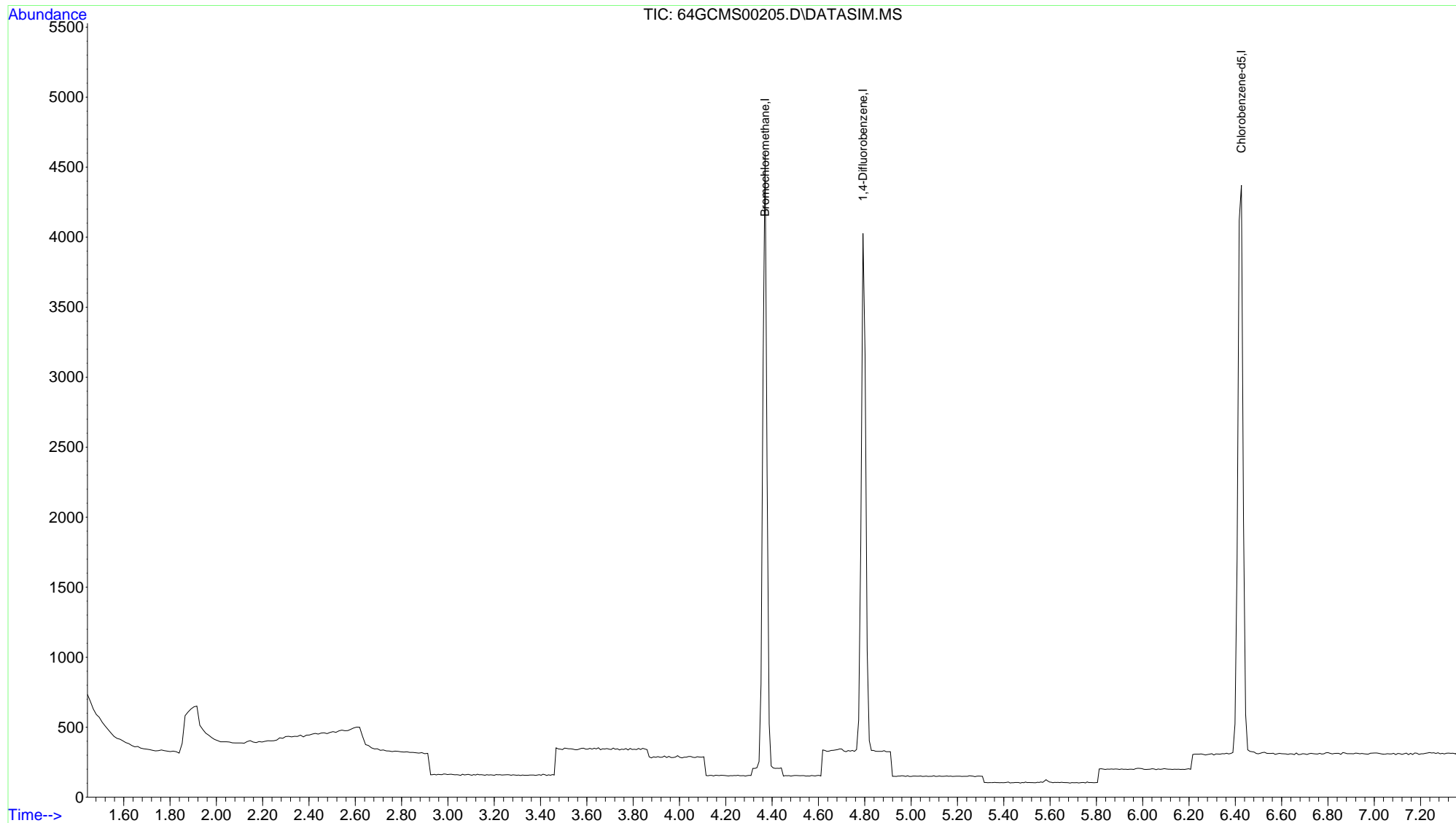
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2047	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3483	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3491	10.00	ppbv	0.00

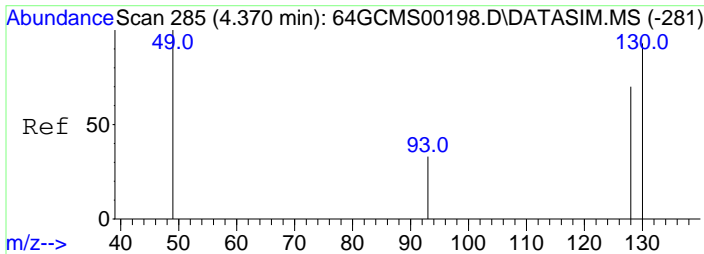
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00205.D
 Acq On : 4 May 2016 9:35 am
 Operator : dlm
 Sample : 51061 \ Unit 11
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 10:17:16 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

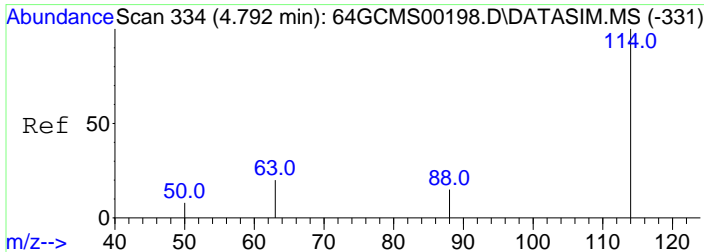
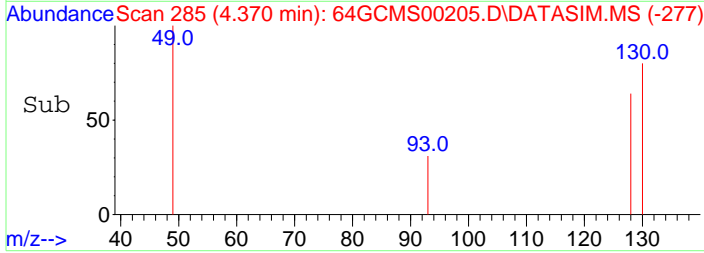
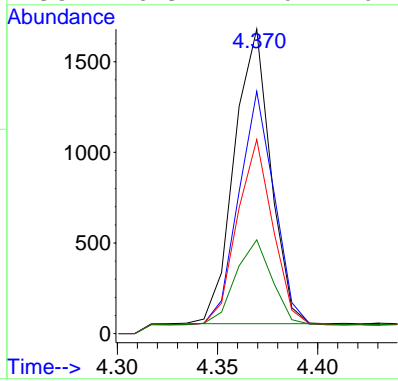
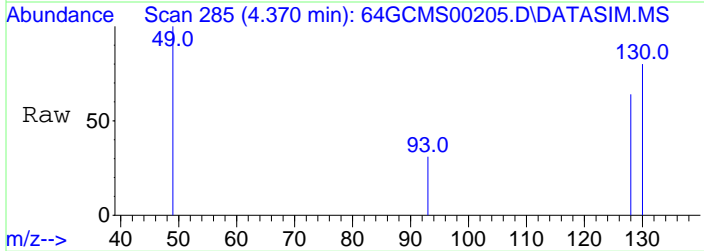




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00205.D
 Acq: 4 May 2016 9:35 am

Tgt Ion: 49 Resp: 2047

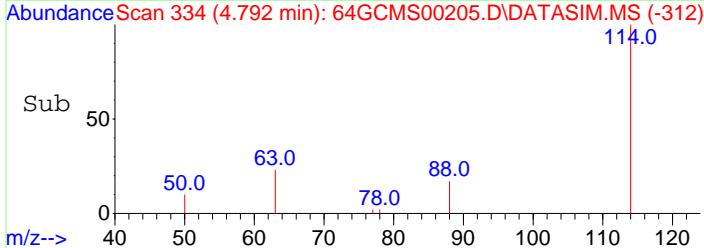
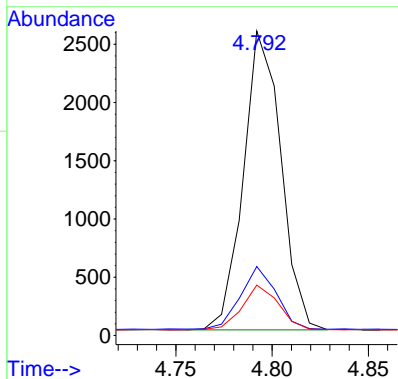
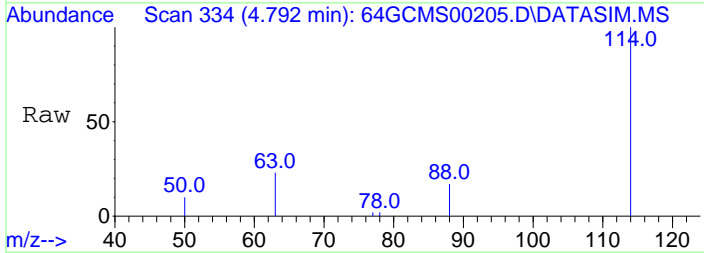
Ion	Ratio	Lower	Upper
49	100		
130	77.5	46.3	69.5#
128	61.3	35.7	53.5#
93	28.9	17.6	26.4#



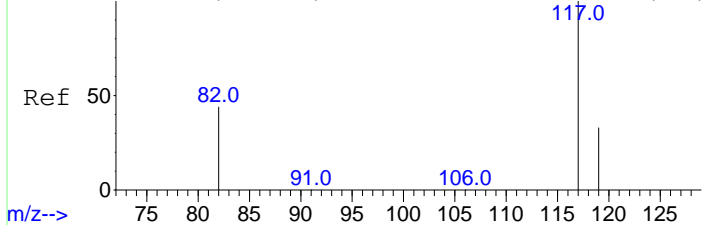
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00205.D
 Acq: 4 May 2016 9:35 am

Tgt Ion: 114 Resp: 3483

Ion	Ratio	Lower	Upper
114	100		
63	19.9	19.2	28.8
88	14.4	13.7	20.5



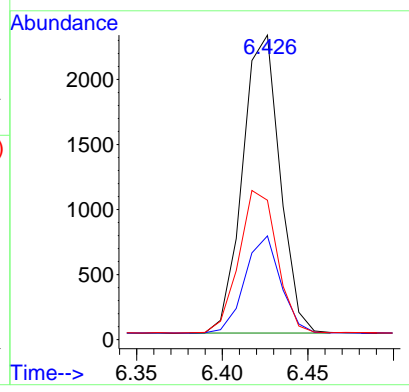
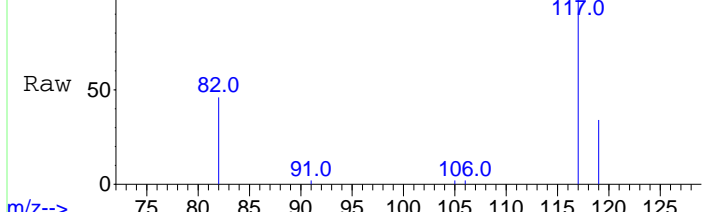
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



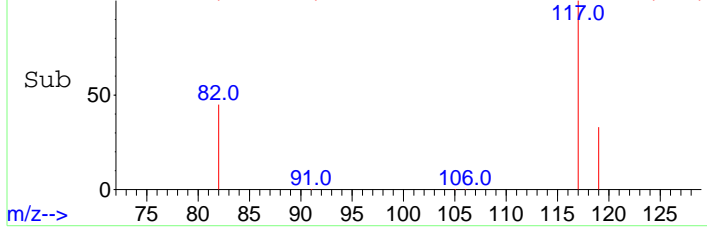
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00205.D
Acq: 4 May 2016 9:35 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	31.2	25.8	38.6
82	48.6	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00205.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00205.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00206.D
Acq On : 4 May 2016 9:48 am
Operator : dlm
Sample : 51061 \ Unit 11 Rep
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 10:15:54 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration

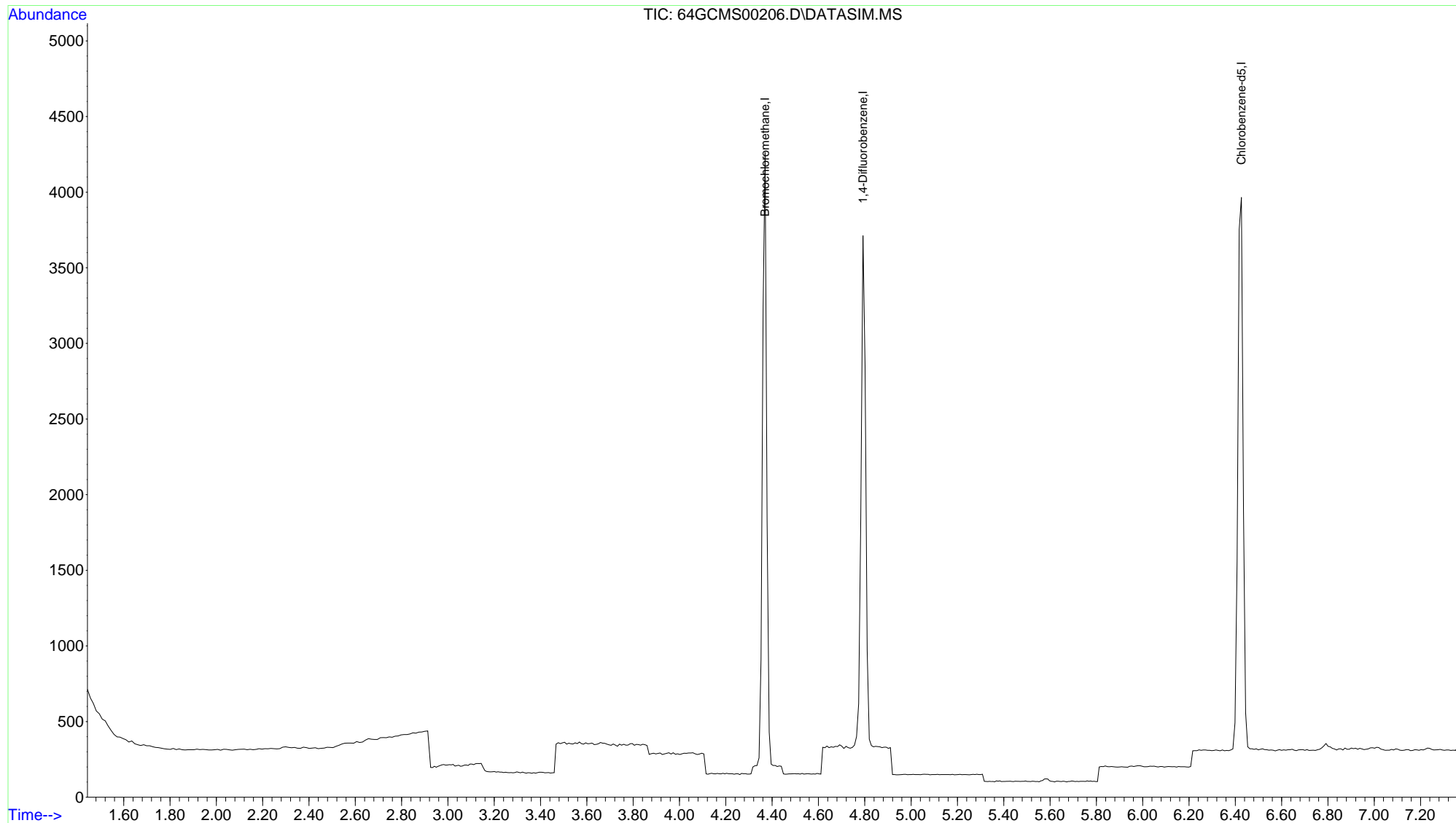
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	1886	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3159	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3092	10.00	ppbv	0.00

Target Compounds	Qvalue
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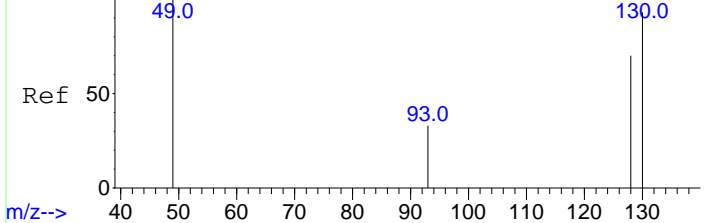
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00206.D
Acq On : 4 May 2016 9:48 am
Operator : dlm
Sample : 51061 \ Unit 11 Rep
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 10:15:54 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration



Abundance Scan 285 (4.370 min): 64GCMS00198.D\DATASIM.MS (-281)

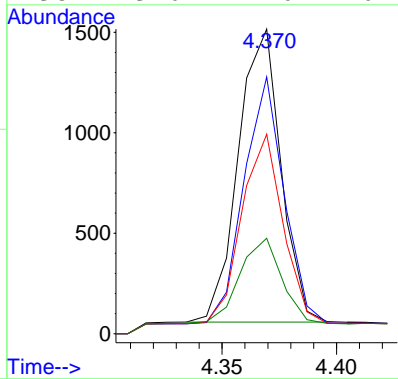
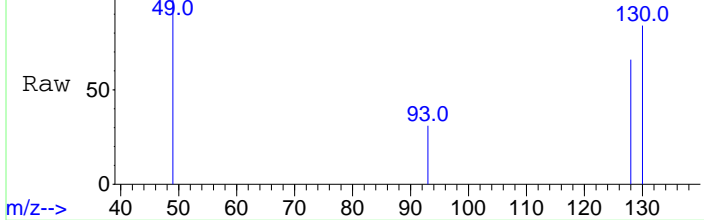


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00206.D
Acq: 4 May 2016 9:48 am

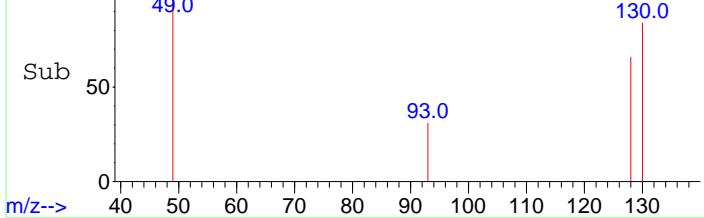
Tgt Ion: 49 Resp: 1886

Ion	Ratio	Lower	Upper
49	100		
130	79.5	46.3	69.5#
128	62.6	35.7	53.5#
93	29.0	17.6	26.4#

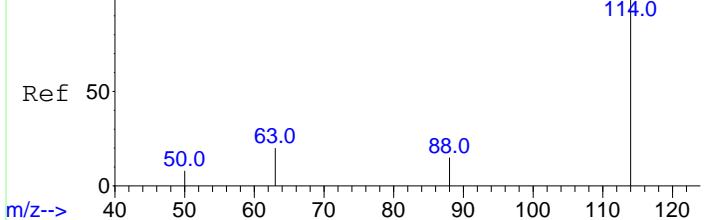
Abundance Scan 285 (4.370 min): 64GCMS00206.D\DATASIM.MS



Abundance Scan 285 (4.370 min): 64GCMS00206.D\DATASIM.MS (-277)



Abundance Scan 334 (4.792 min): 64GCMS00198.D\DATASIM.MS (-331)

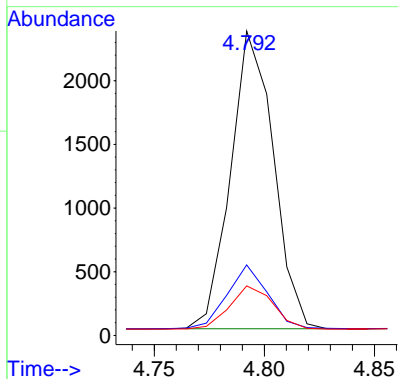
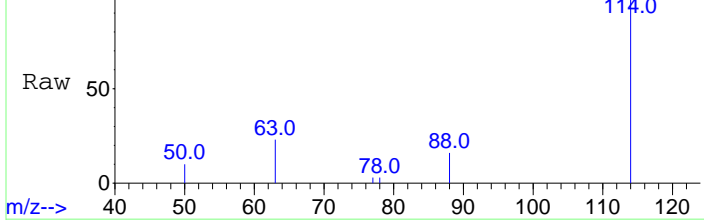


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. -0.000 min
Lab File: 64GCMS00206.D
Acq: 4 May 2016 9:48 am

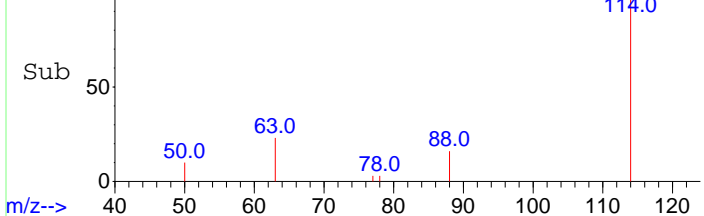
Tgt Ion: 114 Resp: 3159

Ion	Ratio	Lower	Upper
114	100		
63	20.2	19.2	28.8
88	14.7	13.7	20.5

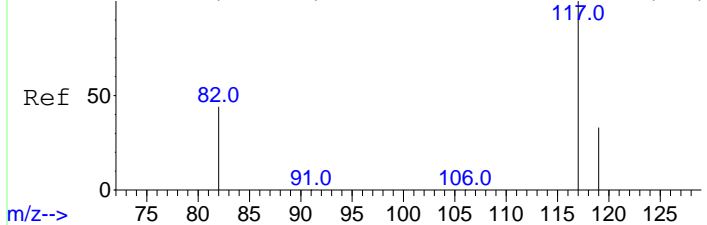
Abundance Scan 334 (4.792 min): 64GCMS00206.D\DATASIM.MS



Abundance Scan 334 (4.792 min): 64GCMS00206.D\DATASIM.MS (-312)



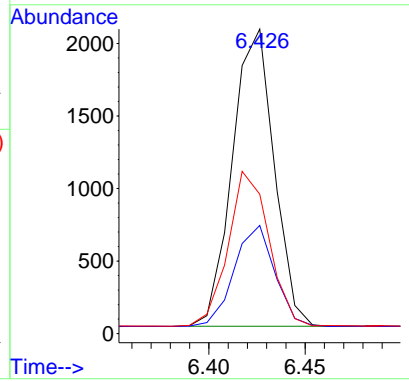
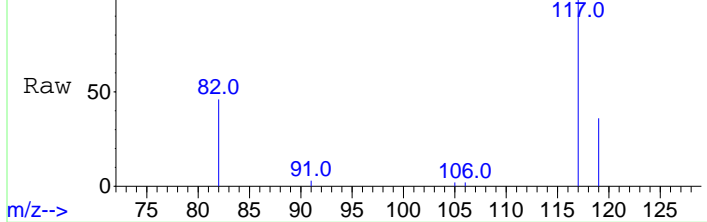
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



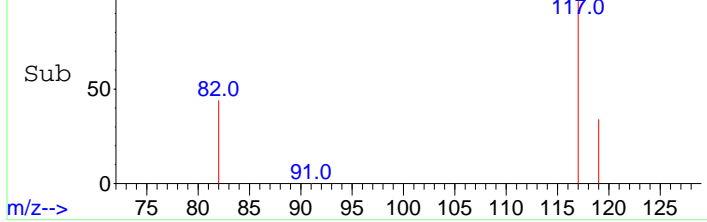
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00206.D
 Acq: 4 May 2016 9:48 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	33.0	25.8	38.6
82	51.0	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00206.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00206.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00207.D
Acq On : 4 May 2016 11:17 am
Operator : dlm
Sample : 51062 \ Unit 18
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 11:34:57 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration

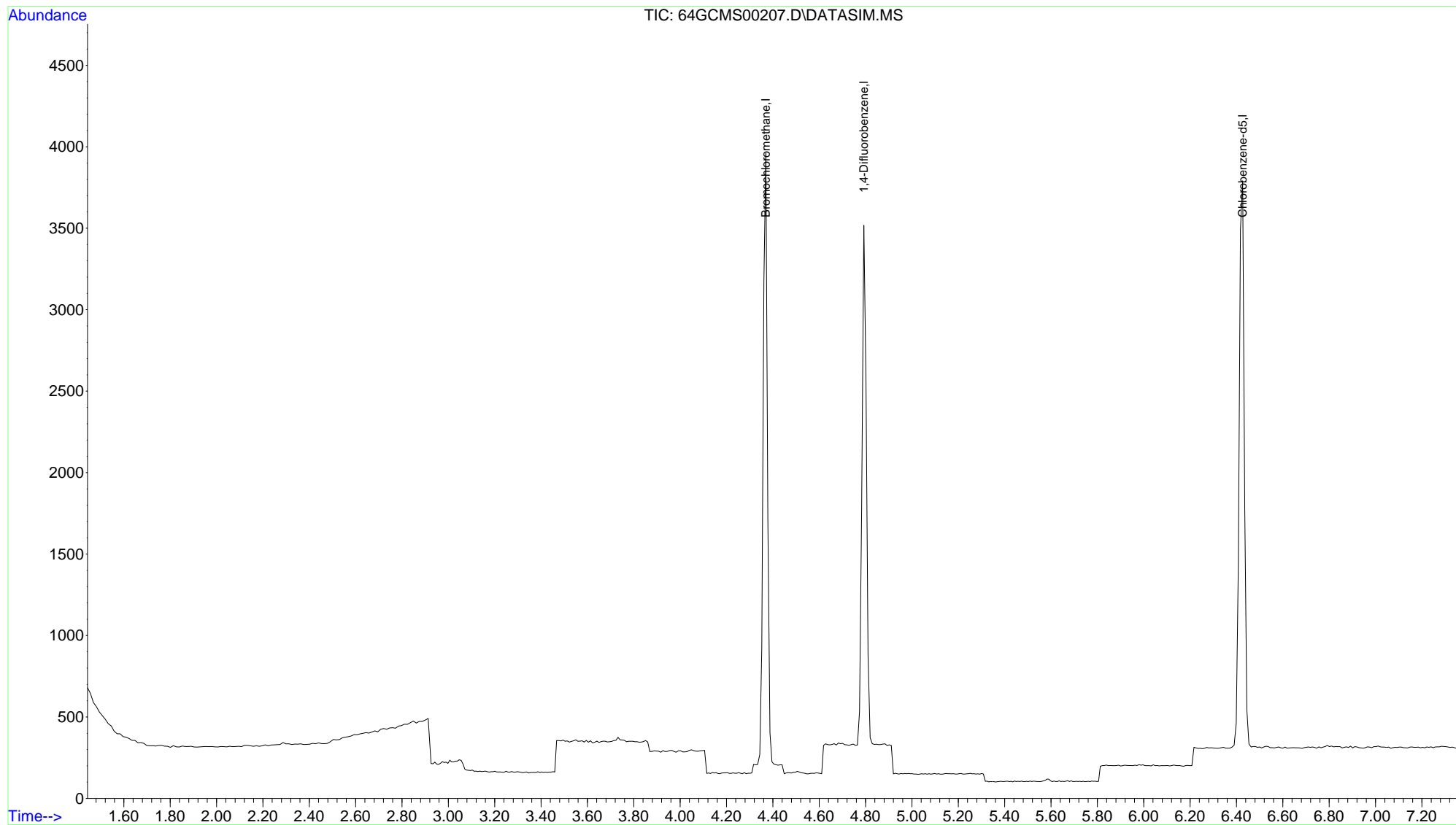
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	1799	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	2947	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.427	117	2870	10.00	ppbv	0.00

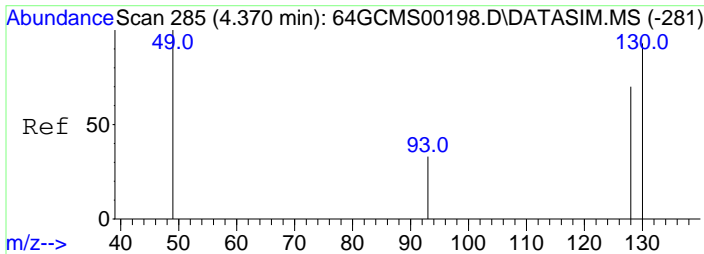
Target Compounds	Qvalue
------------------	--------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00207.D
Acq On : 4 May 2016 11:17 am
Operator : dlm
Sample : 51062 \ Unit 18
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 11:34:57 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration

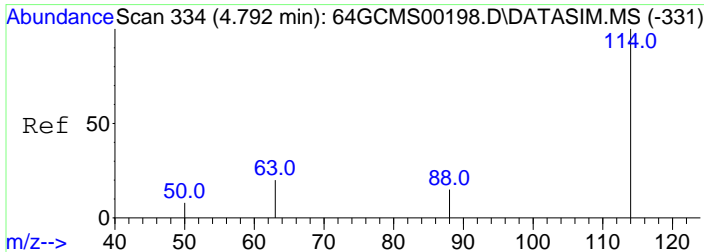
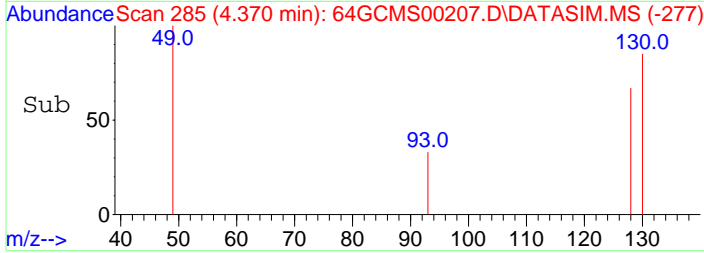
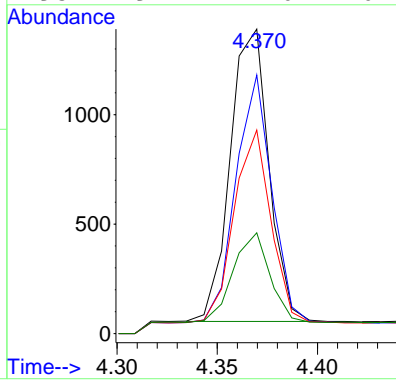
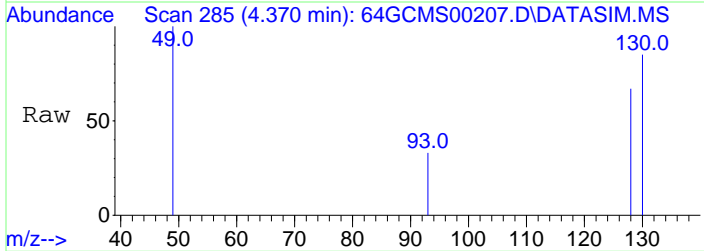




#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00207.D
 Acq: 4 May 2016 11:17 am

Tgt Ion: 49 Resp: 1799

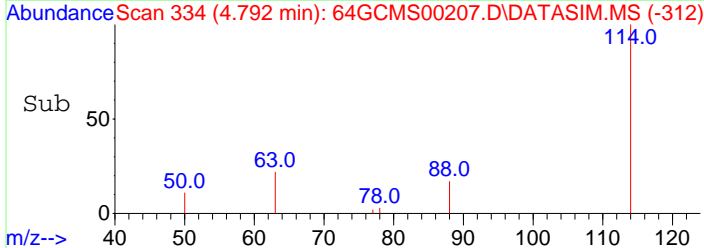
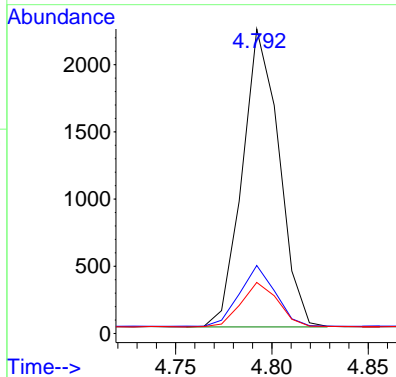
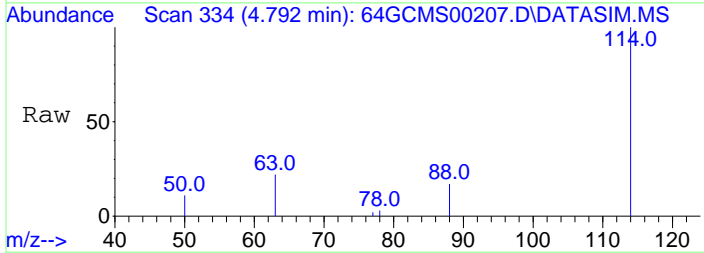
Ion	Ratio	Lower	Upper
49	100		
130	78.5	46.3	69.5#
128	62.5	35.7	53.5#
93	29.1	17.6	26.4#



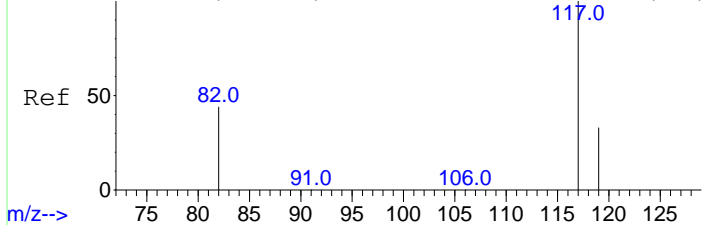
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. 0.000 min
 Lab File: 64GCMS00207.D
 Acq: 4 May 2016 11:17 am

Tgt Ion: 114 Resp: 2947

Ion	Ratio	Lower	Upper
114	100		
63	19.9	19.2	28.8
88	14.8	13.7	20.5



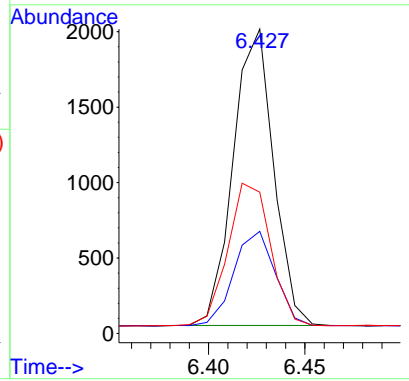
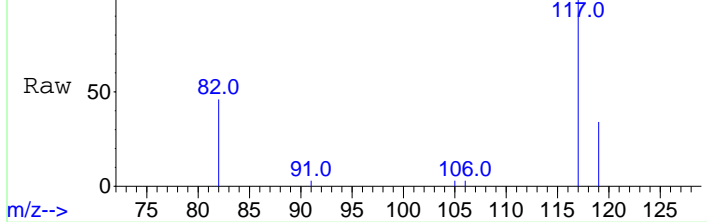
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



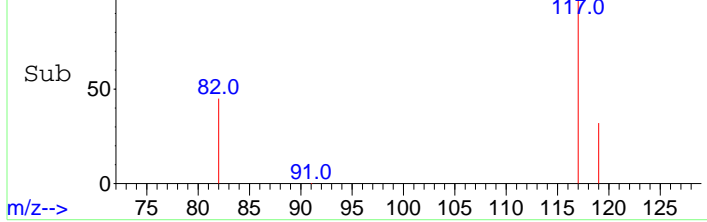
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.427 min Scan# 533
 Delta R.T. 0.000 min
 Lab File: 64GCMS00207.D
 Acq: 4 May 2016 11:17 am

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.6	25.8	38.6
82	51.1	45.6	68.4

Abundance Scan 533 (6.427 min): 64GCMS00207.D\DATASIM.MS



Abundance Scan 533 (6.427 min): 64GCMS00207.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00210.D
 Acq On : 4 May 2016 12:15 pm
 Operator : dlm
 Sample : GM-SG-08 \ GMEH08
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

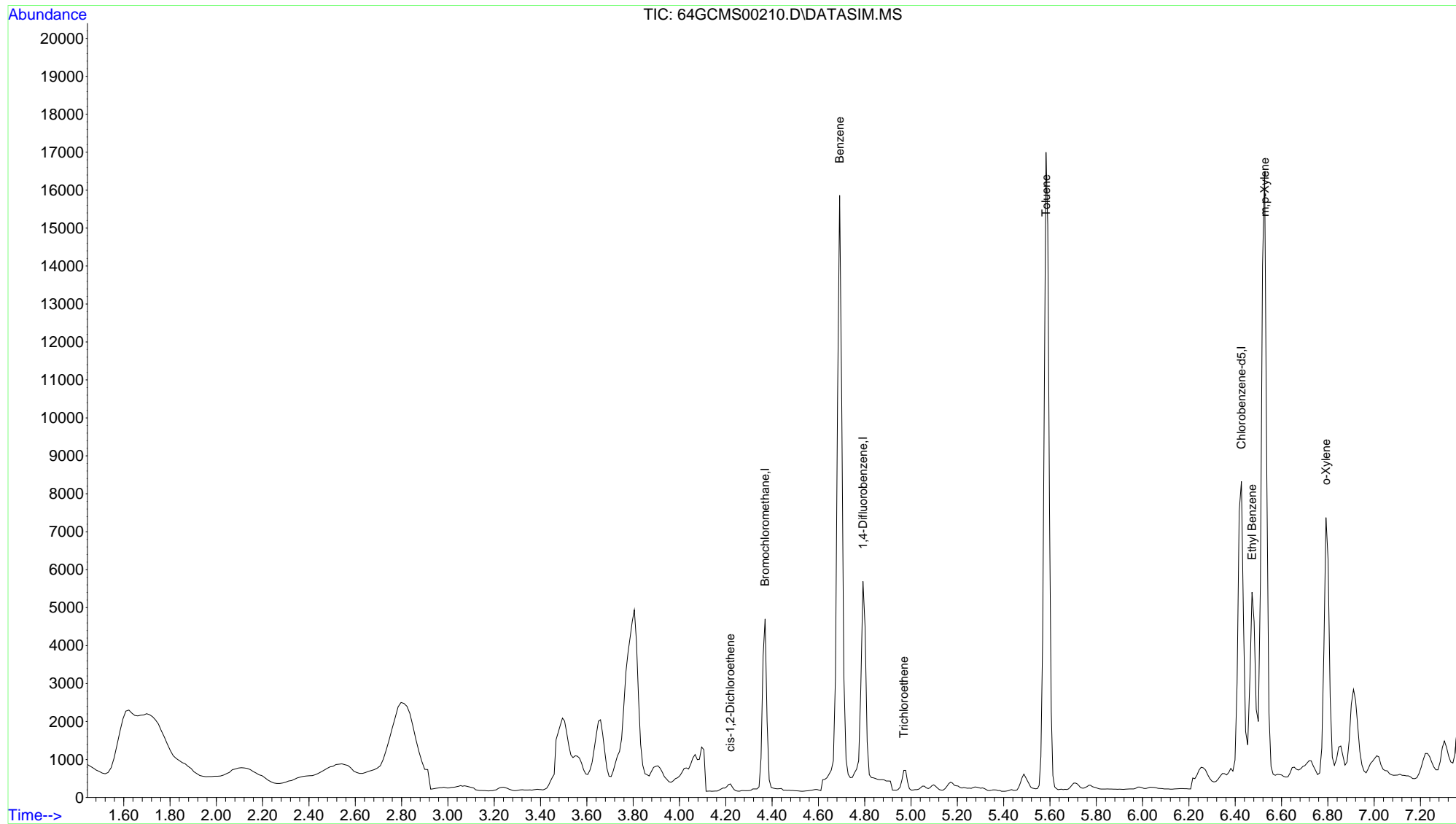
Quant Time: May 04 12:27:33 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2132	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	5014	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	5654	10.00	ppbv	# 0.00
Target Compounds						
						Qvalue
7) cis-1,2-Dichloroethene	4.220	61	230m	1.11	ppbv	
10) Benzene	4.692	78	14774	36.94	ppbv	# 85
11) Trichloroethene	4.968	130	215m	0.87	ppbv	
13) Toluene	5.583	91	16194	27.59	ppbv	96
15) Ethyl Benzene	6.472	91	5670	7.83	ppbv	97
16) m,p-Xylene	6.527	91	13388	22.79	ppbv	98
17) o-Xylene	6.792	91	6168	9.68	ppbv	98

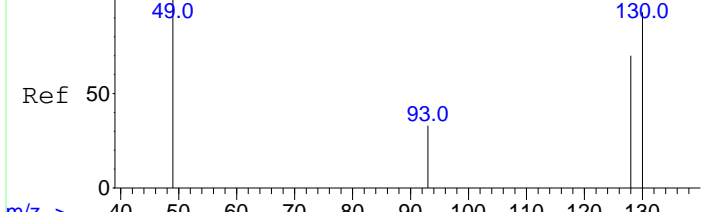
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00210.D
Acq On : 4 May 2016 12:15 pm
Operator : dlm
Sample : GM-SG-08 \ GMEH08
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 12:27:33 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration

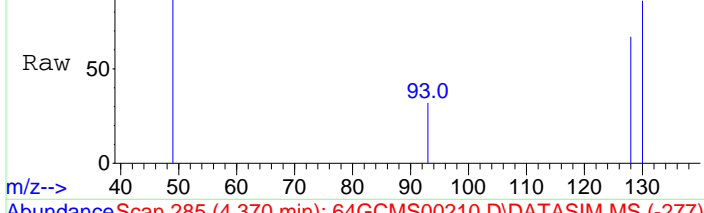


Abundance Scan 285 (4.370 min): 64GCMS00198.D\DATASIM.MS (-281)



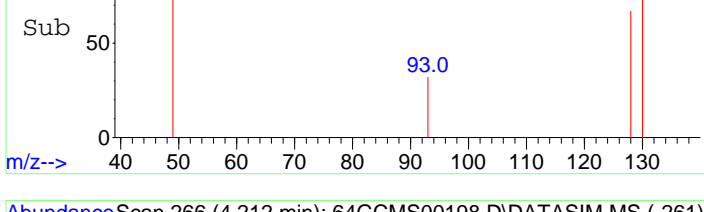
m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00210.D\DATASIM.MS



m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00210.D\DATASIM.MS (-277)

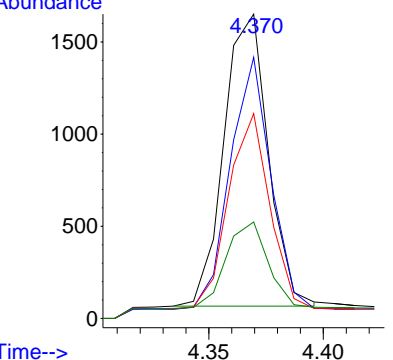


m/z-->

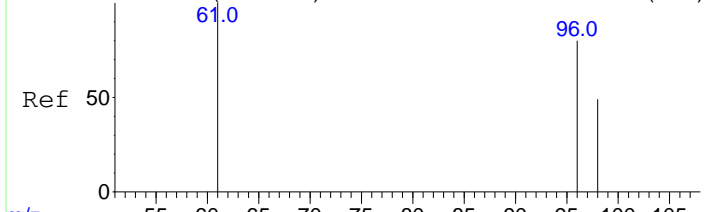
#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00210.D
Acq: 4 May 2016 12:15 pm

Tgt Ion: 49 Resp: 2132

Ion	Ratio	Lower	Upper
49	100		
130	79.2	46.3	69.5#
128	62.2	35.7	53.5#
93	28.2	17.6	26.4#

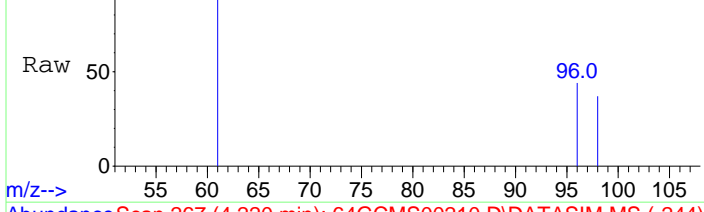


Abundance Scan 266 (4.212 min): 64GCMS00198.D\DATASIM.MS (-261)



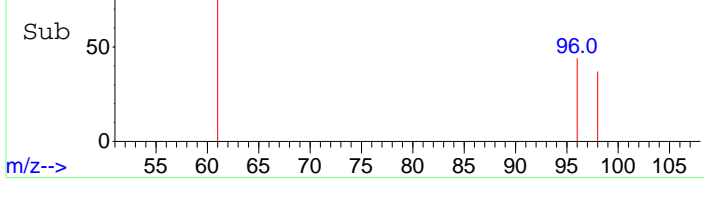
m/z-->

Abundance Scan 267 (4.220 min): 64GCMS00210.D\DATASIM.MS



m/z-->

Abundance Scan 267 (4.220 min): 64GCMS00210.D\DATASIM.MS (-244)

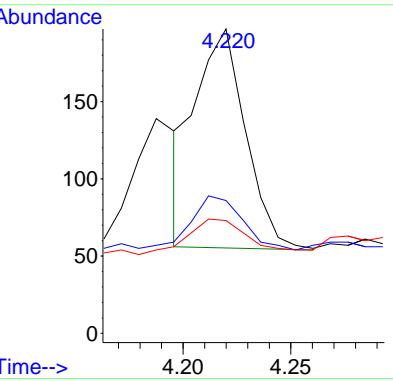


m/z-->

#7
cis-1,2-Dichloroethene
Concen: 1.11 ppbv m
RT: 4.220 min Scan# 267
Delta R.T. -0.000 min
Lab File: 64GCMS00210.D
Acq: 4 May 2016 12:15 pm

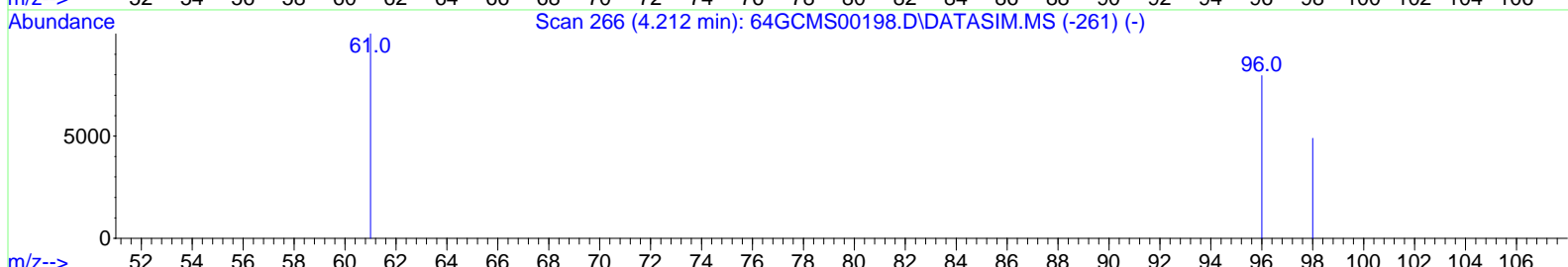
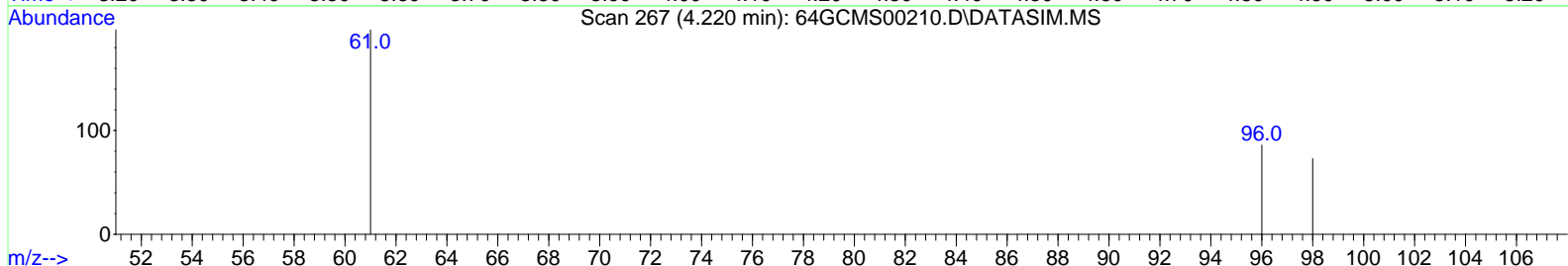
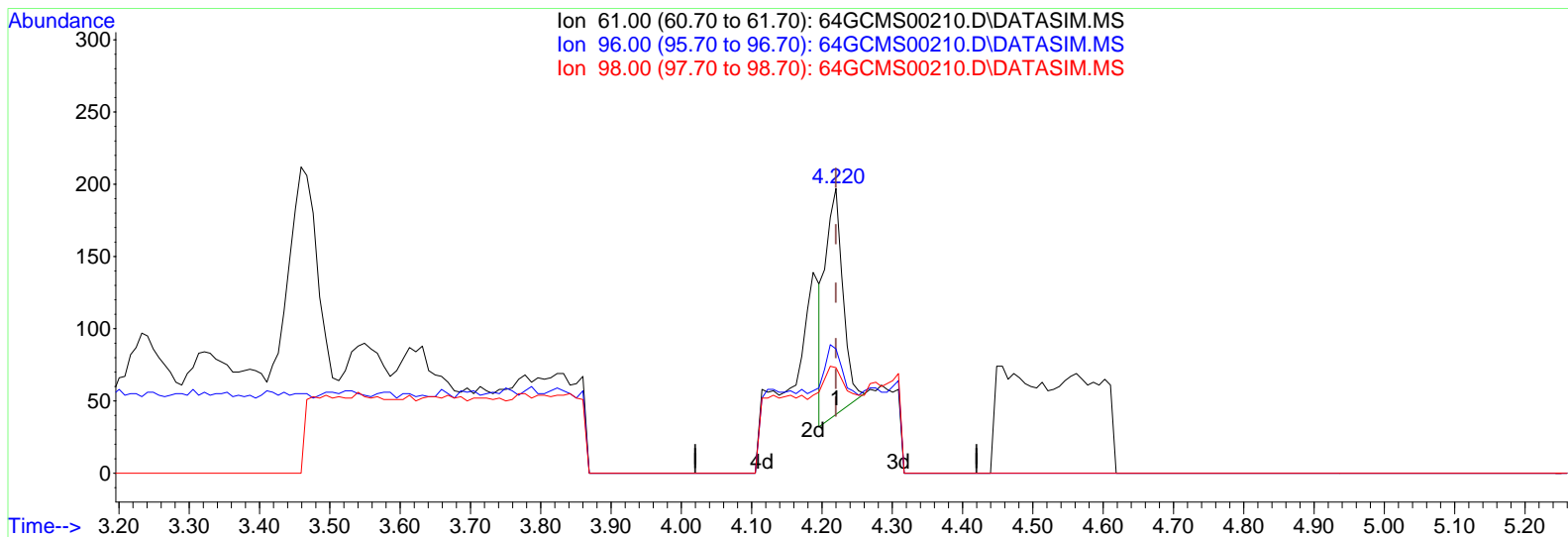
Tgt Ion: 61 Resp: 230

Ion	Ratio	Lower	Upper
61	100		
96	45.7	52.0	78.0#
98	37.0	33.4	50.2



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00210.D
 Acq On : 4 May 2016 12:15 pm
 Operator : dlm
 Sample : GM-SG-08 \ GMEH08
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 12:23:27 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



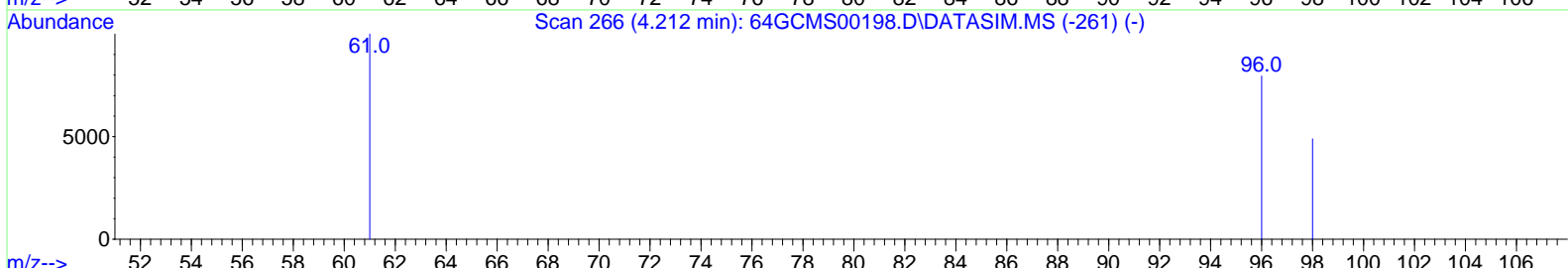
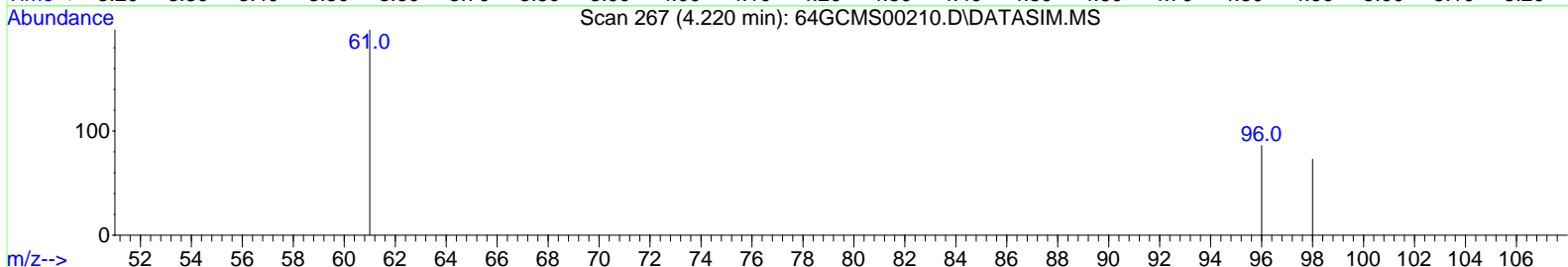
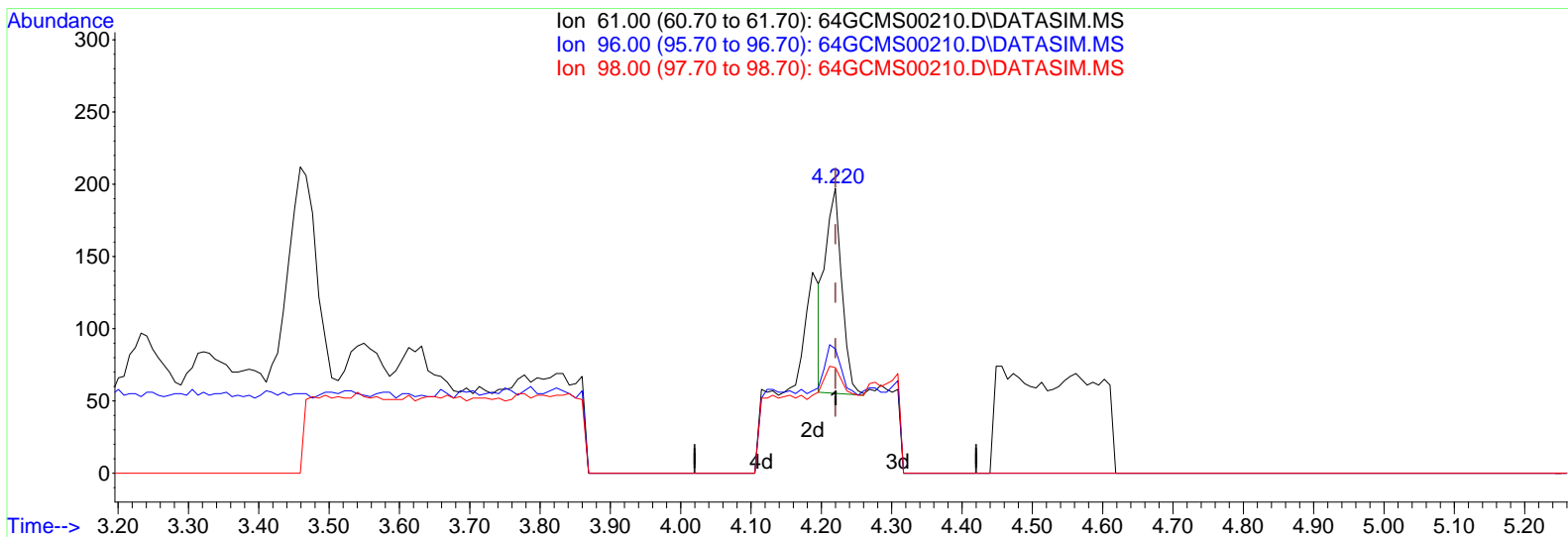
(7) cis-1,2-Dichloroethene

4.220min (-0.000) 1.33 ppbv

response	275	
Ion	Exp%	Act%
61.00	100.00	100.00
96.00	65.00	38.18#
98.00	41.80	30.91#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00210.D
 Acq On : 4 May 2016 12:15 pm
 Operator : dlm
 Sample : GM-SG-08 \ GMEH08
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

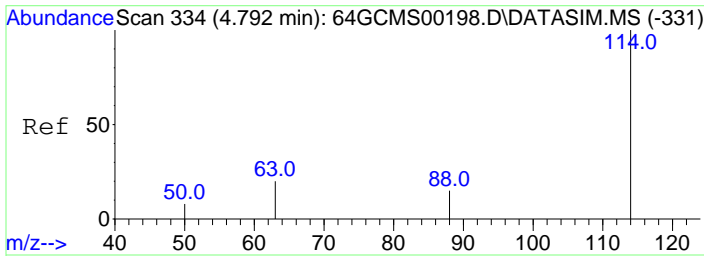
Quant Time: May 04 12:23:27 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



(7) cis-1,2-Dichloroethene

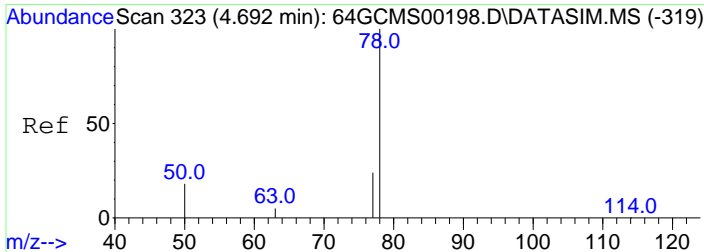
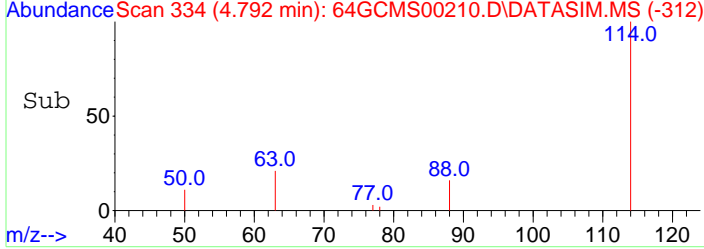
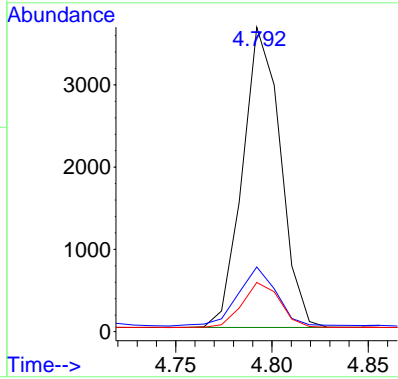
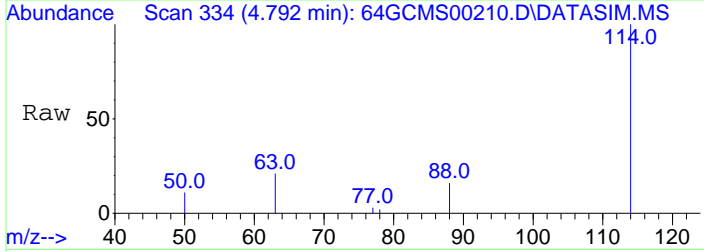
4.220min (-0.000) 1.11 ppbv m

response	230
Ion	Exp% Act%
61.00	100.00 100.00
96.00	65.00 45.65#
98.00	41.80 36.96
0.00	0.00 0.00



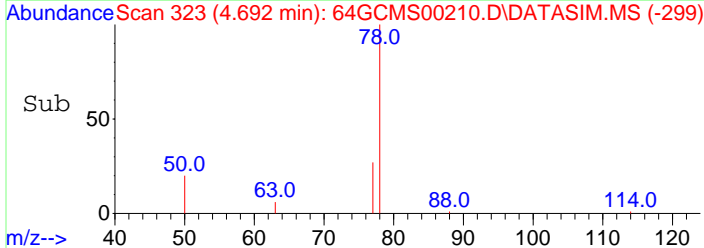
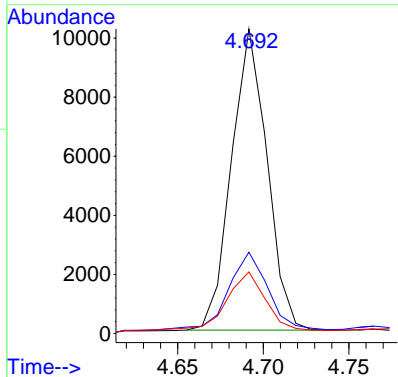
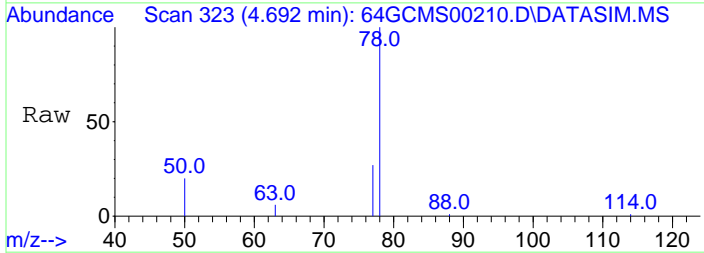
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00210.D
 Acq: 4 May 2016 12:15 pm

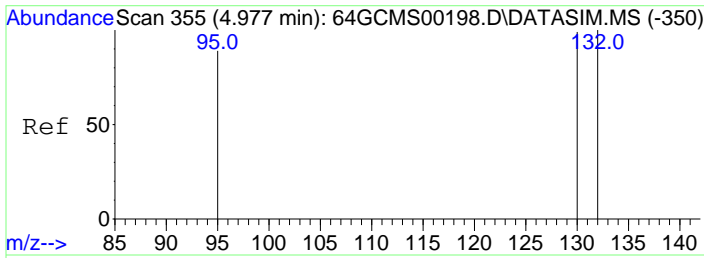
Tgt Ion	Resp	Lower	Upper
114	100		
63	20.8	19.2	28.8
88	14.8	13.7	20.5



#10
 Benzene
 Concen: 36.94 ppbv
 RT: 4.692 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00210.D
 Acq: 4 May 2016 12:15 pm

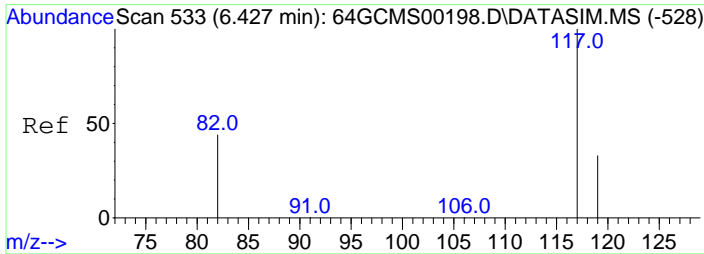
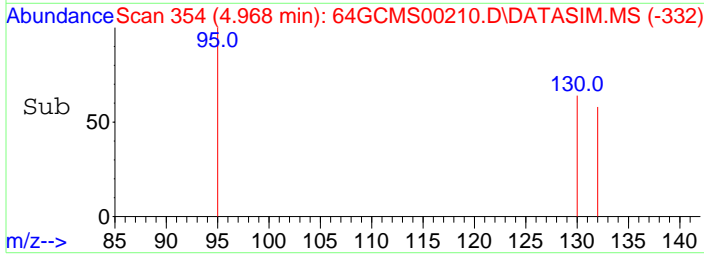
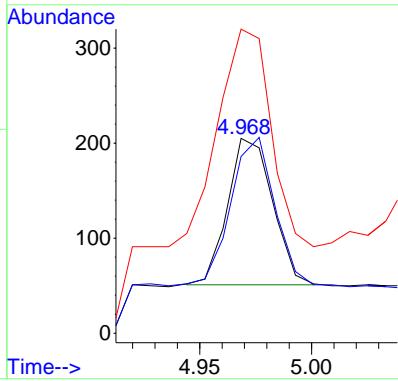
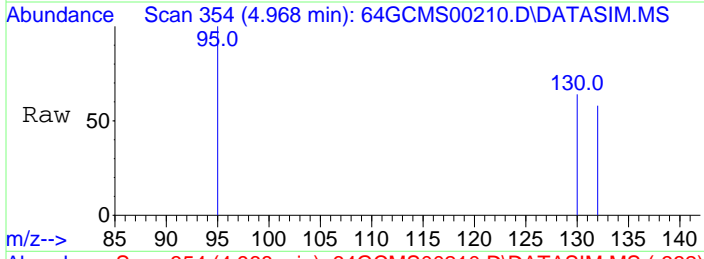
Tgt Ion	Resp	Lower	Upper
78	100		
77	31.7	18.2	27.4#
50	26.1	16.6	24.8#





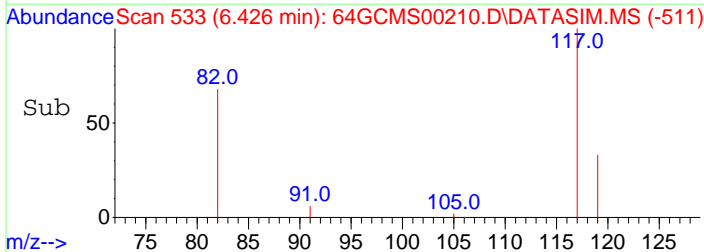
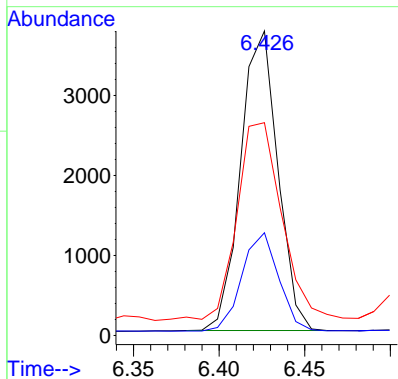
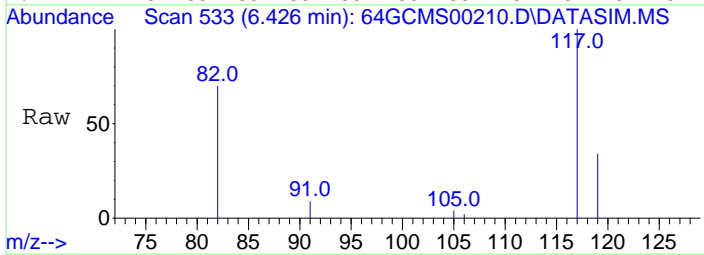
#11
 Trichloroethene
 Concen: 0.87 ppbv m
 RT: 4.968 min Scan# 354
 Delta R.T. -0.008 min
 Lab File: 64GCMS00210.D
 Acq: 4 May 2016 12:15 pm

Tgt Ion	Resp	Lower	Upper
130	100		
132	135.3	76.9	115.3#
95	295.8	81.5	122.3#



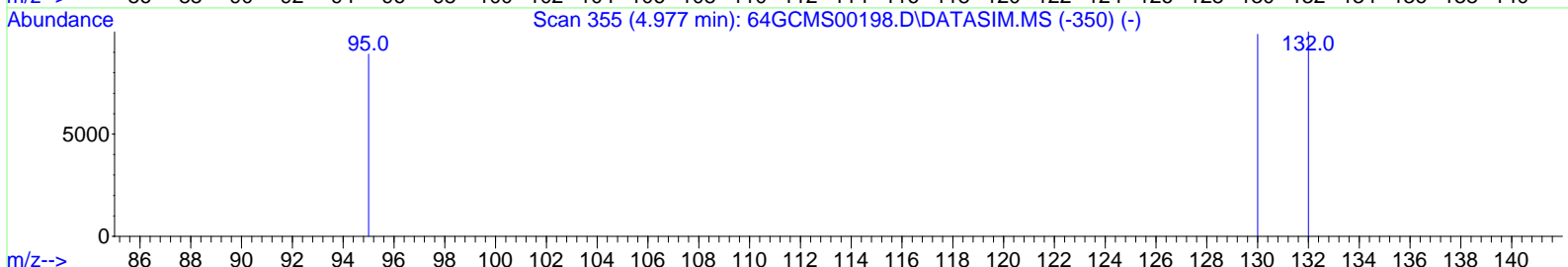
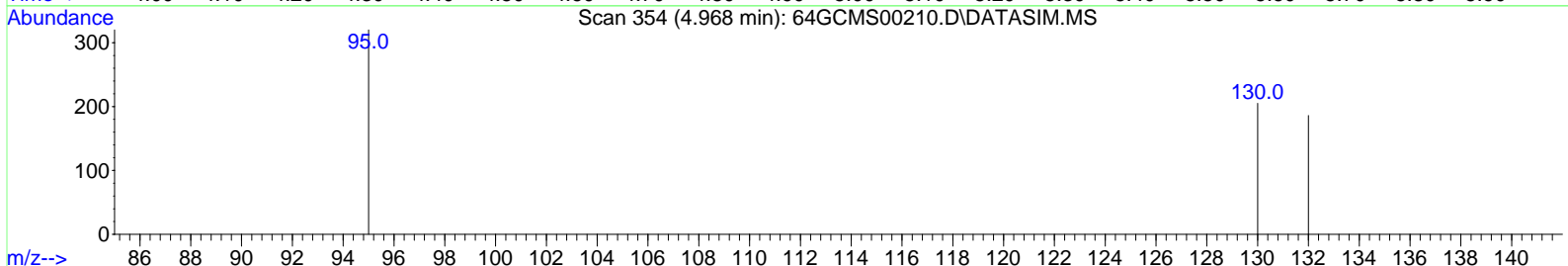
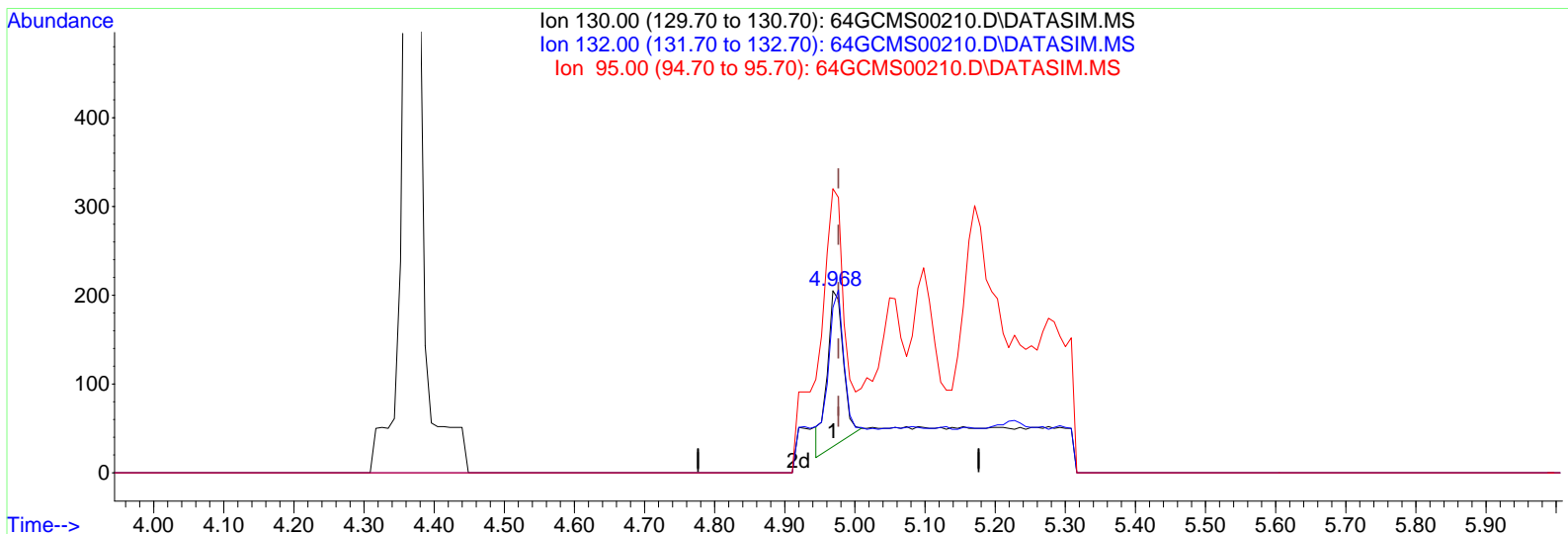
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00210.D
 Acq: 4 May 2016 12:15 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.4	25.8	38.6
82	87.2	45.6	68.4#



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00210.D
 Acq On : 4 May 2016 12:15 pm
 Operator : dlm
 Sample : GM-SG-08 \ GMEH08
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 12:23:27 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



(11) Trichloroethene

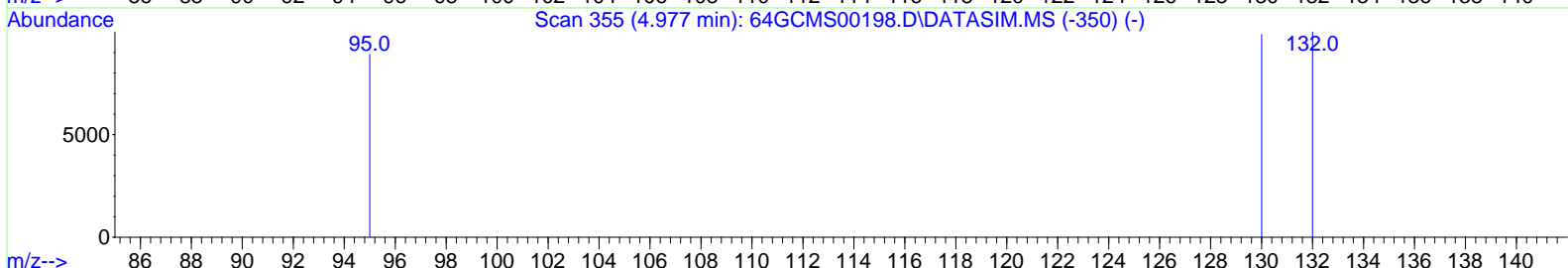
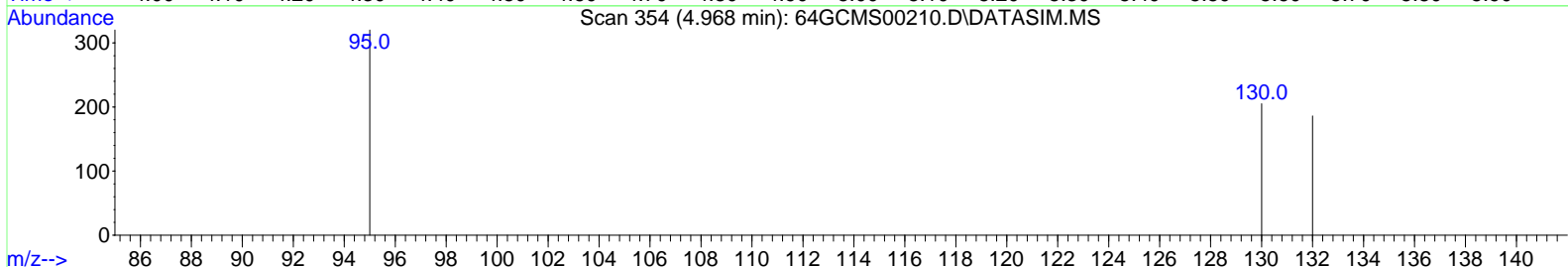
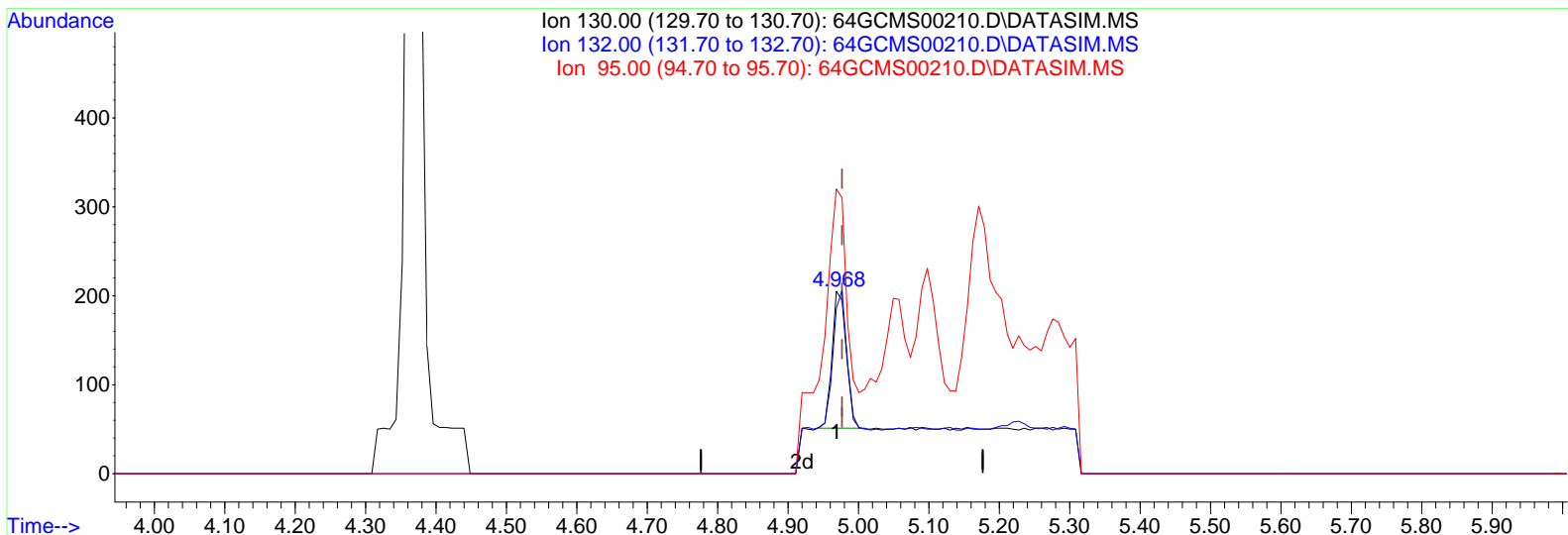
4.968min (-0.008) 1.14 ppbv

response 282

Ion	Exp%	Act%
130.00	100.00	100.00
132.00	96.10	103.19
95.00	101.90	225.53#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00210.D
 Acq On : 4 May 2016 12:15 pm
 Operator : dlm
 Sample : GM-SG-08 \ GMEH08
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 12:23:27 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



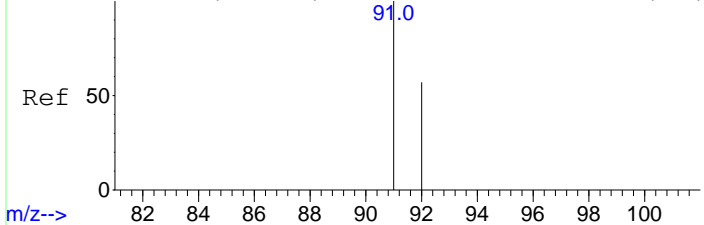
(11) Trichloroethene

4.968min (-0.008) 0.87 ppbv m

response 215

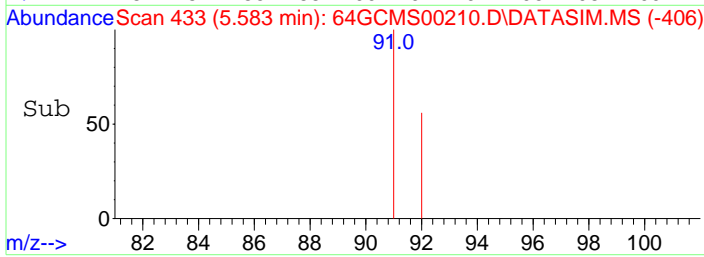
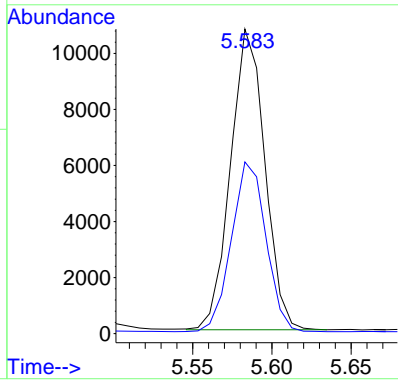
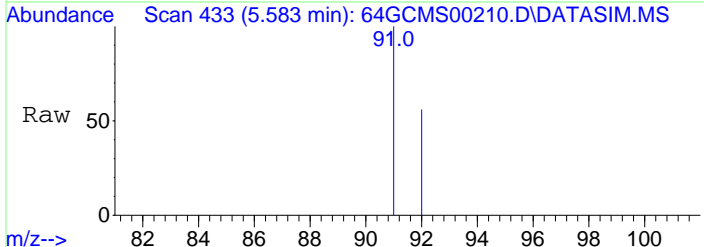
Ion	Exp%	Act%
130.00	100.00	100.00
132.00	96.10	135.35#
95.00	101.90	295.81#
0.00	0.00	0.00

Abundance Scan 433 (5.583 min): 64GCMS00198.D\DATASIM.MS (-428)

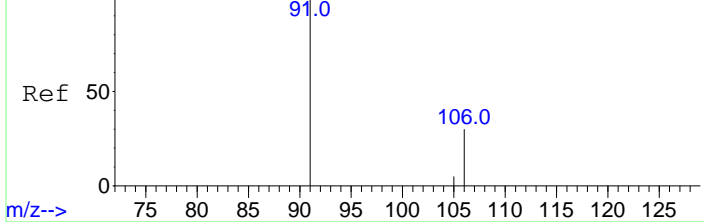


#13
Toluene
Concen: 27.59 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00210.D
Acq: 4 May 2016 12:15 pm

Tgt Ion	Resp	Lower	Upper
91	100		
92	56.7	48.0	72.0

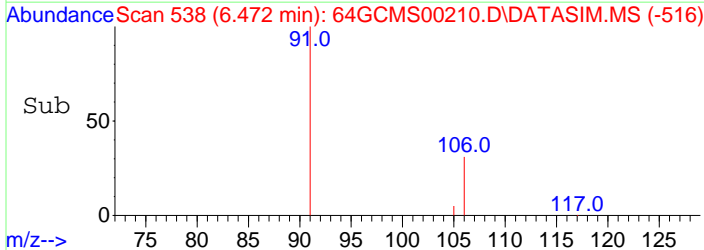
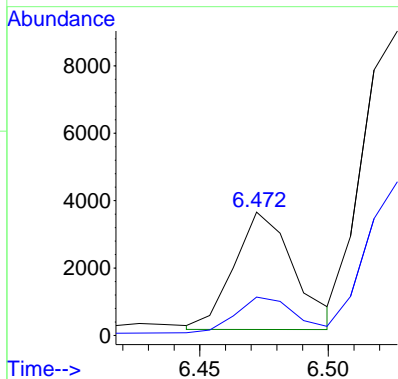
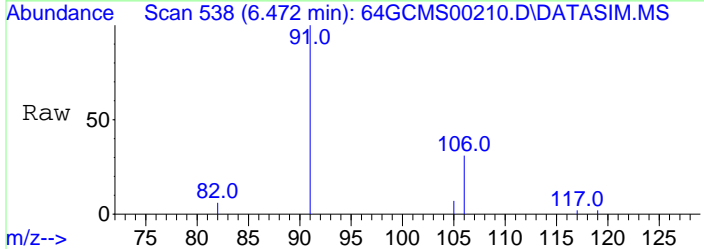


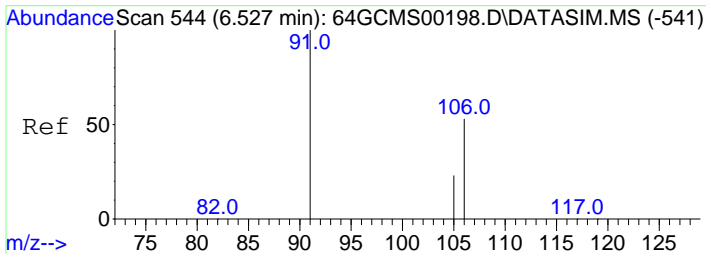
Abundance Scan 538 (6.472 min): 64GCMS00198.D\DATASIM.MS (-534)



#15
Ethyl Benzene
Concen: 7.83 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00210.D
Acq: 4 May 2016 12:15 pm

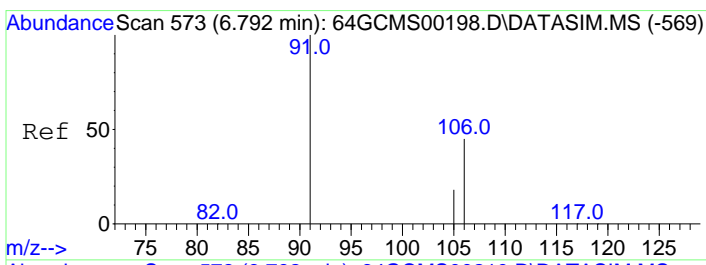
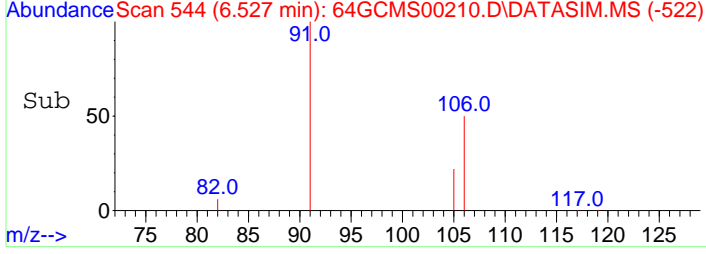
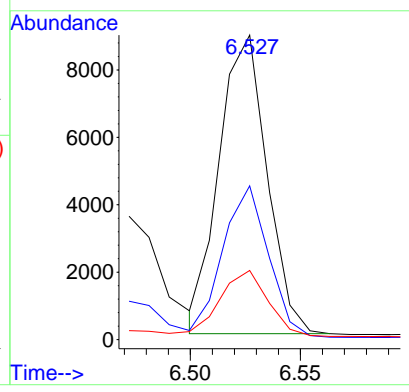
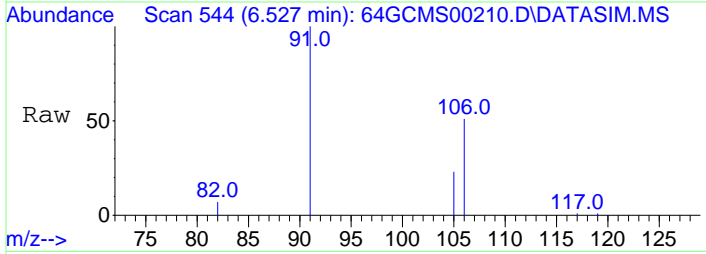
Tgt Ion	Resp	Lower	Upper
91	100		
106	31.6	24.2	36.2





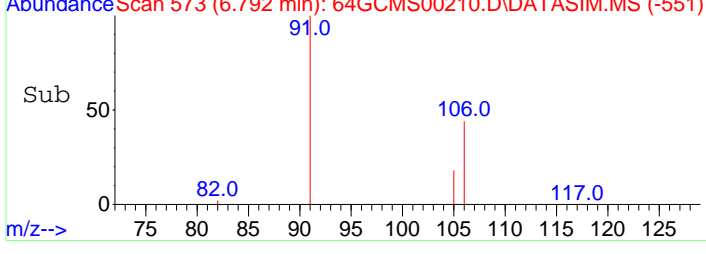
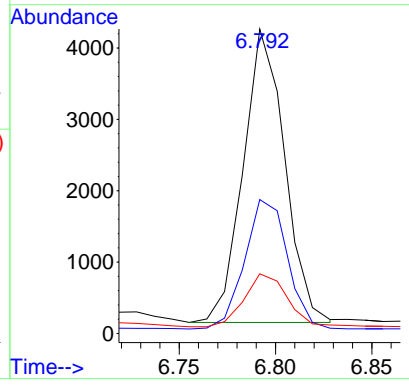
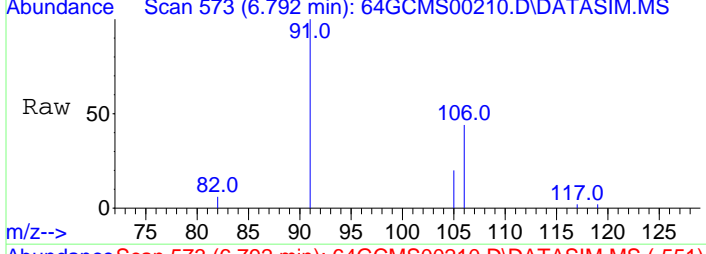
#16
 m,p-Xylene
 Concen: 22.79 ppbv
 RT: 6.527 min Scan# 544
 Delta R.T. -0.000 min
 Lab File: 64GCMS00210.D
 Acq: 4 May 2016 12:15 pm

Tgt Ion	Resp	Lower	Upper
91	13388		
106	48.4	37.7	56.5
105	22.4	17.0	25.4



#17
 o-Xylene
 Concen: 9.68 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00210.D
 Acq: 4 May 2016 12:15 pm

Tgt Ion	Resp	Lower	Upper
91	6168		
106	45.5	35.4	53.2
105	19.0	14.0	21.0



Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00211.D
Acq On : 4 May 2016 12:37 pm
Operator : dlm
Sample : 51063 \ Unit 22
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 12:46:02 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration

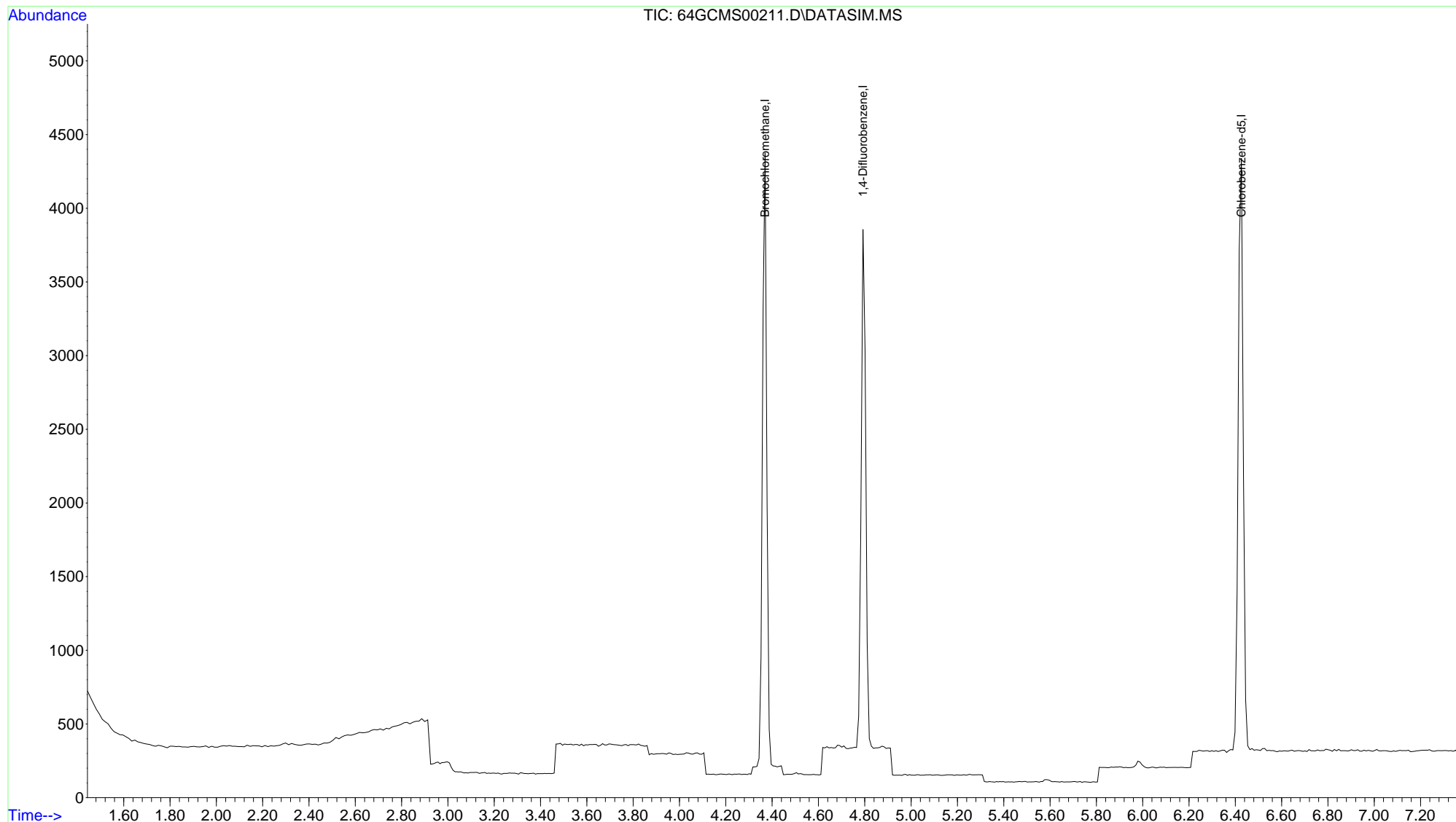
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	1995	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3356	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3250	10.00	ppbv	0.00

Target Compounds	Qvalue
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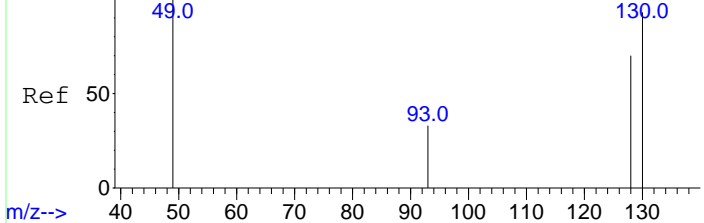
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00211.D
Acq On : 4 May 2016 12:37 pm
Operator : dlm
Sample : 51063 \ Unit 22
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

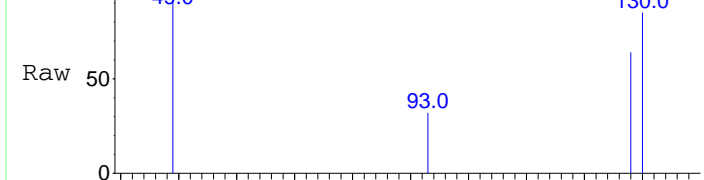
Quant Time: May 04 12:46:02 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration



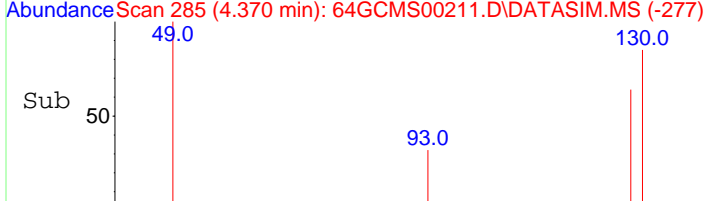
Abundance Scan 285 (4.370 min): 64GCMS00198.D\DATASIM.MS (-281)



m/z-->



Abundance Scan 285 (4.370 min): 64GCMS00211.D\DATASIM.MS (-277)

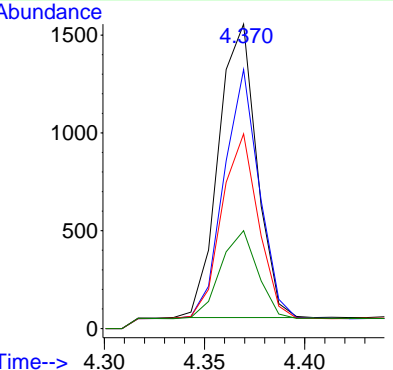


m/z-->

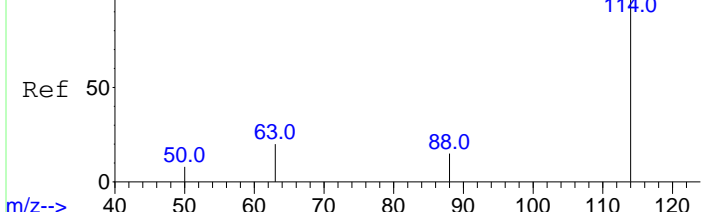
#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00211.D
Acq: 4 May 2016 12:37 pm

Tgt Ion: 49 Resp: 1995

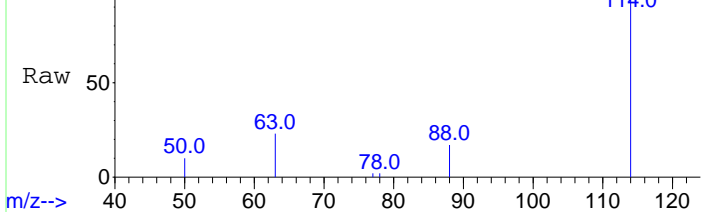
Ion	Ratio	Lower	Upper
49	100		
130	78.2	46.3	69.5#
128	60.2	35.7	53.5#
93	29.2	17.6	26.4#



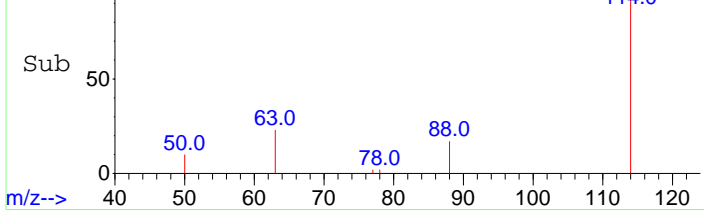
Abundance Scan 334 (4.792 min): 64GCMS00198.D\DATASIM.MS (-331)



m/z-->



Abundance Scan 334 (4.792 min): 64GCMS00211.D\DATASIM.MS (-312)

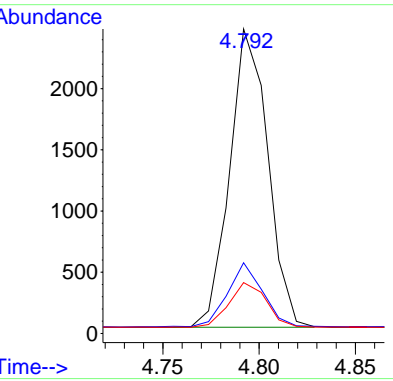


m/z-->

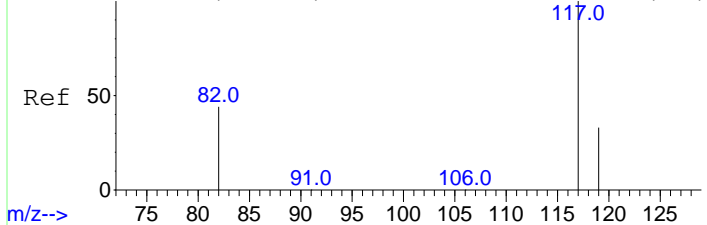
#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. -0.000 min
Lab File: 64GCMS00211.D
Acq: 4 May 2016 12:37 pm

Tgt Ion: 114 Resp: 3356

Ion	Ratio	Lower	Upper
114	100		
63	19.5	19.2	28.8
88	14.7	13.7	20.5



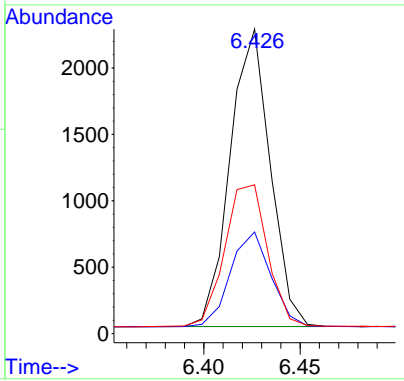
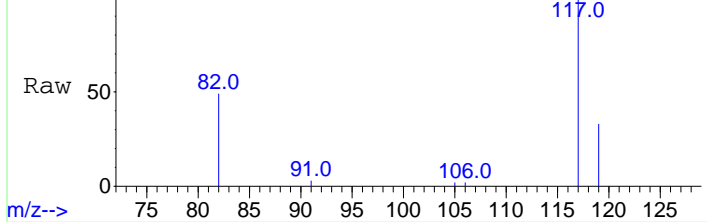
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



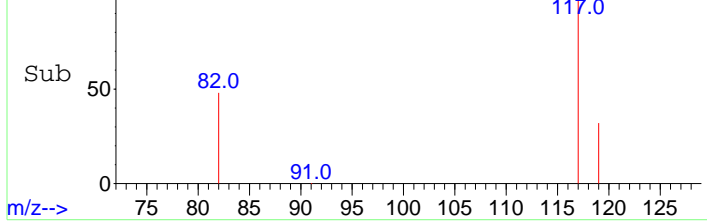
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00211.D
 Acq: 4 May 2016 12:37 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	31.9	25.8	38.6
82	50.5	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00211.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00211.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00212.D
Acq On : 4 May 2016 12:50 pm
Operator : dlm
Sample : 51064 \ Unit 23
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 12:59:03 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration

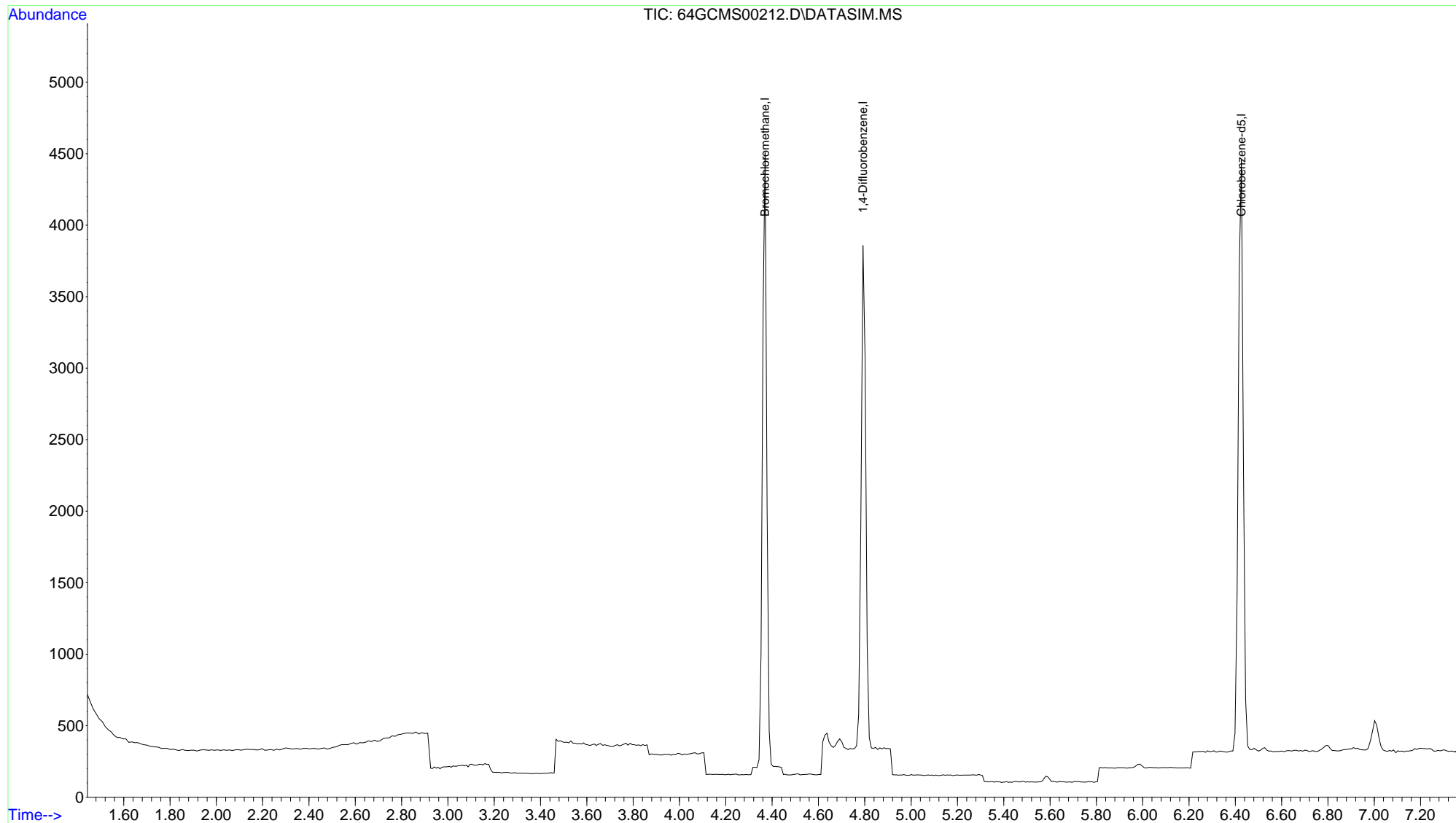
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2071	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3325	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3304	10.00	ppbv	0.00

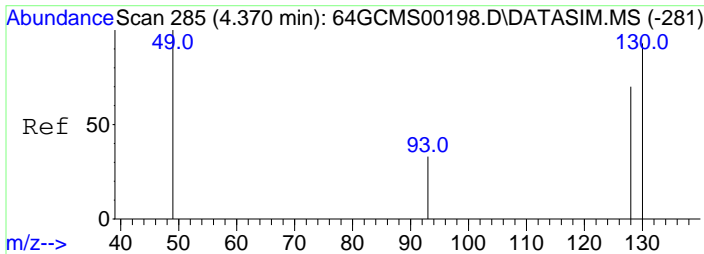
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

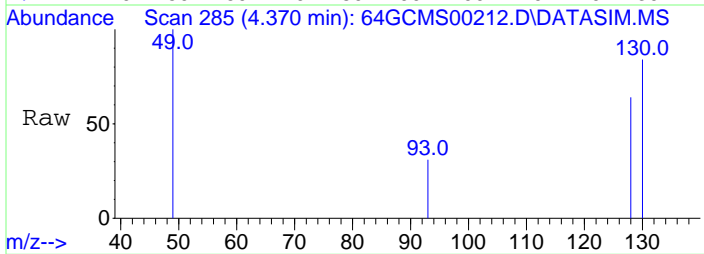
Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00212.D
Acq On : 4 May 2016 12:50 pm
Operator : dlm
Sample : 51064 \ Unit 23
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 12:59:03 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration



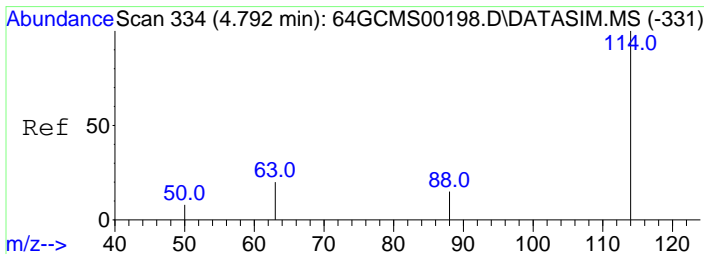
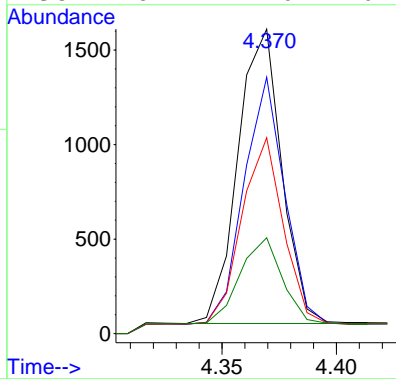
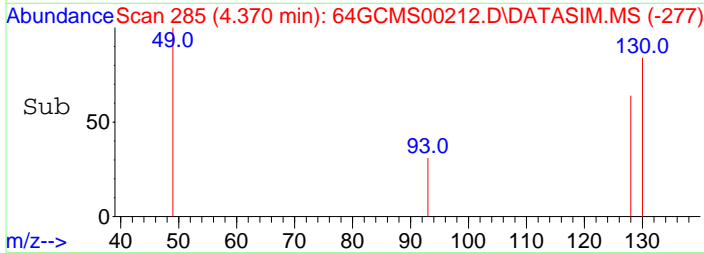


#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00212.D
 Acq: 4 May 2016 12:50 pm

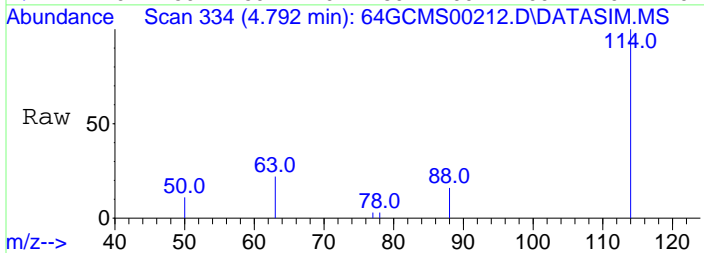


Tgt Ion: 49 Resp: 2071

Ion	Ratio	Lower	Upper
49	100		
130	78.1	46.3	69.5#
128	59.8	35.7	53.5#
93	28.4	17.6	26.4#

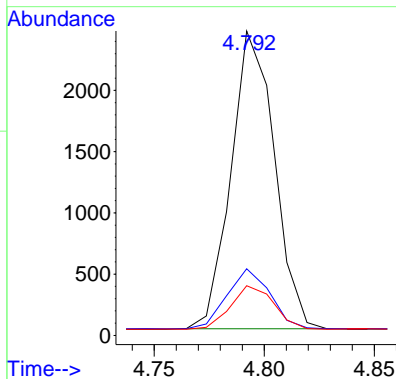
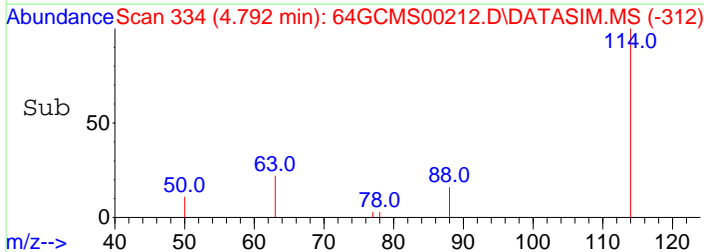


#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00212.D
 Acq: 4 May 2016 12:50 pm

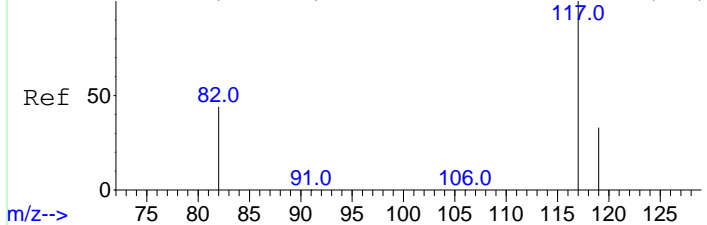


Tgt Ion: 114 Resp: 3325

Ion	Ratio	Lower	Upper
114	100		
63	19.9	19.2	28.8
88	14.5	13.7	20.5



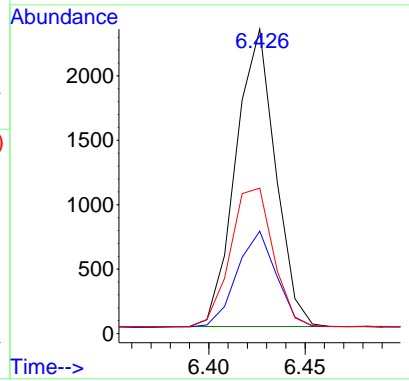
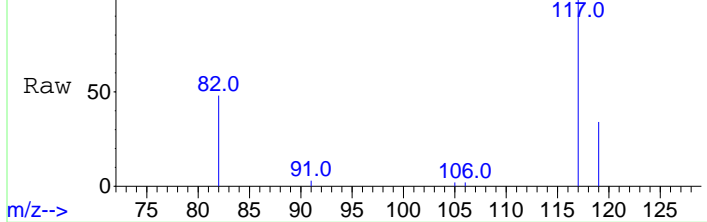
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



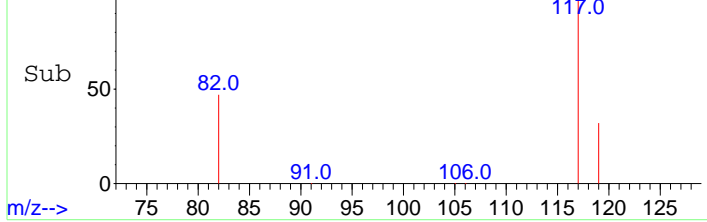
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00212.D
Acq: 4 May 2016 12:50 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.0	25.8	38.6
82	50.6	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00212.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00212.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00213.D
 Acq On : 4 May 2016 2:38 pm
 Operator : dlm
 Sample : GM-SG-07 \ GMEH07
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

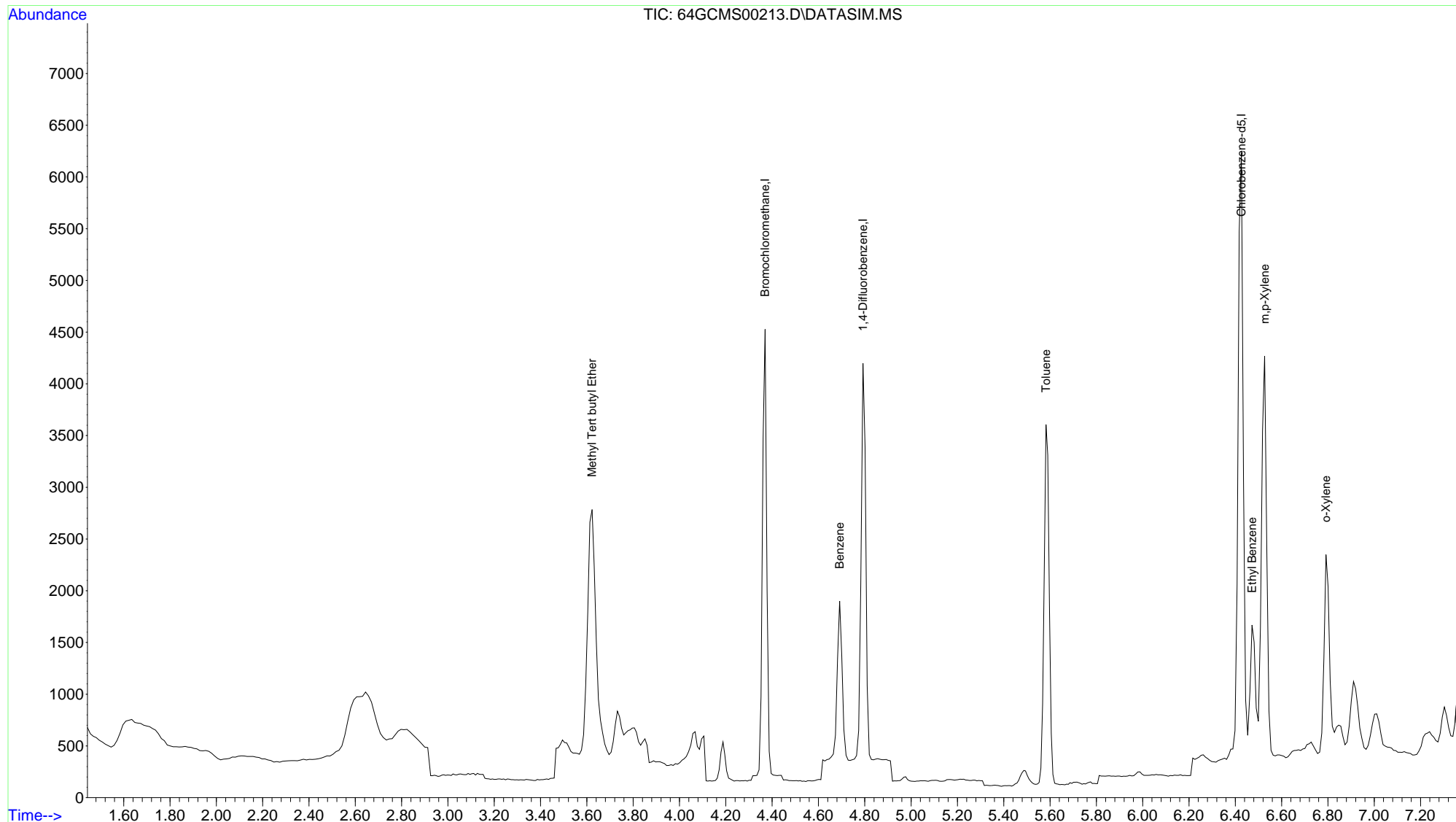
Quant Time: May 04 14:53:33 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2054	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3704	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	4584	10.00	ppbv	0.00
Target Compounds						
4) Methyl Tert butyl Ether	3.622	73	1141	3.38	ppbv	# 74
10) Benzene	4.692	78	1526m	5.17	ppbv	
13) Toluene	5.583	91	3443	7.24	ppbv	95
15) Ethyl Benzene	6.472	91	1514	2.58	ppbv	100
16) m,p-Xylene	6.527	91	3304	6.94	ppbv	98
17) o-Xylene	6.792	91	1794	3.47	ppbv	# 96

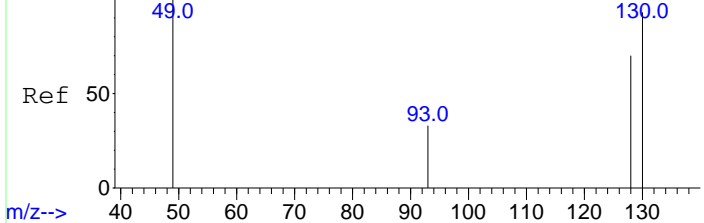
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00213.D
 Acq On : 4 May 2016 2:38 pm
 Operator : dlm
 Sample : GM-SG-07 \ GMEH07
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 14:53:33 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



Abundance Scan 285 (4.370 min): 64GCMS00198.D\DATASIM.MS (-281)

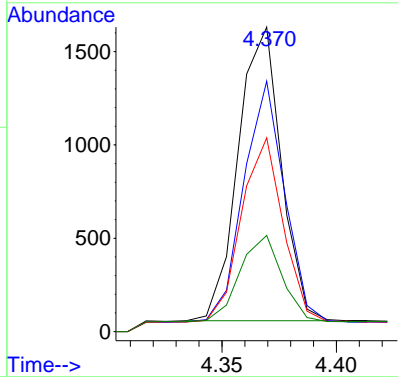
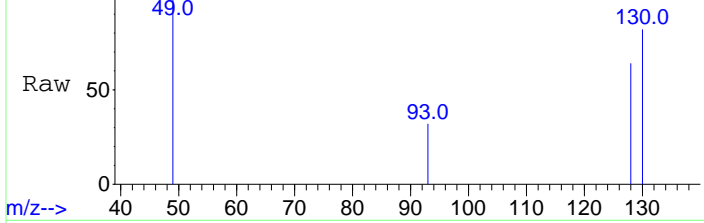


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00213.D
Acq: 4 May 2016 2:38 pm

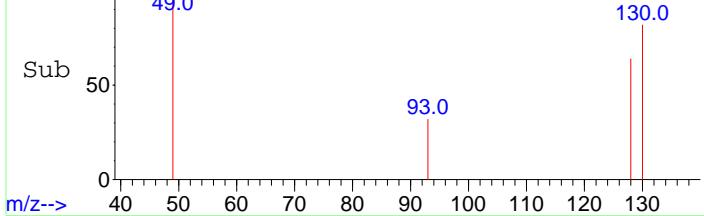
Tgt Ion: 49 Resp: 2054

Ion	Ratio	Lower	Upper
49	100		
130	77.9	46.3	69.5#
128	60.9	35.7	53.5#
93	28.7	17.6	26.4#

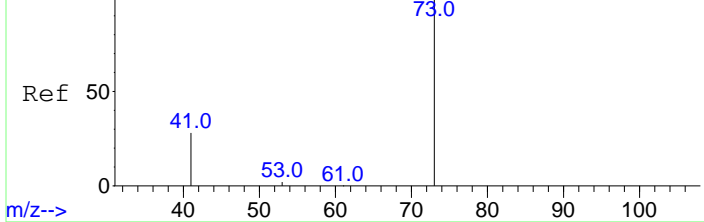
Abundance Scan 285 (4.370 min): 64GCMS00213.D\DATASIM.MS



Abundance Scan 285 (4.370 min): 64GCMS00213.D\DATASIM.MS (-277)



Abundance Scan 205 (3.659 min): 64GCMS00198.D\DATASIM.MS (-195)

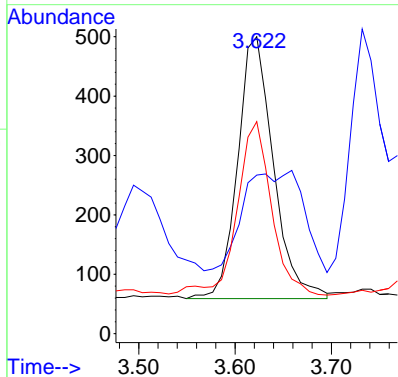
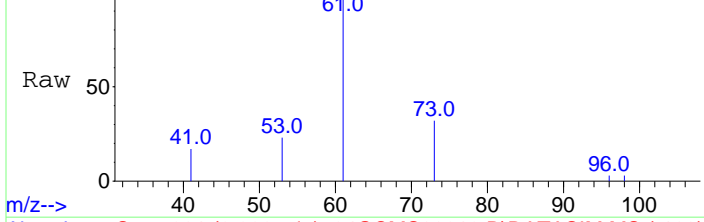


#4
Methyl Tert butyl Ether
Concen: 3.38 ppbv
RT: 3.622 min Scan# 201
Delta R.T. -0.037 min
Lab File: 64GCMS00213.D
Acq: 4 May 2016 2:38 pm

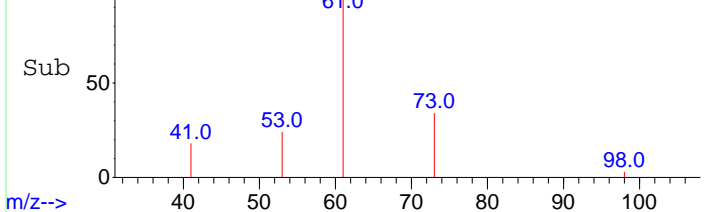
Tgt Ion: 73 Resp: 1141

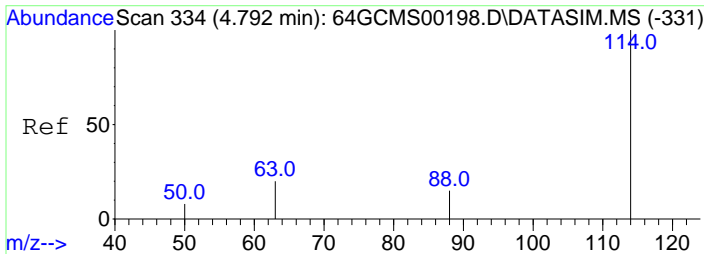
Ion	Ratio	Lower	Upper
73	100		
41	35.0	20.6	30.8#
53	60.7	1.2	1.8#

Abundance Scan 201 (3.622 min): 64GCMS00213.D\DATASIM.MS



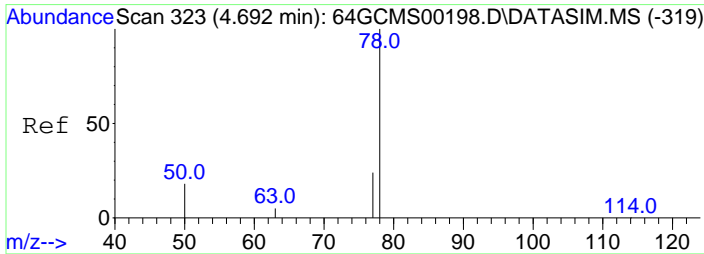
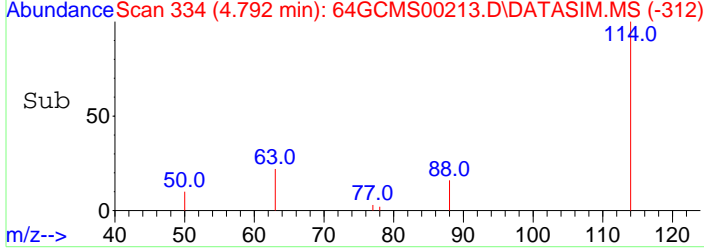
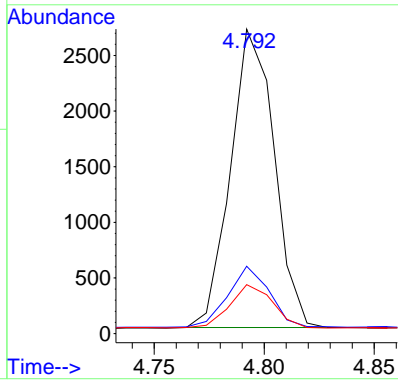
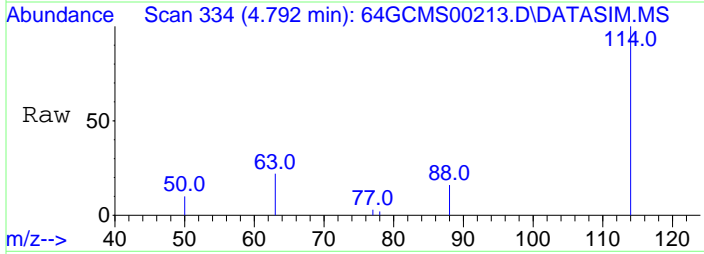
Abundance Scan 201 (3.622 min): 64GCMS00213.D\DATASIM.MS (-183)





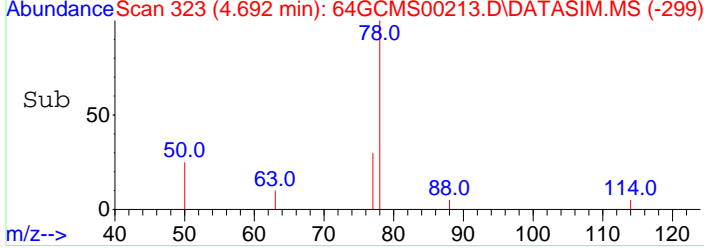
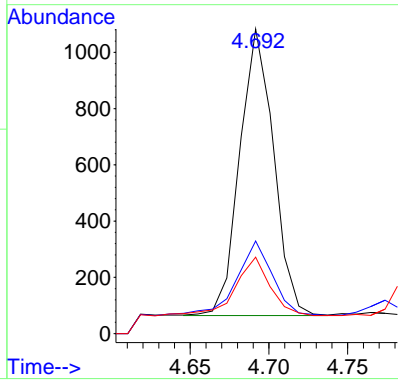
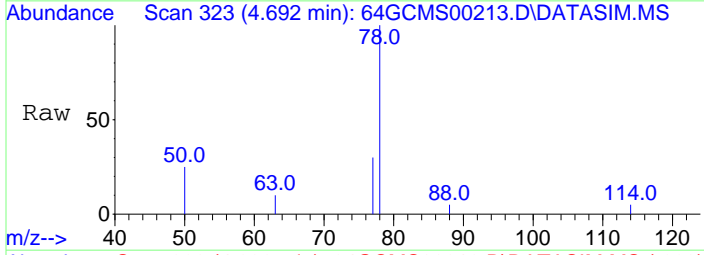
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00213.D
 Acq: 4 May 2016 2:38 pm

Tgt Ion	Resp	Lower	Upper
114	100		
63	20.2	19.2	28.8
88	14.3	13.7	20.5



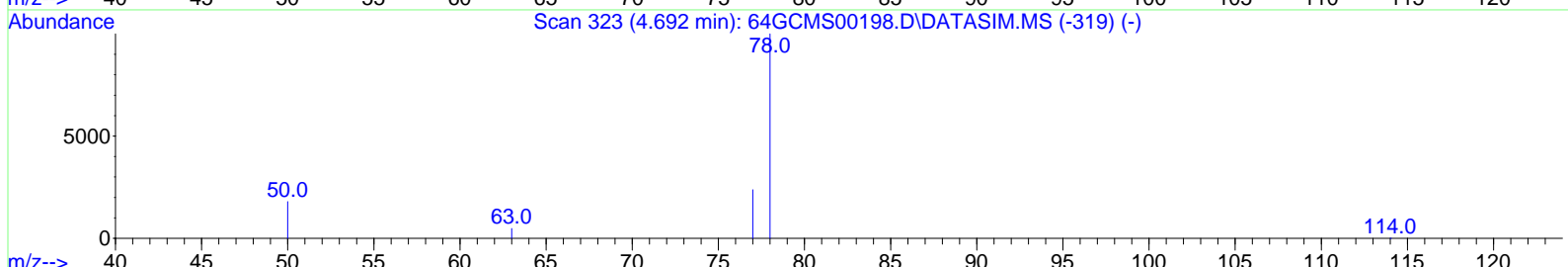
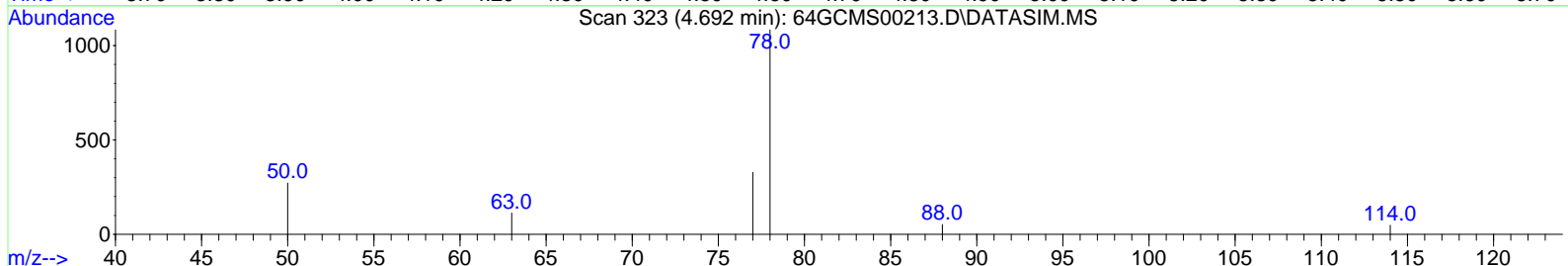
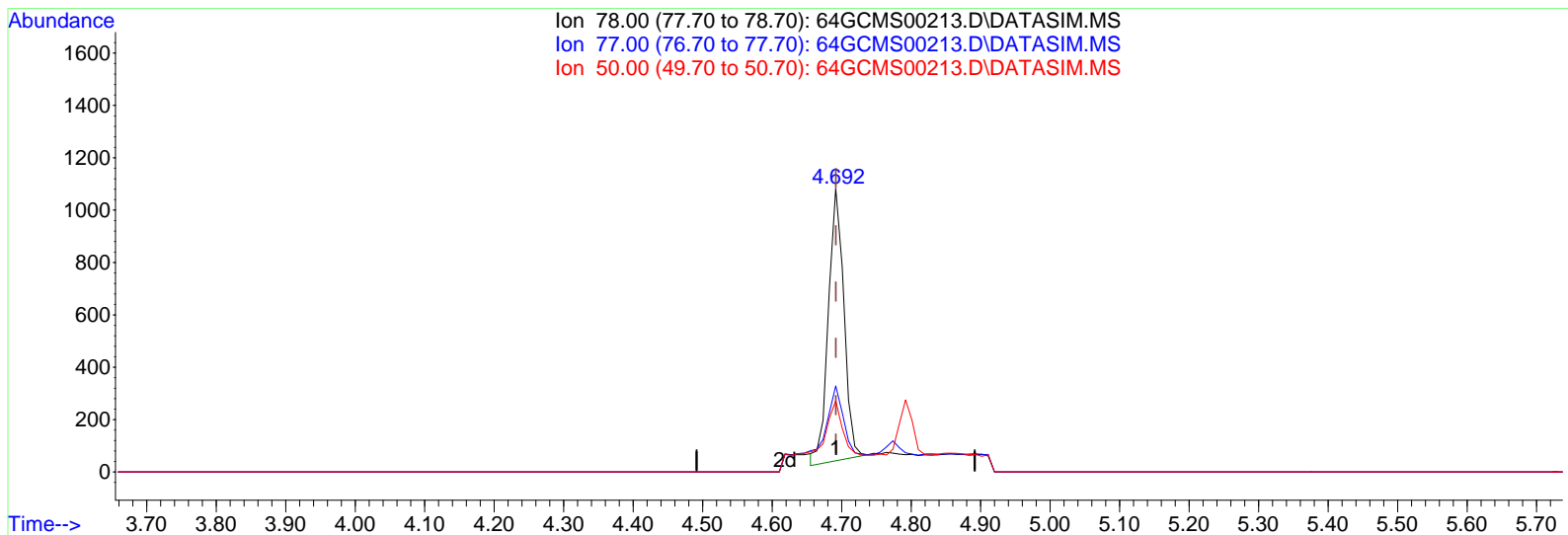
#10
 Benzene
 Concen: 5.17 ppbv m
 RT: 4.692 min Scan# 323
 Delta R.T. -0.000 min
 Lab File: 64GCMS00213.D
 Acq: 4 May 2016 2:38 pm

Tgt Ion	Resp	Lower	Upper
78	100		
77	45.2	18.2	27.4#
50	37.6	16.6	24.8#



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00213.D
 Acq On : 4 May 2016 2:38 pm
 Operator : dlm
 Sample : GM-SG-07 \ GMEH07
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 14:46:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



TIC: 64GCMS00213.D\DATASIM.MS

(10) Benzene

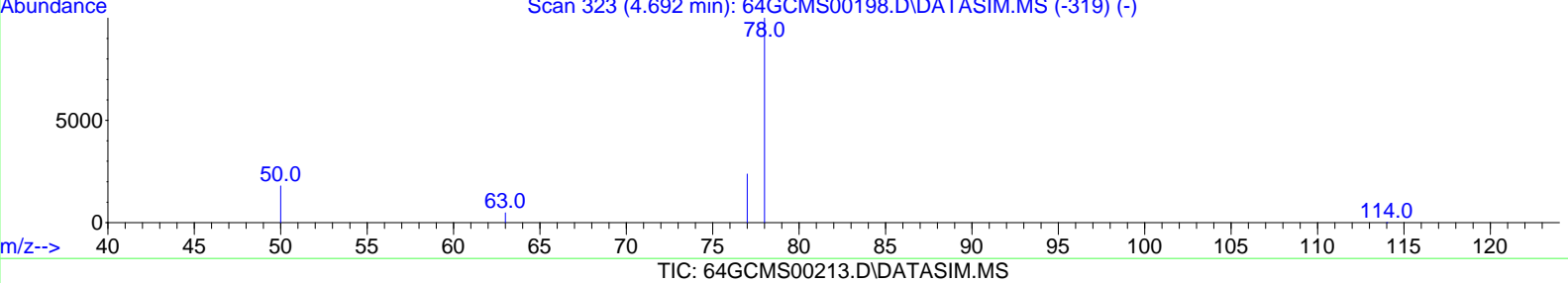
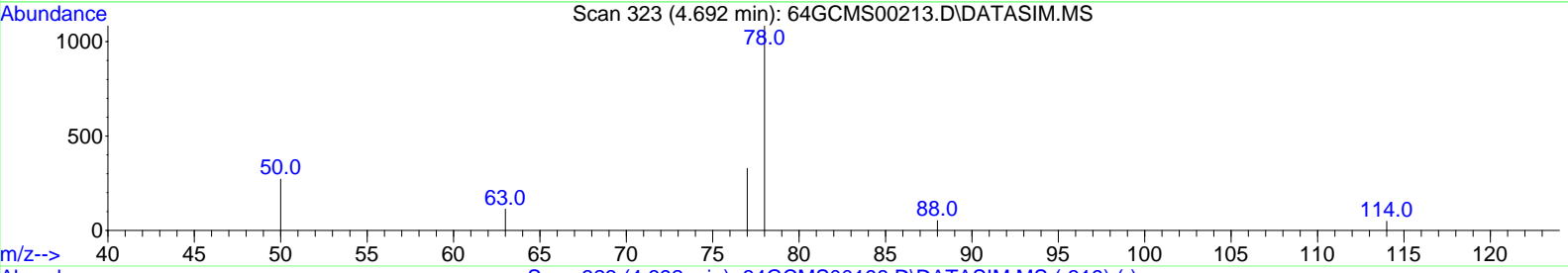
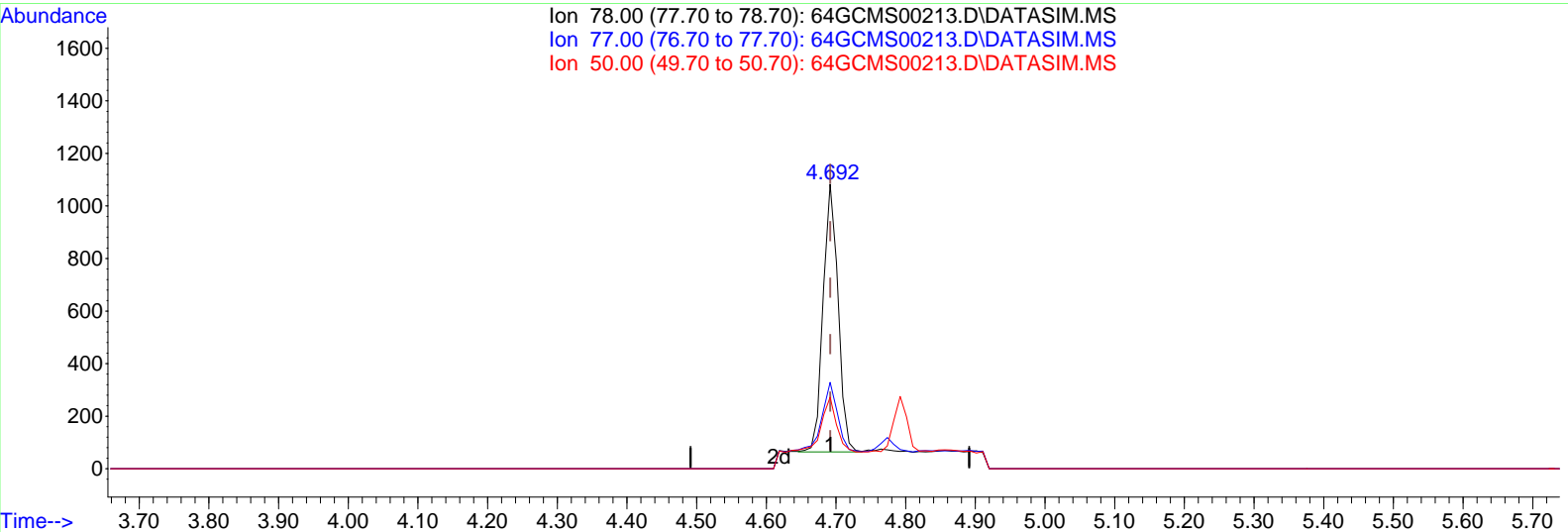
4.692min (-0.000) 5.47 ppbv

response 1617

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	42.67#
50.00	20.70	35.50#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00213.D
 Acq On : 4 May 2016 2:38 pm
 Operator : dlm
 Sample : GM-SG-07 \ GMEH07
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 14:46:55 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



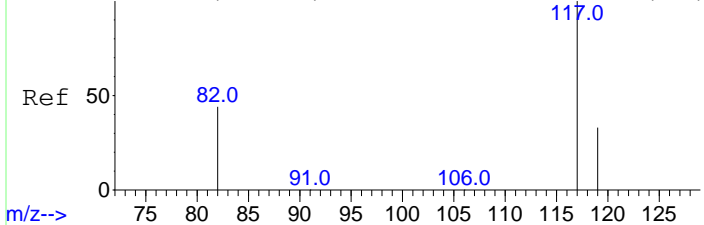
(10) Benzene

4.692min (-0.000) 5.17 ppbv m

response 1526

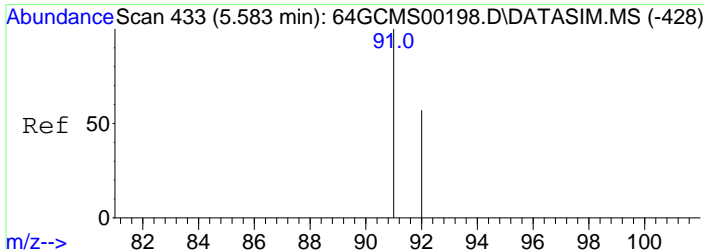
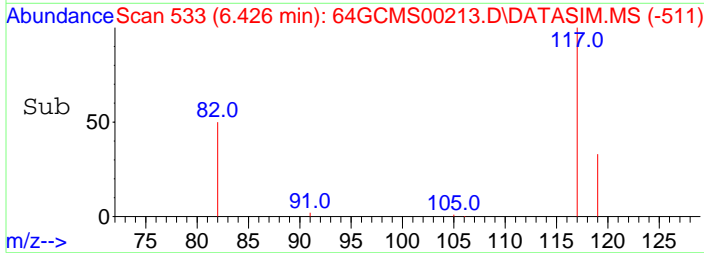
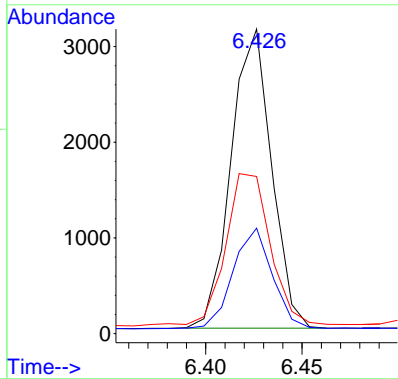
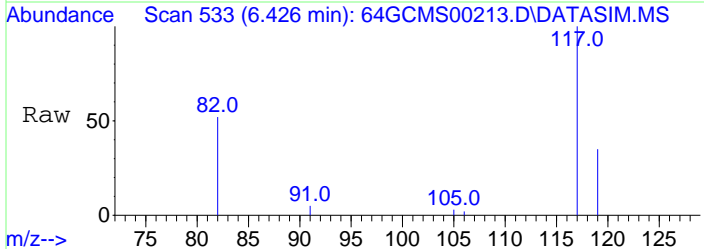
Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	45.22#
50.00	20.70	37.61#
0.00	0.00	0.00

Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



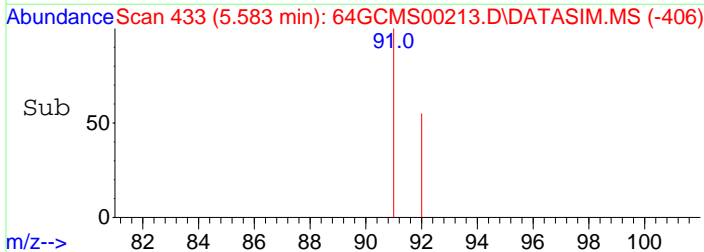
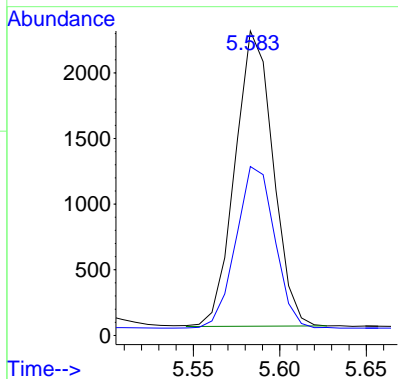
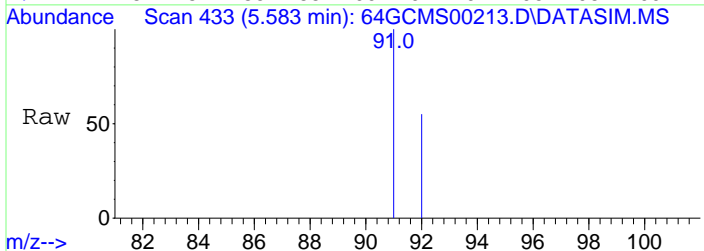
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00213.D
 Acq: 4 May 2016 2:38 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.3	25.8	38.6
82	57.7	45.6	68.4

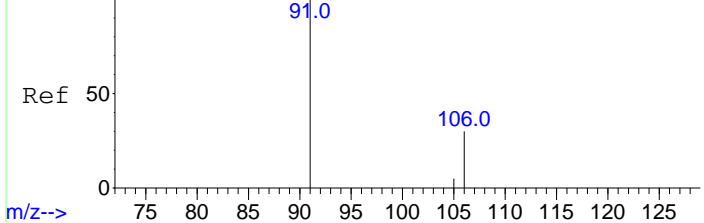


#13
 Toluene
 Concen: 7.24 ppbv
 RT: 5.583 min Scan# 433
 Delta R.T. -0.000 min
 Lab File: 64GCMS00213.D
 Acq: 4 May 2016 2:38 pm

Tgt Ion	Resp	Lower	Upper
91	100		
92	55.9	48.0	72.0



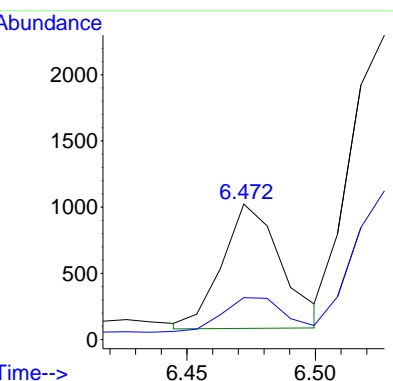
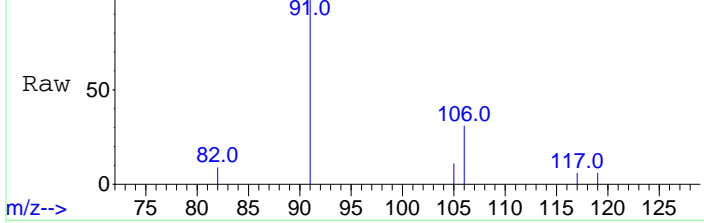
Abundance Scan 538 (6.472 min): 64GCMS00198.D\DATASIM.MS (-534)



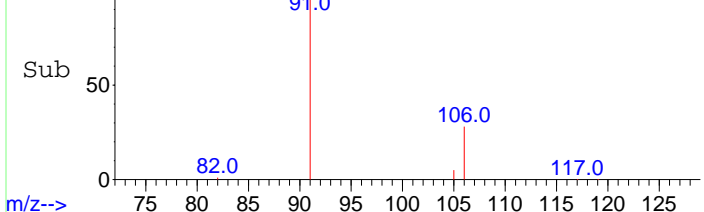
#15
Ethyl Benzene
Concen: 2.58 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00213.D
Acq: 4 May 2016 2:38 pm

Tgt Ion: 91 Resp: 1514
Ion Ratio Lower Upper
91 100
106 30.0 24.2 36.2

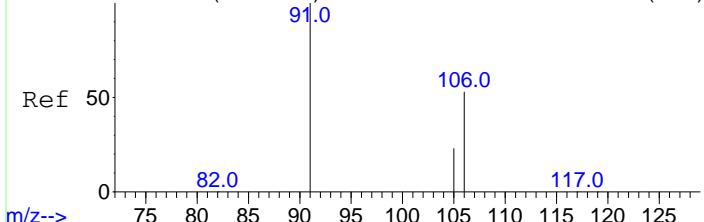
Abundance Scan 538 (6.472 min): 64GCMS00213.D\DATASIM.MS



Abundance Scan 538 (6.472 min): 64GCMS00213.D\DATASIM.MS (-516)



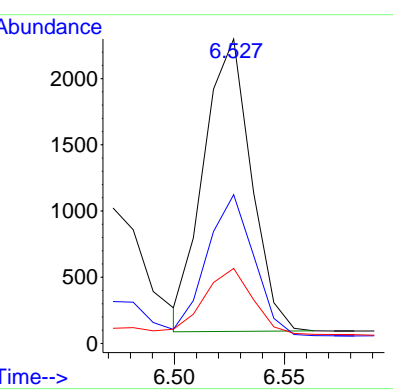
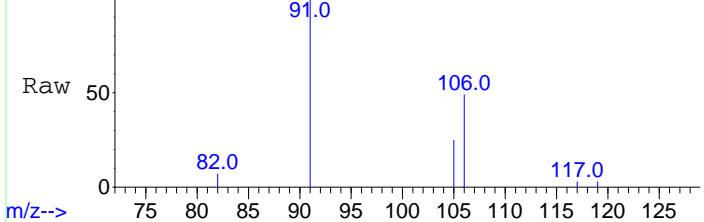
Abundance Scan 544 (6.527 min): 64GCMS00198.D\DATASIM.MS (-541)



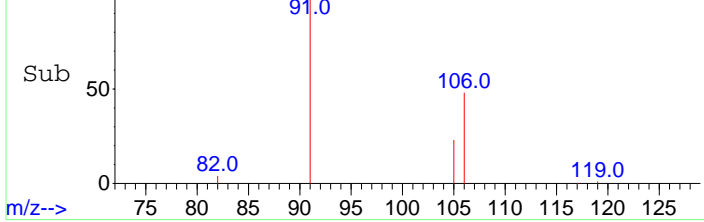
#16
m,p-Xylene
Concen: 6.94 ppbv
RT: 6.527 min Scan# 544
Delta R.T. -0.000 min
Lab File: 64GCMS00213.D
Acq: 4 May 2016 2:38 pm

Tgt Ion: 91 Resp: 3304
Ion Ratio Lower Upper
91 100
106 47.5 37.7 56.5
105 24.4 17.0 25.4

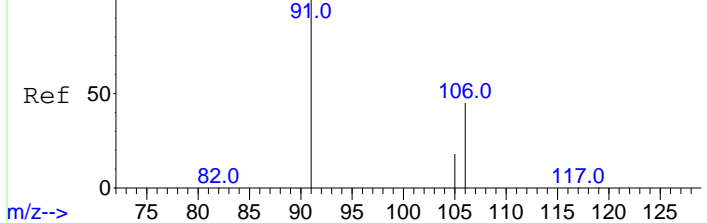
Abundance Scan 544 (6.527 min): 64GCMS00213.D\DATASIM.MS



Abundance Scan 544 (6.527 min): 64GCMS00213.D\DATASIM.MS (-522)



Abundance Scan 573 (6.792 min): 64GCMS00198.D\DATASIM.MS (-569)

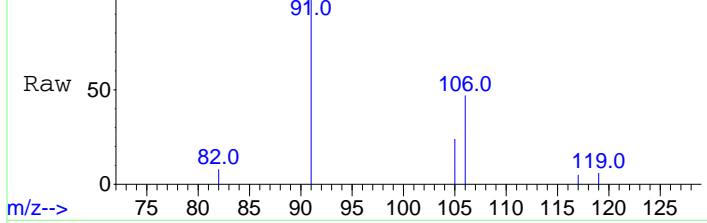


#17

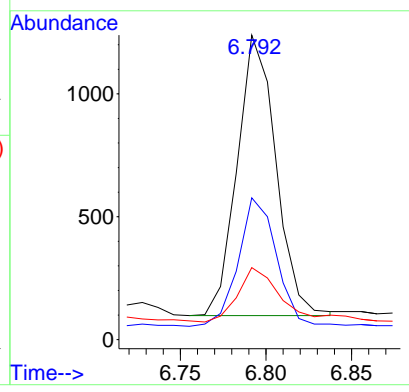
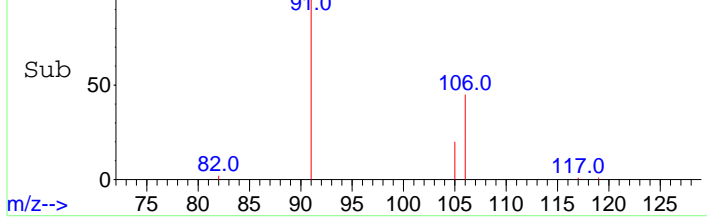
o-Xylene
 Concen: 3.47 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00213.D
 Acq: 4 May 2016 2:38 pm

Tgt Ion	Resp	Lower	Upper
91	1794		
106	45.8	35.4	53.2
105	21.1	14.0	21.0#

Abundance Scan 573 (6.792 min): 64GCMS00213.D\DATASIM.MS



Abundance Scan 573 (6.792 min): 64GCMS00213.D\DATASIM.MS (-551)



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00214.D
 Acq On : 4 May 2016 3:38 pm
 Operator : dlm
 Sample : GM-SG-06 \ GMEH06
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

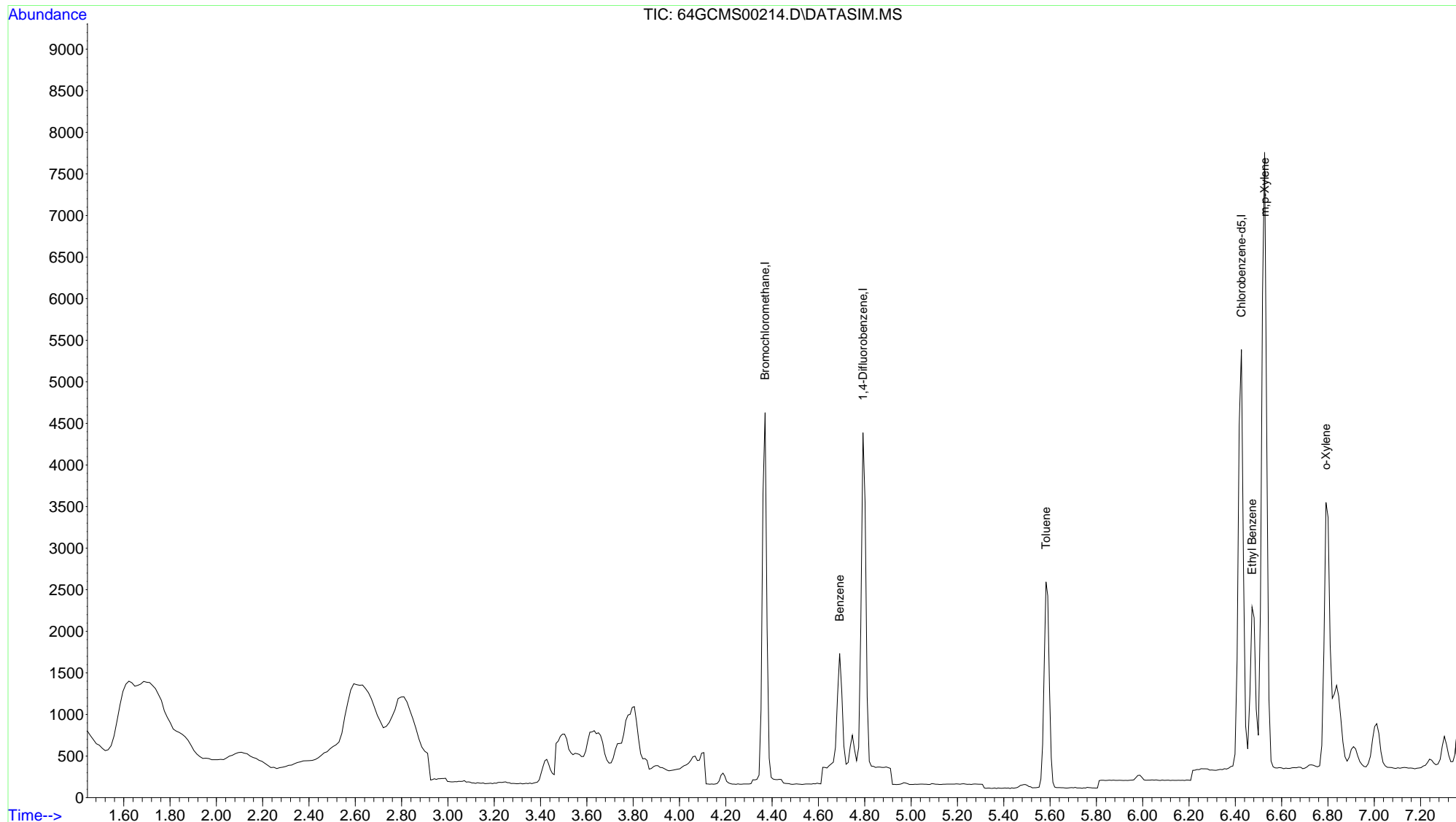
Quant Time: May 05 15:37:59 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

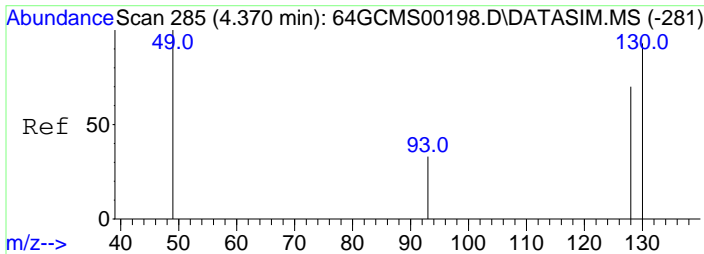
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.369	49	2112	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3825	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3979	10.00	ppbv	0.00
Target Compounds						
10) Benzene	4.691	78	1331m	4.36	ppbv	Qvalue
13) Toluene	5.583	91	2429	5.88	ppbv	97
15) Ethyl Benzene	6.472	91	2307	4.53	ppbv	96
16) m,p-Xylene	6.527	91	6269	15.17	ppbv	97
17) o-Xylene	6.792	91	3003	6.70	ppbv	# 93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

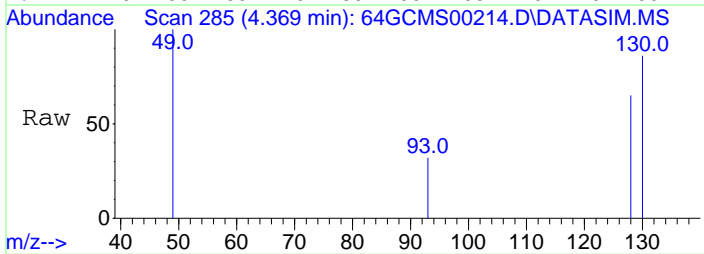
Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00214.D
 Acq On : 4 May 2016 3:38 pm
 Operator : dlm
 Sample : GM-SG-06 \ GMEH06
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:37:59 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration

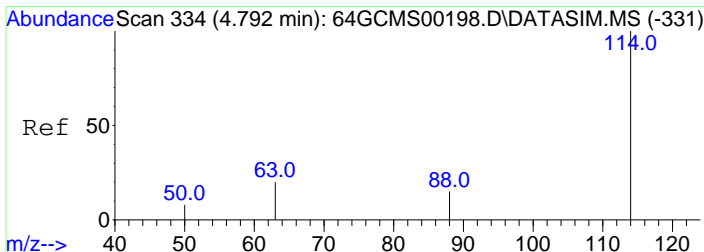
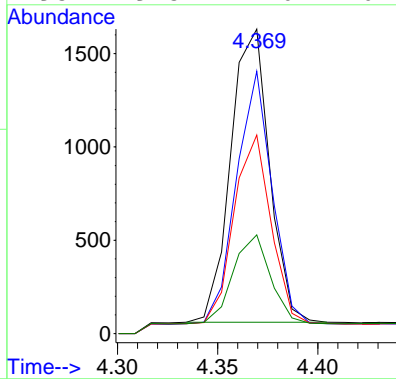
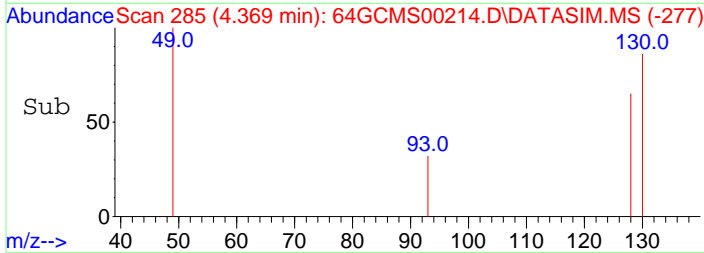




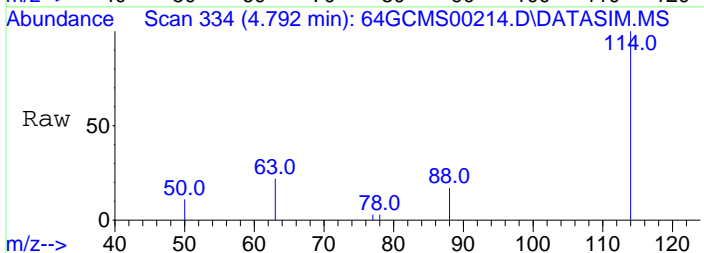
#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.369 min Scan# 285
 Delta R.T. -0.001 min
 Lab File: 64GCMS00214.D
 Acq: 4 May 2016 3:38 pm



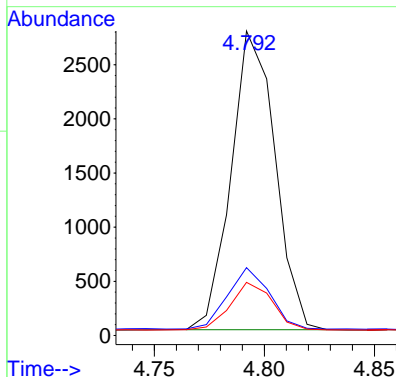
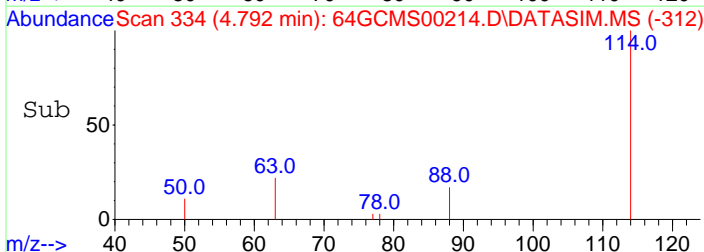
Tgt Ion: 49 Resp: 2112
 Ion Ratio Lower Upper
 49 100
 130 79.1 46.3 69.5#
 128 61.4 35.7 53.5#
 93 29.3 17.6 26.4#



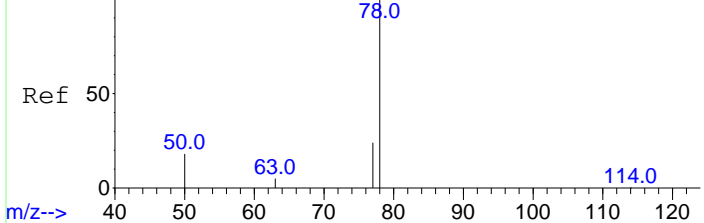
#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00214.D
 Acq: 4 May 2016 3:38 pm



Tgt Ion: 114 Resp: 3825
 Ion Ratio Lower Upper
 114 100
 63 20.4 19.2 28.8
 88 15.2 13.7 20.5



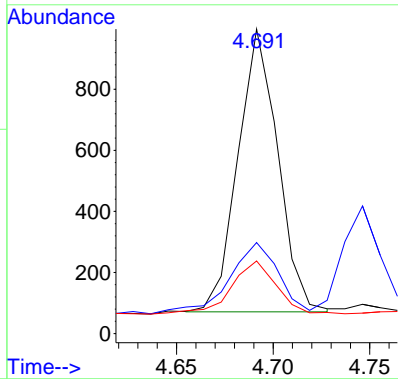
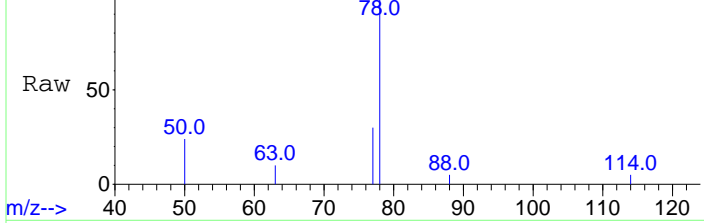
Abundance Scan 323 (4.692 min): 64GCMS00198.D\DATASIM.MS (-319)



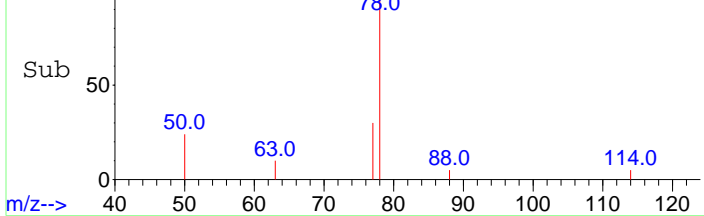
#10
Benzene
Concen: 4.36 ppbv m
RT: 4.691 min Scan# 323
Delta R.T. -0.000 min
Lab File: 64GCMS00214.D
Acq: 4 May 2016 3:38 pm

Tgt Ion	Resp	Lower	Upper
78	100		
77	42.6	18.2	27.4#
50	37.0	16.6	24.8#

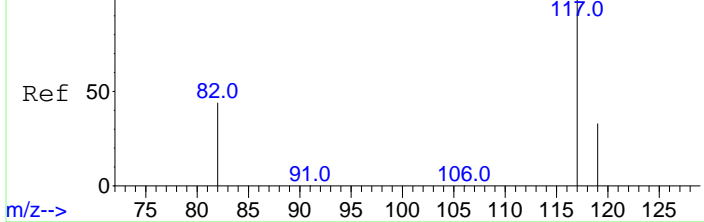
Abundance Scan 323 (4.691 min): 64GCMS00214.D\DATASIM.MS



Abundance Scan 323 (4.691 min): 64GCMS00214.D\DATASIM.MS (-299)



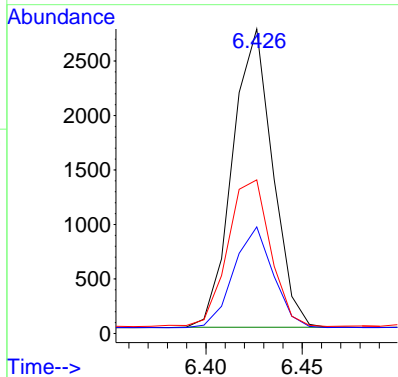
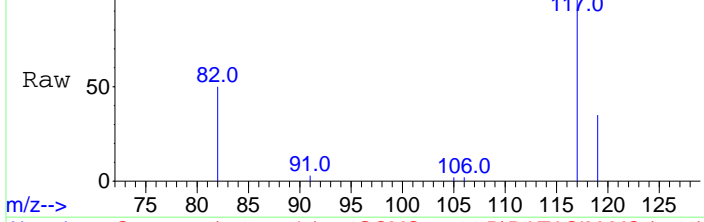
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



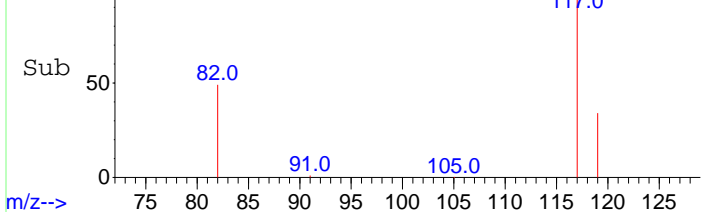
#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.426 min Scan# 533
Delta R.T. -0.000 min
Lab File: 64GCMS00214.D
Acq: 4 May 2016 3:38 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	33.1	25.8	38.6
82	52.1	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00214.D\DATASIM.MS

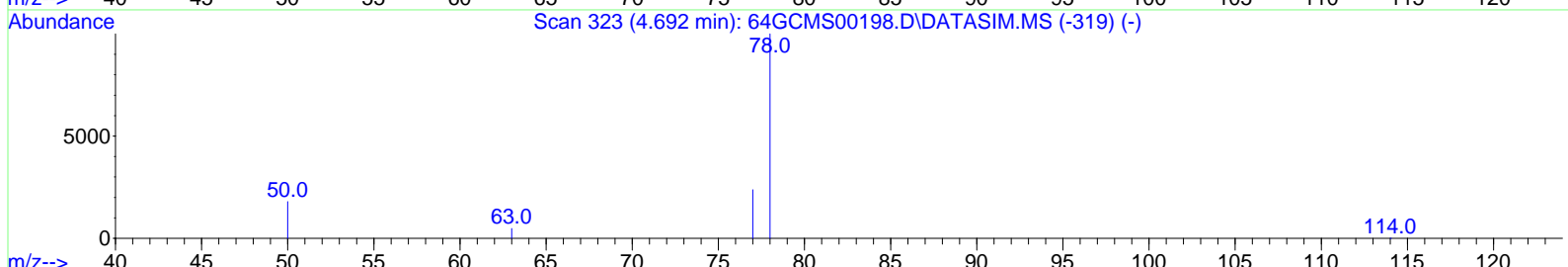
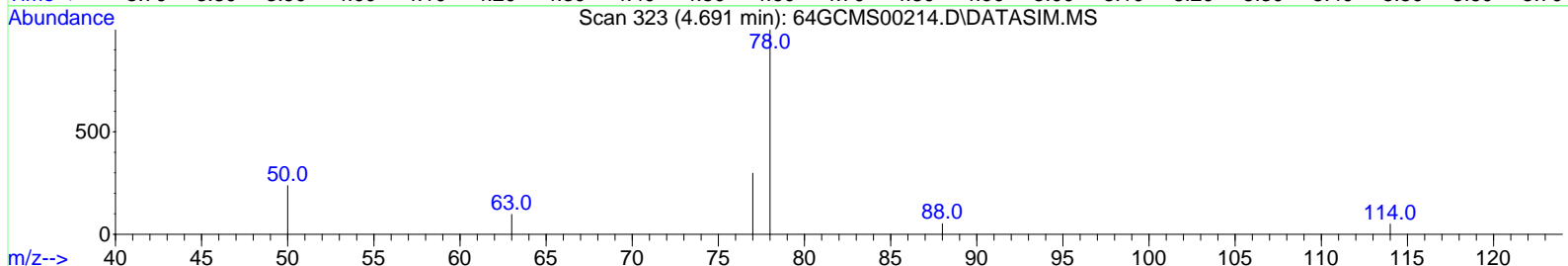
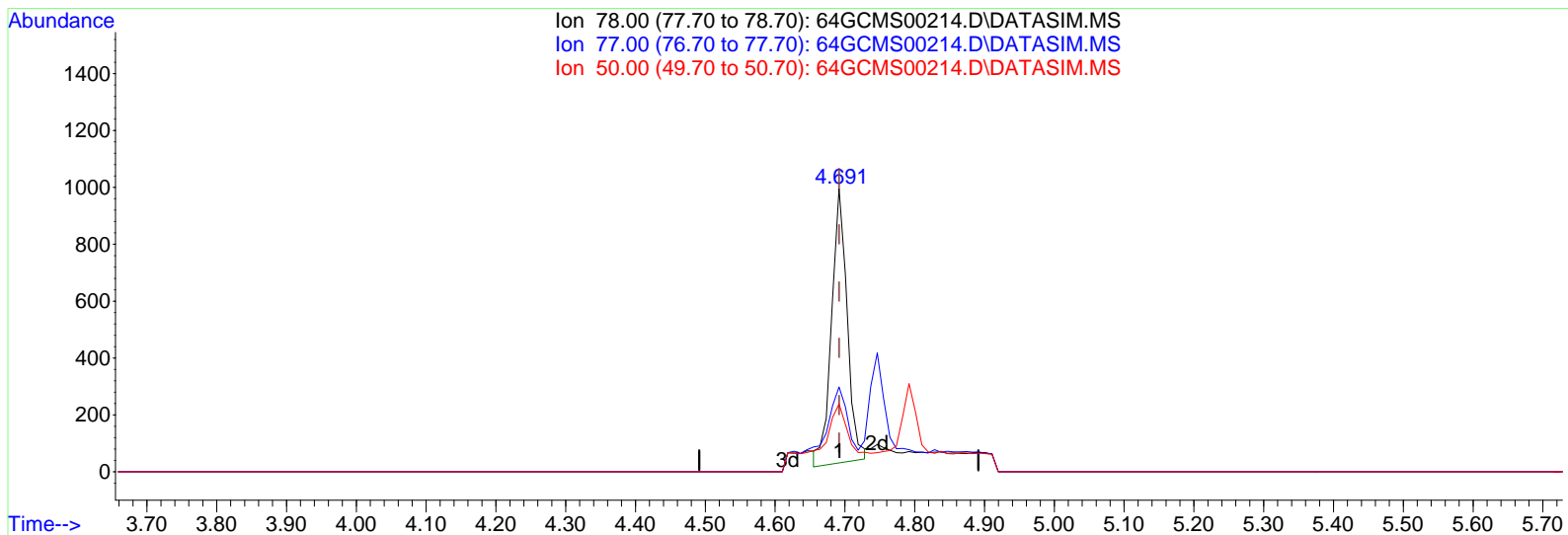


Abundance Scan 533 (6.426 min): 64GCMS00214.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00214.D
 Acq On : 4 May 2016 3:38 pm
 Operator : dlm
 Sample : GM-SG-06 \ GMEH06
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 15:49:14 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



TIC: 64GCMS00214.D\DATASIM.MS

(10) Benzene

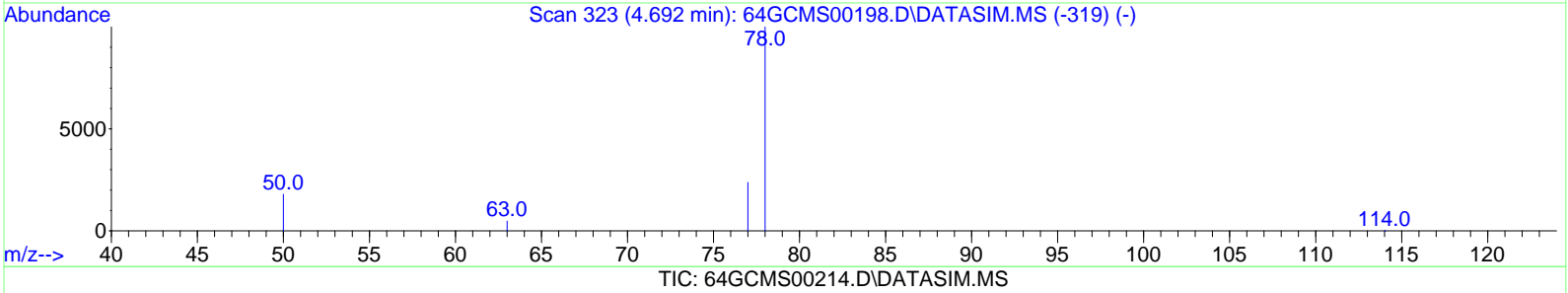
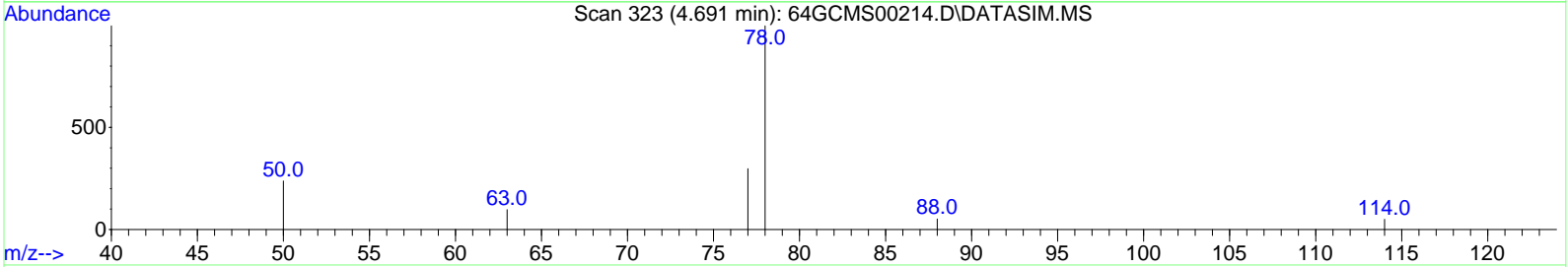
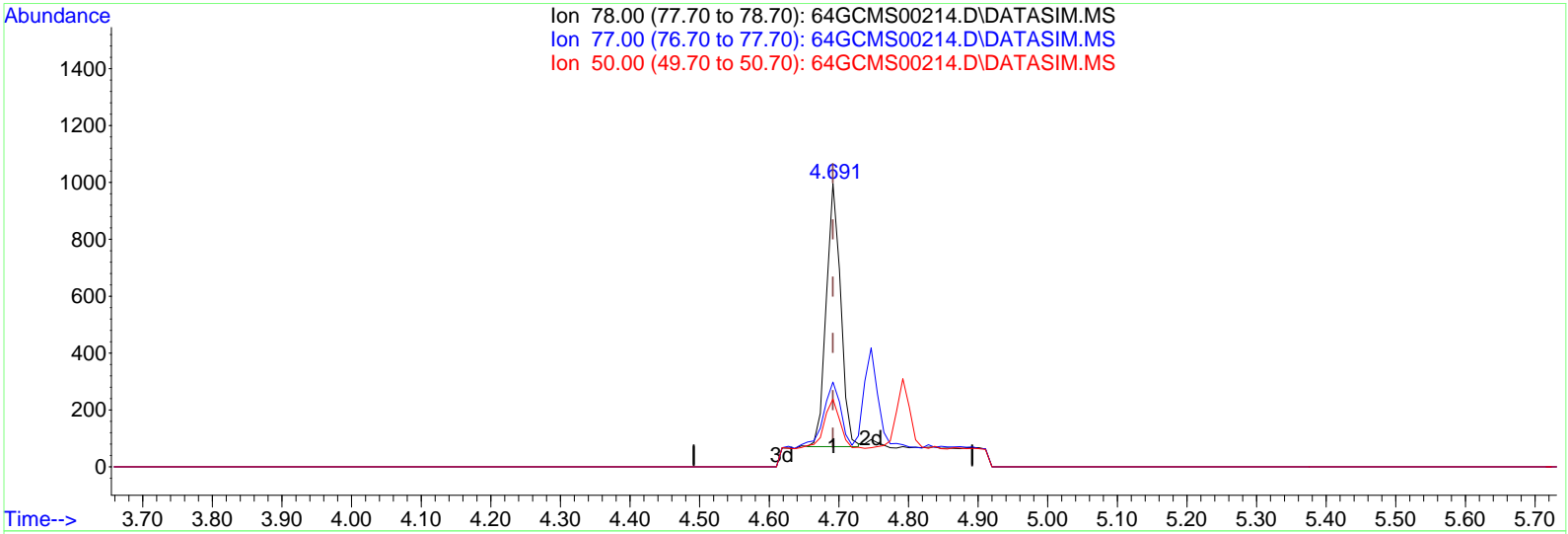
4.691min (-0.000) 4.94 ppbv

response 1506

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	37.65#
50.00	20.70	32.74#
0.00	0.00	0.00

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00214.D
 Acq On : 4 May 2016 3:38 pm
 Operator : dlm
 Sample : GM-SG-06 \ GMEH06
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 15:49:14 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



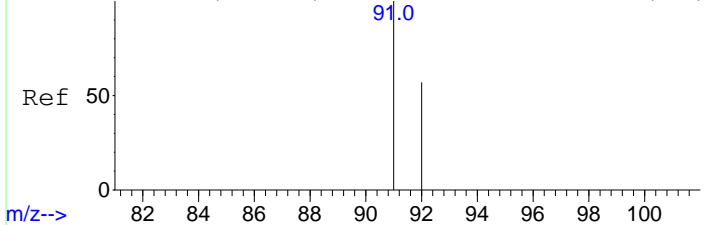
(10) Benzene

4.691min (-0.000) 4.36 ppbv m

response 1331

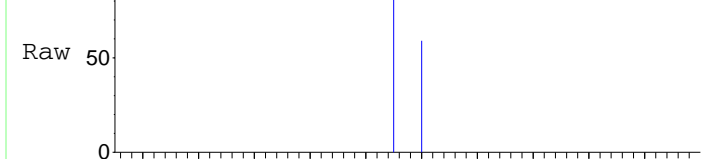
Ion	Exp%	Act%
78.00	100.00	100.00
77.00	22.80	42.60#
50.00	20.70	37.04#
0.00	0.00	0.00

Abundance Scan 433 (5.583 min): 64GCMS00198.D\DATASIM.MS (-428)



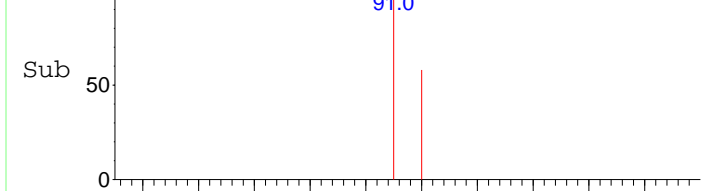
m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00214.D\DATASIM.MS



m/z-->

Abundance Scan 433 (5.583 min): 64GCMS00214.D\DATASIM.MS (-406)

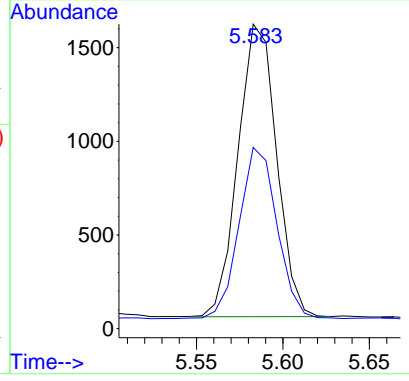


m/z-->

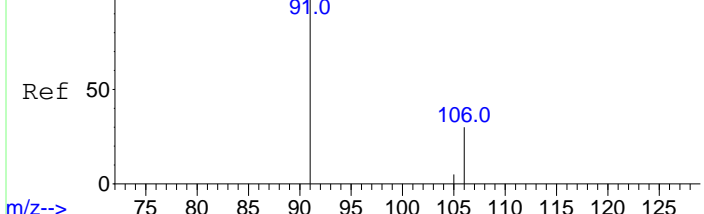
#13

Toluene
Concen: 5.88 ppbv
RT: 5.583 min Scan# 433
Delta R.T. -0.000 min
Lab File: 64GCMS00214.D
Acq: 4 May 2016 3:38 pm

Tgt Ion	91	92	Resp	2429	Lower	Upper
Ion Ratio	100	57.5			48.0	72.0

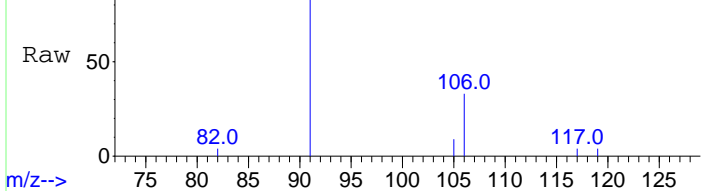


Abundance Scan 538 (6.472 min): 64GCMS00198.D\DATASIM.MS (-534)



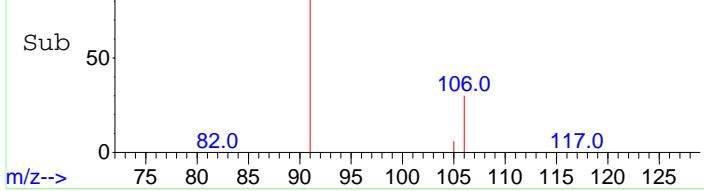
m/z-->

Abundance Scan 538 (6.472 min): 64GCMS00214.D\DATASIM.MS



m/z-->

Abundance Scan 538 (6.472 min): 64GCMS00214.D\DATASIM.MS (-516)

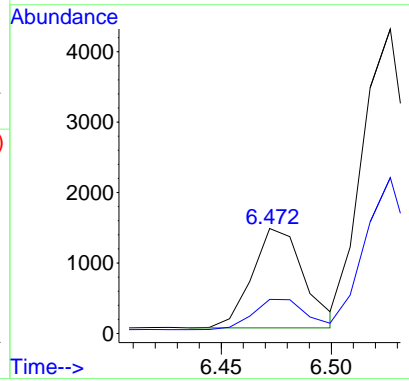


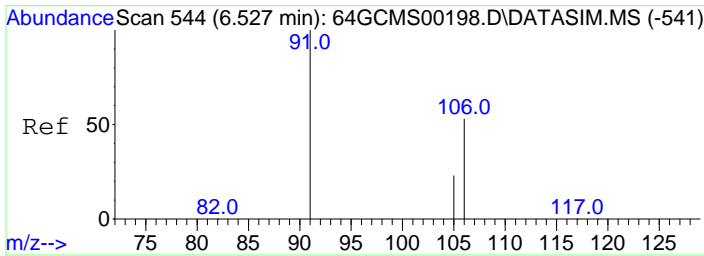
m/z-->

#15

Ethyl Benzene
Concen: 4.53 ppbv
RT: 6.472 min Scan# 538
Delta R.T. -0.000 min
Lab File: 64GCMS00214.D
Acq: 4 May 2016 3:38 pm

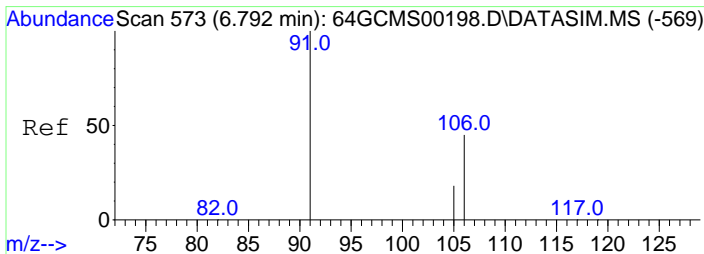
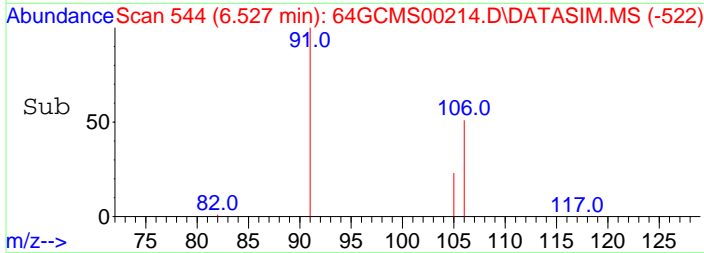
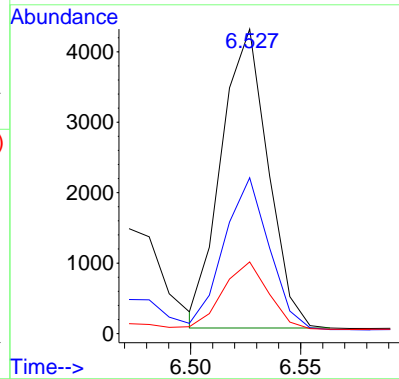
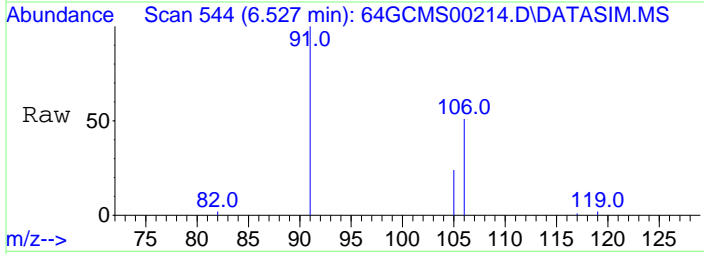
Tgt Ion	91	106	Resp	2307	Lower	Upper
Ion Ratio	100	32.4			24.2	36.2





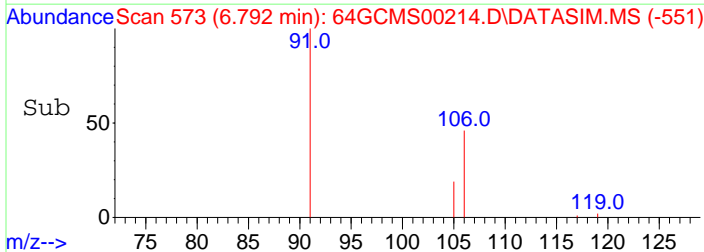
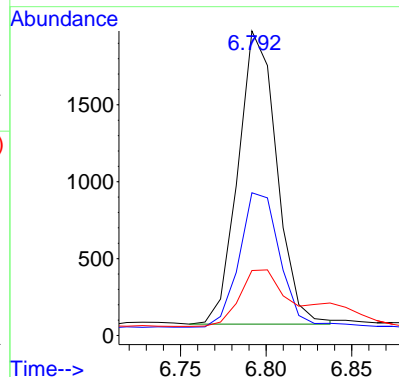
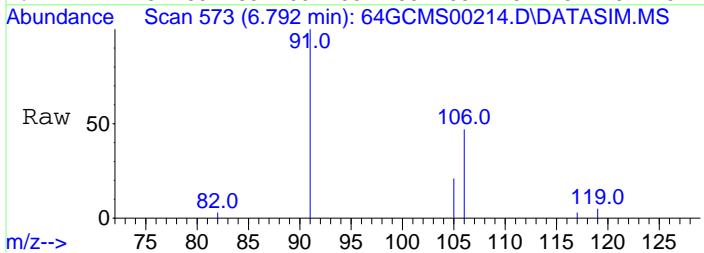
#16
 m,p-Xylene
 Concen: 15.17 ppbv
 RT: 6.527 min Scan# 544
 Delta R.T. -0.000 min
 Lab File: 64GCMS00214.D
 Acq: 4 May 2016 3:38 pm

Tgt Ion	Resp	Lower	Upper
91	6269		
106	49.1	37.7	56.5
105	22.4	17.0	25.4



#17
 o-Xylene
 Concen: 6.70 ppbv
 RT: 6.792 min Scan# 573
 Delta R.T. -0.000 min
 Lab File: 64GCMS00214.D
 Acq: 4 May 2016 3:38 pm

Tgt Ion	Resp	Lower	Upper
91	3003		
106	47.7	35.4	53.2
105	22.8	14.0	21.0#



Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00215.D
Acq On : 4 May 2016 3:51 pm
Operator : dlm
Sample : 51065 \ Unit 8
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 16:01:05 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration

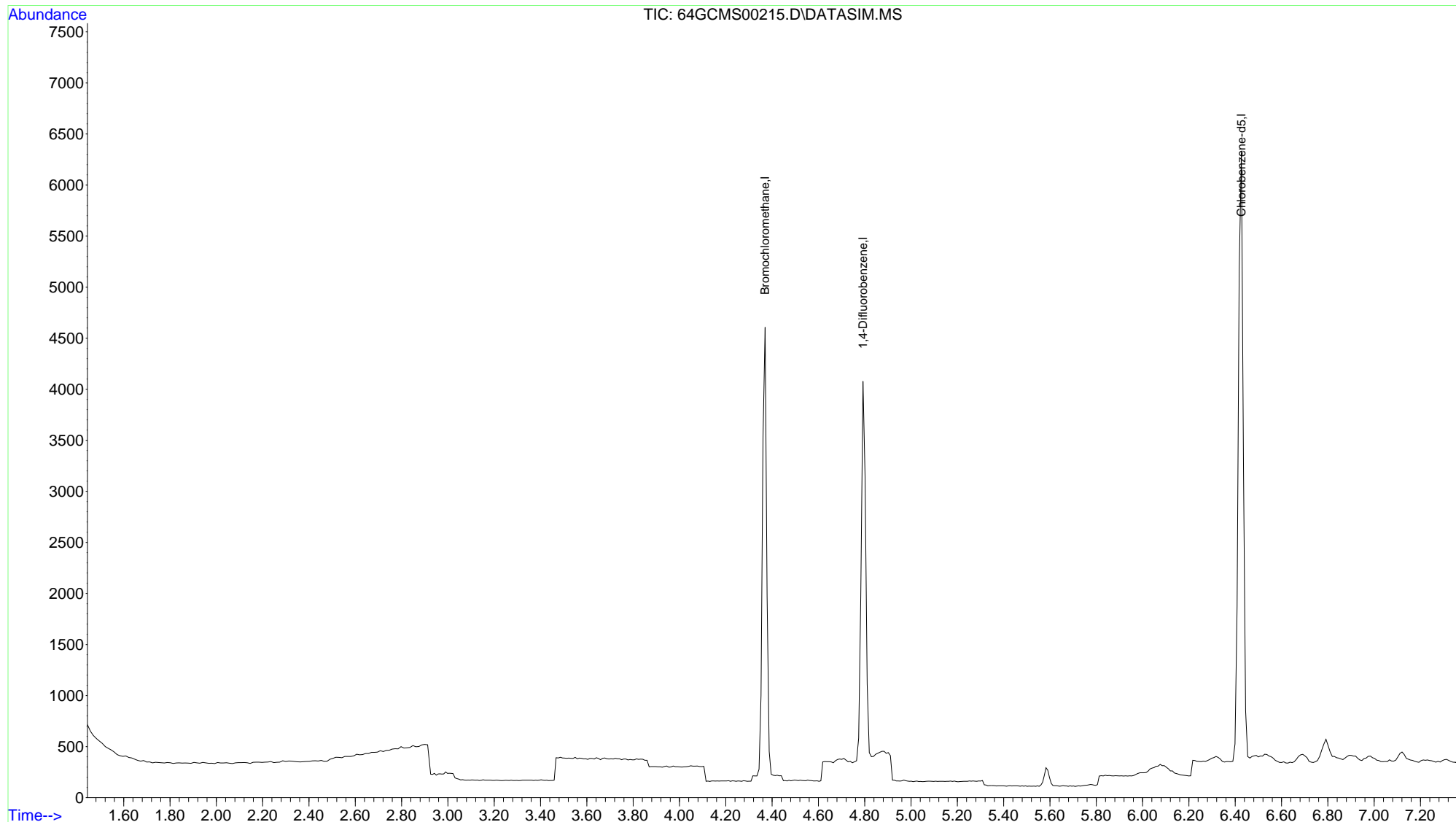
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2074	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3524	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	4778	10.00	ppbv	0.00

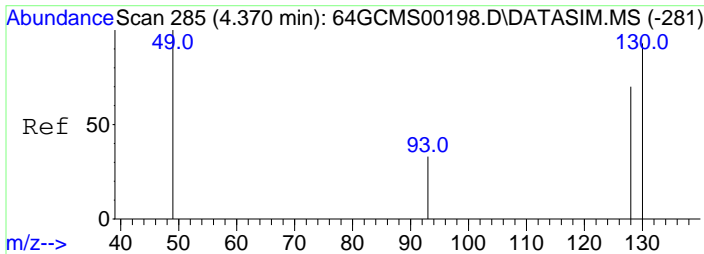
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

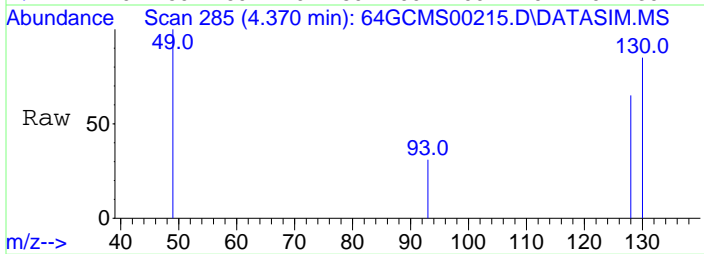
Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00215.D
 Acq On : 4 May 2016 3:51 pm
 Operator : dlm
 Sample : 51065 \ Unit 8
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 16:01:05 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



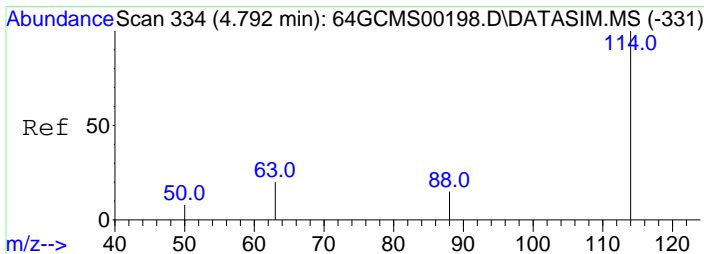
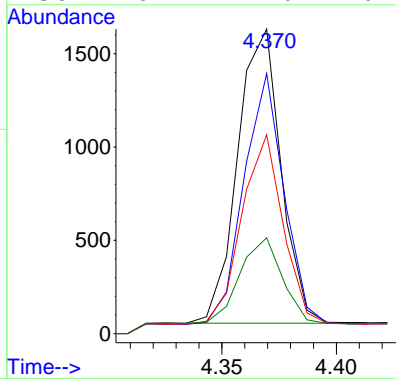
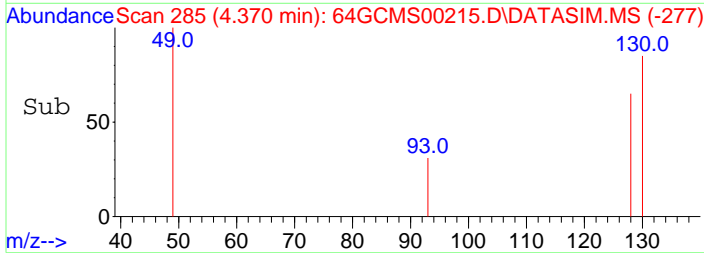


#1
 Bromochloromethane
 Concen: 10.00 ppbv
 RT: 4.370 min Scan# 285
 Delta R.T. -0.000 min
 Lab File: 64GCMS00215.D
 Acq: 4 May 2016 3:51 pm

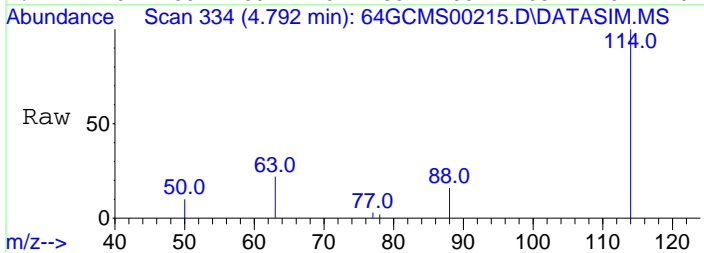


Tgt Ion: 49 Resp: 2074

Ion	Ratio	Lower	Upper
49	100		
130	79.1	46.3	69.5#
128	61.3	35.7	53.5#
93	28.4	17.6	26.4#

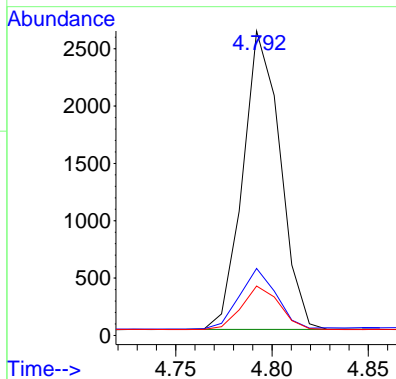
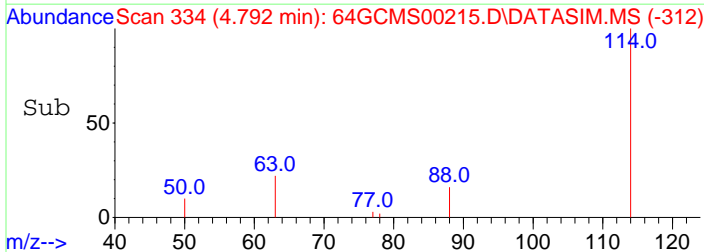


#9
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 4.792 min Scan# 334
 Delta R.T. -0.000 min
 Lab File: 64GCMS00215.D
 Acq: 4 May 2016 3:51 pm

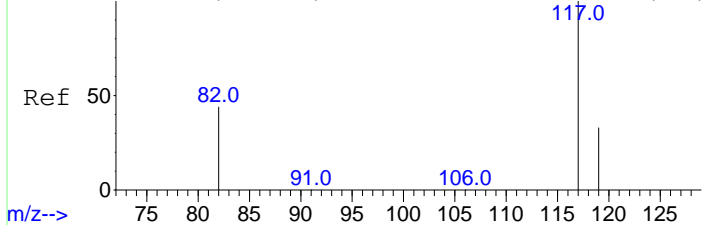


Tgt Ion: 114 Resp: 3524

Ion	Ratio	Lower	Upper
114	100		
63	20.0	19.2	28.8
88	14.6	13.7	20.5



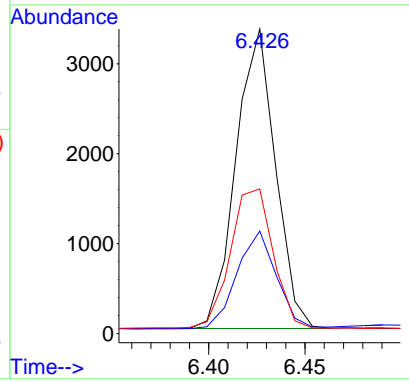
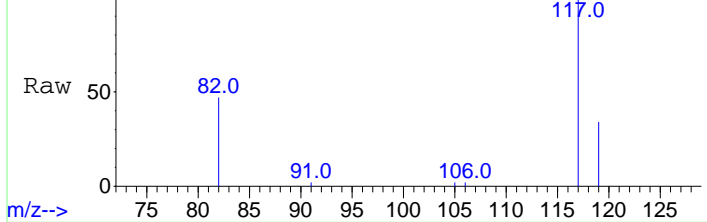
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



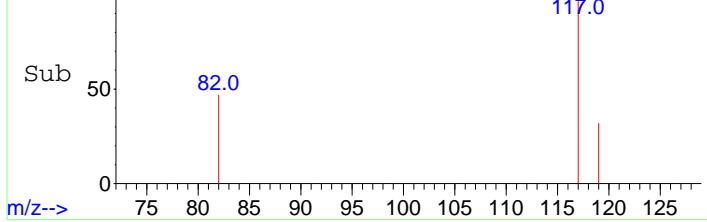
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00215.D
 Acq: 4 May 2016 3:51 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.4	25.8	38.6
82	50.0	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00215.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00215.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00216.D
Acq On : 4 May 2016 5:16 pm
Operator : dlm
Sample : 51066 \ Unit 19
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 17:26:10 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration

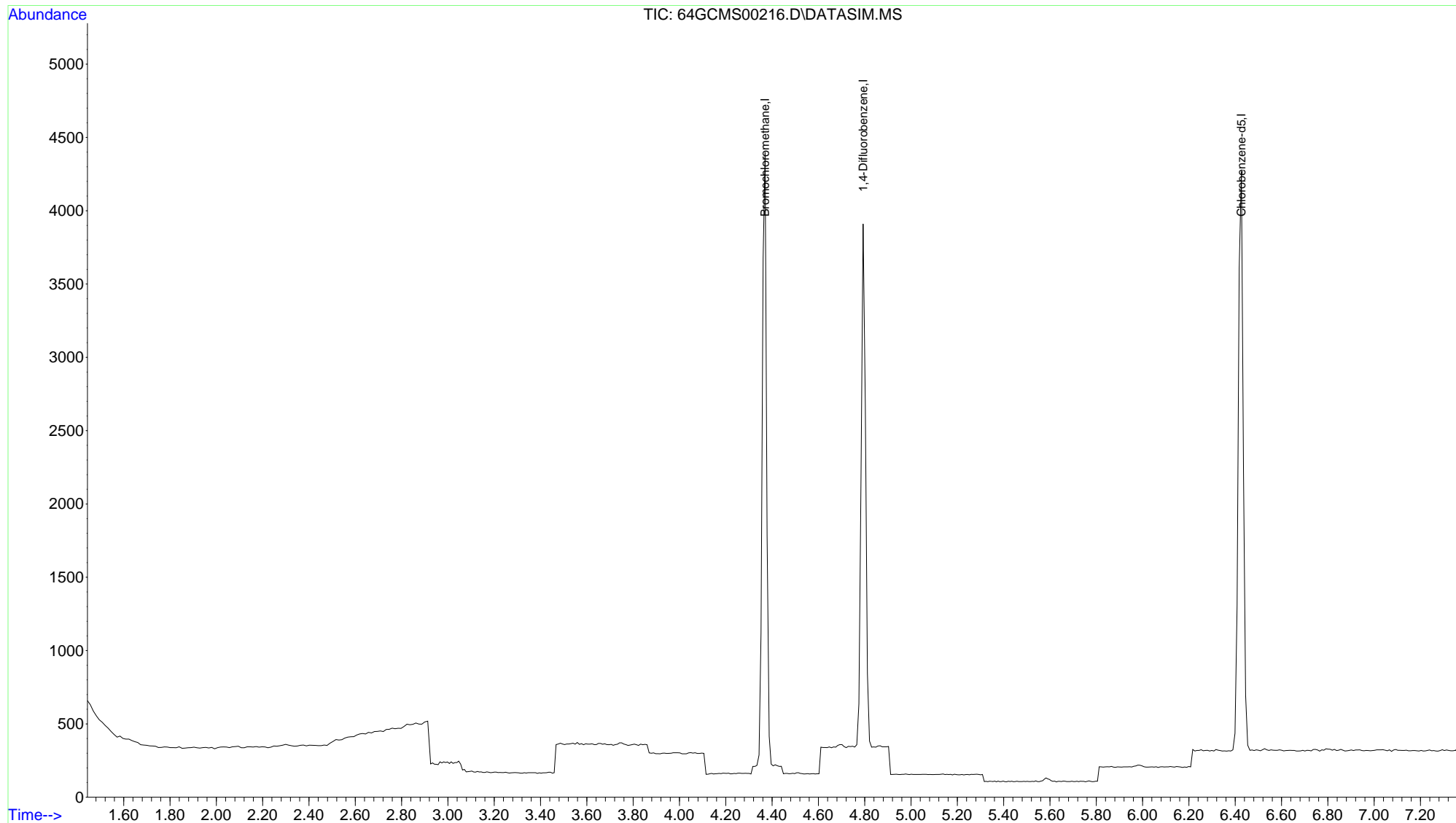
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	2042	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.793	114	3310	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.427	117	3169	10.00	ppbv	0.00

Target Compounds	Qvalue
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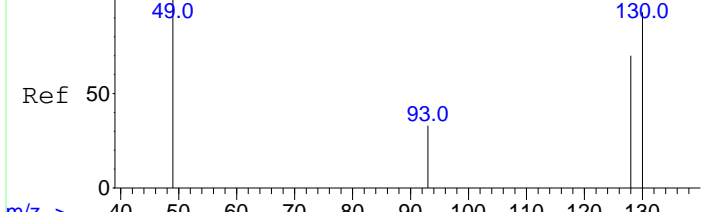
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00216.D
Acq On : 4 May 2016 5:16 pm
Operator : dlm
Sample : 51066 \ Unit 19
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 17:26:10 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration

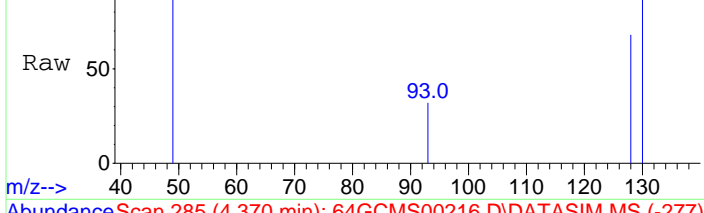


Abundance Scan 285 (4.370 min): 64GCMS00198.D\DATASIM.MS (-281)



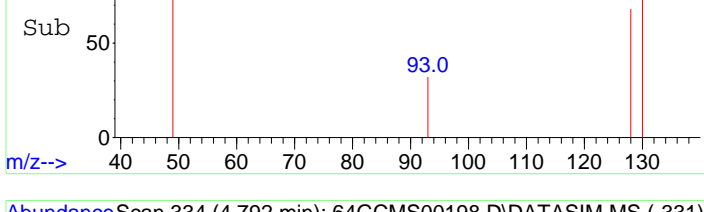
m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00216.D\DATASIM.MS



m/z-->

Abundance Scan 285 (4.370 min): 64GCMS00216.D\DATASIM.MS (-277)

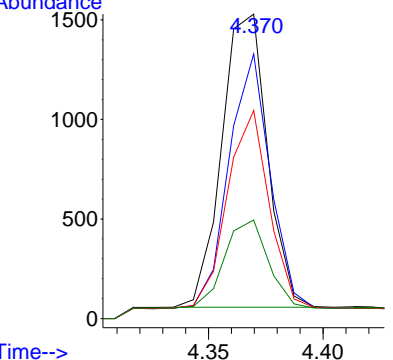


m/z-->

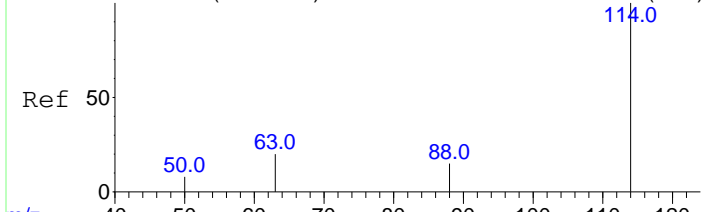
#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00216.D
Acq: 4 May 2016 5:16 pm

Tgt Ion: 49 Resp: 2042

Ion	Ratio	Lower	Upper
49	100		
130	78.1	46.3	69.5#
128	61.5	35.7	53.5#
93	29.0	17.6	26.4#

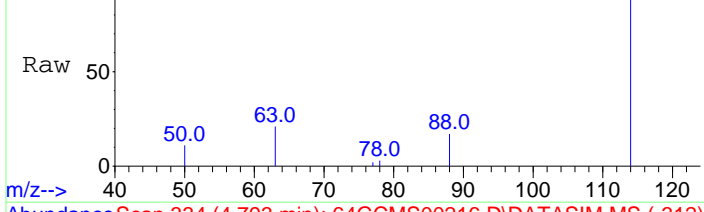


Abundance Scan 334 (4.792 min): 64GCMS00198.D\DATASIM.MS (-331)



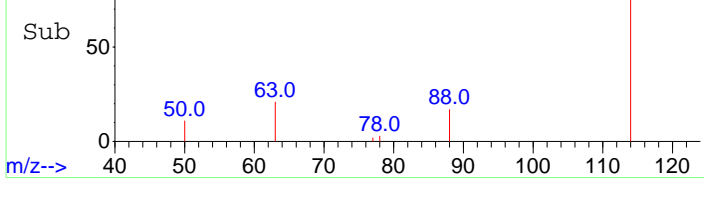
m/z-->

Abundance Scan 334 (4.793 min): 64GCMS00216.D\DATASIM.MS



m/z-->

Abundance Scan 334 (4.793 min): 64GCMS00216.D\DATASIM.MS (-312)

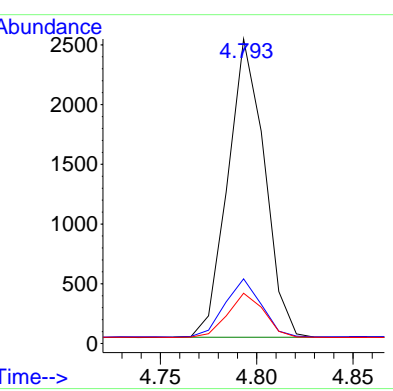


m/z-->

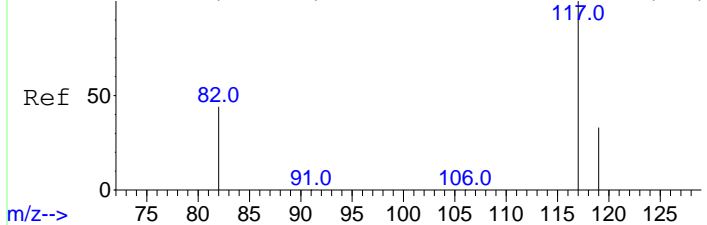
#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.793 min Scan# 334
Delta R.T. 0.001 min
Lab File: 64GCMS00216.D
Acq: 4 May 2016 5:16 pm

Tgt Ion: 114 Resp: 3310

Ion	Ratio	Lower	Upper
114	100		
63	19.5	19.2	28.8
88	14.8	13.7	20.5



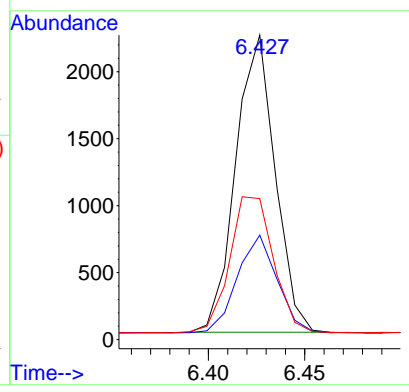
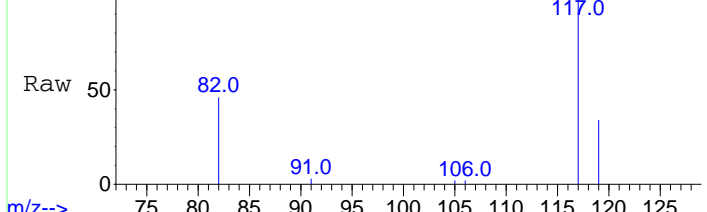
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



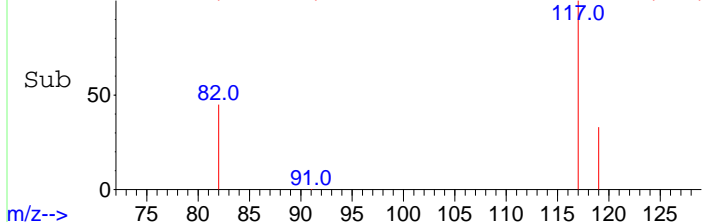
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.427 min Scan# 533
 Delta R.T. 0.000 min
 Lab File: 64GCMS00216.D
 Acq: 4 May 2016 5:16 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	33.1	25.8	38.6
82	50.7	45.6	68.4

Abundance Scan 533 (6.427 min): 64GCMS00216.D\DATASIM.MS



Abundance Scan 533 (6.427 min): 64GCMS00216.D\DATASIM.MS (-511)



Data Path : D:\msdchem\1\data\20160504\
Data File : 64GCMS00217.D
Acq On : 4 May 2016 6:06 pm
Operator : dlm
Sample : 51067 \ Unit 16
Misc : 5 mL \ 4 May 2016
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 18:22:14 2016
Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
QLast Update : Wed May 04 07:23:34 2016
Response via : Initial Calibration

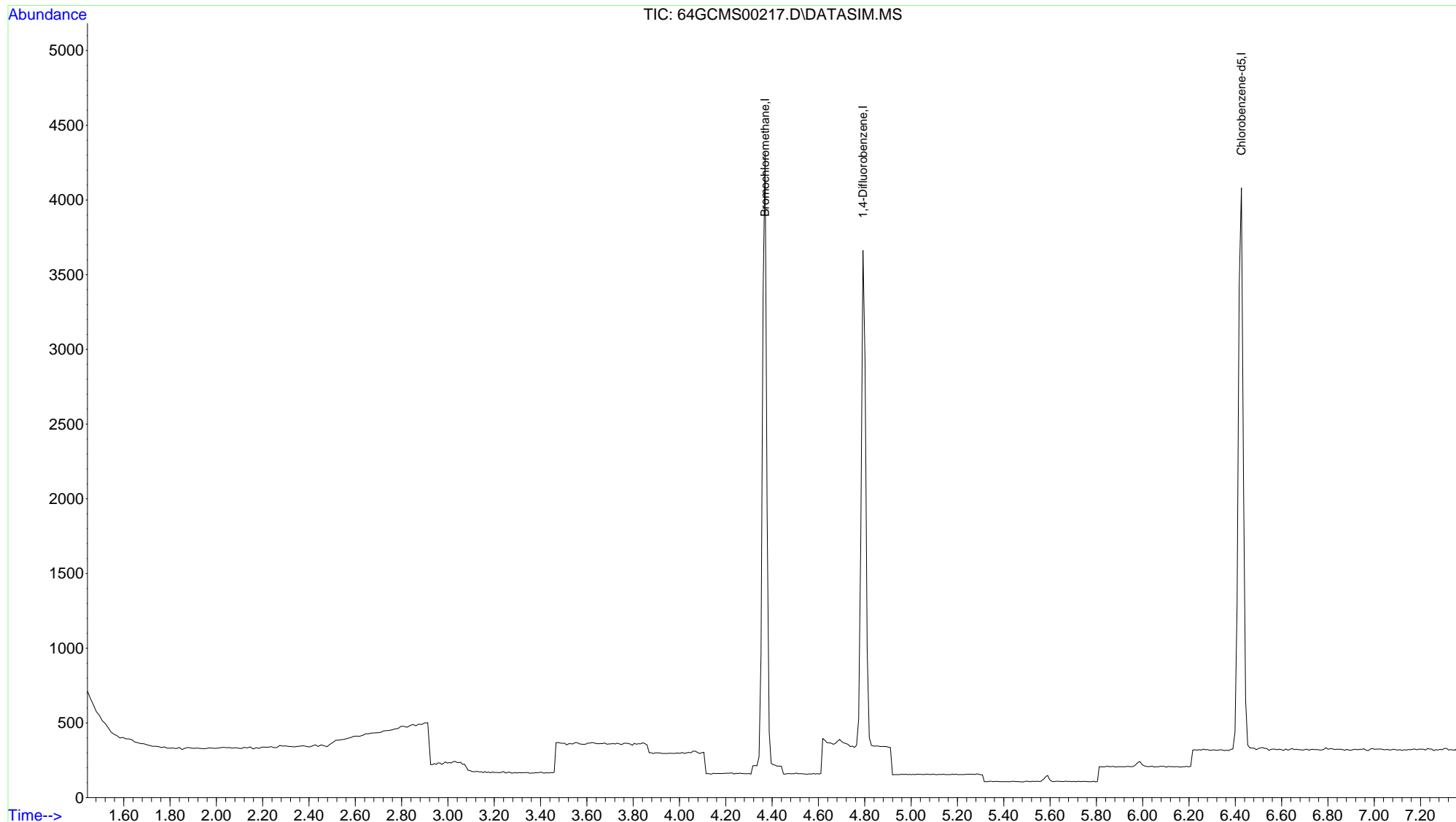
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.370	49	1978	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.792	114	3102	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.426	117	3043	10.00	ppbv	0.00

Target Compounds	Qvalue
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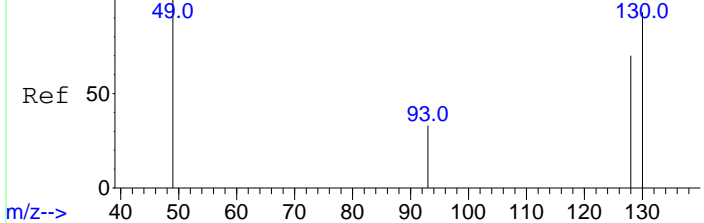
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\data\20160504\
 Data File : 64GCMS00217.D
 Acq On : 4 May 2016 6:06 pm
 Operator : dlm
 Sample : 51067 \ Unit 16
 Misc : 5 mL \ 4 May 2016
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 04 18:22:14 2016
 Quant Method : C:\msdchem\1\methods\LOOP2016_0501.M
 Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless Inj
 QLast Update : Wed May 04 07:23:34 2016
 Response via : Initial Calibration



Abundance Scan 285 (4.370 min): 64GCMS00198.D\DATASIM.MS (-281)

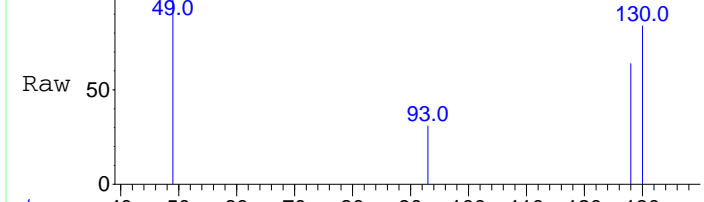


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.370 min Scan# 285
Delta R.T. -0.000 min
Lab File: 64GCMS00217.D
Acq: 4 May 2016 6:06 pm

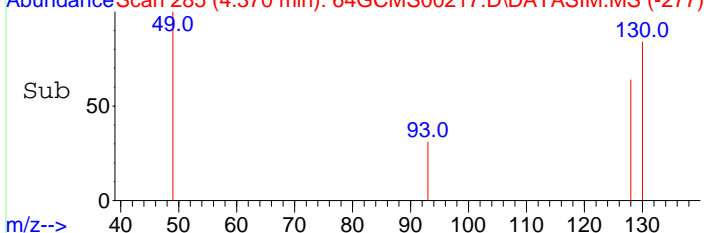
Tgt Ion: 49 Resp: 1978

Ion	Ratio	Lower	Upper
49	100		
130	78.5	46.3	69.5#
128	60.7	35.7	53.5#
93	28.8	17.6	26.4#

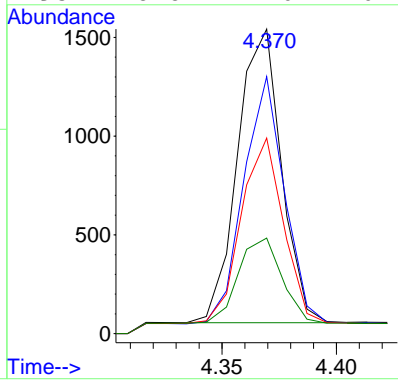
m/z-->



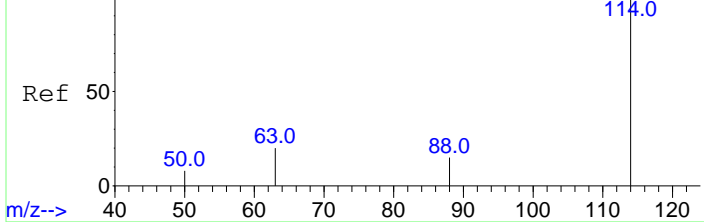
m/z-->



m/z-->



Abundance Scan 334 (4.792 min): 64GCMS00198.D\DATASIM.MS (-331)

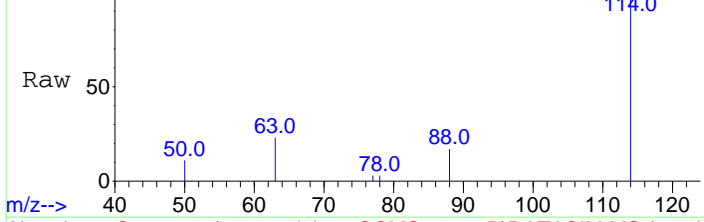


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.792 min Scan# 334
Delta R.T. -0.000 min
Lab File: 64GCMS00217.D
Acq: 4 May 2016 6:06 pm

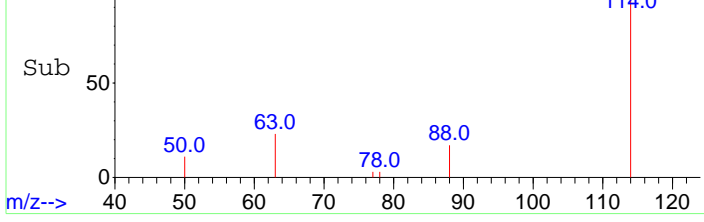
Tgt Ion: 114 Resp: 3102

Ion	Ratio	Lower	Upper
114	100		
63	20.5	19.2	28.8
88	15.2	13.7	20.5

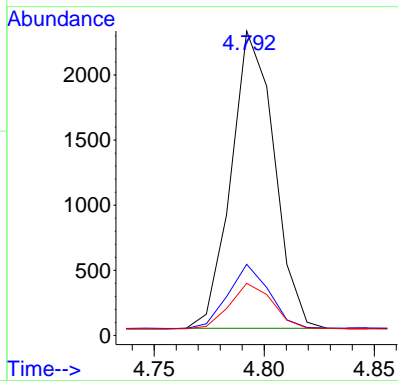
Abundance Scan 334 (4.792 min): 64GCMS00217.D\DATASIM.MS



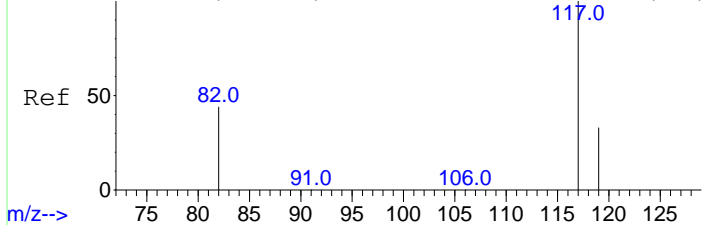
Abundance Scan 334 (4.792 min): 64GCMS00217.D\DATASIM.MS (-312)



m/z-->



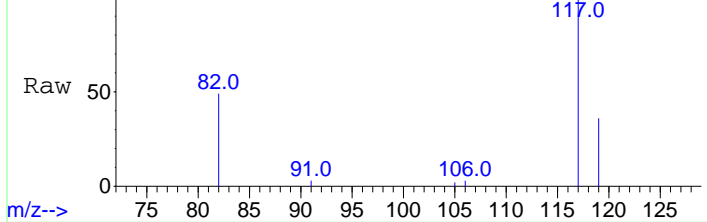
Abundance Scan 533 (6.427 min): 64GCMS00198.D\DATASIM.MS (-528)



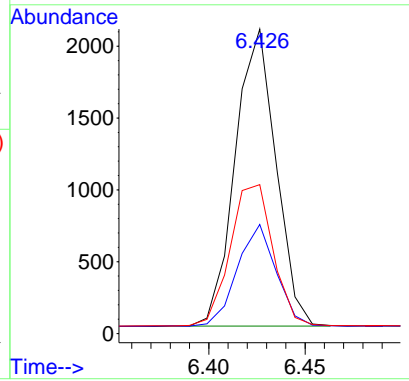
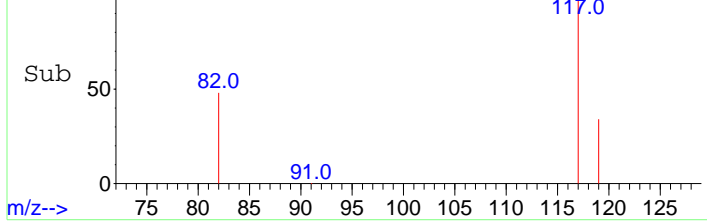
#12
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 6.426 min Scan# 533
 Delta R.T. -0.000 min
 Lab File: 64GCMS00217.D
 Acq: 4 May 2016 6:06 pm

Tgt Ion	Resp	Lower	Upper
117	100		
119	32.5	25.8	38.6
82	50.1	45.6	68.4

Abundance Scan 533 (6.426 min): 64GCMS00217.D\DATASIM.MS



Abundance Scan 533 (6.426 min): 64GCMS00217.D\DATASIM.MS (-511)



APPENDIX D

Final Analytical TAGA Report

**Grenada Manufacturing
(a.k.a. Rockwell International Wheel and Trim)**

August 2016

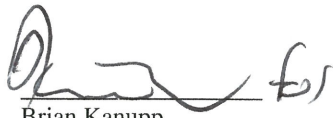
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FINAL ANALYTICAL TAGA REPORT
GRENADA MANUFACTURING SITE
(a.k.a. Rockwell International Wheel and Trim)
GRENADA, MISSISSIPPI
August 2016

U.S. EPA Work Assignment No.: SERAS-293
LOCKHEED MARTIN Work Order No.: SER00293
U.S. EPA Contract No.: EP-W-09-031

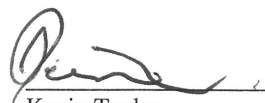
Submitted to
David B. Mickunas
U.S. EPA/ERT

Prepared by:
Lockheed Martin/SERAS


Brian Kanupp
SERAS Task Leader

8/5/16
Date

Analysis by:
Brian Kanupp


Kevin Taylor
SERAS Program Manager

8/5/16
Date

Prepared by:
Brian Kanupp

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2016 at 11:19:28

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- 18f TAGA Target Compound Summary in ppbv for Unit 8 Survey, File: 64MSMS00081 Acquired on 04 May 2016 at 15:04:56
- 18g Unit 8 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 18h Unit 8 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes
- 18i Unit 8 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride
- 18j TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 8 Survey, File: 64MSMS00081 Acquired on 04 May 2016 at 15:04:56
- 19a Mobile Monitoring Two Path, 64MSMS00084
- 19b TAGA File Event Summary, File: 64MSMS00084 Acquired on 04 May 2016 at 15:55:56, Title: Mobile Monitoring Two
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- 19d Mobile Monitoring Two in ppbv for Benzene, Toluene, and Xylenes
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- 19f Mobile Monitoring Two in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene
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- 20a Unit 19 Survey Floor Plan, 64MSMS00085
- 20b TAGA File Event Summary, File: 64MSMS00085 Acquired on 04 May 2016 at 16:25:45, Title: Unit 19 Survey
- 20c Unit 19 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 20d Unit 19 Survey in ppbv for Benzene, Toluene, and Xylenes
- 20e Unit 19 Survey in ppbv for Vinyl Chloride
- 20f TAGA Target Compound Summary in ppbv for Unit 19 Survey, File: 64MSMS00085 Acquired on 04 May 2016 at 16:25:45

- 20g Unit 19 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 20h Unit 19 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes
- 20i Unit 19 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride
- 20j TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 19 Survey, File: 64MSMS00085 Acquired on 04 May 2016 at 16:25:45
- 21a Unit 16 Survey Floor Plan, 64MSMS00086
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- 21c Unit 16 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 21d Unit 16 Survey in ppbv for Benzene, Toluene, and Xylenes
- 21e Unit 16 Survey in ppbv for Vinyl Chloride
- 21f TAGA Target Compound Summary in ppbv for Unit 16 Survey, File: 64MSMS00086 Acquired on 04 May 2016 at 17:25:15
- 21g Unit 16 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 21h Unit 16 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes
- 21i Unit 16 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride
- 21j TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 16 Survey, File: 64MSMS00086 Acquired on 04 May 2016 at 17:25:15
- 22a Mobile Monitoring Three Path, 64MSMS00092
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- 22e Mobile Monitoring Three in ppbv for Benzene, Toluene, and Xylenes
- 22f Mobile Monitoring Three in ppbv for Vinyl Chloride
- 22g Mobile Monitoring Three in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 22h Mobile Monitoring Three in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes
- 22i Mobile Monitoring Three in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride
- 23a Equalization Basin Monitoring on Facility Area Map, 64MSMS00094
- 23b TAGA File Event Summary, File: 64MSMS00094 Acquired on 05 May 2016 at 12:33:02, Title: Equalization

Basin Monitoring on Facility

- 23c Equalization Basin Monitoring on Facility in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 23d Equalization Basin Monitoring on Facility in ppbv for Benzene, Toluene, and Xylenes
- 23e Equalization Basin Monitoring on Facility in ppbv for Vinyl Chloride
- 23f TAGA Target Compound Summary in ppbv for Equalization Basin Monitoring on Facility, File: 64MSMS00094 Acquired on 05 May 2016 at 12:33:02
- 23g Equalization Basin Monitoring on Facility in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 23h Equalization Basin Monitoring on Facility in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes
- 23i Equalization Basin Monitoring on Facility in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride
- 23j TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Equalization Basin on Facility Investigation, File: 64MSMS00094 Acquired on 05 May 2016 at 12:33:02
- 24a Unit 23 Survey Two Floor Plan, 64MSMS00095
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- 24c Unit 23 Survey Two in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 24d Unit 23 Survey Two in ppbv for Benzene, Toluene, and Xylenes
- 24e Unit 23 Survey Two in ppbv for Vinyl Chloride
- 24f TAGA Target Compound Summary in ppbv for Unit 23 Survey Two, File: 64MSMS00095 Acquired on 05 May 2016 at 13:34:46
- 24g Unit 23 Survey Two in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 24h Unit 23 Survey Two in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes
- 24i Unit 23 Survey Two in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride
- 24j TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 23 Survey Two, File: 64MSMS00095 Acquired on 05 May 2016 at 13:34:46
- 25a Unit 23 Investigation Two Floor Plan, 64MSMS00096
- 25b TAGA File Event Summary, File: 64MSMS00096 Acquired on 05 May 2016 at 14:00:59, Title: Unit 23 Investigation Two
- 25c Unit 23 Investigation Two in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 25d Unit 23 Investigation Two in ppbv for Benzene, Toluene, and Xylenes
- 25e Unit 23 Investigation Two in ppbv for Vinyl Chloride

- 25f TAGA Target Compound Summary in ppbv for Unit 23 Investigation Two, File: 64MSMS00096 Acquired on 05 May 2016 at 14:00:59
- 25g Unit 23 Investigation Two in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 25h Unit 23 Investigation Two in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes
- 25i Unit 23 Investigation Two in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride
- 25j TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 23 Investigation Two, File: 64MSMS00096 Acquired on 05 May 2016 at 14:00:59
- 26a West End of Railroad Ditch by Quarry Road Investigation Area Map, 64MSMS00097
- 26b TAGA File Event Summary, File: 64MSMS00097 Acquired on 05 May 2016 at 14:43:41, Title: West End of Railroad Ditch by Quarry Road Investigation
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- 26d West End of Railroad Ditch by Quarry Road Investigation in ppbv for Benzene, Toluene, and Xylenes
- 26e West End of Railroad Ditch by Quarry Road Investigation in ppbv for Vinyl Chloride
- 26f TAGA Target Compound Summary in ppbv for West End of Railroad Ditch by Quarry Road Investigation, File: 64MSMS00097 Acquired on 05 May 2016 at 14:43:41
- 26g West End of Railroad Ditch by Quarry Road Investigation in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 26h West End of Railroad Ditch by Quarry Road Investigation in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes
- 26i West End of Railroad Ditch by Quarry Road Investigation in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride
- 26j TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for West End of Railroad Ditch by Quarry Road Investigation, File: 64MSMS00097 Acquired on 05 May 2016 at 14:43:41
- 27a Ditch between Neighborhood and Quarry Road Investigation Area Map, 64MSMS00098
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- 27c Ditch between Neighborhood and Quarry Road Investigation in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 27d Ditch between Neighborhood and Quarry Road Investigation in ppbv for Benzene, Toluene, and Xylenes
- 27e Ditch between Neighborhood and Quarry Road Investigation in ppbv for Vinyl Chloride
- 27f TAGA Target Compound Summary in ppbv for Ditch between Neighborhood and Quarry Road Investigation, File: 64MSMS00098 Acquired on 05 May 2016 at 15:24:59
- 27g Ditch between Neighborhood and Quarry Road Investigation in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

- 27h Ditch between Neighborhood and Quarry Road Investigation in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes
- 27i Ditch between Neighborhood and Quarry Road Investigation in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride
- 27j TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Ditch between Neighborhood and Quarry Road Investigation, File: 64MSMS00098 Acquired on 05 May 2016 at 15:24:59
- 28a Outfall Ditch on North Side of Access Road Investigation Area Map, 64MSMS00099
- 28b TAGA File Event Summary, File: 64MSMS00099 Acquired on 05 May 2016 at 16:10:42, Title: Outfall Ditch on North Side of Access Road Investigation
- 28c Outfall Ditch on North Side of Access Road Investigation in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 28d Outfall Ditch on North Side of Access Road Investigation in ppbv for Benzene, Toluene, and Xylenes
- 28e Outfall Ditch on North Side of Access Road Investigation in ppbv for Vinyl Chloride
- 28f TAGA Target Compound Summary in ppbv for Outfall Ditch on North Side of Access Road Investigation, File: 64MSMS00099 Acquired on 05 May 2016 at 16:10:42
- 28g Outfall Ditch on North Side of Access Road Investigation in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene
- 28h Outfall Ditch on North Side of Access Road Investigation in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes
- 28i Outfall Ditch on North Side of Access Road Investigation in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride
- 28j TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Outfall Ditch on North Side of Access Road Investigation, File: 64MSMS00099 Acquired on 05 May 2016 at 16:10:42

1.0 INTRODUCTION

The Environmental Protection Agency (EPA)/Environmental Response Team (ERT) issued Work Assignment (WA) Number SERAS-293, Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim) (Site) in Grenada, Mississippi (MS), to Lockheed Martin under the Scientific, Engineering, Response, and Analytical Services (SERAS) contract. As an element of this WA, SERAS personnel were to conduct target compound monitoring using the ECA Trace Atmospheric Gas Analyzer (TAGA) IIe, to assist EPA Region 4 in its investigation of residential indoor air quality.

The TAGA air monitoring events conducted on 02 May 2016 to 05 May 2016 were screening in nature. Air monitoring for tetrachloroethene (PCE), trichloroethene (TCE), total dichloroethene (DCE), benzene, toluene, total xylenes, and vinyl chloride (VC) was performed in accordance with the SERAS Standard Operating Procedure (SOP) # 1711, *Trace Atmospheric Gas Analyzer (TAGA) IIe Operation*. Real-time monitoring for the target compounds was performed using a selected ion technique.

2.0 METHODOLOGY

2.1 Mass Spectrometer/Mass Spectrometer General Theory

The ECA TAGA IIe is based upon the Perkin-Elmer API 365 mass spectrometer/mass spectrometer (MS/MS) and is a direct air-monitoring instrument capable of detecting, in real time, trace levels of many organic compounds in ambient air. The technique of triple quadrupole MS/MS is used to differentiate and quantitate compounds.

The initial step in the MS/MS process involves simultaneous chemical ionization of the compounds present in a sample of ambient air. The ionization produces both positive and negative ions by donating or removing one or more electrons. The chemical ionization is a "soft" ionization technique, which allows ions to be formed with little or no structural fragmentation. These ions are called parent ions. The parent ions with different mass-to-charge (m/z) ratios are separated by the first quadrupole (the first MS of the MS/MS system). The quadrupole scans selected m/z ratios allowing only the parent ions with these ratios to pass through the quadrupole. Parent ions with m/z ratios different from those selected are discriminated electronically and fail to pass through the quadrupole.

The parent ions selected in the first quadrupole are accelerated through a collision cell containing uncharged nitrogen molecules in the second quadrupole. A portion of the parent ions entering the second quadrupole fragments as they collide with the nitrogen molecules. These fragment ions are called daughter ions. This process, in the second quadrupole, is called collision induced dissociation. The daughter ions are separated according to their m/z ratios by the third quadrupole (the second MS of the MS/MS system). The quadrupole scans selected m/z ratios, allowing only the daughter ions with these ratios to pass through the quadrupole. Daughter ions with m/z ratios different from those selected are discriminated electronically and fail to pass through the quadrupole. Daughter ions with the selected m/z ratios are then counted by an electron multiplier. The resulting signals are measured in ion counts per second (icps) for each parent/daughter ion pair selected. The intensity of the icps for each parent/daughter ion pair is directly proportional to the ambient air concentration of the organic compound that produced the ion pair. All of the ions discussed in this report have a single charge. The m/z ratios of all of the ions discussed are equal to the ion masses in atomic mass units (amu). Therefore, the terms parent and daughter masses are synonymous with parent and daughter ion m/z ratios.

2.2 TAGA Procedure

The TAGA was used to analyze indoor air and outdoor ambient air during mobile and stationary monitoring events. Indoor air monitoring and stationary outdoor ambient air monitoring utilized a 300-foot corrugated Teflon® sampling hose. The proximal end was attached to the TAGA source

inlet, while the distal end was taken inside a unit. For mobile monitoring, one end of a 4-foot corrugated Teflon® sampling hose was attached to the TAGA source inlet, while the other was attached to a glass transfer tube passing through the wall of the vehicle during the monitoring event. In both cases, air was continuously drawn through the hose at a set flow rate and transported to the TAGA source during the monitoring event.

2.2.1 TAGA Mass Calibration

At the beginning of the monitoring period, a gas mixture containing benzene, toluene, xylenes, tetrachloroethene, trichloroethene, 1,1-dichloroethene, and vinyl chloride was introduced by a mass flow controller (MFC) into the sample air flow (SAF). The tuning parameters for the first quadrupole at 30, 78, 106, 130, and 166 amu, and the third quadrupole at 30, 78, 105, 129, and 166 amu were optimized for sensitivity and mass assignment. The peak widths were limited between 0.55 amu and 0.85 amu. The mass assignments were set to the correct values within 0.15 amu.

2.2.2 TAGA Response Factor Measurements

The TAGA was calibrated for the target compounds at the beginning, middle, and end of the day. The calibration system consisted of a regulated gas cylinder containing a gas standard mixture of the target compounds connected to an in-line MFC. The MFC was calibrated with a National Institute of Standards and Technology (NIST) traceable flow rate meter. The gas standard certification is presented in Appendix A. The gas standard containing a known mixture of target compounds, certified by the supplier, was regulated at preset flow rates, and diluted with ambient air. The dilution of the gas standard resulted in known analyte concentrations. The calibration consisted of a zero point and five known concentrations obtained by setting the MFC to 0, 10, 20, 40, 80, and 90 milliliters per minute (mL/min) with the SAF at 1,500 milliliters per second (mL/sec).

The approximate concentration range of standards introduced into the TAGA was between 1 and 25 parts per billion by volume (ppbv). Utilizing the analyte concentrations, gas flow rates, and air sampling flow rates, the response factors (RFs), in units of ion counts per second per part per billion by volume (icps/ppbv), were calculated for each ion pair by using a least-square-fit algorithm to calculate the slope of its curve. The coefficient of correlation was checked for each ion pair's RF to ensure that it was greater than 0.90. The RF and intermediate response factor (IRF) were calculated between pairs of calibrations. Both the RF and the IRF were used to quantify target compounds in ambient air.

2.2.3 Transport Efficiency

The transport efficiency and residence time for the target compounds through the 300-foot length of corrugated Teflon® sampling hose was determined prior to and at the conclusion of indoor air monitoring activities each day. The transport efficiency was determined by introducing a known concentration of the target compounds into the proximal end and then into the distal end of the sampling hose. The signal intensity of each ion pair for each compound was measured in icps and the percent (%) transport efficiency calculated using the equation below:

$$\% \text{ transport efficiency} = \frac{\text{signal intensity at the distal end of the hose}}{\text{signal intensity at the proximal end of the hose}} \times 100$$

A transport efficiency of 85% is considered acceptable and results are summarized in Table 1.

The residence time is the interval, in seconds; it takes the air sample to travel the length of the sampling hose. The residence time, which reflects a time difference between the sampling and the instrument response, is incorporated in the offset. The offset, which is the total number of sequences acquired during the residence time, is applied to the monitoring files (Figures 1b to 12b, 14b to 18b, 20b, 21b and 23b to 28b, Figures 1c to 12c, 14c to 18c, 20c, 21c, and 23c to 28c, Figures 1d to 12d, 14d to 18d, 20d, 21d, and 23d to 28d, Figures 1e to 12e, 14e to 18e, 20e, 21e, and 23e to 28e, Figures 1f to 12f, 14f to 18f, 20f, 21f, and 23f to 28f, Figures 1g to 12g, 14g to 18g, 20g, 21g, and 23g to 28g, Figures 1h to 12h, 14h to 18h, 20h, 21h, and 23h to 28h, Figures 1i to 12i, 14i to 18i, 20i, 21i, and 23i to 28i, Figures 1j to 12j, 14j to 18j, 20j, 21j, and 23j to 28j). Therefore, the observations and instrument responses are temporally coordinated.

2.2.4 TAGA Air Monitoring

TAGA monitoring was performed by continuously drawing air through the Teflon[®] hose at a flow-rate of approximately 1,500 mL/sec. The air was then passed through a glass splitter where the pressure gradient between the mass spectrometer core and the atmosphere causes a sample flow of approximately 10 mL/min into the ionization source through a heated transfer line. The flow into the TAGA source was controlled so that the ionization source pressure was maintained at an optimum value of approximately 1.9 torr. The remaining airflow was drawn through the air pump and vented from the TAGA bus.

Monitoring was performed in the parent/daughter ion-monitoring mode. As monitoring proceeded, the operator pressed letter keys (flags), alphabetically on a computer keyboard, to denote events or locations during the monitoring event. This information was also recorded on an event log sheet. The intensity of each parent/daughter ion pair monitored by the TAGA was recorded in a permanent file on the computer's hard drive. One set of recorded measurements of all the ion pairs is called a sequence.

At the beginning of each unit survey or investigation, a one-minute pre-entry ambient data segment was collected. At the operator's signal, the sampler then entered the unit while holding the distal end of the hose at breathing height. The sampler proceeded to each room in the unit where one-minute data segments were collected. After the rooms in the unit were monitored, or at the conclusion of the investigation, a one-minute post-exit ambient data segment was collected. Upon completion of the one-minute post-exit ambient data segment, the instrumentation was challenged with the calibration standard, which was introduced at 30 mL/min (approximately 6.7 ppbv), to verify that the system was functioning properly.

2.3 Global Positioning System (GPS) and Tracking

The mobile laboratory is equipped with a Trimble Pro 6T GPS receiver that streams geographical coordinates to a personal computer. The coordinates represent position of the TAGA mobile laboratory in real-time. The instrument data is synchronized with the GPS coordinates, so the monitoring data can be directly associated with the position of the mobile laboratory as indicated by the GPS system at any time during any monitoring period. The synchronized information and mobile monitoring data are recorded into the data repository (database) and uploaded to the USEPA/ERT VIPER data management system in real-time to be archived on a USEPA/ERT server.

2.4 Meteorological Monitoring

United States Department of Commerce, National Oceanic and Atmospheric Administration, National Climatic Data Center provided the meteorological data for 01 May 2016 to 06 May 2016. Data were collected at the Greenwood-Leflore Regional Airport. The airport is located approximately 27 miles southeast of the Site. Meteorological data, such as wind speed, wind

direction, and rainfall, are summarized in Table 2 for the periods during which monitoring occurred. The compiled meteorological data are presented in Appendix B. The reported data for rainfall is an average of the data recorded during the hour preceding the time recorded in the table. The reported meteorological data for wind speed and direction represent a five-minute average collected prior to the time recorded in the table. Because of the distance of the meteorological monitoring location from the study location and the short averaging period, care should be exercised in relating meteorological conditions existing at the Site.

3.0 TAGA AIR MONITORING RESULTS

The TAGA was used to survey and investigate indoor air in residential units at the Site, to conduct potential outdoor source investigations, and to conduct mobile monitoring at and around the Site.

3.1 Unit Surveys

Figures 1a to 9a, 11a, 12a, 14a to 18a, 20a, 21a, 24a and 25a present the approximate floor plans of the units. The monitoring locations marked by letters are the "flags" that the TAGA operator placed into the file. These "flags" mark events and are carried through the rest of the data presentation.

3.2 Potential Outdoor Source Investigations

Figures 10a, 23a, and 26a to 28a present area maps of the outdoor locations investigated. The maps are marked by letters. These letters are the "flags" that the TAGA operator placed into the file. These "flags" mark events and are carried through the rest of the data presentation.

3.3 Mobile Monitoring Paths

Figures 13a, 19a, 22a, and 22b present the monitoring paths taken by the TAGA mobile laboratory as it traveled in the vicinity of the Site. The maps, representing the monitoring paths, are marked by letters. These letters are the "flags" that the TAGA operator placed into the file. These "flags" mark events and are carried through the rest of the data presentation.

3.4 TAGA File Event Summaries

Figures 1b to 21b, Figure 22c, and Figures 23b to 28b present the TAGA file event summaries. These are the observations made during the file acquisition by the TAGA operator, along with the times from the TAGA file and the letter "flags" used to mark the data, which are recorded by the TAGA computer.

3.5 Graphical Presentations

Figures 1c to 21c, 23c to 28c, Figures 1d to 28d, Figures 1e to 28e, Figure 22f, Figures 1g to 28g, Figures 1h to 28h, Figures 1i to 12i, 14i to 18i, and 20i to 28i are the graphical representations of the TAGA files. For Figures 1c to 21c, 23c to 28c, Figures 1d to 28d, Figures 1e to 28e and Figure 22f, a graph of each target compound concentration is presented with ppbv plotted on the vertical axis, and time into the acquisition, in minutes, on the horizontal axis. For Figures 1g to 28g, Figures 1h to 28h, Figures 1i to 12i, 14i to 18i, and 20i to 28i, a graph of each target compound concentration is presented with micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) plotted on the vertical axis, and time into the acquisition, in minutes, on the horizontal axis. The target compound concentration was calculated by averaging the concentrations obtained from the ion pairs that were monitored for each target compound. There are two horizontal lines on each graph. The lower line is set at the detection limit (DL) for the compound. The higher line is set at the concentration equal to the quantitation limit (QL) for the target compound. When high concentrations are represented, the lower DL line may not be readily discerned. Transient, momentary spikes above the QL line are occasionally observed. These spikes, electronic in nature, do not affect average concentrations. They may be distinguished

from elevated concentrations because the spikes are only present for one sequence and are often only present for one ion pair of the monitored compound.

3.6 TAGA Target Compound Summaries

Figures 1f to 12f, 14f to 18f, 20f, 21f, and 23f to 28f, in ppbv, and Figures 1j to 12j, 14j to 18j, 20j, 21j, and 23j to 28j, in $\mu\text{g}/\text{m}^3$, present the TAGA target compound summaries. These figures contain the concentrations of the target compounds averaged over time, at the various locations logged into the TAGA file event summaries.

4.0 DISCUSSION OF RESULTS

The TAGA target compound summaries are represented in Figures 1f to 12f, 14f to 18f, 20f, 21f, and 23f to 28f, Figures 1j to 12j, 14j to 18j, 20j, 21j, and 23j to 28j. During each unit survey, a one-minute average was measured in each room, or at various locations within a room. During each unit investigation, the distal end of the TAGA hose is moved slowly through selected portions of the unit, in an attempt to locate sources of contamination. For unit surveys and investigations only the highest average concentrations above the QL are listed below. During each potential outdoor source investigation, an average was measured for the monitoring duration at each location. For potential outdoor source investigations the highest average concentrations, and the highest instantaneous maximum concentrations, above the QL are listed below. During each mobile monitoring period, the TAGA mobile laboratory monitored continuously while moving along the monitoring paths. For mobile monitoring, only the highest instantaneous maximum concentrations above the QL are listed below.

Possible interferences for the trichloroethene ion pair 132/95 were observed for calibrations performed on 04 May 2016 and 05 May 2016 resulting in elevated detection limits. As a result, this ion pair was excluded from the calculation of response factors, detection limits, quantitation limits and transport efficiencies and the quantitation of analytical results for monitoring events performed on 04 May and 05 May 2016.

Vinyl chloride has been included as a compound of interest for these analyses however instrument conditions could not be optimized for its detection. Vinyl chloride was present in the standard used to challenge the instrument at the end of each monitoring event, but calculated DL and QL were above the 30 mL/min spike level of approximately 6.7 ppbv. Although all vinyl chloride results are below the QL for all monitoring events, they have been included for completeness.

4.1 Unit 10 Survey, 64MSMS00056

Unit 10 was surveyed on 03 May 2016 at 08:04:45 and is represented in Figures 1a through 1j. The average wind speed and direction at the airport for the five-minute period ending at 08:15 were 7 miles per hour (mph) from 30 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 3.2 ppbv ($12 \mu\text{g}/\text{m}^3$) in bedroom one between flags H and I. The highest average concentration of xylenes was detected at 4.7 ppbv ($21 \mu\text{g}/\text{m}^3$) in the bathroom between flags J and K.

4.2 Unit 14 Survey, 64MSMS00057

Unit 14 was surveyed on 03 May 2016 at 09:35:02 and is represented in Figures 2a through 2j. The average wind speed and direction at the airport for the five-minute period ending at 09:53 were 8 mph from 350 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene, xylenes and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 1.2 ppbv ($4.7 \mu\text{g}/\text{m}^3$) in bedroom one between flags N and O.

4.3 Unit 15 Survey, 64MSMS00058

Unit 15 was surveyed on 03 May 2016 at 10:24:31 and is represented in Figures 3a through 3j. The average wind speed and direction at the airport for the five-minute period ending at 09:53 were 8 mph from 350 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene, xylenes and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 0.96 ppbv ($3.6 \mu\text{g}/\text{m}^3$) in the bathroom between flags F and G.

4.4 Unit 7 Survey, 64MSMS00059

Unit 7 was surveyed on 03 May 2016 at 11:24:52 and is represented in Figures 4a through 4j. The average wind speed and direction at the airport for the five-minute period ending at 10:53 were 5 mph from variable directions. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 1.5 ppbv ($5.6 \mu\text{g}/\text{m}^3$) was detected at the sub-slab port between flags L and M. The highest average concentration of xylenes was detected at 0.57 ppbv ($2.5 \mu\text{g}/\text{m}^3$) at the sub-slab port between flags L and M.

4.5 Unit 9 Survey, 64MSMS00062

Unit 9 was surveyed on 03 May 2016 at 13:57:08 and is represented in Figures 5a through 5j. The average wind speed and direction at the airport for the five-minute period ending at 13:53 were 10 mph from 350 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of benzene was detected at 2.4 ppbv ($7.7 \mu\text{g}/\text{m}^3$) in the bathroom between flags H and I. The highest average concentration of toluene was detected at 4.6 ppbv ($17 \mu\text{g}/\text{m}^3$) in the bathroom between flags H and I. The highest average concentration of xylenes was detected at 2.5 ppbv ($11 \mu\text{g}/\text{m}^3$) in the bathroom between flags H and I.

4.6 Unit 12 Survey, 64MSMS00063

Unit 12 was surveyed on 03 May 2016 at 14:33:32 and is represented in Figures 6a through 6j. The average wind speed and direction at the airport for the five-minute period ending at 14:53 were 8 mph from 340 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene, xylenes and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 0.84 ppbv ($3.2 \mu\text{g}/\text{m}^3$) in bedroom three between flags T and U.

4.7 Unit 17 Survey, 64MSMS00064

Unit 17 was surveyed on 03 May 2016 at 15:25:13 and is represented in Figures 7a through 7j. The average wind speed and direction at the airport for the five-minute period ending at 15:53 were 7 mph from 350 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 3.6 ppbv ($14 \mu\text{g}/\text{m}^3$) in bathroom three between flags X and Y. The highest average concentration of xylenes was detected at 1.7 ppbv ($7.4 \mu\text{g}/\text{m}^3$) in bathroom three between flags X and Y.

4.8 Unit 20 Survey, 64MSMS00065

Unit 20 was surveyed on 03 May 2016 at 16:24:31 and is represented in Figures 8a through 8j. The average wind speed and direction at the airport for the five-minute period ending at 16:53 were 10

mph from 340 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene, xylenes and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 5.3 ppbv ($20 \mu\text{g}/\text{m}^3$) at the sub-slab port between flags N and O.

4.9 Unit 21 Survey, 64MSMS00066

Unit 21 was surveyed on 03 May 2016 at 17:27:15 and is represented in Figures 9a through 9j. The average wind speed and direction at the airport for the five-minute period ending at 17:53 were 8 mph from 350 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene, xylenes and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 2.6 ppbv ($9.7 \mu\text{g}/\text{m}^3$) in bedroom two between flags L and M.

4.10 Drainage Ditch Investigation, 64MSMS00067

The drainage ditch located in the rear of Units 20 and 21 was investigated on 03 May 2016 at 18:15:11 and is represented in Figures 10a through 10j. The average wind speed and direction at the airport for the five-minute period ending at 17:53 were 8 mph from 350 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene, toluene, xylenes and vinyl chloride were not detected above their QL at any location during the investigation.

4.11 Unit 13 Survey, 64MSMS00073

Unit 13 was surveyed on 04 May 2016 at 08:05:53 and is represented in Figures 11a through 11j. The average wind speed and direction at the airport for the five-minute period ending at 07:53 were 5 mph from 240 degrees. There was no precipitation during the preceding hour. Dichloroethene, tetrachloroethene, benzene and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of trichloroethene was detected at 0.24 ppbv ($1.3 \mu\text{g}/\text{m}^3$) in the dining room between flags H and I. The highest average concentration of toluene was detected at 2.3 ppbv ($8.5 \mu\text{g}/\text{m}^3$) in the family room between flags J and K. The highest average concentration of xylenes was detected at 0.66 ppbv ($2.9 \mu\text{g}/\text{m}^3$) in bedroom one between flags T and U and in bedroom two between flags R and S.

4.12 Unit 11 Survey, 64MSMS00074

Unit 11 was surveyed on 04 May 2016 at 08:53:35 and is represented in Figures 12a through 12j. The average wind speed and direction at the airport for the five-minute period ending at 08:53 were 6 mph from variable directions. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 4.8 ppbv ($18 \mu\text{g}/\text{m}^3$) at the sub-slab port between flags N and O. The highest average concentration of xylenes was detected at 1.0 ppbv ($4.5 \mu\text{g}/\text{m}^3$) at the sub-slab port between flags N and O.

4.13 Mobile Monitoring One, 64MSMS00075

Mobile monitoring of the stone quarry was performed on 04 May 2016 at 09:51:56 and is represented in Figures 13a through 13h starting at location A and ending at location B. The path of the mobile monitoring is depicted in Figure 13a. The average wind speed and direction at the airport for the five-minute period ending at 09:53 were 8 mph from 290 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, toluene, xylenes and vinyl chloride were not detected above their QL during the mobile monitoring. The highest instantaneous maximum concentration of benzene was detected at 4.2 ppbv ($13.3 \mu\text{g}/\text{m}^3$) at 8.379

minutes into the monitoring run between flags A and B.

4.14 Unit 18 Survey, 64MSMS00076

Unit 18 was surveyed on 04 May 2016 at 10:24:54 and is represented in Figures 14a through 14j. The average wind speed and direction at the airport for the five-minute period ending at 09:53 were 8 mph from 290 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 2.2 ppbv ($8.2 \mu\text{g}/\text{m}^3$) in the bathroom between flags N and O. The highest average concentration of xylenes was detected at 2.4 ppbv ($11 \mu\text{g}/\text{m}^3$) in the bathroom between flags N and O.

4.15 Unit 22 Survey, 64MSMS00077

Unit 22 was surveyed on 04 May 2016 at 11:19:28 and is represented in Figures 15a through 15j. The average wind speed and direction at the airport for the five-minute period ending at 10:53 were 9 mph from 250 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene, xylenes and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 0.86 ppbv ($3.2 \mu\text{g}/\text{m}^3$) at the sub-slab port between flags J and K.

4.16 Unit 23 Survey One, 64MSMS00078

Unit 23 was surveyed on 04 May 2016 at 11:58:55 and is represented in Figures 16a through 16j. The average wind speed and direction at the airport for the five-minute period ending at 11:53 were 9 mph from 290 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of benzene was detected at 15 ppbv ($47 \mu\text{g}/\text{m}^3$) in the kitchen / dining area between flags D and E. The highest average concentration of toluene was detected at 3.7 ppbv ($14 \mu\text{g}/\text{m}^3$) in bedroom one between flags N and O. The highest average concentration of xylenes was detected at 2.5 ppbv ($11 \mu\text{g}/\text{m}^3$) in bedroom one between flags N and O.

The average concentrations of vinyl chloride were found to be above the DL and below the QL (designated with "J" in Figures 16f and 16j) in all locations within the residence. However, the results are considered to be false positives. Based on the relative ratios of the parent/daughter ion pairs used for the quantitation of vinyl chloride (64/27 and 62/27), the detections of vinyl chloride at these locations are the likely result of interferences for the 64/27 ion pair and designated with an "I" in Figures 16f and 16j. The SUMA canister sampling of Unit 23, conducted by USEPA Region 4 personnel and analyzed at the USEPA Region 4 Athens Laboratory, should be considered the most reliable source for definitive data for vinyl chloride.

4.17 Unit 23 Investigation One, 64MSMS00079

Unit 23 was investigated on 04 May 2016 at 12:29:21 and is represented in Figures 17a through 17j. The average wind speed and direction at the airport for the five-minute period ending at 12:53 were 10 mph from 280 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of benzene was detected at 11 ppbv ($34 \mu\text{g}/\text{m}^3$) under the kitchen cabinets and sink between flags H and I. The highest average concentration of toluene was detected at 2.7 ppbv ($10 \mu\text{g}/\text{m}^3$) under the kitchen cabinets and sink between flags H and I. The highest average concentration of xylenes was detected at 1.5 ppbv ($6.4 \mu\text{g}/\text{m}^3$) in cabinet two under the kitchen sink between flags P and Q.

The average concentrations of vinyl chloride were found to be above the DL and below the QL

(designated with a “J” in Figures 17f and 17j) at several locations within the residence: kitchen cabinets and sink between flags H and I, space under the kitchen sink between flags J and K, wood filler can between flags L and M, and cabinet two under the kitchen sink between flags P and Q. However, the results are considered to be false positives. Based on the relative ratios of the parent/daughter ion pairs used for the quantitation of vinyl chloride (64/27 and 62/27), the detections of vinyl chloride at these locations are the likely result of interferences for the 64/27 ion pair and designated with an “I” in Figures 17f and 17j. The SUMA canister sampling of Unit 23, conducted by USEPA Region 4 personnel and analyzed at the USEPA Region 4 Athens Laboratory, should be considered the most reliable source for definitive data for vinyl chloride.

4.18 Unit 8 Survey, 64MSMS00081

Unit 8 was surveyed on 04 May 2016 at 15:04:56 and is represented in Figures 18a through 18j. The average wind speed and direction at the airport for the five-minute period ending at 14:53 were 11 mph from 300 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene, xylenes and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 2.8 ppbv (11 $\mu\text{g}/\text{m}^3$) at the sub-slab port between flags P and Q.

4.19 Mobile Monitoring Two, 64MSMS00084

Mobile monitoring of the Eastern Heights neighborhood was performed on 04 May 2016 at 15:55:56 and is represented in Figures 19a through 19h starting at Location A and ending at Location B. The average wind speed and direction at the airport for the five-minute period ending at 15:53 were 10 mph from 280 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene and vinyl chloride were not detected above their QL during the mobile monitoring. The highest instantaneous maximum concentration of toluene was detected at 0.69 ppbv (2.6 $\mu\text{g}/\text{m}^3$) at 12.945 minutes into the monitoring run between Flags A and B. The highest instantaneous maximum concentration of xylenes was detected at 0.73 ppbv (3.2 $\mu\text{g}/\text{m}^3$) at 12.945 minutes into the monitoring run between flags A and B.

4.20 Unit 19 Survey, 64MSMS00085

Unit 19 was surveyed on 04 May 2016 at 16:25:45 and is represented in Figures 20a through 20j. The average wind speed and direction at the airport for the five-minute period ending at 16:53 were 8 mph from 290 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene, and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 8.9 ppbv (34 $\mu\text{g}/\text{m}^3$) in bedroom two between flags H and I. The highest average concentration of xylenes was detected at 4.3 ppbv (19 $\mu\text{g}/\text{m}^3$) in bedroom two between flags H and I.

4.21 Unit 16 Survey, 64MSMS00086

Unit 16 was surveyed on 04 May 2016 at 17:25:15 and is represented in Figures 21a through 21j. The average wind speed and direction at the airport for the five-minute period ending at 17:53 were 3 mph from variable directions. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of toluene was detected at 3.0 ppbv (11 $\mu\text{g}/\text{m}^3$) in bedroom two between flags N and O. The highest average concentration of xylenes was detected at 1.3 ppbv (5.5 $\mu\text{g}/\text{m}^3$) in bedroom two between flags N and O.

4.22 Mobile Monitoring Three, 64MSMS00092

Mobile monitoring of the stone quarry, Moose Lodge Road, the Eastern Heights neighborhood, the Grenada Manufacturing facility perimeter and the access road to the west of Highway 332 was performed on 05 May 2016 at 08:44:22 and is represented in Figures 22a through 22i starting at Location A and ending at Location A1. The average wind speed and direction at the airport for the five-minute period ending at 08:53 were 7 mph from 230 degrees. There was no precipitation during the preceding hour. Trichloroethene, tetrachloroethene, and vinyl chloride were not detected above their QL during the monitoring run. The highest instantaneous maximum concentration of dichloroethene was detected at 0.37 ppbv ($1.5 \mu\text{g}/\text{m}^3$) at 100.016 minutes into the monitoring run between flags Y and Z. The highest instantaneous maximum concentration of benzene was detected at 12.3 ppbv ($39.4 \mu\text{g}/\text{m}^3$) at 4.793 minutes into the monitoring run between flags B and C. The highest instantaneous maximum concentration of toluene was detected at 3.7 ppbv ($13.9 \mu\text{g}/\text{m}^3$) at 22.638 minutes into the monitoring run between flags E and F. The highest instantaneous maximum concentration of xylenes was detected at 3.3 ppbv ($14.4 \mu\text{g}/\text{m}^3$) at 4.821 minutes into the monitoring run between flags B and C.

4.23 Equalization (EQ) Basin Monitoring on Facility, 64MSMS00094

The EQ Basin at the Grenada Manufacturing facility was monitored on 05 May 2016 at 12:33:02 and is represented in Figures 23a through 23j. The average wind speed and direction at the airport for the five-minute period ending at 12:53 were 13 mph from 340 degrees. There was no precipitation during the preceding hour. The EQ basin was monitored by affixing the distal end of the monitoring hose to an extendable pole and passing it several inches above the surface of the water while walking along the basin's edge in a west to east traverse. Tetrachloroethene, benzene and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of trichloroethene was detected at 0.32 ppbv ($1.7 \mu\text{g}/\text{m}^3$) at storm drain three at the east end of the EQ basin between flags O and P. The highest instantaneous maximum concentration of trichloroethene was detected at 1.3 ppbv ($7.1 \mu\text{g}/\text{m}^3$) at 27.457 minutes into the monitoring run. The highest average concentration of dichloroethene was detected at 3.1 ppbv ($12 \mu\text{g}/\text{m}^3$) at storm drain three at the east end of the EQ basin between flags O and P. The highest instantaneous maximum concentration of dichloroethene was detected at 8.4 ppbv ($33 \mu\text{g}/\text{m}^3$) at 27.401 minutes into the monitoring run. The highest average concentration of toluene was detected at 0.74 ppbv ($2.8 \mu\text{g}/\text{m}^3$) at storm drain two at the east end of the EQ basin between flags M and N. The highest instantaneous maximum concentration of toluene was detected at 4.6 ppbv ($17 \mu\text{g}/\text{m}^3$) at 21.350 minutes into the monitoring run. The highest average concentration of xylenes was detected at 0.50 ppbv ($2.2 \mu\text{g}/\text{m}^3$) at storm drain two at the east end of the EQ basin between flags M and N. The highest instantaneous maximum concentration of xylenes was detected at 5.2 ppbv ($23 \mu\text{g}/\text{m}^3$) at 21.378 minutes into the monitoring run.

4.24 Unit 23 Survey Two, 64MSMS00095

Unit 23 was surveyed a second time on 05 May 2016 at 13:34:46 and is represented in Figures 24a through 24j. The average wind speed and direction at the airport for the five-minute period ending at 13:53 were 15 mph from 320 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, and tetrachloroethene were not detected above their QL at any of the monitoring locations. The highest average concentration of benzene was detected at 16 ppbv ($52 \mu\text{g}/\text{m}^3$) in the living room between flags F and G and in bedroom three between flags H and I. In determining the locations for the highest average concentrations of benzene, results were used that included more than the two significant figures presented in this report. The highest average concentration of toluene was detected at 3.9 ppbv ($15 \mu\text{g}/\text{m}^3$) at the sub-slab port between flags L and M and in bedroom one between flags N and O. The highest average concentration of xylenes was detected at 2.3 ppbv ($10 \mu\text{g}/\text{m}^3$) during screening of the floor between flags R and S.

The average concentration of vinyl chloride was found to be above the QL in the kitchen/dining area between flags D and E. The average concentrations of vinyl chloride were found to be above the DL and below the QL (designated with a "J" in Figures 24f and 24j) in all other location within the

residence. However, the results are considered to be a false positive. Based on the relative ratios of the parent/daughter ion pairs used for the quantitation of vinyl chloride (64/27 and 62/27), the detection of vinyl chloride at this location is the likely result of interferences for the 64/27 ion pair and designated with an "I" in Figures 24f and 24j. The SUMMA canister sampling of Unit 23, conducted by USEPA Region 4 personnel and analyzed at the USEPA Region 4 Athens Laboratory, should be considered the most reliable source for definitive data for vinyl chloride.

4.25 Unit 23 Investigation Two, 64MSMS00096

Unit 23 was investigated a second time on 05 May 2016 at 14:00:59 and is represented in Figures 25a through 25j. The average wind speed and direction at the airport for the five-minute period ending at 13:53 were 15 mph from 320 degrees. There was no precipitation during the preceding hour. Trichloroethene, dichloroethene, tetrachloroethene, benzene toluene, xylenes and vinyl chloride were not detected above their QL at any of the monitoring locations.

4.26 West End of Railroad Ditch by Quarry Road Investigation, 64MSMS00097

The west end of the railroad ditch by the stone quarry road was investigated on 05 May 2016 at 14:43:41 and is represented in Figures 26a through 26j. The average wind speed and direction at the airport for the five-minute period ending at 14:53 were 10 mph and 330 degrees. There was no precipitation during the preceding hour. The railroad ditch was investigated by affixing the distal end of the monitoring hose to an extendable pole and lowering it into the ditch while traversing the edge from west to east. Tetrachloroethene and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest average concentration of trichloroethene was detected at 0.78 ppbv ($4.2 \mu\text{g}/\text{m}^3$) in the purge well water between flags E and F. The highest instantaneous maximum concentration of trichloroethene was detected at 3.8 ppbv ($21 \mu\text{g}/\text{m}^3$) at 21.462 minutes into the investigation. The highest average concentration of dichloroethene was detected at 1.7 ppbv ($6.6 \mu\text{g}/\text{m}^3$) in the purge well water between flags E and F. The highest instantaneous maximum concentration of dichloroethene was detected at 6.8 ppbv ($27 \mu\text{g}/\text{m}^3$) at 21.462 minutes into the investigation. The highest instantaneous maximum concentration of benzene was detected at 3.8 ppbv ($12 \mu\text{g}/\text{m}^3$) at 24.039 minutes into the investigation. The highest average concentration of toluene was detected at 0.81 ppbv ($3.0 \mu\text{g}/\text{m}^3$) in the pre-run ambient monitoring between flags A and B. The highest instantaneous maximum concentration of toluene was detected at 2.3 ppbv ($8.6 \mu\text{g}/\text{m}^3$) at 19.921 minutes into the investigation. The highest instantaneous maximum concentration of trichloroethene was detected at 3.8 ppbv ($21 \mu\text{g}/\text{m}^3$) at 21.462 minutes into the investigation. The highest average concentration of xylenes was detected at 0.42 ppbv ($1.8 \mu\text{g}/\text{m}^3$) during the pre-run ambient monitoring between flags A and B. The highest instantaneous maximum concentration of xylenes was detected at 2.4 ppbv ($10 \mu\text{g}/\text{m}^3$) at 19.949 minutes into the investigation. The pre-run ambient monitoring location was near Highway 332. The exhaust from passing traffic is the likely cause of the elevated pre-run ambient levels of toluene and xylenes.

4.27 Ditch between Neighborhood and Quarry Road Investigation, 64MSMS00098

The ditch between the neighborhood and quarry road was investigated on 05 May 2016 at 15:24:59 and is represented in Figures 27a through 27j. The average wind speed and direction at the airport for the five-minute period ending at 14:53 were 10 mph and 330 degrees. There was no precipitation during the preceding hour. The ditch was investigated by affixing the distal end of the monitoring hose to an extendable pole and lowering it into the ditch while traversing the edge from west to east. Trichloroethene, dichloroethene, tetrachloroethene, benzene, and vinyl chloride were not detected above their QL at any of the monitoring locations. The highest instantaneous maximum concentration of toluene was detected at 0.80 ppbv ($3.0 \mu\text{g}/\text{m}^3$) at 13.141 minutes into the investigation. The highest instantaneous maximum concentration of xylenes was detected at 0.83 ppbv ($3.6 \mu\text{g}/\text{m}^3$) at 13.197 minutes into the investigation.

4.28 Outfall Ditch on North Side of Access Road Investigation, 64MSMS00099

The outfall ditch on the north side of the access road was investigated on 05 May 2016 at 16:10:42 and is represented in Figures 28a through 28j. The average wind speed and direction at the airport for the five-minute period ending at 15:53 were 16 mph and 340 degrees. There was no precipitation during the preceding hour. The outfall ditch was investigated by affixing the distal end of the monitoring hose to an extendable pole and lowering it into the ditch at each of the monitoring locations. The monitoring locations are indicated on the area map in Figure 28a. Trichloroethene, dichloroethene, tetrachloroethene, benzene, toluene, xylenes and vinyl chloride were not detected above their QL at any of the monitoring locations.

5.0 QUALITY ASSURANCE/QUALITY CONTROL

The compound parent/daughter ion pairs used are listed below.

Compound	Parent Ion Mass	Daughter Ion Mass
Trichloroethene	130	95
Trichloroethene	132	95
Trichloroethene	132	97
Dichloroethene	96	61
Dichloroethene	98	63
Tetrachloroethene	164	129
Tetrachloroethene	166	129
Tetrachloroethene	166	131
Benzene	78	39
Benzene	78	52
Toluene	92	65
Toluene	92	91
Xylene	106	65
Xylene	106	91
Vinyl Chloride	62	27
Vinyl Chloride	64	27

Tables 3 and 4 document the RFs and IRFs generated during the calibration procedure for the individual ion pairs. The RFs and IRFs were used to quantitate the ion pair concentrations.

The summaries of detection and quantitation limit data for the monitoring periods (Sections 5.3 and 5.4 and Tables 5 and 6) document the compound ion concentration, in ppbv for Table 5 and $\mu\text{g}/\text{m}^3$ for Table 6, required for a compound's ion pair to be considered detectable and quantifiable during the specified monitoring period. The DL is defined as three times the standard deviation (SD) of the concentration for a compound ion pair measured in an ambient air sample. The QL is defined as 10 times the SD of the concentration for the same conditions. The detection and quantitation limits for a compound result from averaging the appropriate detection and quantitation limits of the compound ion pairs.

5.1 Intermediate Response Factor for Ion Pairs

Response factors were generated from two calibration events, as described in the procedure (Section 2.2.2.). Table 3 contains the RFs in units of icps/ppbv and Table 4 contains the RFs in units of

$\mu\text{g}/\text{m}^3$. The initial and final RFs were used to calculate the IRFs, which were used to calculate the reported concentration results.

The following equation was used to calculate the IRFs found in Tables 3 through 6:

$$\text{IRF} = \frac{2(\text{RF}_1 \times \text{RF}_2)}{(\text{RF}_1 + \text{RF}_2)}$$

where:

IRF = Intermediate response factor (icps/concentration)

RF₁ = The RF for an ion pair measured during the first calibration event (icps/concentration)

RF₂ = The RF for the same ion pair measured during the second calibration event (icps/concentration)

For example, the entry for the 130/95 ion pair of trichloroethene from Table 3 for files 64MSMS00054 and 64MSMS00060 acquired on 03 May 2016 is:

RF₁ = 508.53 icps/ppbv

RF₂ = 365.31 icps/ppbv

therefore,

$$\text{IRF} = \frac{2(508.53 \times 365.31)}{(508.53 + 365.31)} = \frac{371,542.18}{873.84} = 425.18 \text{ icps/ppbv}$$

The result, 425.18 icps/ppbv, is the IRF reported in Table 3 and used in Table 5.

5.2 Error Bars

The potential maximum concentration percent deviations for each target compound are presented in Table 3 for ppbv and Table 4 for $\mu\text{g}/\text{m}^3$ and are called “error bars” for simplicity. They represent the potential bias in the concentration due to changes in the sensitivity of the TAGA instrument. Errors bars were calculated using the following equation:

$$\text{error bar} = \frac{|\text{RF}_1 - \text{RF}_2|}{(\text{RF}_1 + \text{RF}_2)} \times 100$$

where:

error bar = Maximum concentration percent deviation

RF₁ = The RF for an ion pair measured during the first calibration event (icps/concentration)

RF₂ = The RF for the same ion pair measured during the second calibration event (icps/concentration)

For example, the entry for the 130/95 ion pair of trichloroethene from Table 3 for files 64MSMS00054 and 64MSMS00060 acquired on 05 May 2016 is:

RF₁ = 508.53 icps/ppbv

RF₂ = 365.31 icps/ppbv

therefore,

$$\text{error bar} = \frac{|508.53 - 365.31|}{(508.53 + 365.31)} \times 100 = 16.4\%$$

The % error bar calculated for the 130/95 ion pair of trichloroethene is 16.4% for files 64MSMS00054 and 64MSMS00060, acquired on 03 May 2016.

The above calculation was repeated for each ion pair. The error bars for each compound's ions were averaged to give a single value for the compound. This averaged error bar can be applied to the samples analyzed between the two calibrations of the monitoring period.

5.3 Ion Pair Detection and Quantitation Limits

The DLs and QLs were calculated using the SD of the compound's ion pair intensity measured in an ambient air sample and its RF or IRF. The SD reflects the variability of the instrument's response to the ambient air sample.

The following equation was used to calculate the DLs found in Table 5 and Table 6:

$$\text{DL} = \frac{3 \times \text{SD}}{\text{RF or IRF}}$$

where:

DL = Detection limit for an ion pair (concentration)

SD = Standard deviation of the ion intensity measured in an ambient air sample (icps)

RF or IRF = Response factor or Intermediate response factor for an ion pair (icps/concentration)

For example, the entry for the 130/95 ion pair of trichloroethene from Table 5 for files 64MSMS00054 and 64MSMS00060 acquired on 03 May 2016 is:

SD = 8.0187 icps

RF or IRF = 425.18 icps/ppbv

$$\text{DL} = \frac{3 \times 8.0187}{425.18} = 0.0566 \text{ ppbv}$$

The following equation was used to calculate the QLs found in Table 5 and Table 6:

$$\text{QL} = \frac{10 \times \text{SD}}{\text{RF or IRF}}$$

where:

QL = Quantitation limit concentration for an ion pair (concentration)

SD = Standard deviation of the ion intensity measured in an ambient air sample (icps)

RF or IRF = Response factor or Intermediate response factor for an ion pair (icps/concentration)

For example, the entry for the 130/95 ion pair of trichloroethene from Table 5 for file 64MSMS00054 and 64MSMS00060 acquired on 03 May 2016 is:

SD = 8.0187 icps
IRF = 425.18 icps/ppbv

$$QL = \frac{10 \times 8.0187}{425.18} = 0.189 \text{ ppbv}$$

5.4 Compound Detection and Quantitation Limits

The DLs and QLs found in Tables 5 and 6 are calculated by averaging the respective DLs and QLs for the compound ion pairs.

The following equation was used to calculate the compound DL:

$$DL_c = \frac{DL_1 + DL_2 + \dots + DL_n}{n}$$

where:

DL_c = Detection limit for a compound (concentration)
DL₁ = Detection limit for the first ion pair (concentration)
DL₂ = Detection limit for the second ion pair (concentration)
DL_n = Detection limit for the nth ion pair (concentration)
n = Number of ion pairs to be averaged

For example, using the entries for the 96/61 and 98/63 ion pairs of dichloroethene from Table 5 for files 64MSMS00054 and 64MSMS00060 acquired on 03 May 2016, the compound DL is:

$$DL_c = \frac{0.0307 + 0.0324}{2} = \frac{0.0631}{2} = 0.0315 \text{ ppbv}$$

This result, 0.0315 ppbv, rounded to 0.032 ppbv is the DL for dichloroethene found in Table 5.

The following equation was used to calculate the compound's QL:

$$QL_c = \frac{QL_1 + QL_2 + \dots + QL_n}{n}$$

where:

QL_c = Quantitation limit for a compound (ppbv)
QL₁ = Quantitation limit for the first ion pair (ppbv)
QL₂ = Quantitation limit for the second ion pair (ppbv)
QL_n = Quantitation limit for the nth ion pair (ppbv)
n = Number of ion pairs to be averaged

For example, using the entries for the 96/61 and 98/63 ion pair of dichloroethene from Table 5 for files 64MSMS00054 and 64MSMS00060 acquired on 03 May 2016, the compound QL is:

$$QL_c = \frac{0.102 + 0.108}{2} = \frac{0.210}{2} = 0.105 \text{ ppbv}$$

This result, 0.105 ppbv, rounded to 0.11 ppbv is the QL for dichloroethene found in Table 5.

TABLES

TABLE 1
Summary of Transport Efficiencies Measured on 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Transport Efficiency for 03 May 2016 06:09:21 File: 64MSMS00055					
		Start Sequence:	592	723	
		End Sequence:	628	736	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)	
Trichloroethene	130/95	8910.8	8679.3	97.4	
Trichloroethene	132/95	2921.4	2748.6	94.1	
Trichloroethene	132/97	5723.8	5699.3	99.6	
Average Trichloroethene Transport Efficiency:				97.0	
Dichloroethene	96/61	8668.9	8472.9	97.7	
Dichloroethene	98/63	3097.8	3011.4	97.2	
Average Dichloroethene Transport Efficiency:				97.5	
Tetrachloroethene	164/129	5833.8	5467.9	93.7	
Tetrachloroethene	166/129	2052.7	1942.9	94.6	
Tetrachloroethene	166/131	5930.3	5600.0	94.4	
Average Tetrachloroethene Transport Efficiency:				94.3	
Benzene	78/39	384.59	378.57	98.4	
Benzene	78/52	2423.2	2498.6	103	
Average Benzene Transport Efficiency:				101	
Toluene	92/65	6175.1	6020.0	97.5	
Toluene	92/91	17841	17268	96.8	
Average Toluene Transport Efficiency:				97.1	
Xylene	106/65	6375.9	5962.9	93.5	
Xylene	106/91	34882	32689	93.7	
Average Xylene Transport Efficiency:				93.6	
Vinyl Chloride	62/27	11.892	9.2857	78.1	
Vinyl Chloride	64/27	10.000	9.2857	92.9	
Average Vinyl Chloride Transport Efficiency:				85.5	

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = Percent

TABLE 1 (continued)
Summary of Transport Efficiencies Measured on 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Transport Efficiency for 03 May 2016 19:15:01 File: 64MSMS00069					
		Start Sequence:	103	267	
		End Sequence:	141	309	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)	
Trichloroethene	130/95	1549.5	1500.5	96.8	
Trichloroethene	132/95	483.85	464.19	95.9	
Trichloroethene	132/97	919.74	878.84	95.6	
Average Trichloroethene Transport Efficiency:				96.1	
Dichloroethene	96/61	2244.1	2160.2	96.3	
Dichloroethene	98/63	680.26	684.65	101	
Average Dichloroethene Transport Efficiency:				98.6	
Tetrachloroethene	164/129	446.15	434.19	97.3	
Tetrachloroethene	166/129	236.41	236.98	100	
Tetrachloroethene	166/131	753.59	711.40	94.4	
Average Tetrachloroethene Transport Efficiency:				97.2	
Benzene	78/39	83.846	92.326	110	
Benzene	78/52	581.79	562.56	96.7	
Average Benzene Transport Efficiency:				103	
Toluene	92/65	1232.6	1185.6	96.2	
Toluene	92/91	3610.0	3469.5	96.1	
Average Toluene Transport Efficiency:				96.1	
Xylene	106/65	928.46	840.00	90.5	
Xylene	106/91	4339.2	4046.5	93.3	
Average Xylene Transport Efficiency:				91.9	
Vinyl Chloride	62/27	7.6923	8.6047	112	
Vinyl Chloride	64/27	3.3333	4.1860	126	
Average Vinyl Chloride Transport Efficiency:				119	

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = Percent

TABLE 1 (continued)
Summary of Transport Efficiencies Measured on 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Transport Efficiency for 04 May 2016 06:20:25 File: 64MSMS00072					
		Start Sequence:	136	272	
		End Sequence:	172	309	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)	
Trichloroethene	130/95	6727.0	6663.7	99.1	
Trichloroethene	132/97	3512.7	3426.8	97.6	
Average Trichloroethene Transport Efficiency:				98.3	
Dichloroethene	96/61	6928.6	6875.3	99.2	
Dichloroethene	98/63	2295.7	2328.4	101	
Average Dichloroethene Transport Efficiency:				100	
Tetrachloroethene	164/129	2817.0	2722.4	96.6	
Tetrachloroethene	166/129	1594.3	1519.7	95.3	
Tetrachloroethene	166/131	4862.4	4714.5	97.0	
Average Tetrachloroethene Transport Efficiency:				96.3	
Benzene	78/39	229.19	233.68	102	
Benzene	78/52	1713.2	1755.5	102	
Average Benzene Transport Efficiency:				102	
Toluene	92/65	4253.2	4132.6	97.2	
Toluene	92/91	12818	12572	98.1	
Average Toluene Transport Efficiency:				97.6	
Xylene	106/65	3450.3	3298.4	95.6	
Xylene	106/91	18710	17860	95.5	
Average Xylene Transport Efficiency:				95.5	
Vinyl Chloride	62/27	23.243	27.105	117	
Vinyl Chloride	64/27	10.000	13.684	137	
Average Vinyl Chloride Transport Efficiency:				127	

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = Percent

TABLE 1 (continued)
Summary of Transport Efficiencies Measured on 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Transport Efficiency for 04 May 2016 18:18:45 PM File: 64MSMS00088					
		Start Sequence:	152	285	
		End Sequence:	212	322	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)	
Trichloroethene	130/95	3638.0	3530.3	97.0	
Trichloroethene	132/97	1779.0	1718.4	96.6	
Average Trichloroethene Transport Efficiency:				96.8	
Dichloroethene	96/61	3433.1	3457.6	101	
Dichloroethene	98/63	1109.5	1122.4	101	
Average Dichloroethene Transport Efficiency:				101	
Tetrachloroethene	164/129	1336.9	1279.7	95.7	
Tetrachloroethene	166/129	795.74	833.16	105	
Tetrachloroethene	166/131	2573.3	2506.8	97.4	
Average Tetrachloroethene Transport Efficiency:				99.4	
Benzene	78/39	154.43	142.89	92.5	
Benzene	78/52	931.97	945.26	101	
Average Benzene Transport Efficiency:				96.8	
Toluene	92/65	2532.5	2439.5	96.3	
Toluene	92/91	7494.3	7299.5	97.4	
Average Toluene Transport Efficiency:				96.9	
Xylene	106/65	1945.4	1805.3	92.8	
Xylene	106/91	10673	10169	95.3	
Average Xylene Transport Efficiency:				94.0	
Vinyl Chloride	62/27	16.885	14.737	87.3	
Vinyl Chloride	64/27	7.7049	7.1053	92.2	
Average Vinyl Chloride Transport Efficiency:				89.7	

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = Percent

TABLE 1 (continued)
Summary of Transport Efficiencies Measured on 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Transport Efficiency for 05 May 2016 05:56:53 AM File: 64MSMS00090				
Start Sequence:		109	277	
End Sequence:		145	313	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Trichloroethene	130/95	4516.5	4378.4	96.9
Trichloroethene	132/97	2206.2	2100.8	95.2
Average Trichloroethene Transport Efficiency:				96.1
Dichloroethene	96/61	5092.2	4959.2	97.4
Dichloroethene	98/63	1724.6	1636.8	94.9
Average Dichloroethene Transport Efficiency:				96.1
Tetrachloroethene	164/129	1524.6	1470.3	96.4
Tetrachloroethene	166/129	1019.2	953.78	93.6
Tetrachloroethene	166/131	3096.2	3033.8	98.0
Average Tetrachloroethene Transport Efficiency:				96.0
Benzene	78/39	195.95	200.54	102
Benzene	78/52	1277.0	1245.4	97.5
Average Benzene Transport Efficiency:				99.8
Toluene	92/65	3492.2	3373.8	96.6
Toluene	92/91	10288	9911.6	96.3
Average Toluene Transport Efficiency:				96.5
Xylene	106/65	2951.4	2809.2	95.2
Xylene	106/91	15670	14859	94.8
Average Xylene Transport Efficiency:				95.0
Vinyl Chloride	62/27	16.757	25.405	152
Vinyl Chloride	64/27	10.000	8.3784	83.8
Average Vinyl Chloride Transport Efficiency:				118

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = Percent

TABLE 1 (continued)
Summary of Transport Efficiencies Measured on 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Transport Efficiency for 05 May 2016 18:36:53 PM File: 64MSMS00101				
Start Sequence:		109	275	
End Sequence:		146	311	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Trichloroethene	130/95	3968.4	3961.1	99.8
Trichloroethene	132/97	1971.1	1935.7	98.2
Average Trichloroethene Transport Efficiency:				99.0
Dichloroethene	96/61	4312.1	4249.7	98.6
Dichloroethene	98/63	1421.3	1402.2	98.7
Average Dichloroethene Transport Efficiency:				98.6
Tetrachloroethene	164/129	980.53	995.14	101
Tetrachloroethene	166/129	673.42	674.86	100
Tetrachloroethene	166/131	2497.1	2450.8	98.1
Average Tetrachloroethene Transport Efficiency:				99.7
Benzene	78/39	146.05	147.30	101
Benzene	78/52	878.68	879.73	100
Average Benzene Transport Efficiency:				101
Toluene	92/65	2438.9	2376.2	97.4
Toluene	92/91	5685.3	5488.9	96.5
Average Toluene Transport Efficiency:				97.0
Xylene	106/65	1807.9	1819.7	101
Xylene	106/91	8895.8	8522.7	95.8
Average Xylene Transport Efficiency:				98.4
Vinyl Chloride	62/27	24.211	26.486	109
Vinyl Chloride	64/27	7.6316	11.892	156
Average Vinyl Chloride Transport Efficiency:				133

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = Percent

TABLE 2
Summary of Meteorological Conditions during Monitoring, 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

File	Location	Date	Start Time	Wind Speed (mph)	Wind Direction (degrees)	Rainfall (inches)
64MSMS00056	Unit 10 Survey	05/03/2016	08:04:45	7	30	-
64MSMS00057	Unit 14 Survey	05/03/2016	09:35:02	8	350	-
64MSMS00058	Unit 15 Survey	05/03/2016	10:24:31	8	350	-
64MSMS00059	Unit 7 Survey	05/03/2016	11:24:52	5	VR	-
64MSMS00062	Unit 9 Survey	05/03/2016	13:57:08	10	350	-
64MSMS00063	Unit 12 Survey	05/03/2016	14:33:32	8	340	-
64MSMS00064	Unit 17 Survey	05/03/2016	15:25:13	7	350	-
64MSMS00065	Unit 20 Survey	05/03/2016	16:24:31	10	340	-
64MSMS00066	Unit 21 Survey	05/03/2016	17:27:15	8	350	-
64MSMS00067	Drainage Ditch Investigation	05/03/2016	18:15:11	8	350	-
64MSMS00073	Unit 13 Survey	05/04/2016	08:05:53	5	240	-
64MSMS00074	Unit 11 Survey	05/04/2016	08:53:35	6	VR	-
64MSMS00075	Mobile Monitoring One	05/04/2016	09:51:56	8	290	-
64MSMS00076	Unit 18 Survey	05/04/2016	10:24:54	8	290	-
64MSMS00077	Unit 22 Survey	05/04/2016	11:19:28	9	250	-
64MSMS00078	Unit 23 Survey One	05/04/2016	11:58:55	9	290	-

Wind direction is the direction from which the wind is blowing.

mph = Miles per hour

- = No precipitation

VR = Variable direction

TABLE 2 (continued)
Summary of Meteorological Conditions during Monitoring, 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

File	Location	Date	Start Time	Wind Speed (mph)	Wind Direction (degrees)	Rainfall (inches)
64MSMS00079	Unit 23 Investigation One	05/04/2016	12:29:21	10	280	-
64MSMS00081	Unit 8 Survey	05/04/2016	15:04:56	11	300	-
64MSMS00084	Mobile Monitoring Two	05/04/2016	15:55:56	10	280	-
64MSMS00085	Unit 19 Survey	05/04/2016	16:25:45	8	290	-
64MSMS00086	Unit 16 Survey	05/04/2016	17:25:15	3	VR	-
64MSMS00092	Mobile Monitoring Three	05/05/2016	08:44:22	7	230	-
64MSMS00094	Equalization Basin Monitoring on Facility	05/05/2016	12:33:02	13	340	-
64MSMS00095	Unit 23 Survey Two	05/05/2016	13:34:46	15	320	-
64MSMS00096	Unit 23 Investigation Two	05/05/2016	14:00:59	15	320	-
64MSMS00097	Railroad Ditch Investigation	05/05/2016	14:43:41	10	330	-
64MSMS00098	Neighborhood / Quarry Ditch Investigation	05/05/2016	15:24:59	10	330	-
64MSMS00099	Outfall Ditch Investigation	05/05/2016	16:10:42	16	340	-

Wind direction is the direction from which the wind is blowing.

mph = Miles per hour

- = No precipitation

VR = Variable direction

TABLE 3
Summary of Response Factors and Error Bars in ppbv for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00054 and 64MSMS00060 on 03 May 2016 Used for Survey Files: 64MSMS00056, 64MSMS00057, 64MSMS00058, and 64MSMS00059					
Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Trichloroethene	130/95	508.53	365.31	425.18	16.4
Trichloroethene	132/95	166.33	117.39	137.64	17.3
Trichloroethene	132/97	328.16	231.28	271.33	17.3
Average:					17
Dichloroethene	96/61	460.31	410.17	433.80	5.76
Dichloroethene	98/63	166.81	141.72	153.24	8.13
Average:					6.9
Tetrachloroethene	164/129	353.98	203.24	258.22	27.1
Tetrachloroethene	166/129	125.20	77.175	95.490	23.7
Tetrachloroethene	166/131	363.46	226.87	279.36	23.1
Average:					25
Benzene	78/39	19.254	17.111	18.119	5.89
Benzene	78/52	137.04	119.87	127.88	6.69
Average:					6.3
Toluene	92/65	350.35	280.39	311.49	11.1
Toluene	92/91	1019.3	840.58	921.35	9.61
Average:					10
Xylene	106/65	244.90	167.38	198.85	18.8
Xylene	106/91	1348.1	950.14	1114.7	17.3
Average:					18
Vinyl Chloride	62/27	1.0974	0.88310	0.97866	10.8
Vinyl Chloride	64/27	0.33120	0.50000	0.39846	20.3
Average:					16

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 3 (continued)
Summary of Response Factors and Error Bars in ppbv for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00060MD and 64MSMS00068 on 03 May 2016 Used for Survey Files: 64MSMS00062, 64MSMS00063, 64MSMS00064, 64MSMS00065, 64MSMS00066, and 64MSMS00067					
Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Trichloroethene	130/95	365.31	236.69	287.26	21.4
Trichloroethene	132/95	117.39	74.702	91.301	22.2
Trichloroethene	132/97	231.28	145.34	178.51	22.8
Average:					22
Dichloroethene	96/61	410.17	287.00	337.71	17.7
Dichloroethene	98/63	141.72	98.224	116.03	18.1
Average:					18
Tetrachloroethene	164/129	203.24	104.10	137.68	32.3
Tetrachloroethene	166/129	77.175	45.849	57.523	25.5
Tetrachloroethene	166/131	226.87	136.34	170.33	24.9
Average:					28
Benzene	78/39	17.111	12.019	14.120	17.5
Benzene	78/52	119.87	82.836	97.968	18.3
Average:					18
Toluene	92/65	280.39	185.94	223.60	20.3
Toluene	92/91	840.58	567.19	677.34	19.4
Average:					20
Xylene	106/65	167.38	97.998	123.62	26.1
Xylene	106/91	950.14	559.90	704.59	25.8
Average:					26
Vinyl Chloride	62/27	0.88310	0.96100	0.92040	4.22
Vinyl Chloride	64/27	0.50000	0.31170	0.38401	23.2
Average:					14

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 3 (continued)
Summary of Response Factors and Error Bars in ppbv for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00071 and 64MSMS00080 on 04 May 2016 Used for Survey Files: 64MSMS00073, 64MSMS00074, 64MSMS00075, 64MSMS00076, 64MSMS00077, 64MSMS00078, and 64MSMS00079					
Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Trichloroethene	130/95	360.35	223.99	276.26	23.3
Trichloroethene	132/97	186.79	110.06	138.51	25.8
Average:					25
Dichloroethene	96/61	352.72	214.10	266.46	24.5
Dichloroethene	98/63	120.26	72.127	90.172	25.0
Average:					25
Tetrachloroethene	164/129	165.45	93.446	119.44	27.8
Tetrachloroethene	166/129	90.193	54.354	67.830	24.8
Tetrachloroethene	166/131	270.91	164.72	204.87	24.4
Average:					26
Benzene	78/39	12.864	8.8977	10.519	18.2
Benzene	78/52	91.977	60.844	73.239	20.4
Average:					19
Toluene	92/65	222.99	156.44	183.87	17.5
Toluene	92/91	678.72	468.89	554.62	18.3
Average:					18
Xylene	106/65	120.04	80.407	96.306	19.8
Xylene	106/91	672.39	462.99	548.38	18.4
Average:					19
Vinyl Chloride	62/27	1.2338	1.3052	1.2685	2.81
Vinyl Chloride	64/27	0.45450	0.37660	0.41190	9.37
Average:					6.1

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 3 (continued)
Summary of Response Factors and Error Bars in ppbv for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00080MD and 64MSMS00087 on 04 May 2016 Used for Survey Files: 64MSMS00081, 64MSMS00084, 64MSMS00085, and 64MSMS00086					
Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Trichloroethene	130/95	223.99	171.29	194.13	13.3
Trichloroethene	132/97	110.06	87.213	97.315	11.6
Average:					12
Dichloroethene	96/61	214.10	157.16	181.26	15.3
Dichloroethene	98/63	72.127	53.211	61.242	15.1
Average:					15
Tetrachloroethene	164/129	93.446	66.394	77.631	16.9
Tetrachloroethene	166/129	54.354	41.625	47.145	13.3
Tetrachloroethene	166/131	164.72	126.73	143.25	13.0
Average:					14
Benzene	78/39	8.8977	7.1130	7.9059	11.1
Benzene	78/52	60.844	42.640	50.141	17.6
Average:					14
Toluene	92/65	156.44	119.12	135.25	13.5
Toluene	92/91	468.89	357.15	405.46	13.5
Average:					14
Xylene	106/65	80.407	62.570	70.376	12.5
Xylene	106/91	462.99	349.08	398.04	14.0
Average:					13
Vinyl Chloride	62/27	1.3052	0.62340	0.84378	35.4
Vinyl Chloride	64/27	0.37660	0.34420	0.35967	4.50
Average:					20

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 3 (continued)
Summary of Response Factors and Error Bars in ppbv for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00093 and 64MSMS00100 on 05 May 2016 Used for Survey Files: 64MSMS00094, 64MSMS00095, 64MSMS00096, 64MSMS00097, 64MSMS00098, and 64MSMS00099					
Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Trichloroethene	130/95	202.26	215.30	208.57	3.12
Trichloroethene	132/97	97.806	102.77	100.23	2.48
Average:					2.8
Dichloroethene	96/61	214.94	216.79	215.86	0.428
Dichloroethene	98/63	70.052	72.961	71.477	2.03
Average:					1.2
Tetrachloroethene	164/129	55.665	52.316	53.938	3.10
Tetrachloroethene	166/129	36.887	37.819	37.347	1.25
Tetrachloroethene	166/131	133.05	137.66	135.32	1.70
Average:					2.0
Benzene	78/39	7.3241	7.5352	7.4282	1.42
Benzene	78/52	48.953	46.145	47.508	2.95
Average:					2.2
Toluene	92/65	130.84	127.32	129.06	1.37
Toluene	92/91	336.75	294.59	314.27	6.68
Average:					4.0
Xylene	106/65	65.292	64.019	64.649	0.985
Xylene	106/91	315.35	311.87	313.60	0.554
Average:					0.77
Vinyl Chloride	62/27	0.94160	1.0909	1.0108	7.35
Vinyl Chloride	64/27	0.38310	0.44160	0.41028	7.09
Average:					7.2

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 4
Summary of Response Factors and Error Bars in $\mu\text{g}/\text{m}^3$ for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00054 and 64MSMS00060 on 03 May 2016 Used for Survey Files: 64MSMS00056, 64MSMS00057, 64MSMS00058, and 64MSMS00059					
Compound	PM/DM	Initial Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Final Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Intermediate Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Error Bar (%)
Trichloroethene	130/95	94.624	67.974	79.115	16.4
Trichloroethene	132/95	30.950	21.842	25.611	17.3
Trichloroethene	132/97	61.063	43.035	50.488	17.3
Average:					17
Dichloroethene	96/61	116.10	103.45	109.41	5.76
Dichloroethene	98/63	42.073	35.743	38.651	8.13
Average:					6.9
Tetrachloroethene	164/129	52.191	29.966	38.072	27.1
Tetrachloroethene	166/129	18.460	11.379	14.079	23.7
Tetrachloroethene	166/131	53.589	33.450	41.189	23.1
Average:					25
Benzene	78/39	6.0271	5.3563	5.6719	5.89
Benzene	78/52	42.899	37.522	40.031	6.69
Average:					6.3
Toluene	92/65	92.991	74.423	82.677	11.1
Toluene	92/91	270.54	223.11	244.55	9.61
Average:					10
Xylene	106/65	56.403	38.549	45.798	18.8
Xylene	106/91	310.48	218.83	256.72	17.3
Average:					18
Vinyl Chloride	62/27	0.42930	0.34550	0.38287	10.8
Vinyl Chloride	64/27	0.12960	0.19560	0.15590	20.3
Average:					16

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
% = Percent

TABLE 4 (continued)
Summary of Response Factors and Error Bars in $\mu\text{g}/\text{m}^3$ for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00060MD and 64MSMS00068 on 03 May 2016 Used for Survey Files: 64MSMS00062, 64MSMS00063, 64MSMS00064, 64MSMS00065, 64MSMS00066, and 64MSMS00067					
Compound	PM/DM	Initial Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Final Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Intermediate Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Error Bar (%)
Trichloroethene	130/95	67.974	44.042	53.451	21.4
Trichloroethene	132/95	21.842	13.900	16.989	22.2
Trichloroethene	132/97	43.035	27.045	33.216	22.8
Average:					22
Dichloroethene	96/61	103.45	72.387	85.176	17.7
Dichloroethene	98/63	35.743	24.774	29.264	18.1
Average:					18
Tetrachloroethene	164/129	29.966	15.348	20.299	32.3
Tetrachloroethene	166/129	11.379	6.7599	8.4812	25.5
Tetrachloroethene	166/131	33.450	20.103	25.113	24.9
Average:					28
Benzene	78/39	5.3563	3.7624	4.4200	17.5
Benzene	78/52	37.522	25.931	30.668	18.3
Average:					18
Toluene	92/65	74.423	49.354	59.350	20.3
Toluene	92/91	223.11	150.54	179.78	19.4
Average:					20
Xylene	106/65	38.549	22.570	28.471	26.1
Xylene	106/91	218.83	128.95	162.28	25.8
Average:					26
Vinyl Chloride	62/27	0.34550	0.37600	0.36011	4.23
Vinyl Chloride	64/27	0.19560	0.12190	0.15020	23.2
Average:					14

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
% = Percent

TABLE 4 (continued)
Summary of Response Factors and Error Bars in $\mu\text{g}/\text{m}^3$ for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00071 and 64MSMS00080 on 04 May 2016 Used for Survey Files: 64MSMS00073, 64MSMS00074, 64MSMS00075, 64MSMS00076, 64MSMS00077, 64MSMS00078, and 64MSMS00079					
Compound	PM/DM	Initial Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Final Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Intermediate Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Error Bar (%)
Trichloroethene	130/95	67.051	41.680	51.405	23.3
Trichloroethene	132/97	34.758	20.480	25.773	25.8
Average:					25
Dichloroethene	96/61	88.963	53.999	67.206	24.5
Dichloroethene	98/63	30.332	18.192	22.743	25.0
Average:					25
Tetrachloroethene	164/129	24.394	13.778	17.610	27.8
Tetrachloroethene	166/129	13.298	8.0139	10.001	24.8
Tetrachloroethene	166/131	39.943	24.286	30.206	24.4
Average:					26
Benzene	78/39	4.0266	2.7852	3.2928	18.2
Benzene	78/52	28.791	19.046	22.925	20.4
Average:					19
Toluene	92/65	59.186	41.522	48.804	17.5
Toluene	92/91	180.15	124.45	147.21	18.3
Average:					18
Xylene	106/65	27.648	18.519	22.181	19.8
Xylene	106/91	154.86	106.63	126.30	18.4
Average:					19
Vinyl Chloride	62/27	0.48270	0.51060	0.49626	2.81
Vinyl Chloride	64/27	0.17780	0.14730	0.16112	9.38
Average:					6.1

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
 $\mu\text{g}/\text{m}^3$ = parts per billion by volume
% = Percent

TABLE 4 (continued)
Summary of Response Factors and Error Bars in $\mu\text{g}/\text{m}^3$ for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00080MD and 64MSMS00087 on 04 May 2016 Used for Survey Files: 64MSMS00081, 64MSMS00084, 64MSMS00085, and 64MSMS00086					
Compound	PM/DM	Initial Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Final Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Intermediate Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Error Bar (%)
Trichloroethene	130/95	41.680	31.872	36.122	13.3
Trichloroethene	132/97	20.480	16.228	18.108	11.6
Average:					12
Dichloroethene	96/61	53.999	39.638	45.717	15.3
Dichloroethene	98/63	18.192	13.421	15.446	15.1
Average:					15
Tetrachloroethene	164/129	13.778	9.7892	11.446	16.9
Tetrachloroethene	166/129	8.0139	6.1372	6.9511	13.3
Tetrachloroethene	166/131	24.286	18.686	21.121	13.0
Average:					14
Benzene	78/39	2.7852	2.2265	2.4747	11.1
Benzene	78/52	19.046	13.347	15.695	17.6
Average:					14
Toluene	92/65	41.522	31.618	35.899	13.5
Toluene	92/91	124.45	94.797	107.62	13.5
Average:					14
Xylene	106/65	18.519	14.411	16.208	12.5
Xylene	106/91	106.63	80.397	91.675	14.0
Average:					13
Vinyl Chloride	62/27	0.51060	0.24390	0.33011	35.3
Vinyl Chloride	64/27	0.14730	0.13460	0.14066	4.51
Average:					20

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
 $\mu\text{g}/\text{m}^3$ = parts per billion by volume
% = Percent

TABLE 4 (continued)
Summary of Response Factors and Error Bars in $\mu\text{g}/\text{m}^3$ for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00093 and 64MSMS00100 on 05 May 2016 Used for Survey Files: 64MSMS00094, 64MSMS00095, 64MSMS00096, 64MSMS00097, 64MSMS00098, and 64MSMS00099					
Compound	PM/DM	Initial Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Final Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Intermediate Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Error Bar (%)
Trichloroethene	130/95	37.634	40.062	38.810	3.12
Trichloroethene	132/97	18.199	19.123	18.650	2.48
Average:					2.8
Dichloroethene	96/61	54.213	54.679	54.445	0.428
Dichloroethene	98/63	17.669	18.402	18.028	2.03
Average:					1.2
Tetrachloroethene	164/129	8.2073	7.7135	7.9527	3.10
Tetrachloroethene	166/129	5.4387	5.5761	5.5065	1.25
Tetrachloroethene	166/131	19.617	20.297	19.951	1.70
Average:					2.0
Benzene	78/39	2.2926	2.3587	2.3252	1.42
Benzene	78/52	15.323	14.444	14.871	2.95
Average:					2.2
Toluene	92/65	34.729	33.793	34.254	1.37
Toluene	92/91	89.383	78.192	83.414	6.68
Average:					4.0
Xylene	106/65	15.038	14.744	14.889	0.984
Xylene	106/91	72.628	71.829	72.226	0.554
Average:					0.77
Vinyl Chloride	62/27	0.36830	0.42680	0.39540	7.36
Vinyl Chloride	64/27	0.14990	0.17270	0.16049	7.07
Average:					7.2

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
 $\mu\text{g}/\text{m}^3$ = parts per billion by volume
% = Percent

TABLE 5
Summary of Detection and Quantitation Limit Data in ppbv for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00054 and 64MSMS00060 on 03 May 2016 Used for Survey Files: 64MSMS00056, 64MSMS00057, 64MSMS00058, and 64MSMS00059					
Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Trichloroethene	130/95	425.18	8.0187	0.0566	0.189
Trichloroethene	132/95	137.64	5.3074	0.116	0.386
Trichloroethene	132/97	271.33	6.4867	0.0717	0.239
Average:				0.081	0.27
Dichloroethene	96/61	433.80	4.4405	0.0307	0.102
Dichloroethene	98/63	153.24	1.6549	0.0324	0.108
Average:				0.032	0.11
Tetrachloroethene	164/129	258.22	7.5875	0.0882	0.294
Tetrachloroethene	166/129	95.490	3.3304	0.105	0.349
Tetrachloroethene	166/131	279.36	6.1221	0.0657	0.219
Average:				0.086	0.29
Benzene	78/39	18.119	4.2215	0.699	2.33
Benzene	78/52	127.88	11.375	0.267	0.890
Average:				0.48	1.6
Toluene	92/65	311.49	25.144	0.242	0.807
Toluene	92/91	921.35	43.302	0.141	0.470
Average:				0.19	0.64
Xylene	106/65	198.85	14.589	0.220	0.734
Xylene	106/91	1114.7	27.132	0.0730	0.243
Average:				0.15	0.49
Vinyl Chloride	62/27	0.97866	1.6549	5.07	16.9
Vinyl Chloride	64/27	0.39846	1.6549	12.5	41.5
Average:				8.8	29

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

TABLE 5 (continued)
Summary of Detection and Quantitation Limit Data in ppbv for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00060MD and 64MSMS00068 on 03 May 2016 Used for Survey Files: 64MSMS00062, 64MSMS00063, 64MSMS00064, 64MSMS00065, 64MSMS00066, and 64MSMS00067					
Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Trichloroethene	130/95	287.26	6.5348	0.0682	0.227
Trichloroethene	132/95	91.301	5.3661	0.176	0.588
Trichloroethene	132/97	178.51	4.5364	0.0762	0.254
Average:				0.11	0.36
Dichloroethene	96/61	337.71	5.0176	0.0446	0.149
Dichloroethene	98/63	116.03	2.9834	0.0771	0.257
Average:				0.061	0.20
Tetrachloroethene	164/129	137.68	4.4405	0.0968	0.323
Tetrachloroethene	166/129	57.523	3.5823	0.187	0.623
Tetrachloroethene	166/131	170.33	6.8462	0.121	0.402
Average:				0.13	0.45
Benzene	78/39	14.120	4.6387	0.986	3.29
Benzene	78/52	97.968	11.973	0.367	1.22
Average:				0.68	2.3
Toluene	92/65	223.60	17.709	0.238	0.792
Toluene	92/91	677.34	32.269	0.143	0.476
Average:				0.19	0.63
Xylene	106/65	123.62	15.165	0.368	1.23
Xylene	106/91	704.59	37.358	0.159	0.530
Average:				0.26	0.88
Vinyl Chloride	62/27	0.92040	2.8527	9.30	31.0
Vinyl Chloride	64/27	0.38401	4.6451	36.3	121
Average:				23	76

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

TABLE 5 (continued)
Summary of Detection and Quantitation Limit Data in ppbv for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
August 2016

Calibration Files: 64MSMS00071 and 64MSMS00080 on 04 May 2016 Used for Survey Files: 64MSMS00073, 64MSMS00074, 64MSMS00075, 64MSMS00076, 64MSMS00077, 64MSMS00078, and 64MSMS00079					
Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Trichloroethene	130/95	276.26	4.6724	0.0507	0.169
Trichloroethene	132/97	138.51	1.1785	0.0255	0.0851
Average:				0.038	0.13
Dichloroethene	96/61	266.46	4.2145	0.0475	0.158
Dichloroethene	98/63	90.172	2.3570	0.0784	0.261
Average:				0.063	0.21
Tetrachloroethene	164/129	119.44	3.0611	0.0769	0.256
Tetrachloroethene	166/129	67.830	2.7832	0.123	0.410
Tetrachloroethene	166/131	204.87	2.7832	0.0408	0.136
Average:				0.080	0.27
Benzene	78/39	10.519	2.9834	0.851	2.84
Benzene	78/52	73.239	8.4984	0.348	1.16
Average:				0.60	2.0
Toluene	92/65	183.87	14.948	0.244	0.813
Toluene	92/91	554.62	27.373	0.148	0.494
Average:				0.20	0.65
Xylene	106/65	96.306	6.6901	0.208	0.695
Xylene	106/91	548.38	17.170	0.0939	0.313
Average:				0.15	0.50
Vinyl Chloride	62/27	1.2685	2.0123	4.76	15.9
Vinyl Chloride	64/27	0.41190	4.0897	29.8	99.3
Average:				17	58

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

TABLE 5 (continued)
Summary of Detection and Quantitation Limit Data in ppbv for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00080MD and 64MSMS00087 on 04 May 2016 Used for Survey Files: 64MSMS00081, 64MSMS00084, 64MSMS00085, and 64MSMS00086					
Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Trichloroethene	130/95	194.13	7.5046	0.116	0.387
Trichloroethene	132/97	97.315	3.6579	0.113	0.376
Average:				0.11	0.38
Dichloroethene	96/61	181.26	4.5364	0.0751	0.250
Dichloroethene	98/63	61.242	2.3067	0.113	0.377
Average:				0.094	0.31
Tetrachloroethene	164/129	77.631	2.0123	0.0778	0.259
Tetrachloroethene	166/129	47.145	1.1785	0.0750	0.250
Tetrachloroethene	166/131	143.25	4.2145	0.0883	0.294
Average:				0.080	0.27
Benzene	78/39	7.9059	2.9834	1.13	3.77
Benzene	78/52	50.141	6.5661	0.393	1.31
Average:				0.76	2.5
Toluene	92/65	135.25	10.615	0.235	0.785
Toluene	92/91	405.46	20.805	0.154	0.513
Average:				0.19	0.65
Xylene	106/65	70.376	5.5647	0.237	0.791
Xylene	106/91	398.04	12.852	0.0969	0.323
Average:				0.17	0.56
Vinyl Chloride	62/27	0.84378	3.0611	10.9	36.3
Vinyl Chloride	64/27	0.35967	1.6549	13.8	46.0
Average:				12	41

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

TABLE 5 (continued)
Summary of Detection and Quantitation Limit Data in ppbv for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration File: 64MSMS00089 at 05:17:03 on 05 May 2016 Used for Survey Files: 64MSMS00092					
Compound	PM/DM	Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Trichloroethene	130/95	234.49	7.1063	0.0909	0.303
Trichloroethene	132/97	114.93	3.2082	0.0837	0.279
Average:				0.087	0.29
Dichloroethene	96/61	249.19	3.5375	0.0426	0.142
Dichloroethene	98/63	79.434	1.1625	0.0439	0.146
Average:				0.043	0.14
Tetrachloroethene	164/129	74.597	2.2767	0.0916	0.305
Tetrachloroethene	166/129	47.687	3.0210	0.190	0.633
Tetrachloroethene	166/131	155.23	3.2082	0.0620	0.207
Average:				0.11	0.38
Benzene	78/39	8.8145	8.4108	2.86	9.54
Benzene	78/52	60.371	21.580	1.07	3.57
Average:				2.0	6.6
Toluene	92/65	152.59	27.097	0.533	1.78
Toluene	92/91	455.18	42.429	0.280	0.932
Average:				0.41	1.4
Xylene	106/65	83.559	14.579	0.523	1.74
Xylene	106/91	432.76	27.584	0.191	0.637
Average:				0.36	1.2
Vinyl Chloride	62/27	1.0000	2.5272	7.58	25.3
Vinyl Chloride	64/27	0.35060	2.2793	19.5	65.0
Average:				14	45

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

TABLE 5 (continued)
Summary of Detection and Quantitation Limit Data in ppbv for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00093 and 64MSMS00100 on 05 May 2016 Used for Survey Files: 64MSMS00094, 64MSMS00095, 64MSMS00096, 64MSMS00097, 64MSMS00098, and 64MSMS00099					
Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Trichloroethene	130/95	208.57	3.5823	0.0515	0.172
Trichloroethene	132/97	100.23	3.1648	0.0947	0.316
Average:				0.073	0.24
Dichloroethene	96/61	215.86	3.8659	0.0537	0.179
Dichloroethene	98/63	71.477	1.6549	0.0695	0.232
Average:				0.062	0.21
Tetrachloroethene	164/129	53.938	5.1256	0.285	0.950
Tetrachloroethene	166/129	37.347	3.4231	0.275	0.917
Tetrachloroethene	166/131	135.32	4.3313	0.0960	0.320
Average:				0.22	0.73
Benzene	78/39	7.4282	2.0123	0.813	2.71
Benzene	78/52	47.508	4.8430	0.306	1.02
Average:				0.56	1.9
Toluene	92/65	129.06	7.5046	0.174	0.581
Toluene	92/91	314.27	12.121	0.116	0.386
Average:				0.15	0.48
Xylene	106/65	64.649	2.3067	0.107	0.357
Xylene	106/91	313.60	8.5945	0.0822	0.274
Average:				0.095	0.32
Vinyl Chloride	62/27	1.0108	1.6549	4.91	16.4
Vinyl Chloride	64/27	0.41028	2.8527	20.9	69.5
Average:				13	43

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

TABLE 6
Summary of Detection and Quantitation Limit Data in $\mu\text{g}/\text{m}^3$ for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00054 and 64MSMS00060 on 03 May 2016 Used for Survey Files: 64MSMS00056, 64MSMS00057, 64MSMS00058, and 64MSMS00059					
Compound	PM/DM	Intermediate Response Factor ($\text{icps}/\mu\text{g}/\text{m}^3$)	Standard Deviation (icps)	Detection Limit ($\mu\text{g}/\text{m}^3$)	Quantitation Limit ($\mu\text{g}/\text{m}^3$)
Trichloroethene	130/95	79.115	8.0187	0.304	1.01
Trichloroethene	132/95	25.611	5.3074	0.622	2.07
Trichloroethene	132/97	50.488	6.4867	0.385	1.28
Average:				0.44	1.5
Dichloroethene	96/61	109.41	4.4405	0.122	0.406
Dichloroethene	98/63	38.651	1.6549	0.128	0.428
Average:				0.13	0.42
Tetrachloroethene	164/129	38.072	7.5875	0.598	1.99
Tetrachloroethene	166/129	14.079	3.3304	0.710	2.37
Tetrachloroethene	166/131	41.189	6.1221	0.446	1.49
Average:				0.58	1.9
Benzene	78/39	5.6719	4.2215	2.23	7.44
Benzene	78/52	40.031	11.375	0.853	2.84
Average:				1.5	5.1
Toluene	92/65	82.677	25.144	0.912	3.04
Toluene	92/91	244.55	43.302	0.531	1.77
Average:				0.72	2.4
Xylene	106/65	45.798	14.589	0.956	3.19
Xylene	106/91	256.72	27.132	0.317	1.06
Average:				0.64	2.1
Vinyl Chloride	62/27	0.38287	1.6549	13.0	43.2
Vinyl Chloride	64/27	0.15590	1.6549	31.8	106
Average:				22	75

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

TABLE 6 (continued)
Summary of Detection and Quantitation Limit Data in $\mu\text{g}/\text{m}^3$ for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00060MD and 64MSMS00068 on 03 May 2016 Used for Survey Files: 64MSMS00062, 64MSMS00063, 64MSMS00064, 64MSMS00065, 64MSMS00066, and 64MSMS00067					
Compound	PM/DM	Intermediate Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Standard Deviation (icps)	Detection Limit ($\mu\text{g}/\text{m}^3$)	Quantitation Limit ($\mu\text{g}/\text{m}^3$)
Trichloroethene	130/95	53.451	6.5348	0.367	1.22
Trichloroethene	132/95	16.989	5.3661	0.948	3.16
Trichloroethene	132/97	33.216	4.5364	0.410	1.37
Average:				0.57	1.9
Dichloroethene	96/61	85.176	5.0176	0.177	0.589
Dichloroethene	98/63	29.264	2.9834	0.306	1.02
Average:				0.24	0.80
Tetrachloroethene	164/129	20.299	4.4405	0.656	2.19
Tetrachloroethene	166/129	8.4812	3.5823	1.27	4.22
Tetrachloroethene	166/131	25.113	6.8462	0.818	2.73
Average:				0.91	3.0
Benzene	78/39	4.4200	4.6387	3.15	10.5
Benzene	78/52	30.668	11.973	1.17	3.90
Average:				2.2	7.2
Toluene	92/65	59.350	17.709	0.895	2.98
Toluene	92/91	179.78	32.269	0.538	1.79
Average:				0.72	2.4
Xylene	106/65	28.471	15.165	1.60	5.33
Xylene	106/91	162.28	37.358	0.691	2.30
Average:				1.1	3.8
Vinyl Chloride	62/27	0.36011	2.8527	23.8	79.2
Vinyl Chloride	64/27	0.15020	4.6451	92.8	309
Average:				58	190

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

TABLE 6 (continued)
Summary of Detection and Quantitation Limit Data in $\mu\text{g}/\text{m}^3$ for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00071 and 64MSMS00080 on 04 May 2016 Used for Survey Files: 64MSMS00073, 64MSMS00074, 64MSMS00075, 64MSMS00076, 64MSMS00077, 64MSMS00078, and 64MSMS00079					
Compound	PM/DM	Intermediate Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Standard Deviation (icps)	Detection Limit ($\mu\text{g}/\text{m}^3$)	Quantitation Limit ($\mu\text{g}/\text{m}^3$)
Trichloroethene	130/95	51.405	4.6724	0.273	0.909
Trichloroethene	132/97	25.773	1.1785	0.137	0.457
Average:				0.20	0.68
Dichloroethene	96/61	67.206	4.2145	0.188	0.627
Dichloroethene	98/63	22.743	2.3570	0.311	1.04
Average:				0.25	0.83
Tetrachloroethene	164/129	17.610	3.0611	0.521	1.74
Tetrachloroethene	166/129	10.001	2.7832	0.835	2.78
Tetrachloroethene	166/131	30.206	2.7832	0.276	0.921
Average:				0.54	1.8
Benzene	78/39	3.2928	2.9834	2.72	9.06
Benzene	78/52	22.925	8.4984	1.11	3.71
Average:				1.9	6.4
Toluene	92/65	48.804	14.948	0.919	3.06
Toluene	92/91	147.21	27.373	0.558	1.86
Average:				0.74	2.5
Xylene	106/65	22.181	6.6901	0.905	3.02
Xylene	106/91	126.30	17.170	0.408	1.36
Average:				0.66	2.2
Vinyl Chloride	62/27	0.49626	2.0123	12.2	40.5
Vinyl Chloride	64/27	0.16112	4.0897	76.1	254
Average:				44	150

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

TABLE 6 (continued)
Summary of Detection and Quantitation Limit Data in $\mu\text{g}/\text{m}^3$ for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00080MD and 64MSMS00087 on 04 May 2016 Used for Survey Files: 64MSMS00081, 64MSMS00084, 64MSMS00085, and 64MSMS00086					
Compound	PM/DM	Intermediate Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Standard Deviation (icps)	Detection Limit ($\mu\text{g}/\text{m}^3$)	Quantitation Limit ($\mu\text{g}/\text{m}^3$)
Trichloroethene	130/95	36.122	7.5046	0.623	2.08
Trichloroethene	132/97	18.108	3.6579	0.606	2.02
Average:				0.61	2.0
Dichloroethene	96/61	45.717	4.5364	0.298	0.992
Dichloroethene	98/63	15.446	2.3067	0.448	1.49
Average:				0.37	1.2
Tetrachloroethene	164/129	11.446	2.0123	0.527	1.76
Tetrachloroethene	166/129	6.9511	1.1785	0.509	1.70
Tetrachloroethene	166/131	21.121	4.2145	0.599	2.00
Average:				0.54	1.8
Benzene	78/39	2.4747	2.9834	3.62	12.1
Benzene	78/52	15.695	6.5661	1.26	4.18
Average:				2.4	8.1
Toluene	92/65	35.899	10.615	0.887	2.96
Toluene	92/91	107.62	20.805	0.580	1.93
Average:				0.73	2.4
Xylene	106/65	16.208	5.5647	1.03	3.43
Xylene	106/91	91.675	12.852	0.421	1.40
Average:				0.73	2.4
Vinyl Chloride	62/27	0.33011	3.0611	27.8	92.7
Vinyl Chloride	64/27	0.14066	1.6549	35.3	118
Average:				32	110

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

TABLE 6 (continued)
Summary of Detection and Quantitation Limit Data in $\mu\text{g}/\text{m}^3$ for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration File: 64MSMS00089 at 05:17:03 on 05 May 2016 Used for Survey Files: 64MSMS00092					
Compound	PM/DM	Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Standard Deviation (icps)	Detection Limit ($\mu\text{g}/\text{m}^3$)	Quantitation Limit ($\mu\text{g}/\text{m}^3$)
Trichloroethene	130/95	43.632	7.1063	0.489	1.63
Trichloroethene	132/97	21.386	3.2082	0.450	1.50
Average:				0.47	1.6
Dichloroethene	96/61	62.850	3.5375	0.169	0.563
Dichloroethene	98/63	20.035	1.1625	0.174	0.580
Average:				0.17	0.57
Tetrachloroethene	164/129	10.999	2.2768	0.621	2.07
Tetrachloroethene	166/129	7.0310	3.0210	1.29	4.30
Tetrachloroethene	166/131	22.887	3.2081	0.421	1.40
Average:				0.78	2.6
Benzene	78/39	2.7591	8.4100	9.14	30.5
Benzene	78/52	18.897	21.580	3.43	11.4
Average:				6.3	21
Toluene	92/65	40.501	27.097	2.01	6.69
Toluene	92/91	120.82	42.429	1.05	3.51
Average:				1.5	5.1
Xylene	106/65	19.245	14.579	2.27	7.58
Xylene	106/91	99.671	27.584	0.830	2.77
Average:				1.6	5.2
Vinyl Chloride	62/27	0.39120	2.5259	19.4	64.6
Vinyl Chloride	64/27	0.13720	2.2734	49.7	166
Average:				35	120

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

TABLE 6 (continued)
Summary of Detection and Quantitation Limit Data in $\mu\text{g}/\text{m}^3$ for 03 May 2016 to 05 May 2016
Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)
Grenada, Mississippi
August 2016

Calibration Files: 64MSMS00093 and 64MSMS00100 on 05 May 2016 Used for Survey Files: 64MSMS00094, 64MSMS00095, 64MSMS00096, 64MSMS00097, 64MSMS00098, and 64MSMS00099					
Compound	PM/DM	Intermediate Response Factor (icps/ $\mu\text{g}/\text{m}^3$)	Standard Deviation (icps)	Detection Limit ($\mu\text{g}/\text{m}^3$)	Quantitation Limit ($\mu\text{g}/\text{m}^3$)
Trichloroethene	130/95	38.810	3.5823	0.277	0.923
Trichloroethene	132/97	18.650	3.1648	0.509	1.70
Average:				0.39	1.3
Dichloroethene	96/61	54.445	3.8659	0.213	0.710
Dichloroethene	98/63	18.028	1.6549	0.275	0.918
Average:				0.24	0.81
Tetrachloroethene	164/129	7.9527	5.1256	1.93	6.45
Tetrachloroethene	166/129	5.5065	3.4231	1.86	6.22
Tetrachloroethene	166/131	19.951	4.3313	0.651	2.17
Average:				1.5	4.9
Benzene	78/39	2.3252	2.0123	2.60	8.65
Benzene	78/52	14.871	4.8430	0.977	3.26
Average:				1.8	6.0
Toluene	92/65	34.254	7.5046	0.657	2.19
Toluene	92/91	83.414	12.121	0.436	1.45
Average:				0.55	1.8
Xylene	106/65	14.889	2.3067	0.465	1.55
Xylene	106/91	72.226	8.5945	0.357	1.19
Average:				0.41	1.4
Vinyl Chloride	62/27	0.39540	1.6549	12.6	41.9
Vinyl Chloride	64/27	0.16049	2.8527	53.3	178
Average:				33	110

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

FIGURES

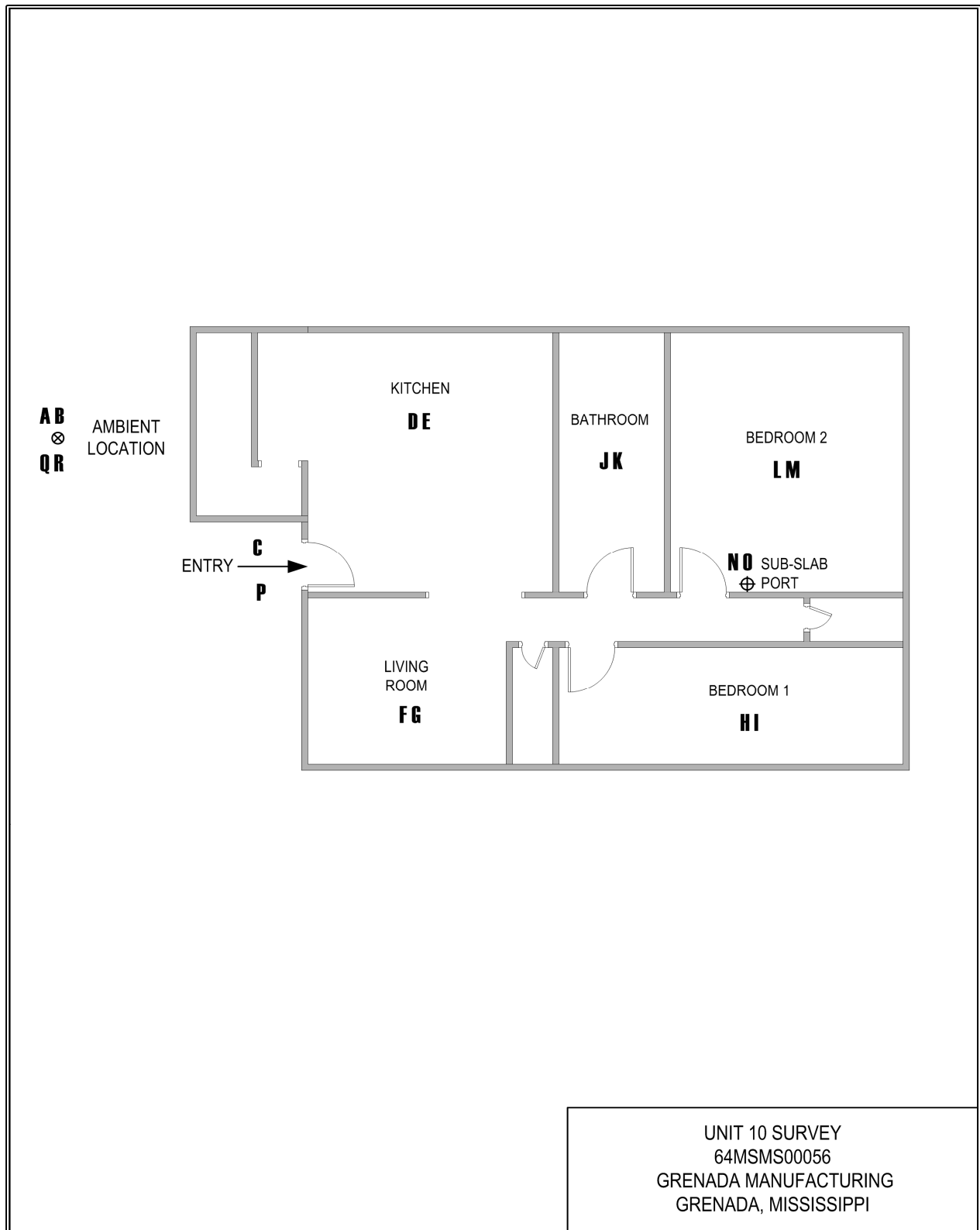


Figure 1a Unit 10 Survey Floor Plan, 64MSMS00056

Figure 1b

TAGA File Event Summary			
File: 64MSMS00056 Acquired on 03 May 2016 at 08:04:45			
Title: Unit 10 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.8	100	Start of the pre-entry ambient
B	3.8	136	End of the pre-entry ambient
C	5.2	187	Entering the unit
D	5.7	206	Start of the kitchen
E	7.9	282	End of the kitchen
F	8.2	295	Start of the living room
G	9.3	332	End of the living room
H	9.9	354	Start of bedroom one
I	10.9	391	End of bedroom one
J	11.3	404	Start of the bathroom
K	12.3	441	End of the bathroom
L	12.7	455	Start of bedroom two
M	13.8	493	End of bedroom two
N	14.3	510	Start of the sub-slab port
O	15.3	546	End of the sub-slab port
P	16.0	573	Exiting the unit
Q	17.0	607	Start of the post-exit ambient
R	18.0	642	End of the post-exit ambient
S	20.4	730	Start of 30 mL/min spike
T	21.4	766	End of 30 mL/min spike

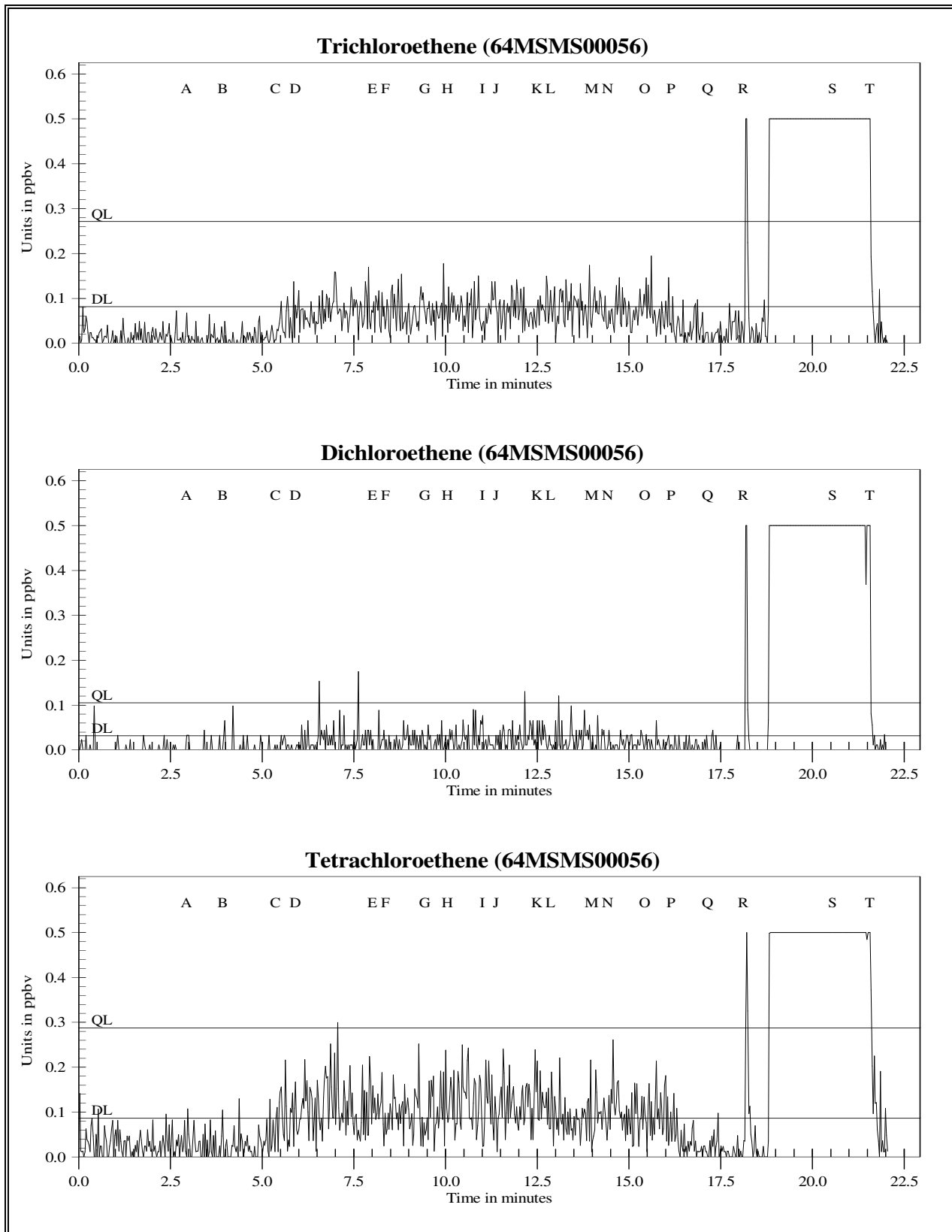


Figure 1c Unit 10 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

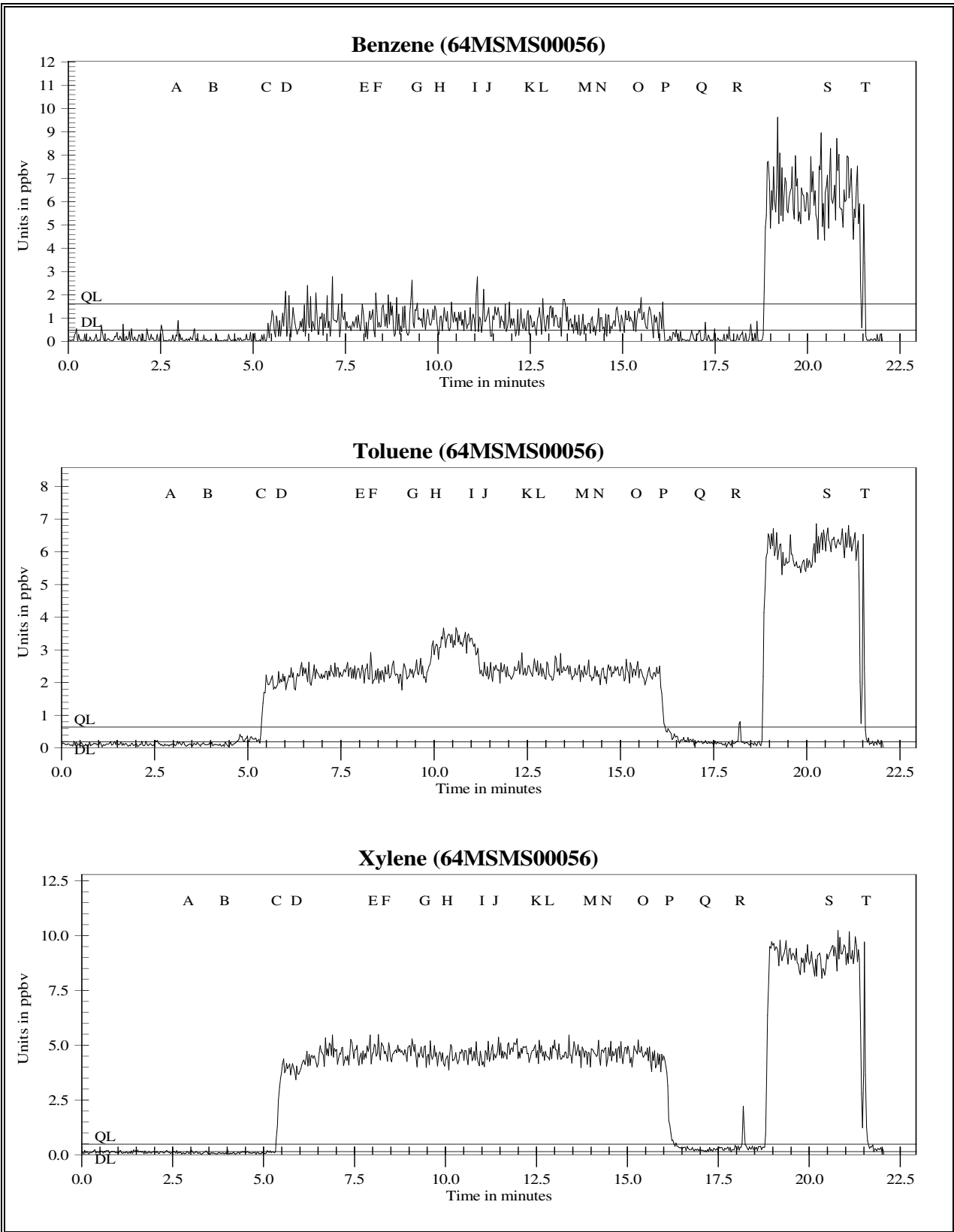


Figure 1d Unit 10 Survey in ppbv for Benzene, Toluene, and Xylenes

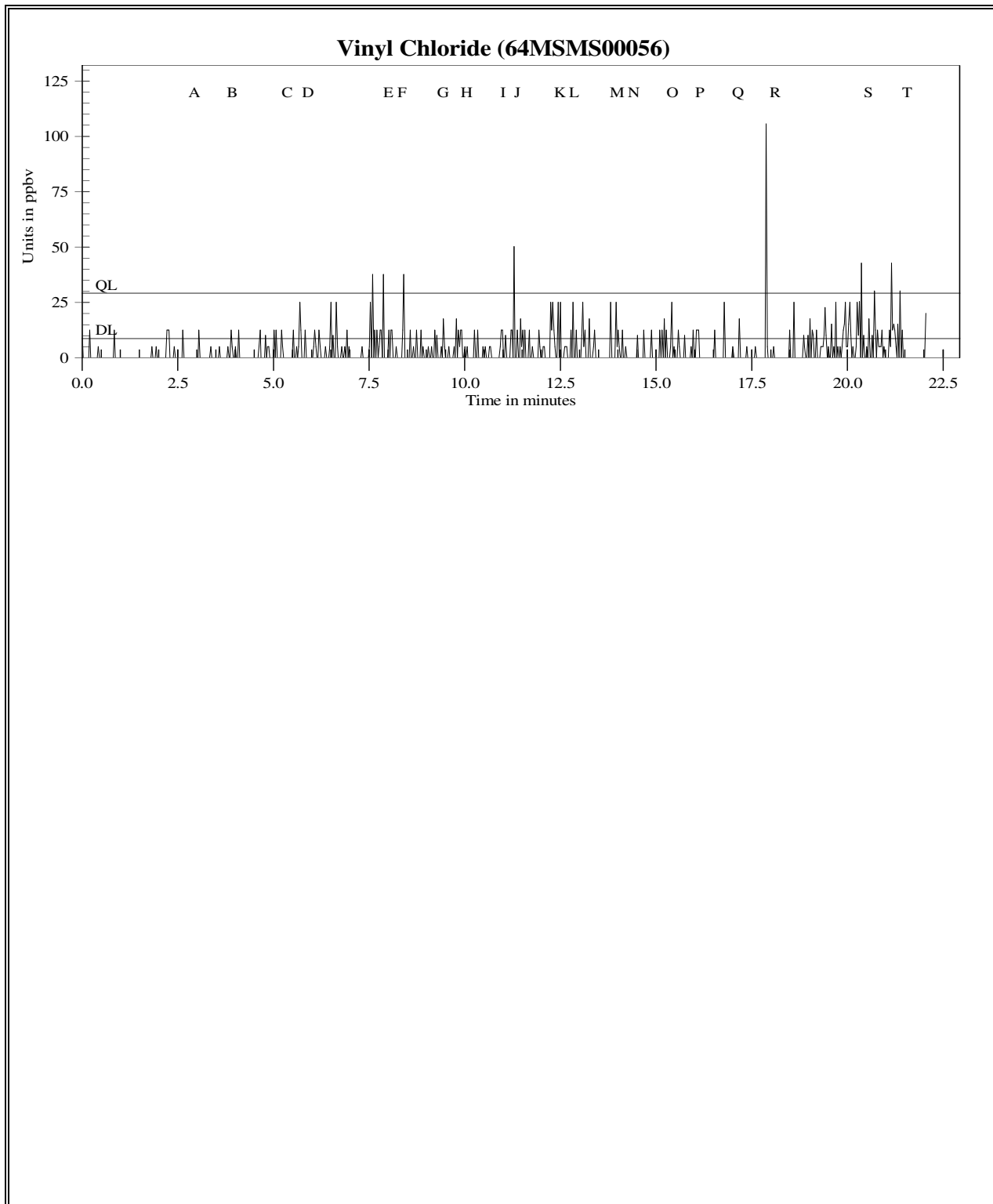


Figure 1e Unit 10 Survey in ppbv for Vinyl Chloride

Figure 1f

TAGA Target Compound Summary in ppbv for Unit 10 Survey File: 64MSMS00056 Acquired on 03 May 2016 at 08:04:45								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.081	0.032	0.086	0.48	0.19	0.15	8.8
Quantitation Limits - QL:		0.27	0.11	0.29	1.6	0.64	0.49	29
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
D - E	Kitchen	DL=0.081	DL=0.032	0.11J	0.90J	2.2	4.4	DL=8.8
F - G	Living room	DL=0.081	DL=0.032	0.10J	0.96J	2.3	4.7	DL=8.8
H - I	Bedroom one	DL=0.081	DL=0.032	0.13J	0.92J	3.2	4.5	DL=8.8
J - K	Bathroom	DL=0.081	DL=0.032	0.11J	0.90J	2.3	4.7	DL=8.8
L - M	Bedroom two	DL=0.081	DL=0.032	0.089J	0.98J	2.4	4.6	DL=8.8
N - O	Sub-slab port	DL=0.081	DL=0.032	0.099J	0.84J	2.3	4.6	DL=8.8
Q - R	Post-exit ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	0.25J	DL=8.8
S - T	30 mL/min spike	6.2	6.6	5.8	6.2	6.2	8.9	DL=8.8

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

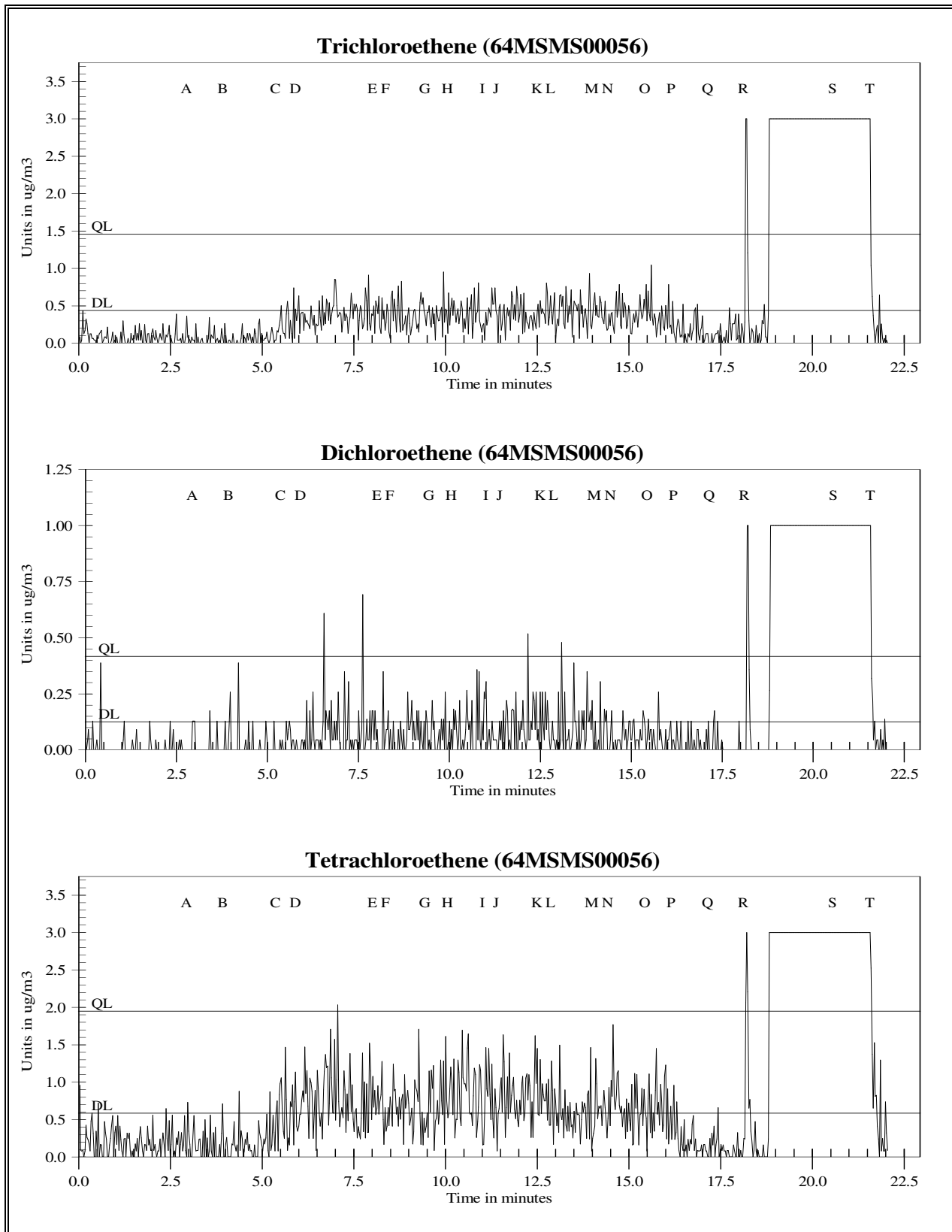


Figure 1g Unit 10 Survey $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

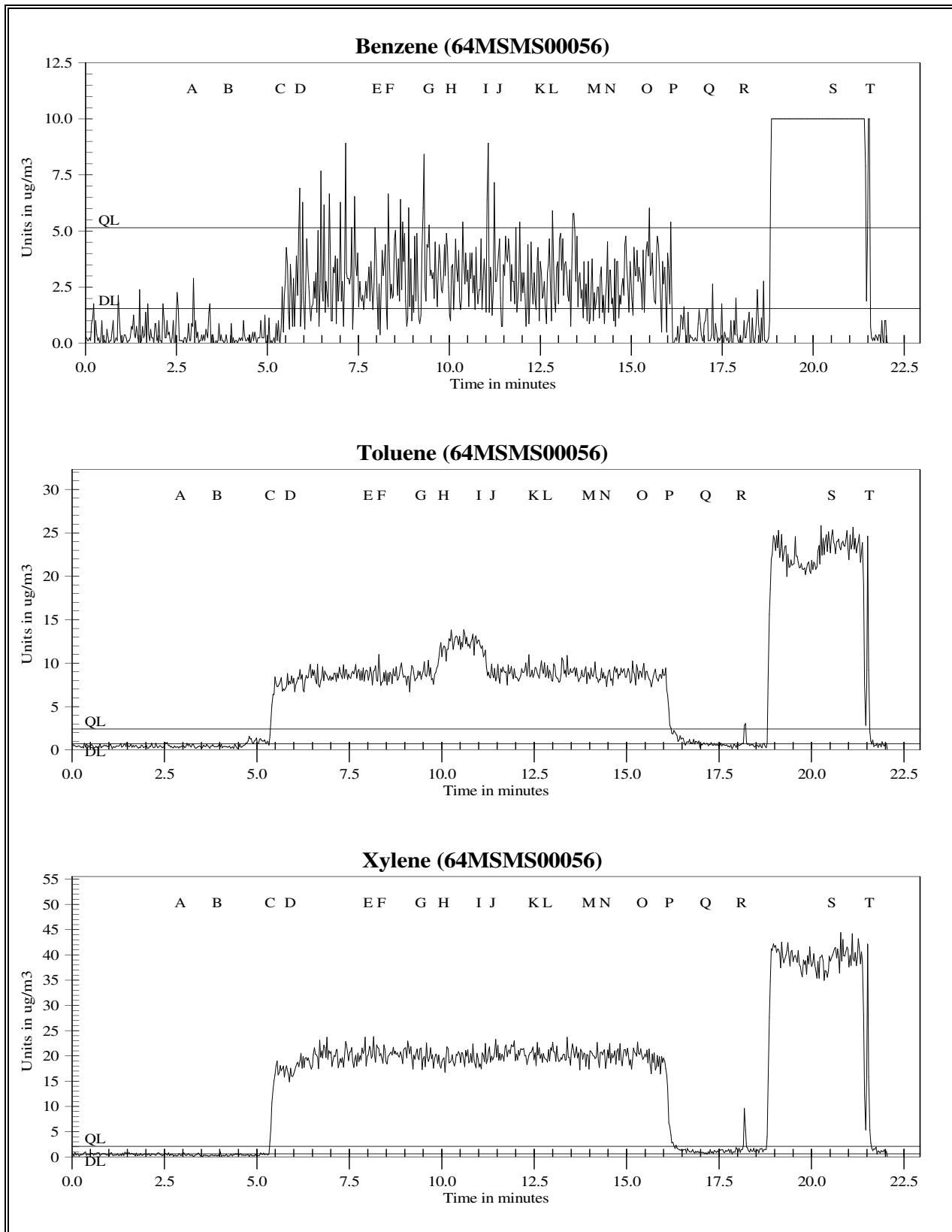


Figure 1h Unit 10 Survey $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

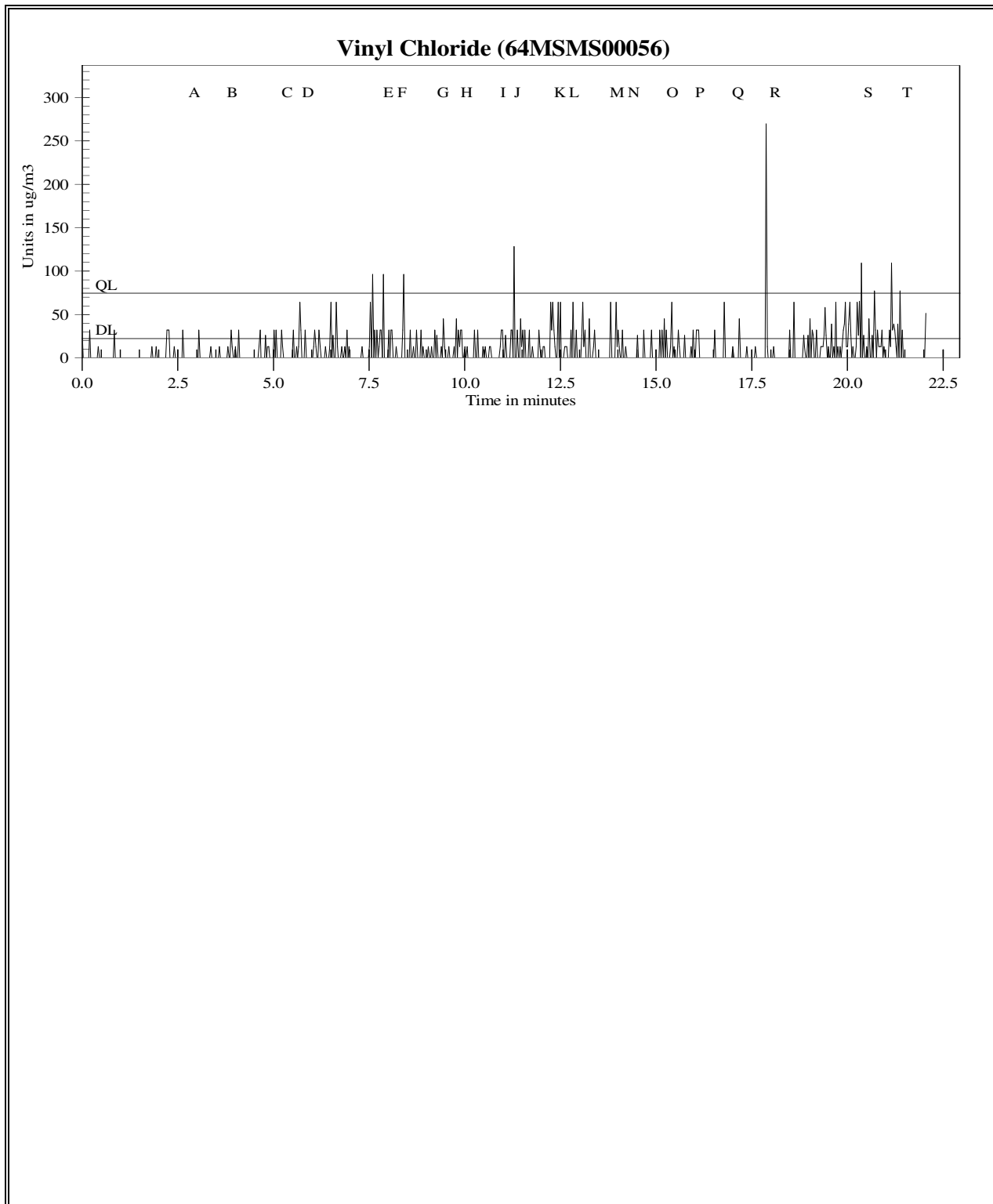


Figure 1i Unit 10 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 1j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 10 Survey File: 64MSMS00056 Acquired on 03 May 2016 at 08:04:45								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.44	0.13	0.58	1.5	0.72	0.64	22
Quantitation Limits - QL:		1.5	0.42	1.9	5.1	2.4	2.1	75
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
D - E	Kitchen	DL=0.44	DL=0.13	0.74J	2.9J	8.4	19	DL=22.
F - G	Living room	DL=0.44	DL=0.13	0.70J	3.1J	8.6	20	DL=22.
H - I	Bedroom one	DL=0.44	DL=0.13	0.85J	2.9J	12	19	DL=22.
J - K	Bathroom	DL=0.44	DL=0.13	0.76J	2.9J	8.8	21	DL=22.
L - M	Bedroom two	DL=0.44	DL=0.13	0.60J	3.1J	8.9	20	DL=22.
N - O	Sub-slab port	DL=0.44	DL=0.13	0.67J	2.7J	8.7	20	DL=22.
Q - R	Post-exit ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	1.1J	DL=22.
S - T	30 mL/min spike	33	26	39	20	23	39	DL=22.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

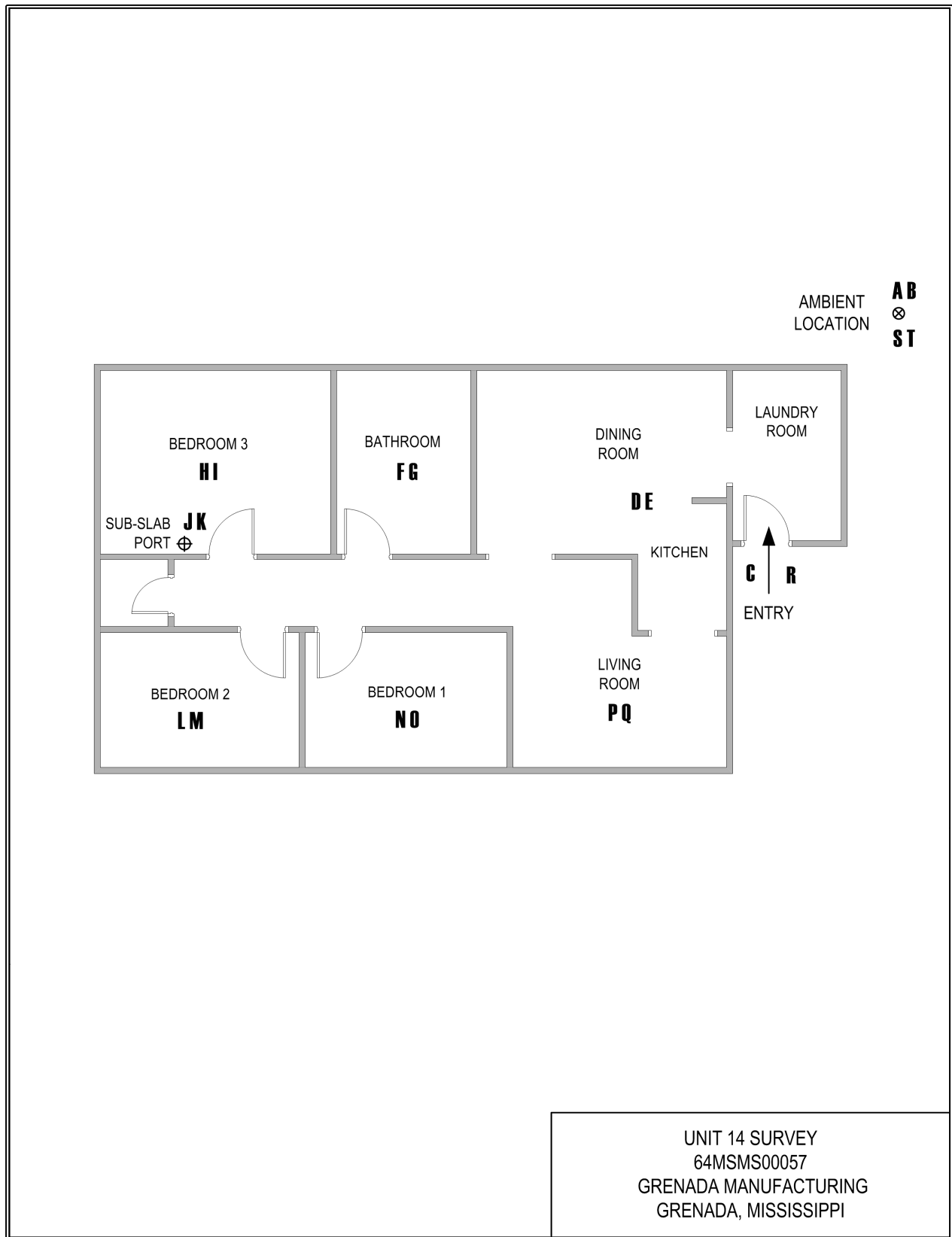


Figure 2a Unit 14 Survey Floor Plan, 64MSMS00057

Figure 2b

TAGA File Event Summary			
File: 64MSMS00057 Acquired on 03 May 2016 at 09:35:02			
Title: Unit 14 Survey			
Flag	Offset Time	Offset Sequence	Description
A	1.9	69	Start of the pre-entry ambient
B	2.9	106	End of the pre-entry ambient
C	4.8	172	Entering the unit
D	5.6	200	Start of the kitchen / dining room
E	6.6	237	End of the kitchen / dining room
F	7.4	265	Start of the bathroom
G	8.4	301	End of the bathroom
H	8.6	307	Start of bedroom three
I	9.6	344	End of bedroom three
J	9.8	352	Start of the sub-slab port
K	10.8	388	End of the sub-slab port
L	11.1	398	Start of bedroom two
M	12.2	436	End of bedroom two
N	12.5	447	Start of bedroom one
O	13.6	486	End of bedroom one
P	14.0	499	Start of the living room
Q	15.0	537	End of the living room
R	15.7	561	Exiting the unit
S	16.5	591	Start of the post-exit ambient
T	17.5	626	End of the post-exit ambient
U	20.4	730	Start of 30 mL/min spike
V	22.4	802	End of 30 mL/min spike

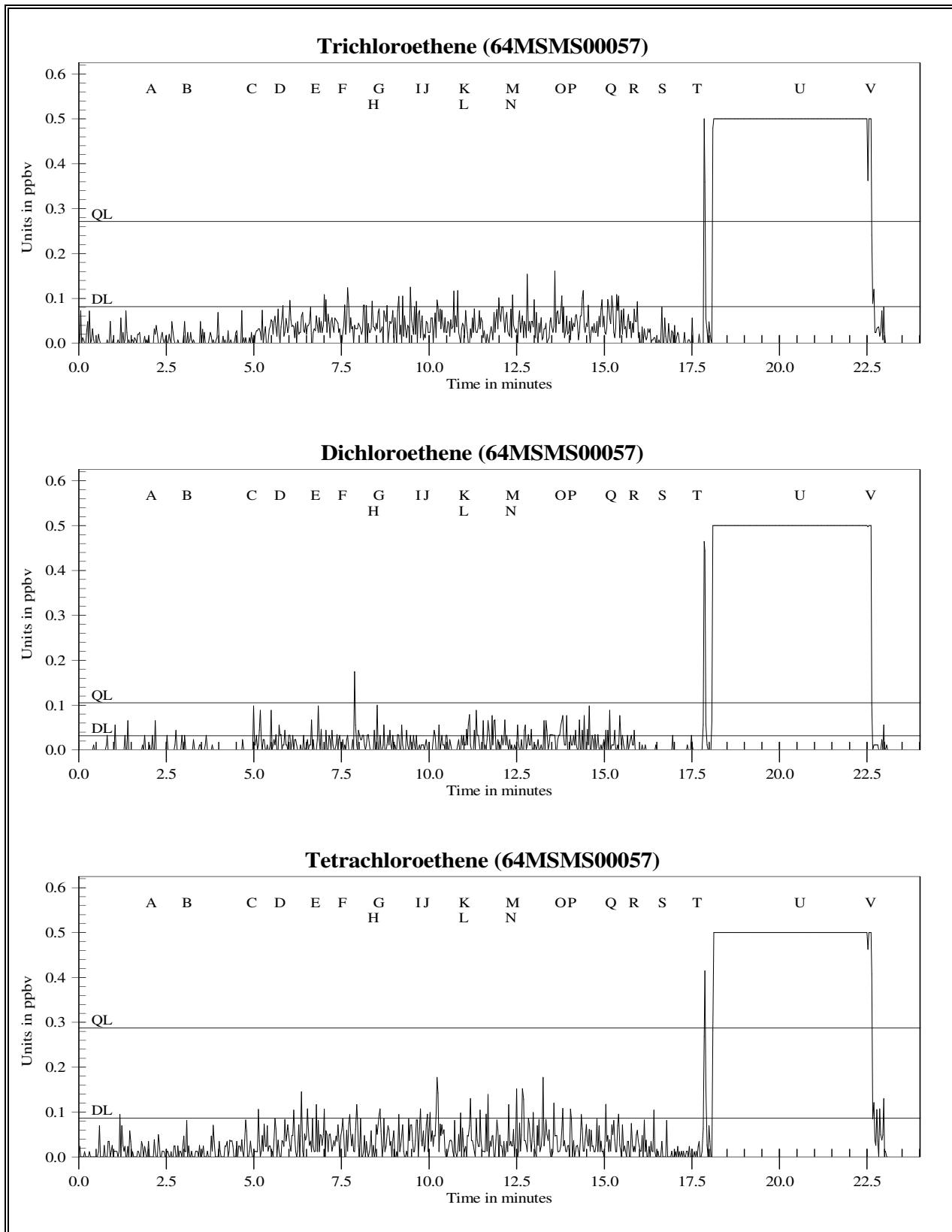


Figure 2c Unit 14 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

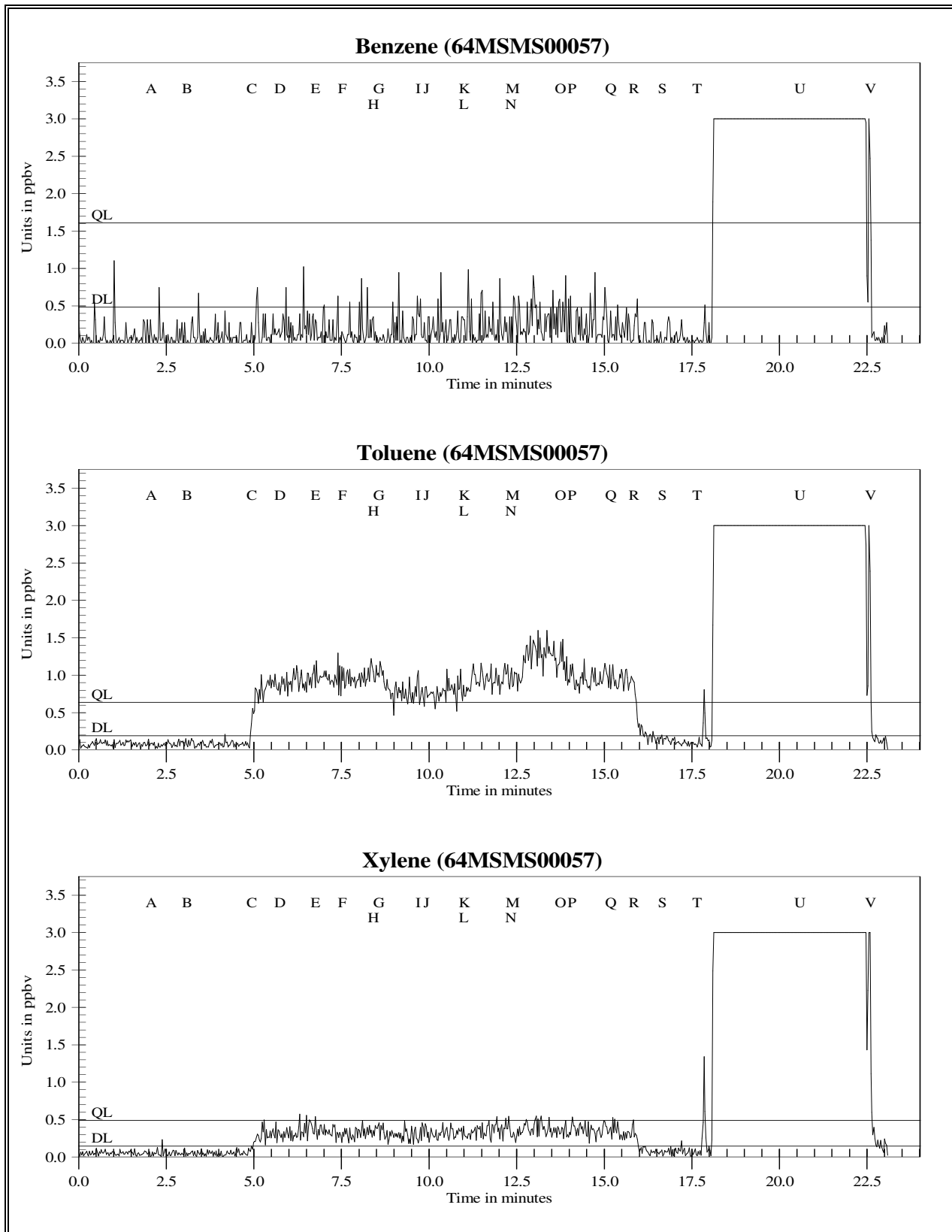


Figure 2d Unit 14 Survey in ppbv for Benzene, Toluene, and Xylenes

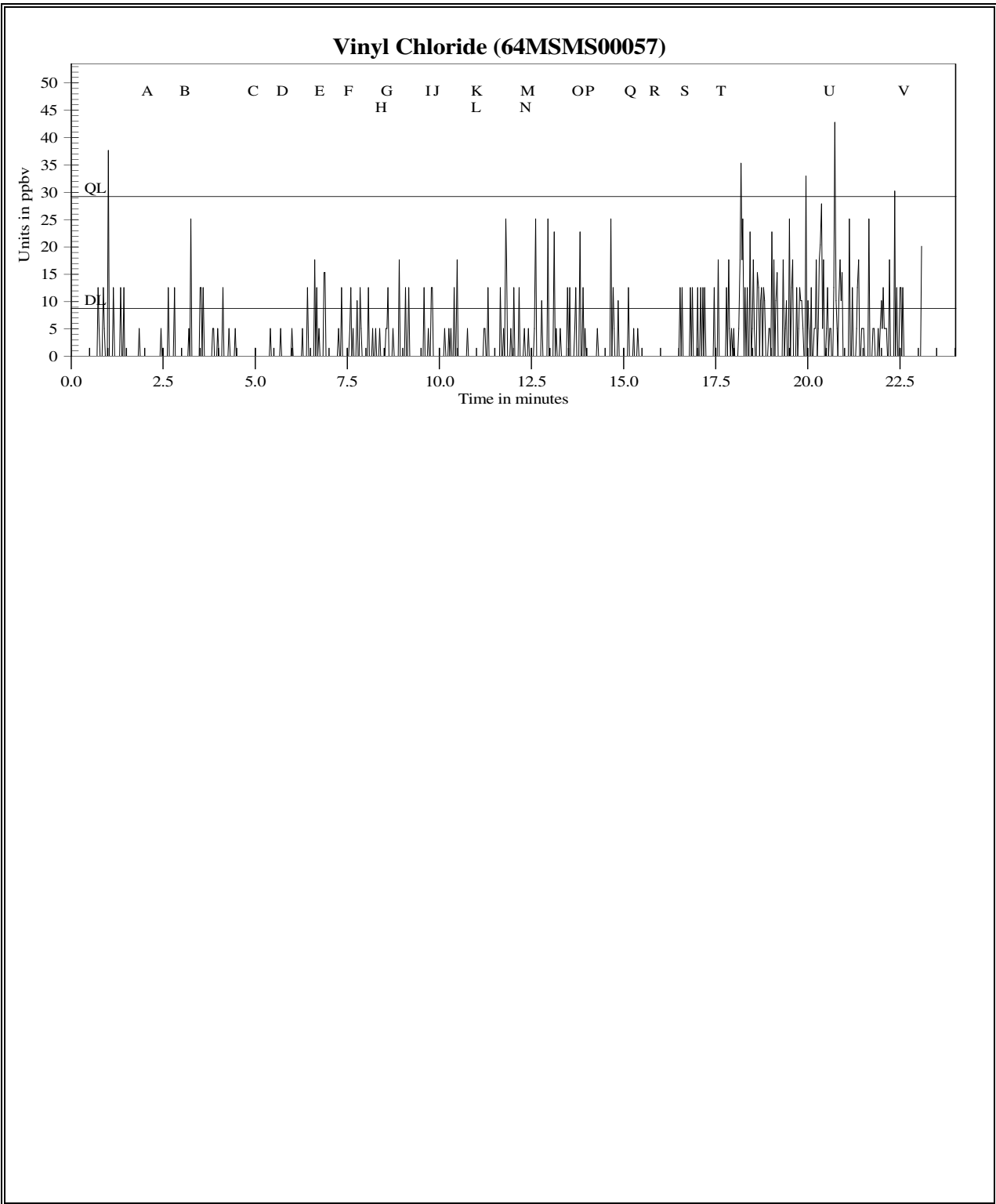


Figure 2e Unit 14 Survey in ppbv for Vinyl Chloride

Figure 2f

TAGA Target Compound Summary in ppbv for Unit 14 Survey File: 64MSMS00057 Acquired on 03 May 2016 at 09:35:02								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.081	0.032	0.086	0.48	0.19	0.15	8.8
Quantitation Limits - QL:		0.27	0.11	0.29	1.6	0.64	0.49	29
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
D - E	Kitchen / dining room	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.91	0.33J	DL=8.8
F - G	Bathroom	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.98	0.32J	DL=8.8
H - I	Bedroom three	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.81	0.30J	DL=8.8
J - K	Sub-slab port	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.77	0.32J	DL=8.8
L - M	Bedroom two	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.94	0.36J	DL=8.8
N - O	Bedroom one	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.2	0.38J	DL=8.8
P - Q	Living room	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.95	0.36J	DL=8.8
S - T	Post-exit ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
U - V	30 mL/min spike	5.6	6.2	5.3	6.2	6.2	9.1	DL=8.8

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

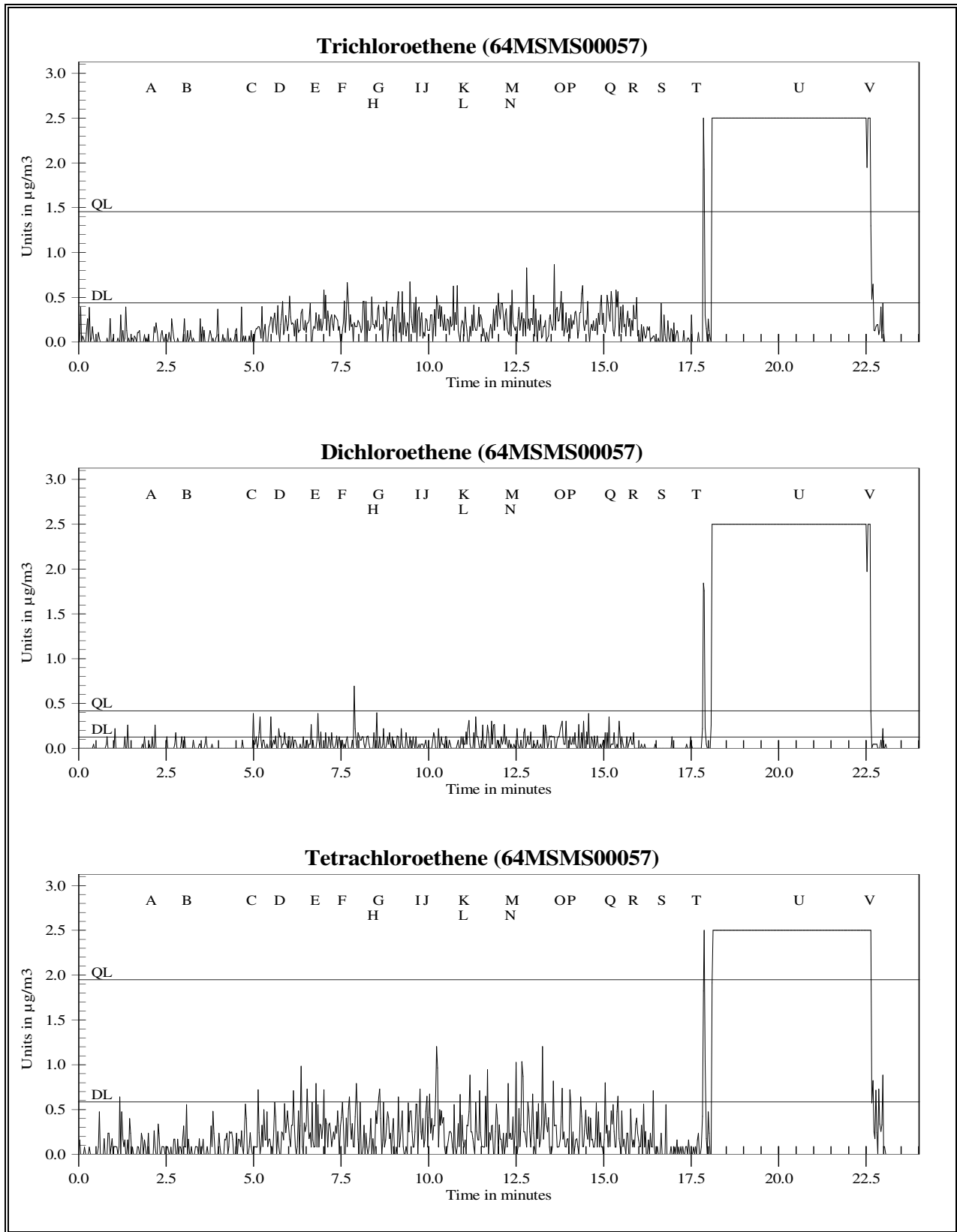


Figure 2g Unit 14 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

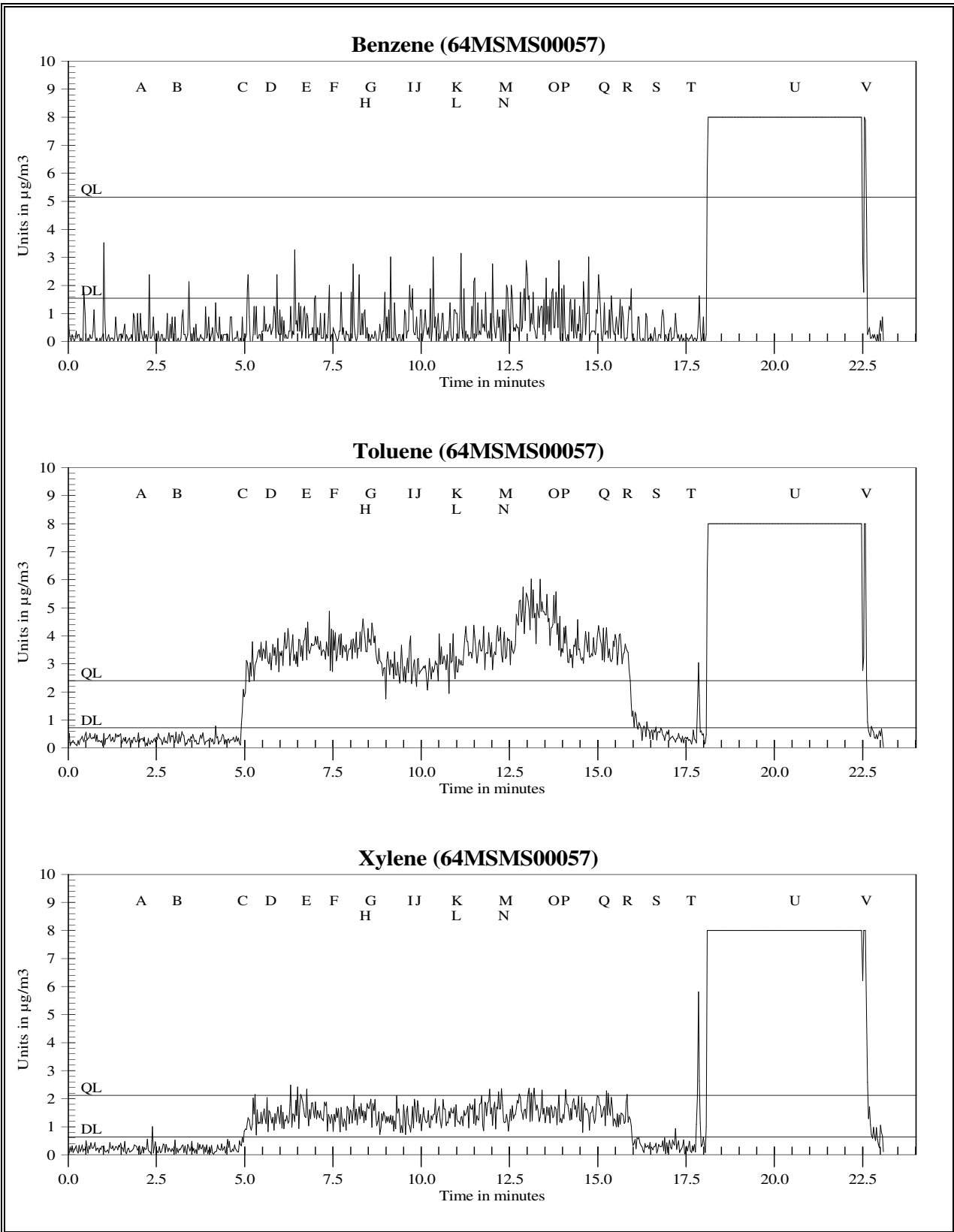


Figure 2h Unit 14 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

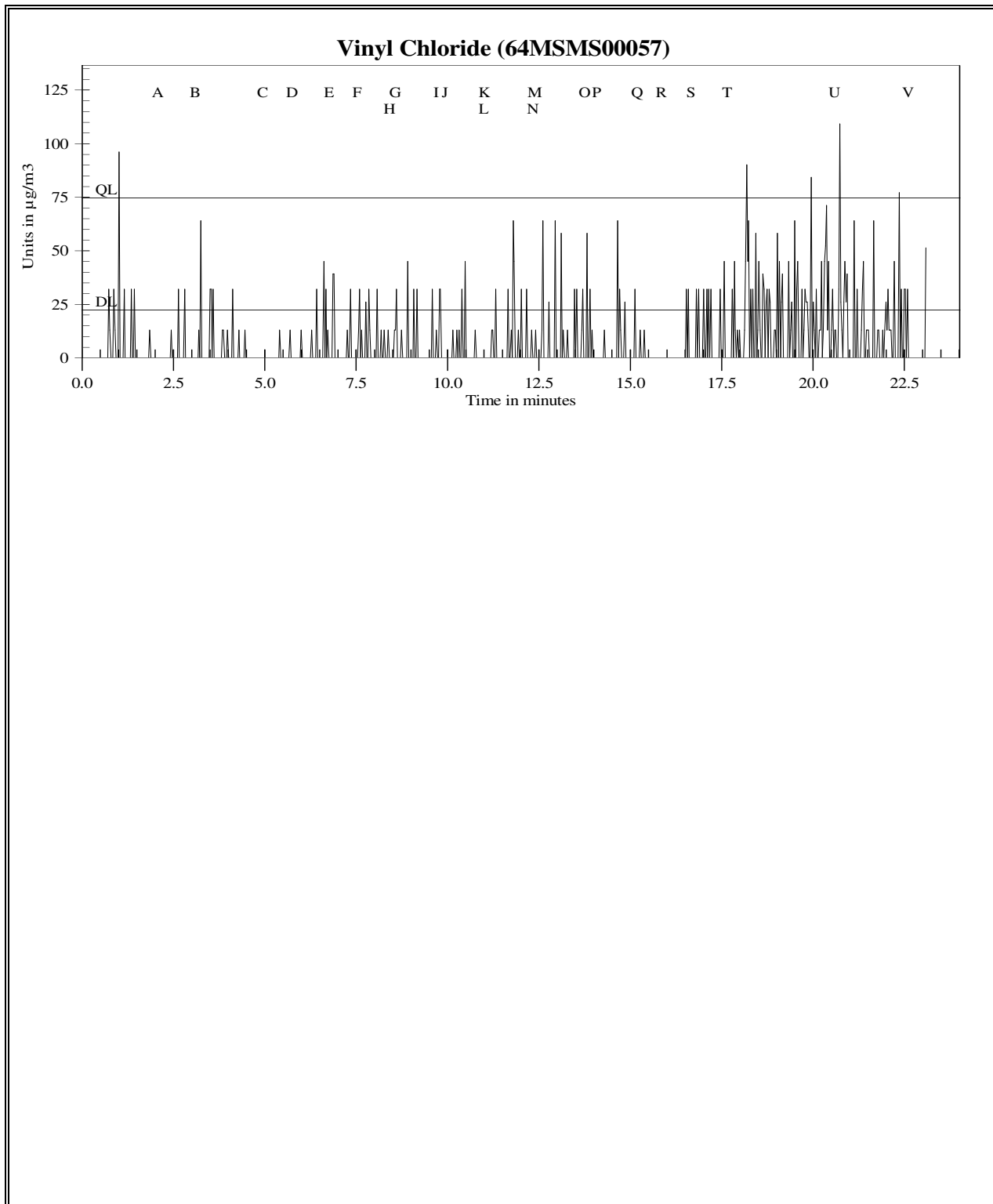


Figure 2i Unit 14 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 2j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 14 Survey File: 64MSMS00057 Acquired on 03 May 2016 at 09:35:02								
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride	
Detection Limits - DL:	0.44	0.13	0.58	1.5	0.72	0.64	22	
Quantitation Limits - QL:	1.5	0.42	1.9	5.1	2.4	2.1	75	
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
D - E	Kitchen / dining room	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.4	1.4J	DL=22.
F - G	Bathroom	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.7	1.4J	DL=22.
H - I	Bedroom three	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.0	1.3J	DL=22.
J - K	Sub-slab port	DL=0.44	DL=0.13	DL=0.58	DL=1.5	2.9	1.4J	DL=22.
L - M	Bedroom two	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.6	1.5J	DL=22.
N - O	Bedroom one	DL=0.44	DL=0.13	DL=0.58	DL=1.5	4.7	1.7J	DL=22.
P - Q	Living room	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.6	1.6J	DL=22.
S - T	Post-exit ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
U - V	30 mL/min spike	30	25	36	20	23	40	DL=22.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

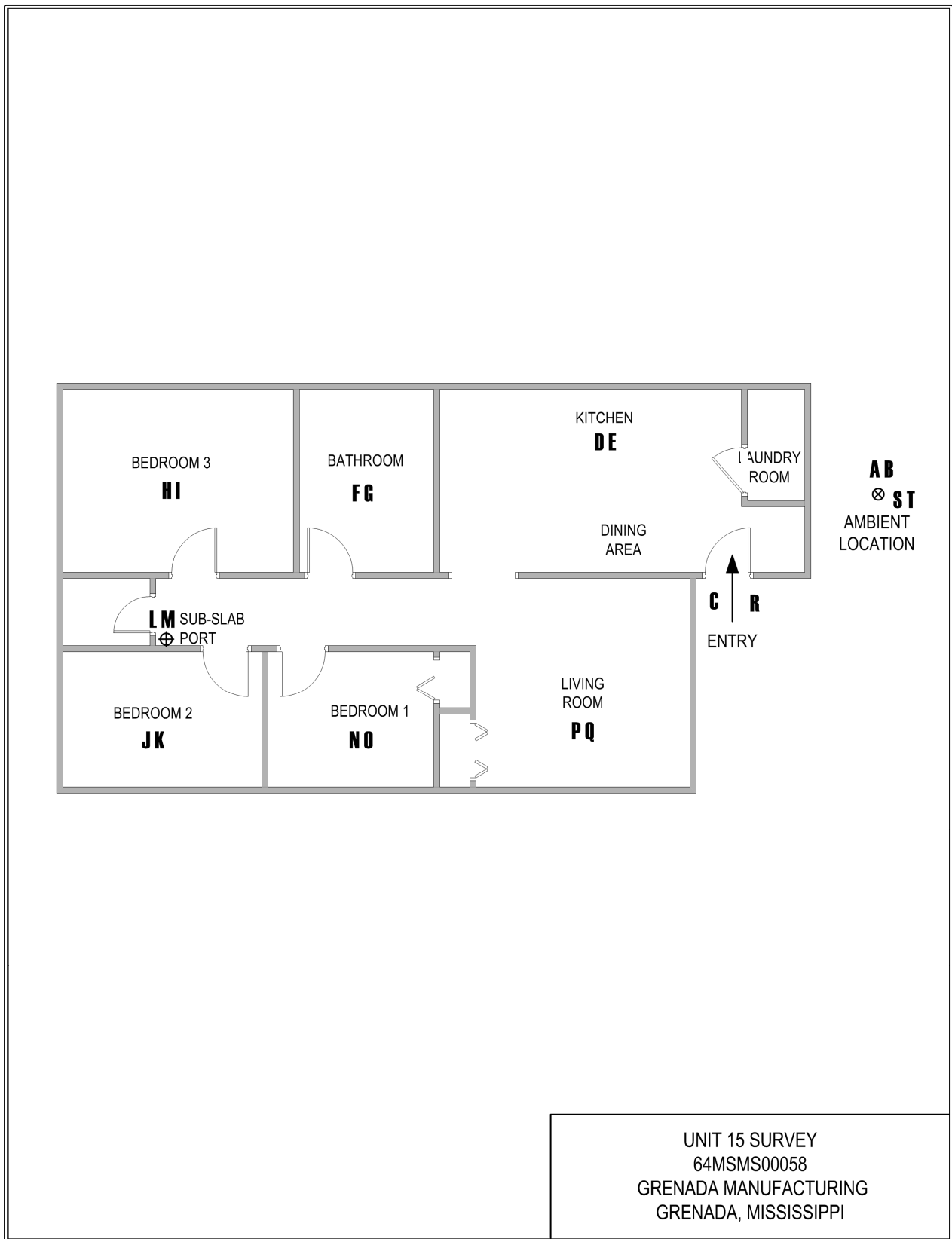


Figure 3a Unit 15 Survey Floor Plan, 64MSMS00058

Figure 3b

TAGA File Event Summary			
File: 64MSMS00058 Acquired on 03 May 2016 at 10:24:31			
Title: Unit 15 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.6	94	Start of the pre-entry ambient
B	3.7	132	End of the pre-entry ambient
C	6.2	222	Entering the unit
D	7.2	259	Start of the kitchen / dining area
E	8.2	295	End of the kitchen / dining area
F	8.6	309	Start of the bathroom
G	9.6	345	End of the bathroom
H	9.9	353	Start of bedroom three
I	11.0	394	End of bedroom three
J	11.3	406	Start of bedroom two
K	12.4	442	End of bedroom two
L	12.6	451	Start of the sub-slab port
M	13.7	489	End of the sub-slab port
N	14.1	504	Start of bedroom one
O	15.1	540	End of bedroom one
P	15.5	554	Start of the living room
Q	16.5	591	End of the living room
R	17.0	607	Exiting the unit
S	18.0	645	Start of the post-exit ambient
T	19.1	683	End of the post-exit ambient
U	21.5	768	Start of 30 mL/min spike
V	24.4	873	End of 30 mL/min spike

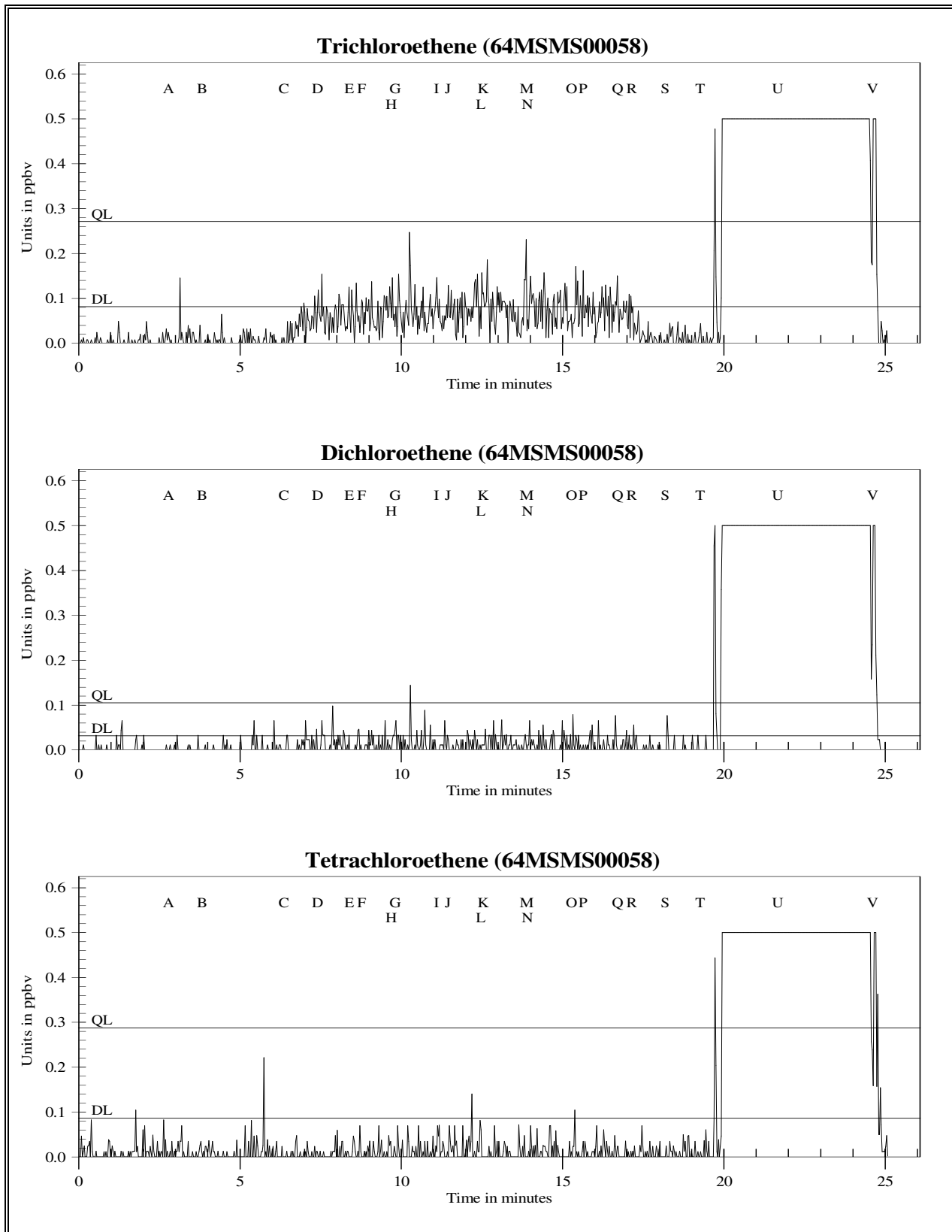


Figure 3c Unit 15 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

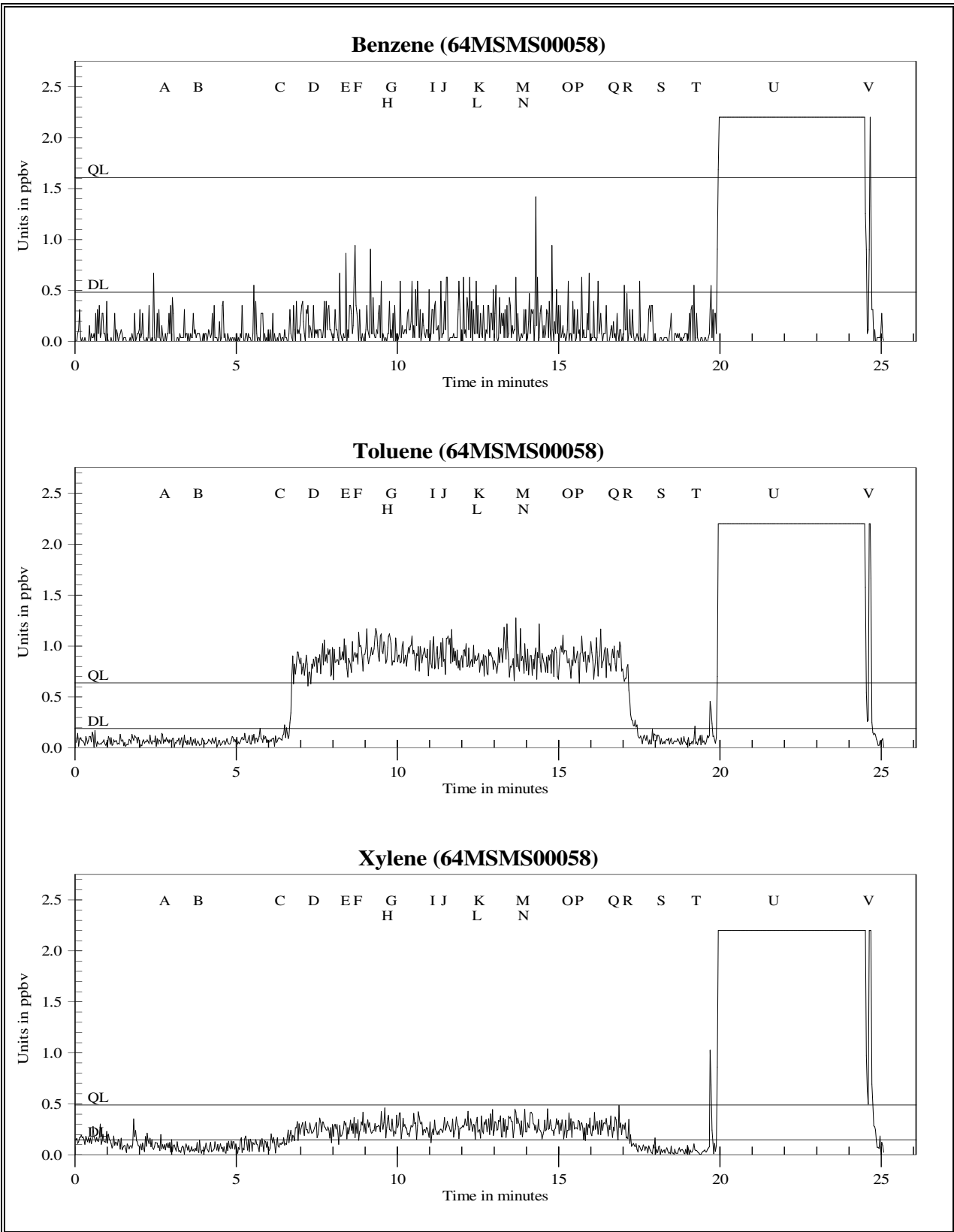


Figure 3d Unit 15 Survey in ppbv for Benzene, Toluene, and Xylenes

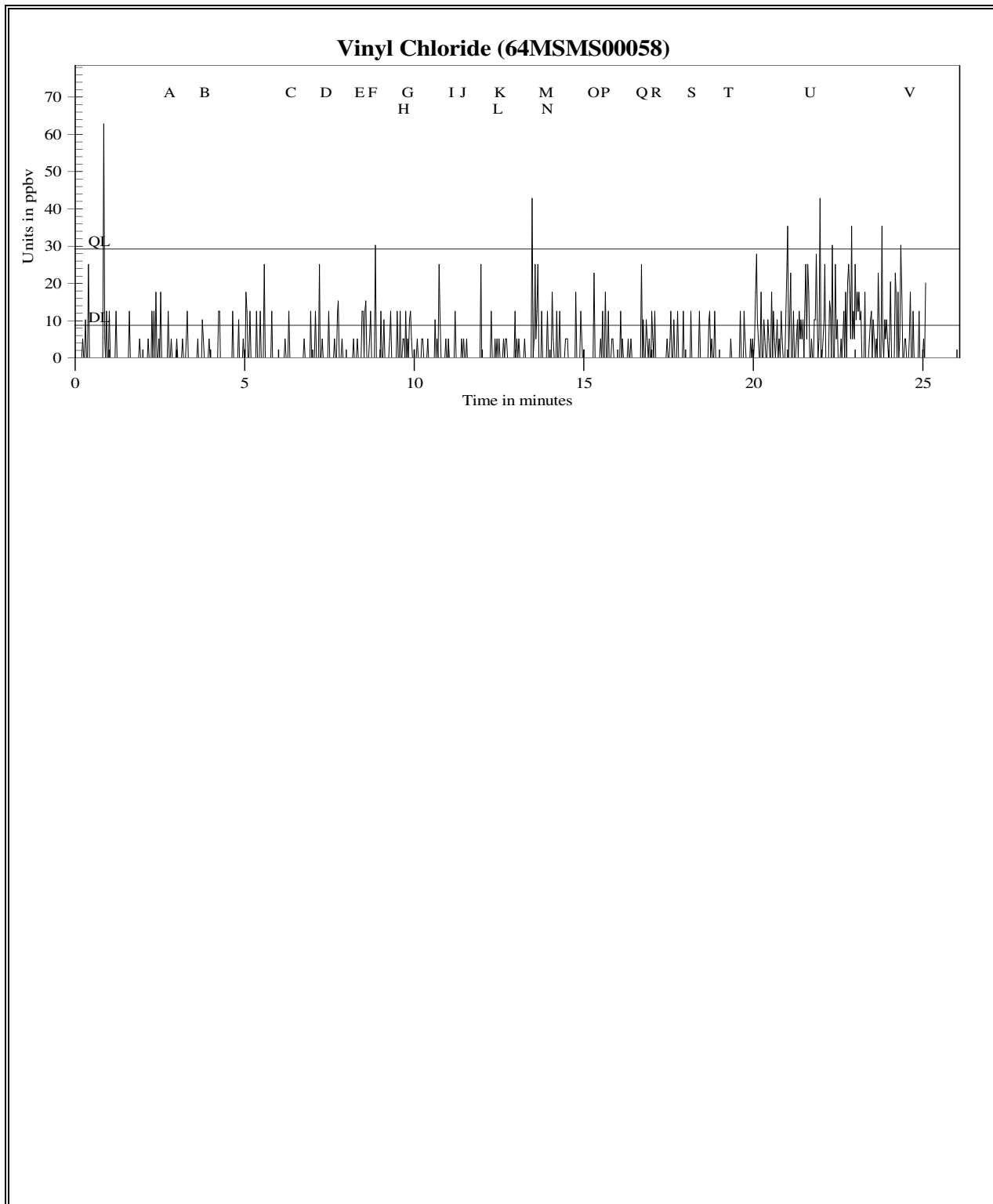


Figure 3e Unit 15 Survey in ppbv for Vinyl Chloride

Figure 3f

TAGA Target Compound Summary in ppbv for Unit 15 Survey File: 64MSMS00058 Acquired on 03 May 2016 at 10:24:31								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.081	0.032	0.086	0.48	0.19	0.15	8.8
Quantitation Limits - QL:		0.27	0.11	0.29	1.6	0.64	0.49	29
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
D - E	Kitchen	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.85	0.25J	DL=8.8
F - G	Bathroom	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.96	0.28J	DL=8.8
H - I	Bedroom three	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.91	0.27J	DL=8.8
J - K	Bedroom two	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.91	0.28J	DL=8.8
L - M	Sub-slab port	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.88	0.30J	DL=8.8
N - O	Bedroom one	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.87	0.28J	DL=8.8
P - Q	Living room	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.89	0.27J	DL=8.8
S - T	Post-exit ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
U - V	30 mL/min spike	5.3	5.9	4.8	5.8	5.6	8.1	DL=8.8

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

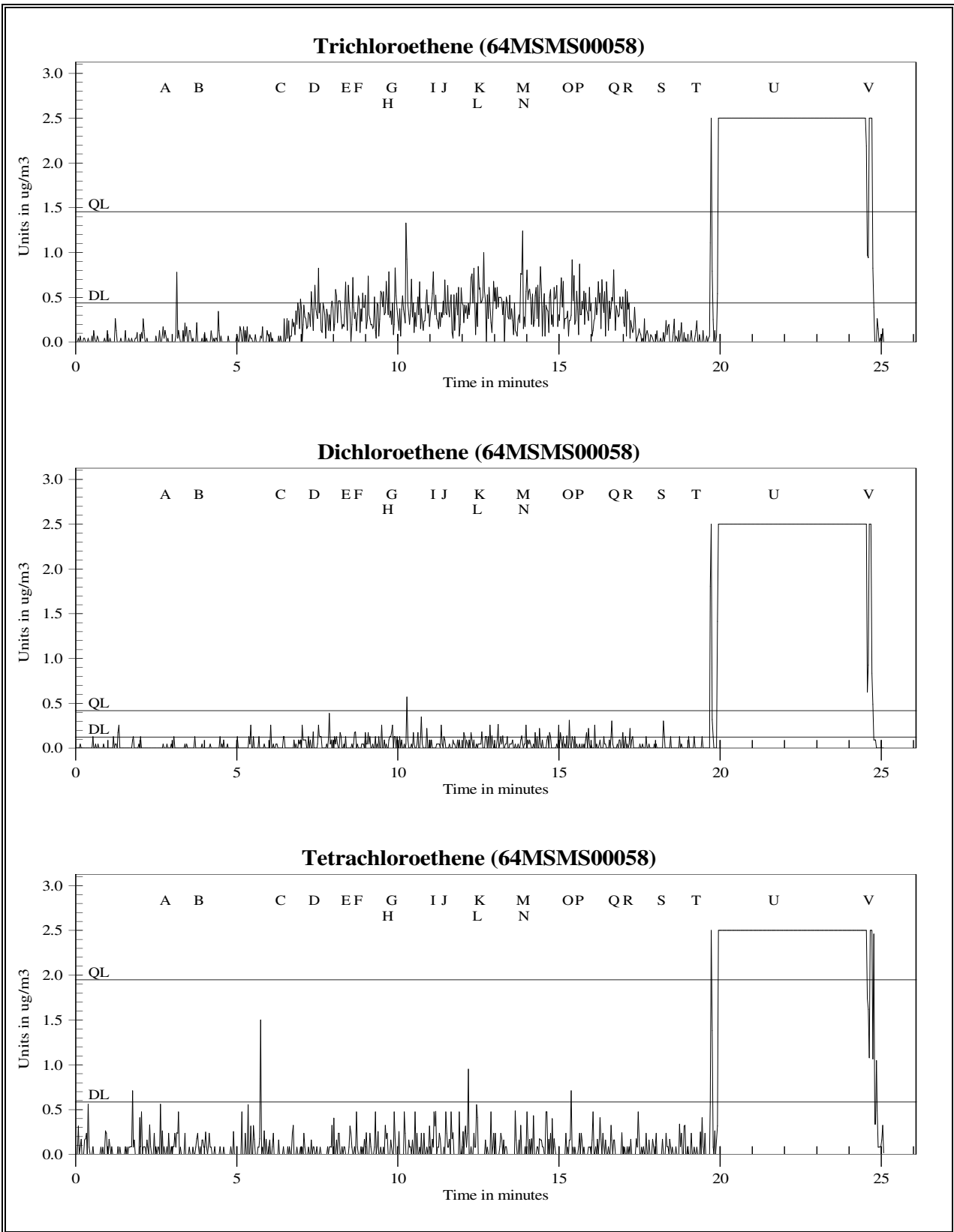


Figure 3g Unit 15 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

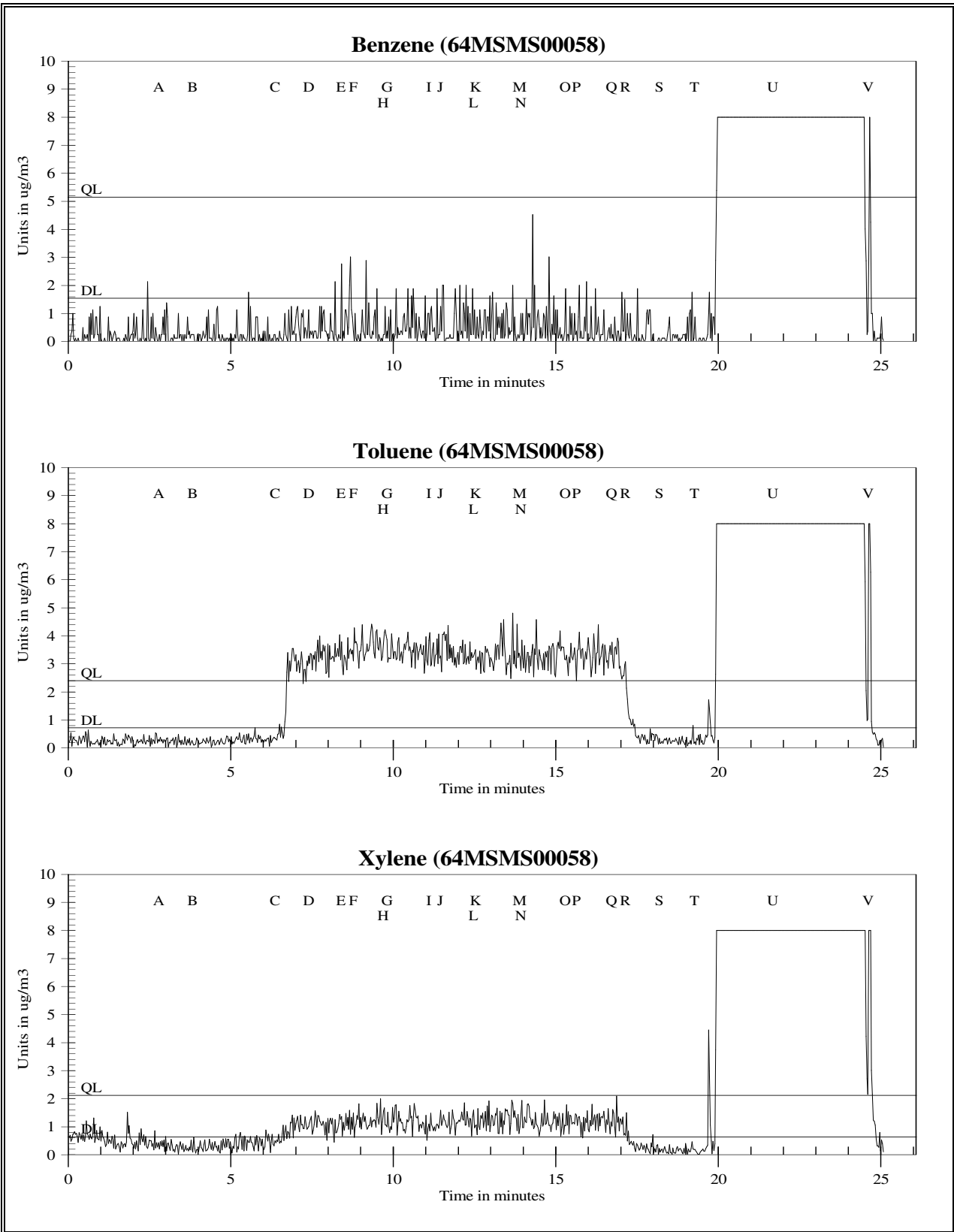


Figure 3h Unit 15 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

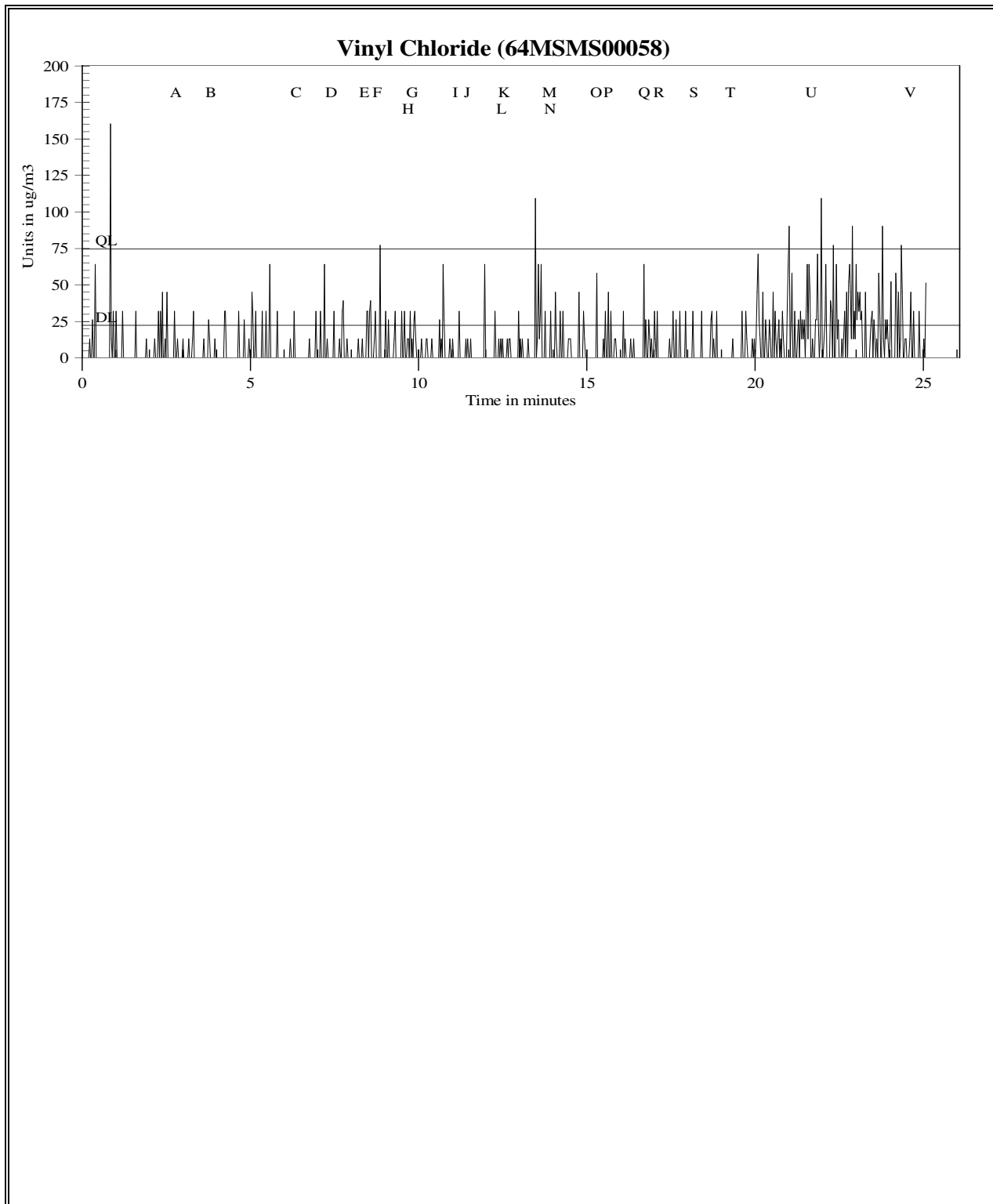


Figure 3i Unit 15 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 3j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 15 Survey File: 64MSMS00058 Acquired on 03 May 2016 at 10:24:31								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.44	0.13	0.58	1.5	0.72	0.64	22
Quantitation Limits - QL:		1.5	0.42	1.9	5.1	2.4	2.1	75
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
D - E	Kitchen	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.2	1.1J	DL=22.
F - G	Bathroom	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.6	1.2J	DL=22.
H - I	Bedroom three	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.4	1.2J	DL=22.
J - K	Bedroom two	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.4	1.2J	DL=22.
L - M	Sub-slab port	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.3	1.3J	DL=22.
N - O	Bedroom one	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.3	1.2J	DL=22.
P - Q	Living room	DL=0.44	DL=0.13	DL=0.58	DL=1.5	3.3	1.2J	DL=22.
S - T	Post-exit ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
U - V	30 mL/min spike	29	24	32	19	21	35	DL=22.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

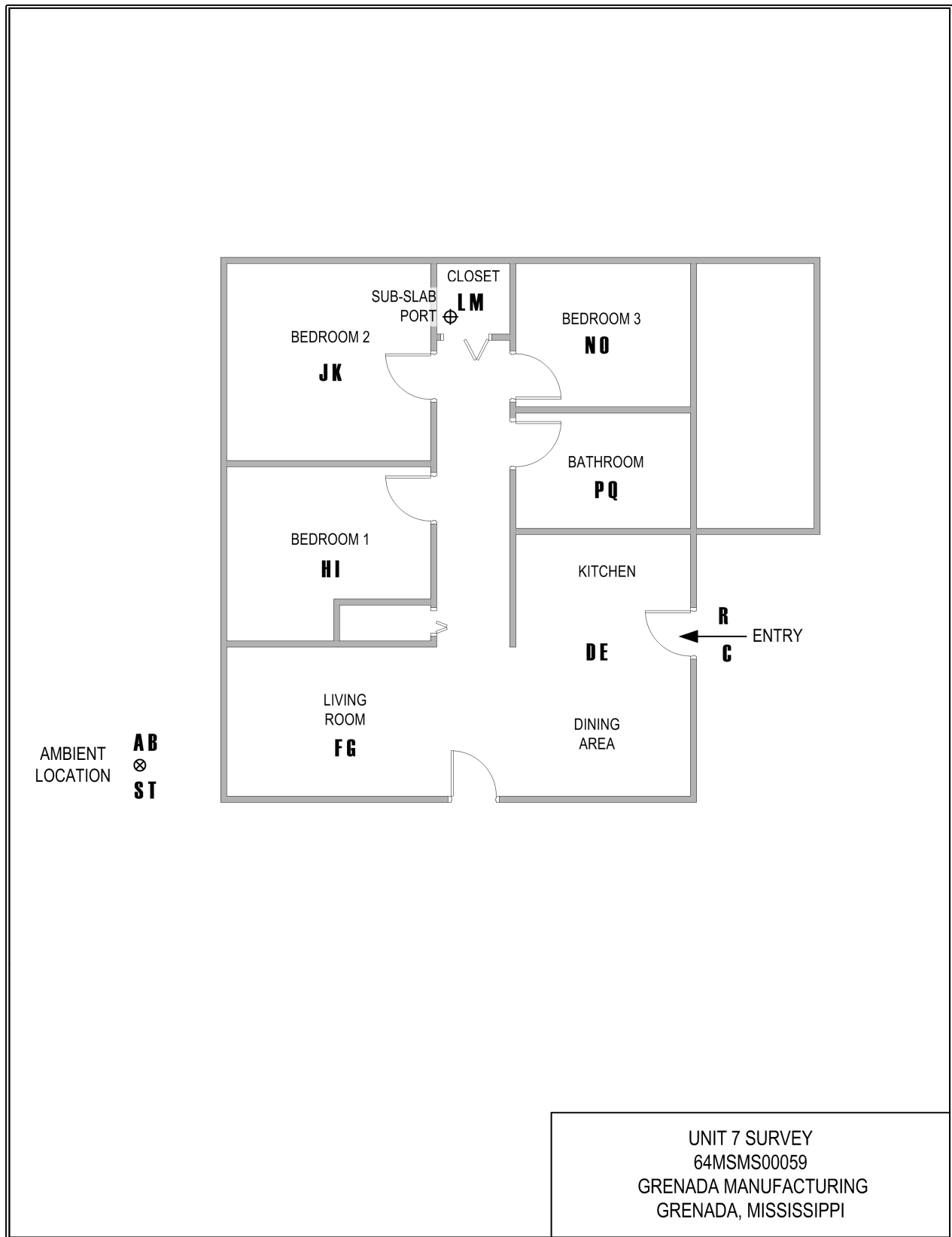


Figure 4a Unit 7 Survey Floor Plan, 64MSMS00059

Figure 4b

TAGA File Event Summary			
File: 64MSMS00059 Acquired on 03 May 2016 at 11:24:52			
Title: Unit 7 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.0	73	Start of the pre-entry ambient
B	3.0	108	End of the pre-entry ambient
C	5.0	180	Entering the unit
D	6.0	215	Start of the kitchen / dining area
E	7.0	252	End of the kitchen / dining area
F	7.3	260	Start of the living room
G	8.3	296	End of the living room
H	8.7	310	Start of bedroom one
I	9.7	347	End of bedroom one
J	10.0	358	Start of bedroom two
K	10.5	376	End of bedroom two
L	11.5	411	Start of the sub-slab port
M	12.5	447	End of the sub-slab port
N	12.7	456	Start of bedroom three
O	13.8	493	End of bedroom three
P	14.0	501	Start of the bathroom
Q	15.2	542	End of the bathroom
R	15.7	562	Exiting the unit
S	17.1	612	Start of the post-exit ambient
T	18.1	647	End of the post-exit ambient
U	21.2	757	Start of 30 mL/min spike
V	22.8	813	End of 30 mL/min spike

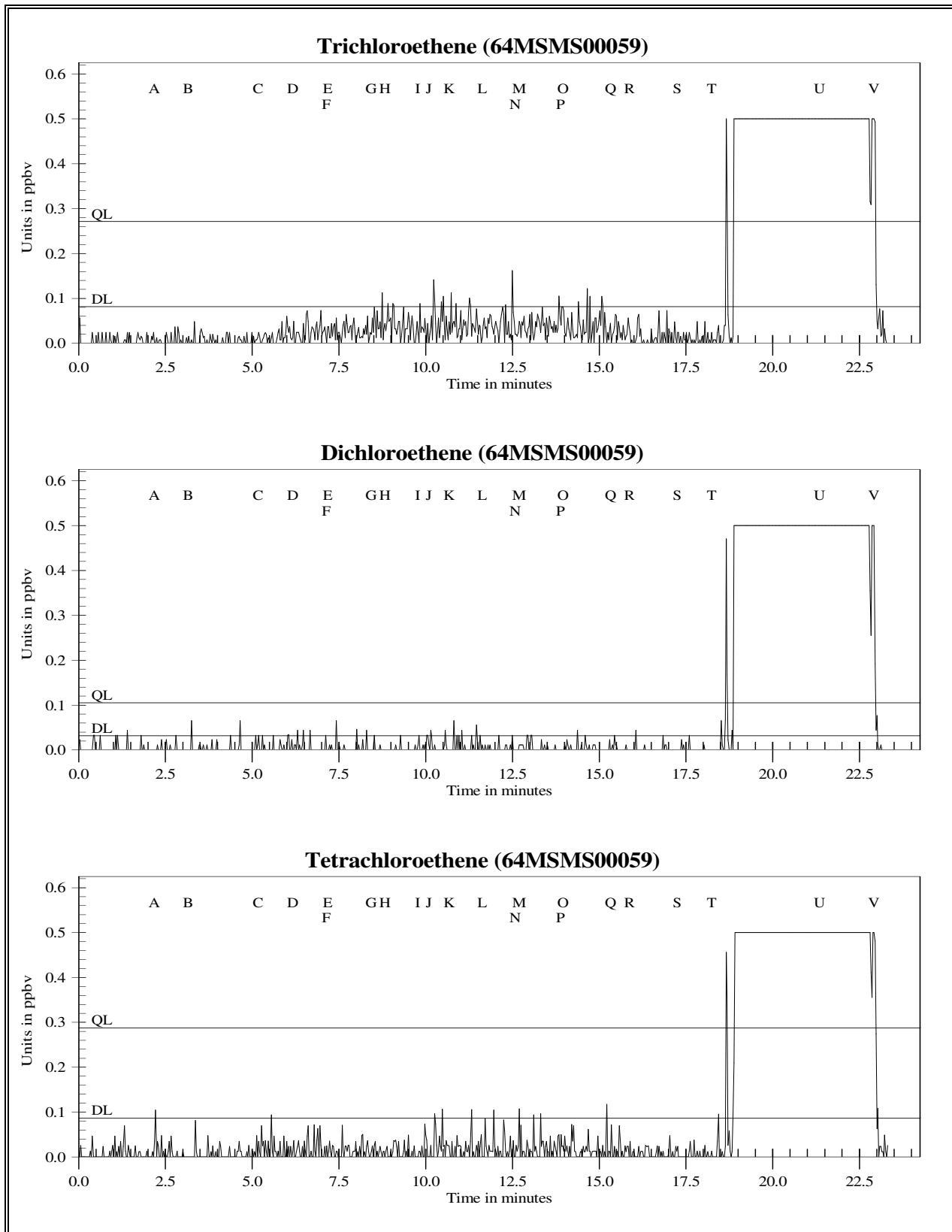


Figure 4c Unit 7 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

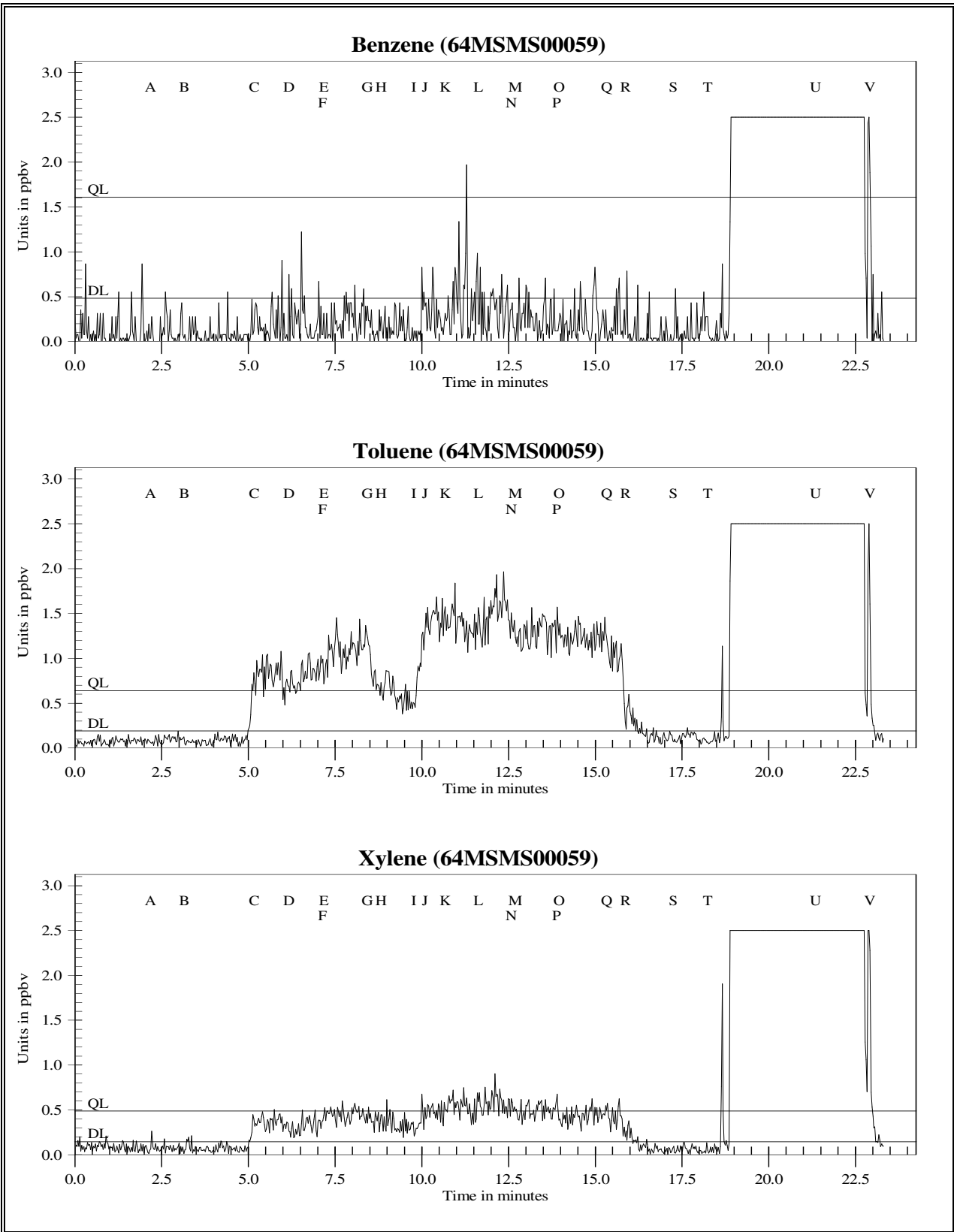


Figure 4d Unit 7 Survey in ppbv for Benzene, Toluene, and Xylenes

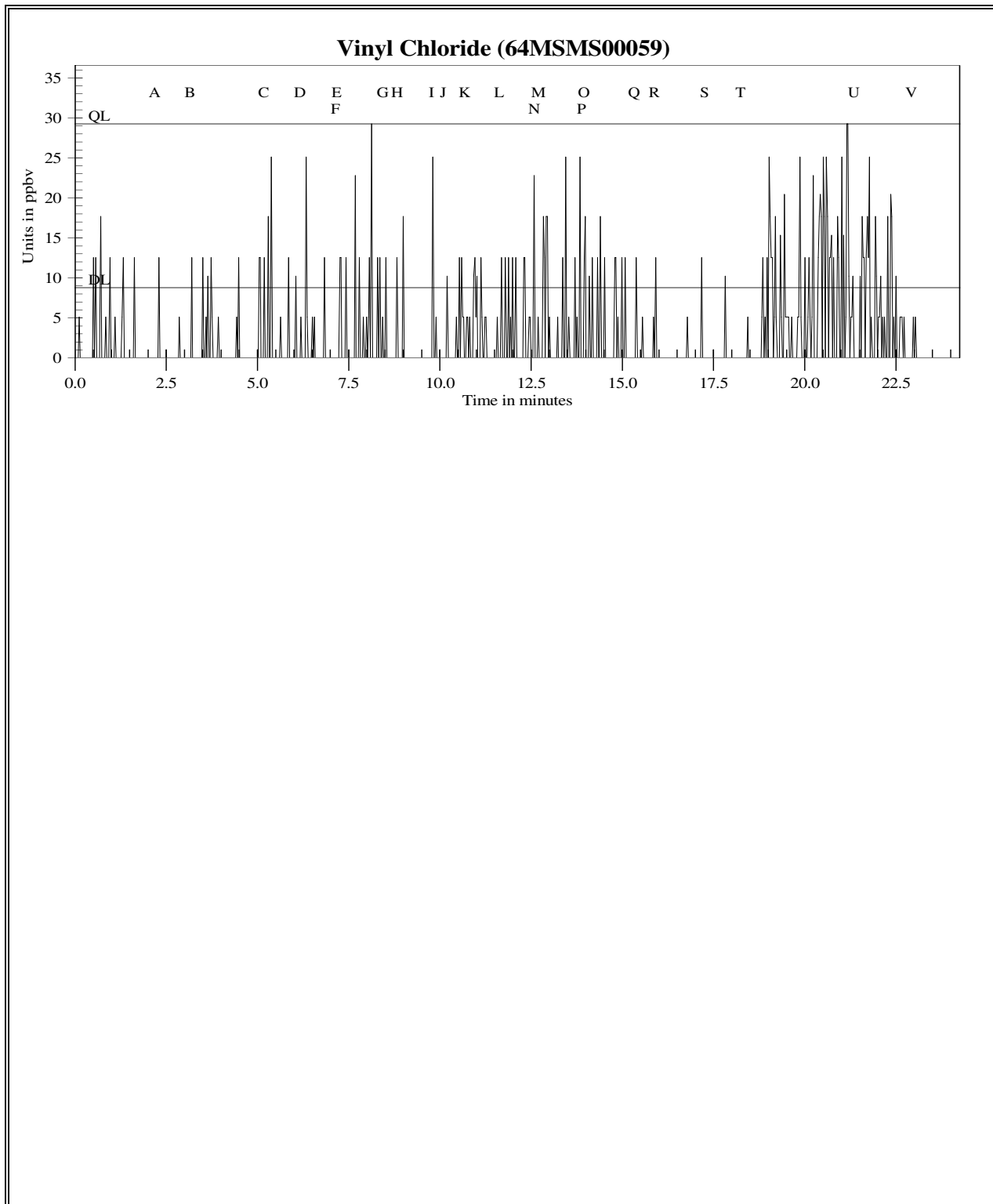


Figure 4e Unit 7 Survey in ppbv for Vinyl Chloride

Figure 4f

TAGA Target Compound Summary in ppbv for Unit 7 Survey File: 64MSMS00059 Acquired on 03 May 2016 at 11:24:52								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.081	0.032	0.086	0.48	0.19	0.15	8.8
Quantitation Limits - QL:		0.27	0.11	0.29	1.6	0.64	0.49	29
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
D - E	Kitchen / dining area	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.78	0.31J	DL=8.8
F - G	Living room	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.1	0.46J	DL=8.8
H - I	Bedroom one	DL=0.081	DL=0.032	DL=0.086	DL=0.48	0.63J	0.35J	DL=8.8
J - K	Bedroom two	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.4	0.49	DL=8.8
L - M	Sub-slab port	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.5	0.57	DL=8.8
N - O	Bedroom three	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.3	0.49	DL=8.8
P - Q	Bathroom	DL=0.081	DL=0.032	DL=0.086	DL=0.48	1.2	0.43J	DL=8.8
S - T	Post-exit ambient	DL=0.081	DL=0.032	DL=0.086	DL=0.48	DL=0.19	DL=0.15	DL=8.8
U - V	30 mL/min spike	5.0	5.5	4.4	5.6	5.4	7.8	DL=8.8

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

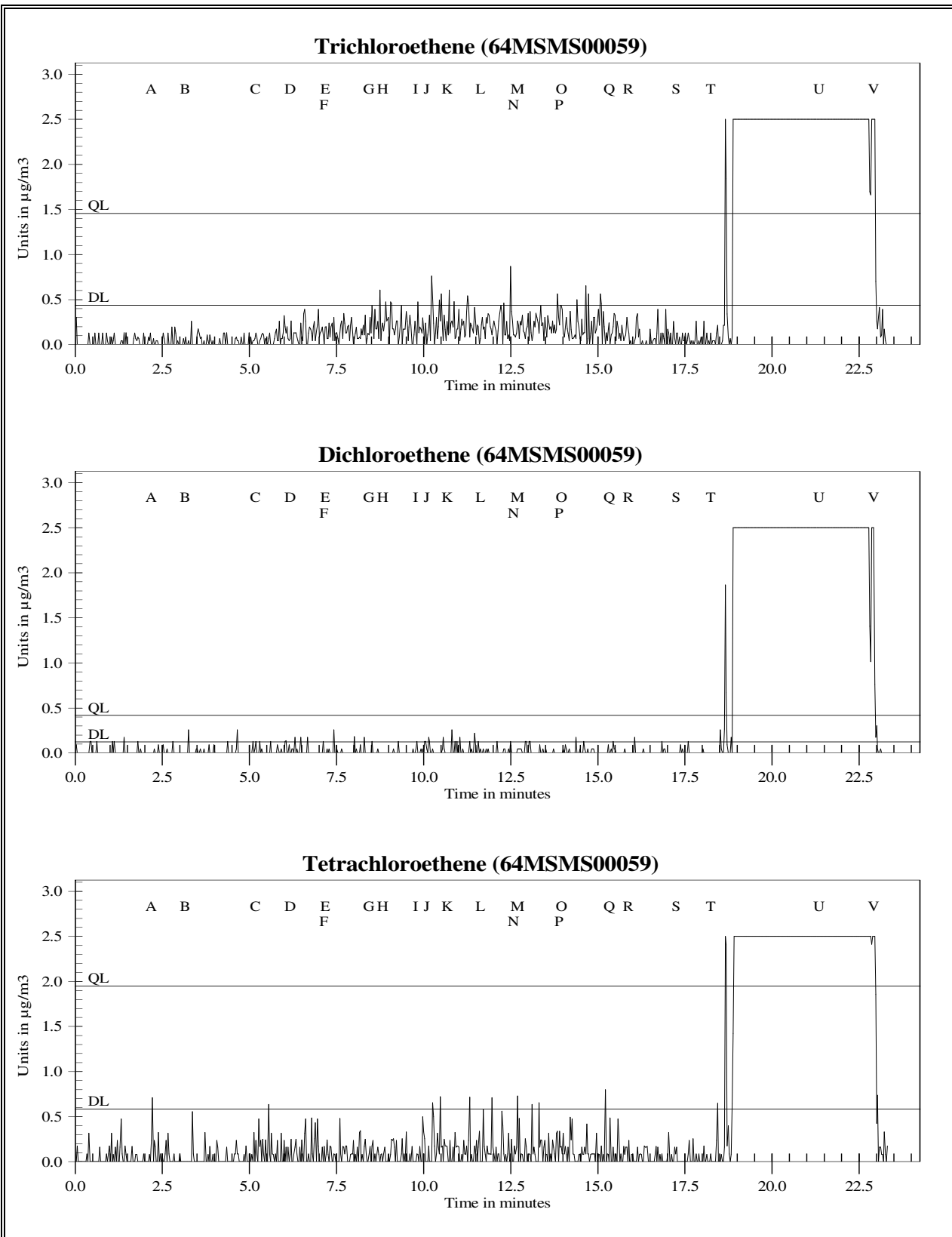


Figure 4g Unit 7 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

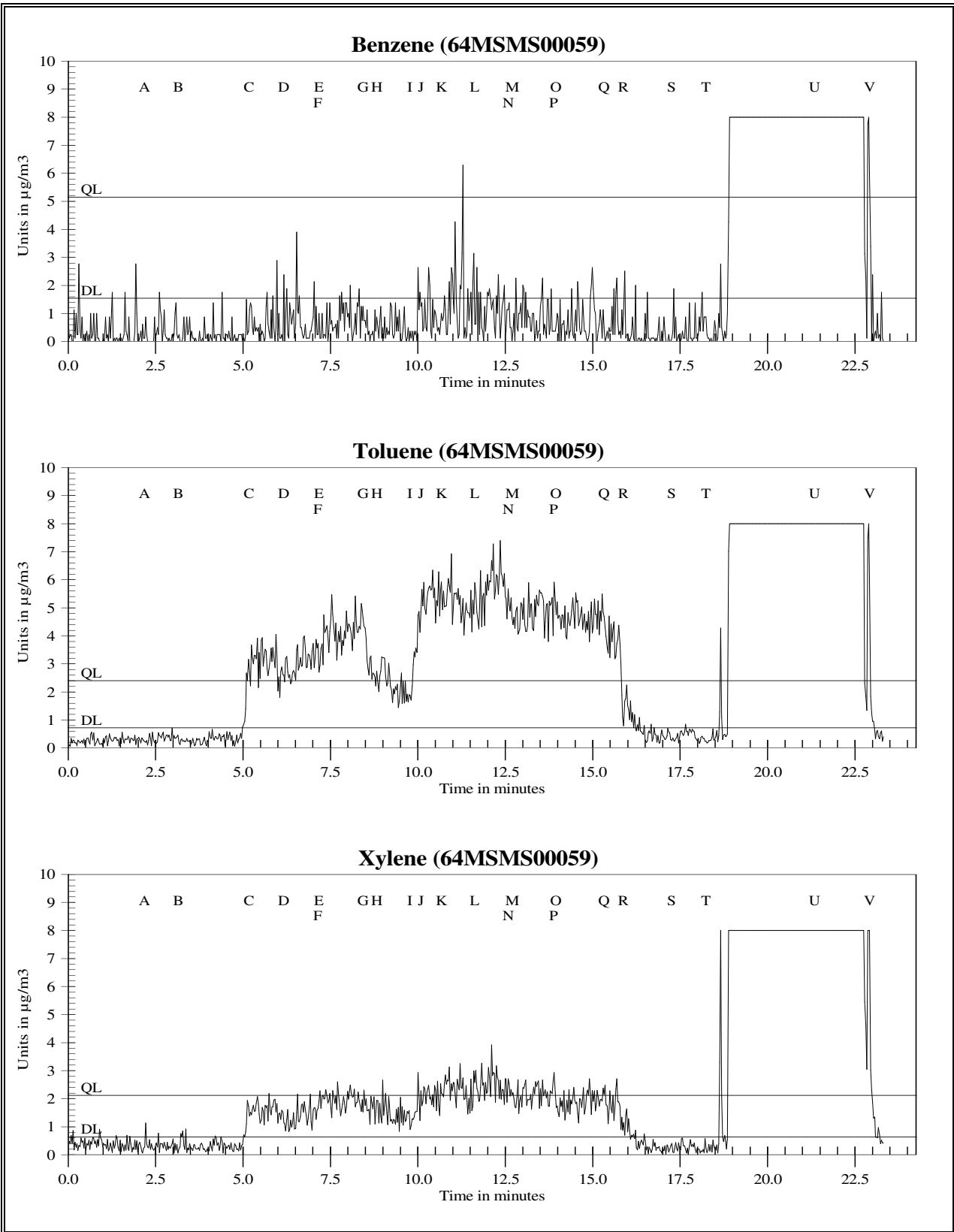


Figure 4h Unit 7 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

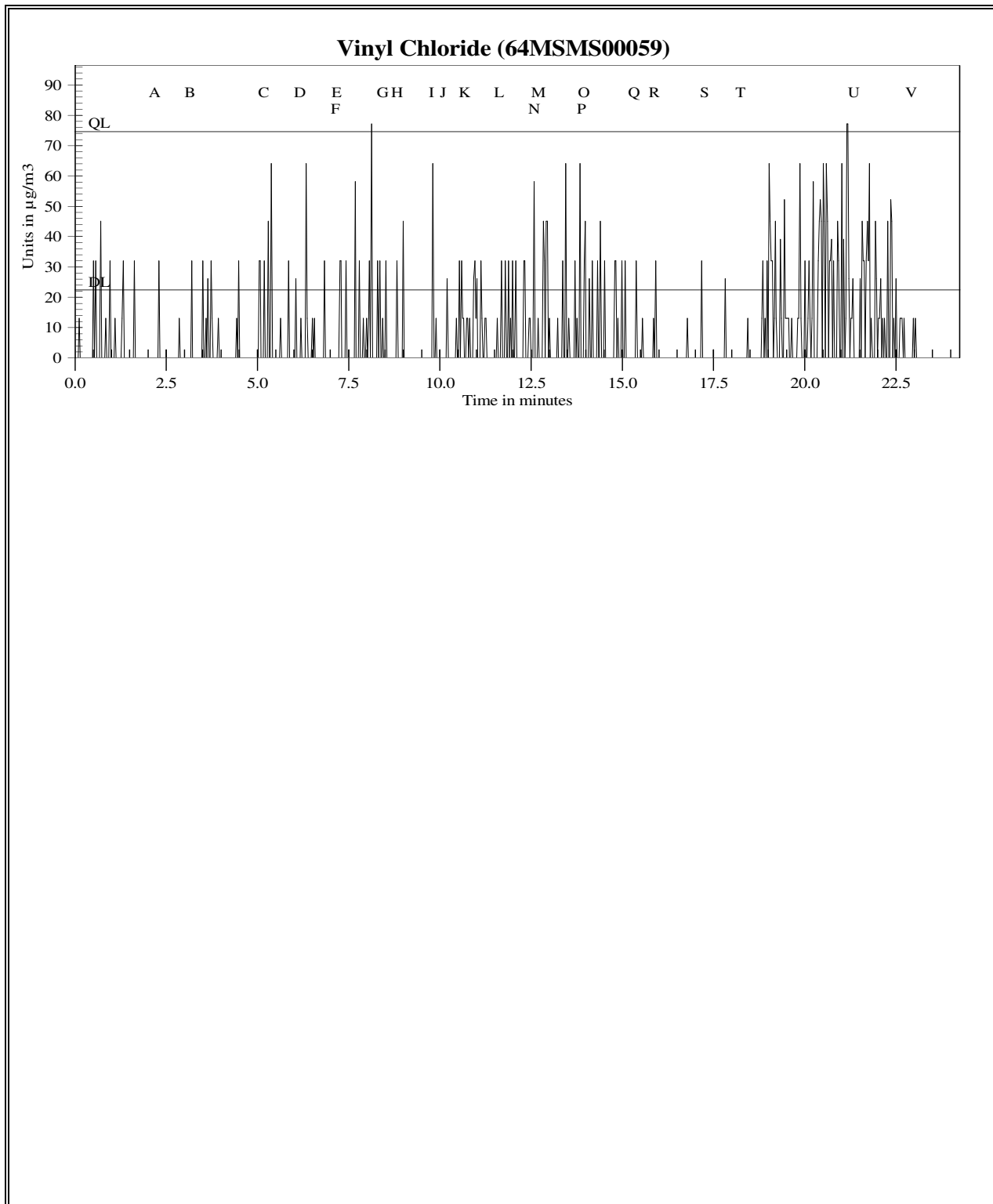


Figure 4i Unit 7 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 4j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 7 Survey File: 64MSMS00059 Acquired on 03 May 2016 at 11:24:52								
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride	
Detection Limits - DL:	0.44	0.13	0.58	1.5	0.72	0.64	22	
Quantitation Limits - QL:	1.5	0.42	1.9	5.1	2.4	2.1	75	
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
D - E	Kitchen / dining area	DL=0.44	DL=0.13	DL=0.58	DL=1.5	2.9	1.4J	DL=22.
F - G	Living room	DL=0.44	DL=0.13	DL=0.58	DL=1.5	4.1	2.0J	DL=22.
H - I	Bedroom one	DL=0.44	DL=0.13	DL=0.58	DL=1.5	2.4J	1.5J	DL=22.
J - K	Bedroom two	DL=0.44	DL=0.13	DL=0.58	DL=1.5	5.3	2.1	DL=22.
L - M	Sub-slab port	DL=0.44	DL=0.13	DL=0.58	DL=1.5	5.6	2.5	DL=22.
N - O	Bedroom three	DL=0.44	DL=0.13	DL=0.58	DL=1.5	4.8	2.1	DL=22.
P - Q	Bathroom	DL=0.44	DL=0.13	DL=0.58	DL=1.5	4.6	1.9J	DL=22.
S - T	Post-exit ambient	DL=0.44	DL=0.13	DL=0.58	DL=1.5	DL=0.72	DL=0.64	DL=22.
U - V	30 mL/min spike	27	22	30	18	20	34	DL=22.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

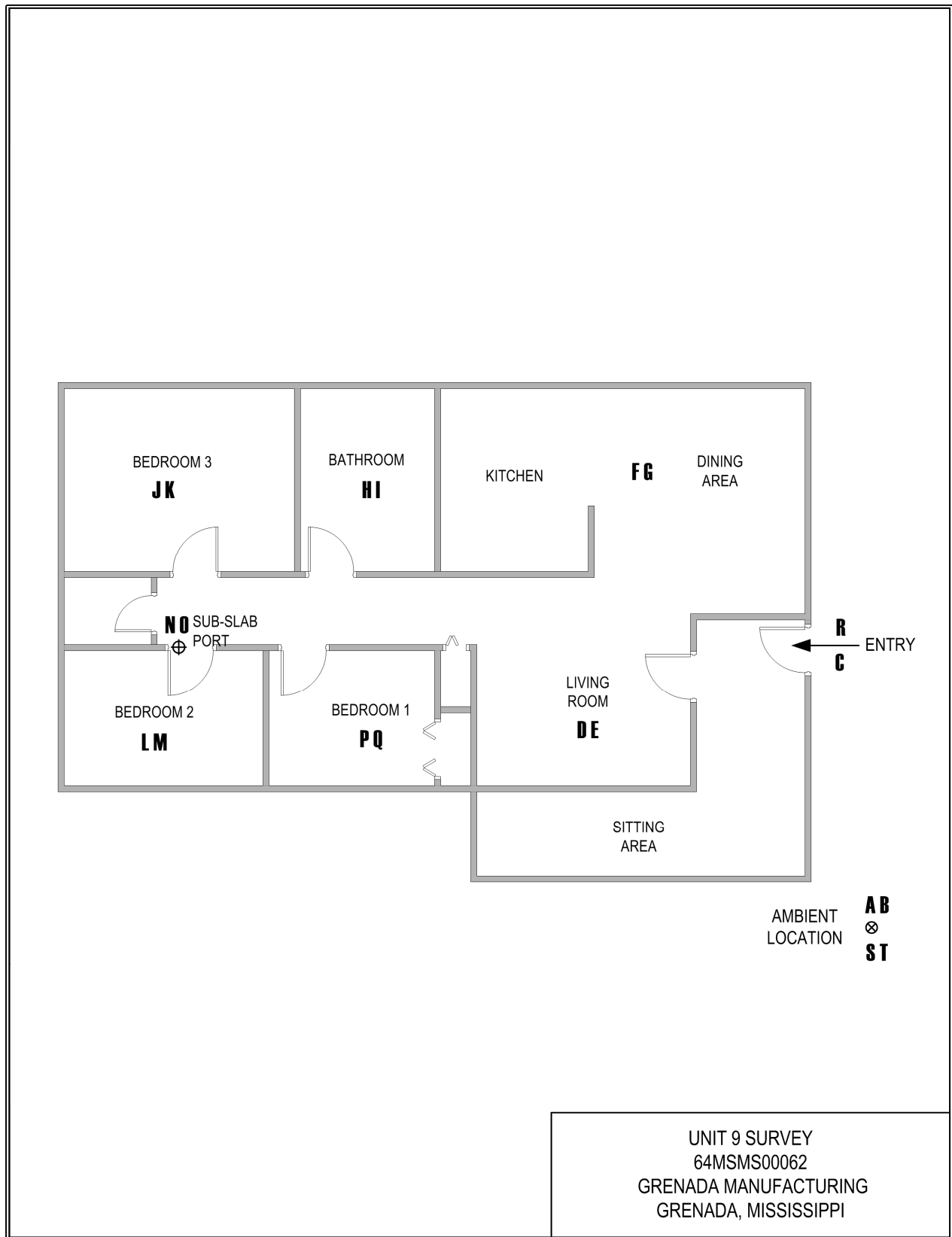


Figure 5a Unit 9 Survey Floor Plan, 64MSMS00062

Figure 5b

TAGA File Event Summary			
File: 64MSMS00062 Acquired on 03 May 2016 at 13:57:08			
Title: Unit 9 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.1	75	Start of the pre-entry ambient
B	3.1	111	End of the pre-entry ambient
C	4.1	146	Entering the unit
D	4.4	157	Start of the living room
E	5.4	193	End of the living room
F	5.7	203	Start of the kitchen / dining area
G	6.7	241	End of the kitchen / dining area
H	7.1	254	Start of the bathroom
I	8.1	290	End of the bathroom
J	8.3	298	Start of bedroom three
K	9.4	336	End of bedroom three
L	9.6	344	Start of bedroom two
M	10.7	382	End of bedroom two
N	11.0	395	Start of the sub-slab port
O	12.1	433	End of the sub-slab port
P	12.3	441	Start of bedroom one
Q	13.4	479	End of bedroom one
R	13.9	498	Exiting the unit
S	14.9	534	Start of the post-exit ambient
T	16.0	572	End of the post-exit ambient
U	19.2	685	Start of 30 mL/min spike
V	20.2	721	End of 30 mL/min spike

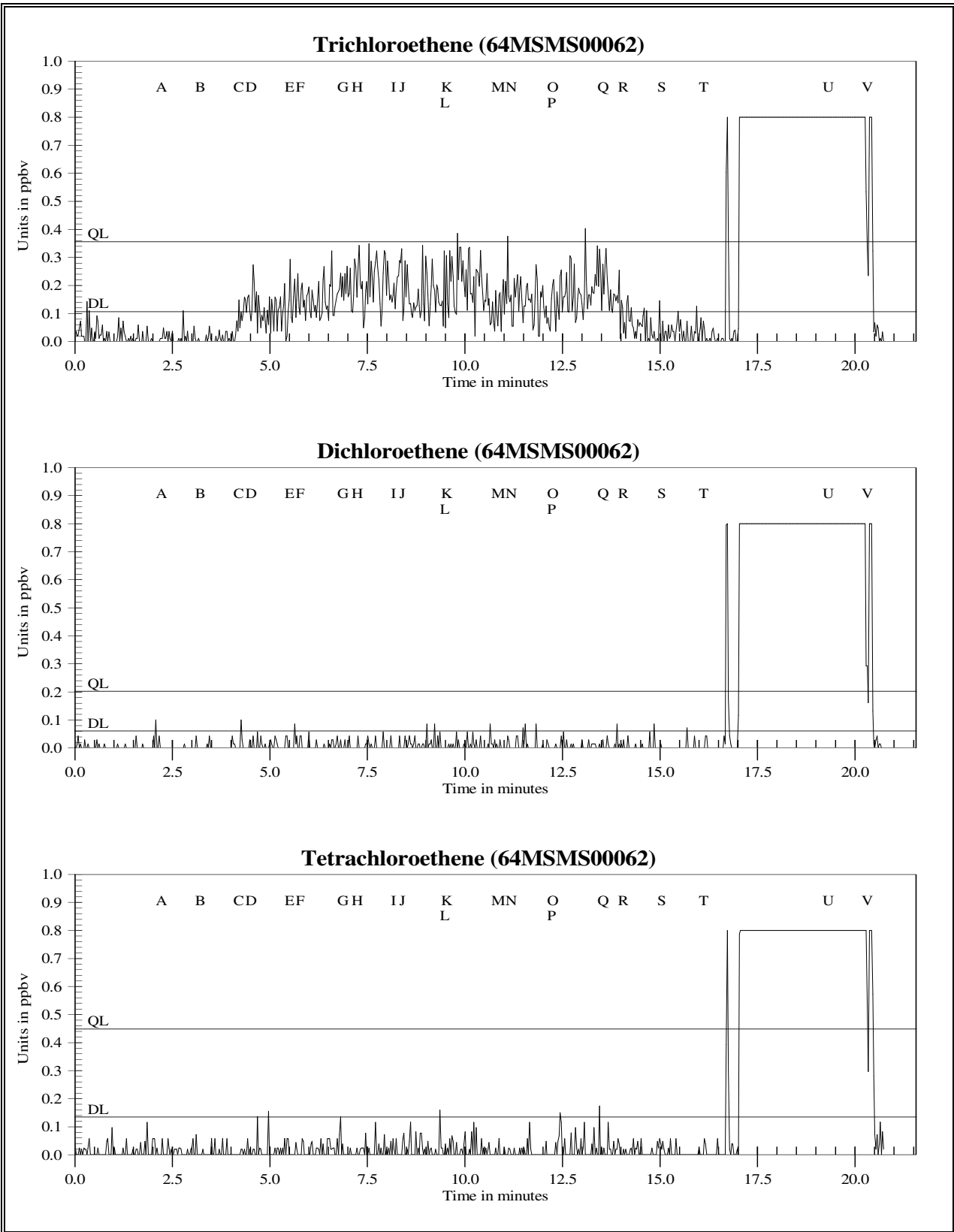


Figure 5c Unit 9 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

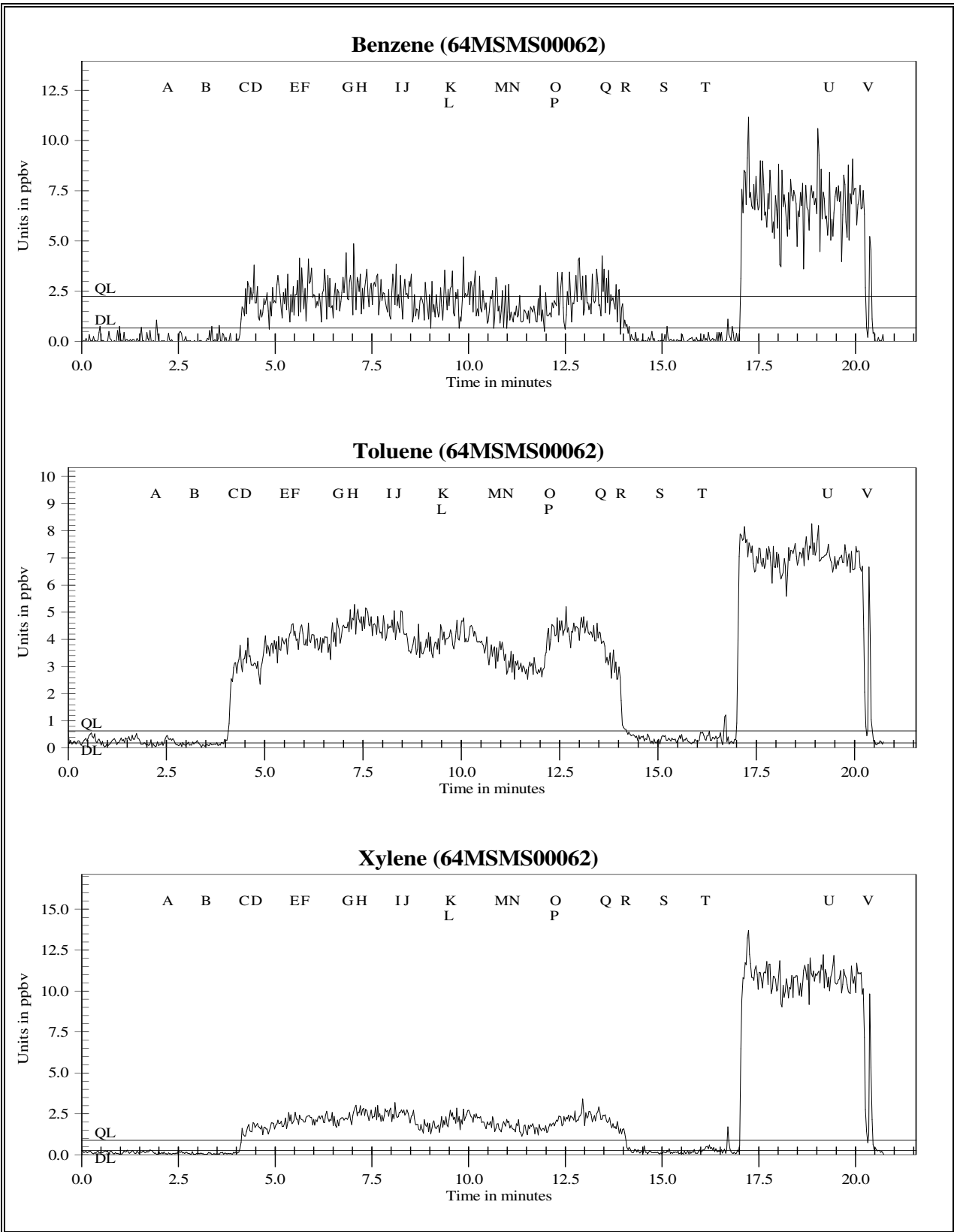


Figure 5d Unit 9 Survey in ppbv for Benzene, Toluene, and Xylenes

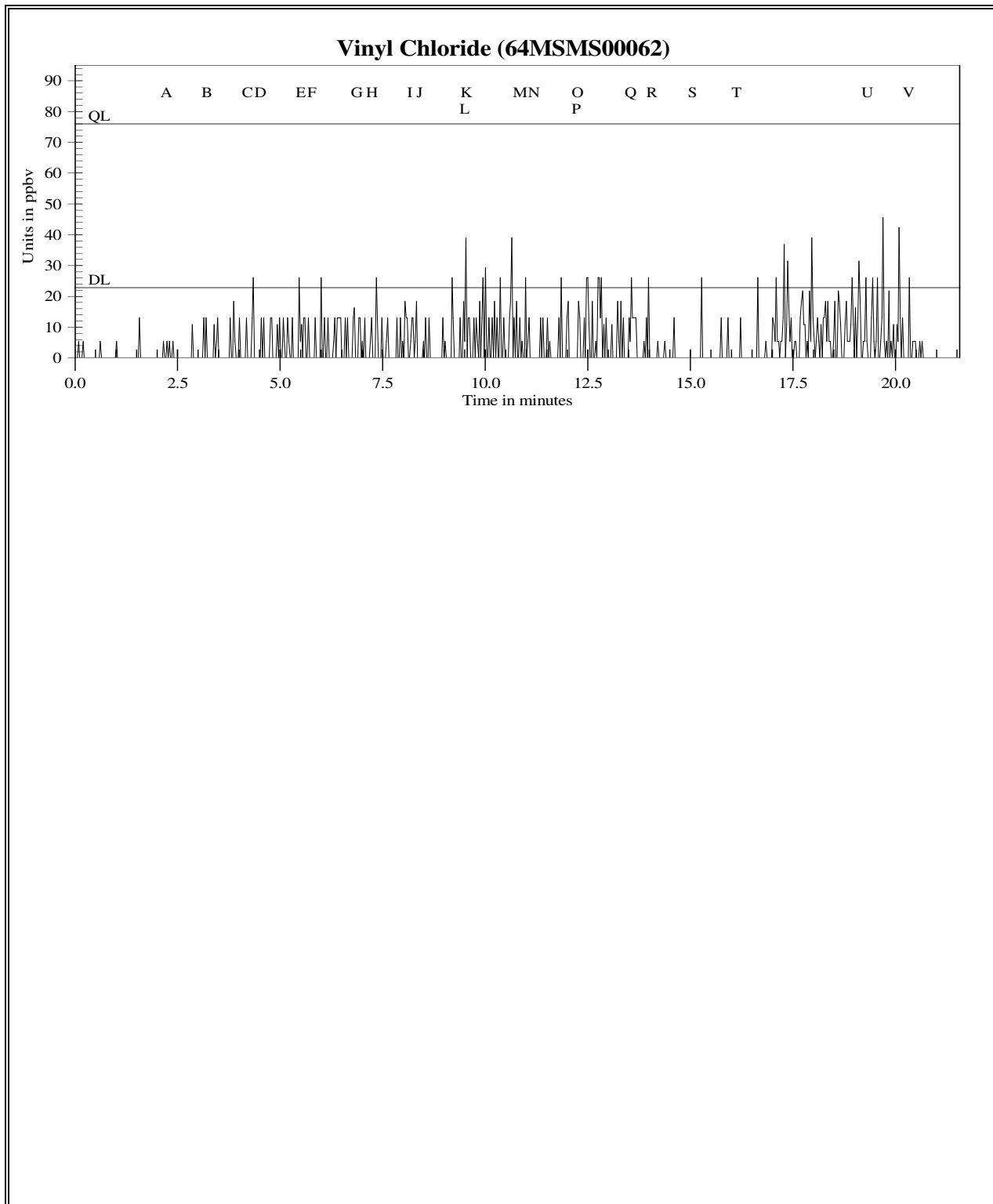


Figure 5e Unit 9 Survey in ppbv for Vinyl Chloride

Figure 5f

TAGA Target Compound Summary in ppbv for Unit 9 Survey File: 64MSMS00062 Acquired on 03 May 2016 at 13:57:08								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:		0.36	0.20	0.45	2.3	0.63	0.88	76
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
D - E	Living room	0.12J	DL=0.061	DL=0.13	2.0J	3.4	1.8	DL=23.
F - G	Kitchen / dining area	0.15J	DL=0.061	DL=0.13	2.3	4.0	2.2	DL=23.
H - I	Bathroom	0.21J	DL=0.061	DL=0.13	2.4	4.6	2.5	DL=23.
J - K	Bedroom three	0.17J	DL=0.061	DL=0.13	2.0J	3.9	2.0	DL=23.
L - M	Bedroom two	0.21J	DL=0.061	DL=0.13	2.0J	4.1	2.2	DL=23.
N - O	Sub-slab port	0.15J	DL=0.061	DL=0.13	1.4J	3.0	1.6	DL=23.
P - Q	Bedroom one	0.18J	DL=0.061	DL=0.13	2.2J	4.4	2.3	DL=23.
S - T	Post-exit ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.30J	DL=0.26	DL=23.
U - V	30 mL/min spike	6.5	6.9	6.4	6.8	7.0	11	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

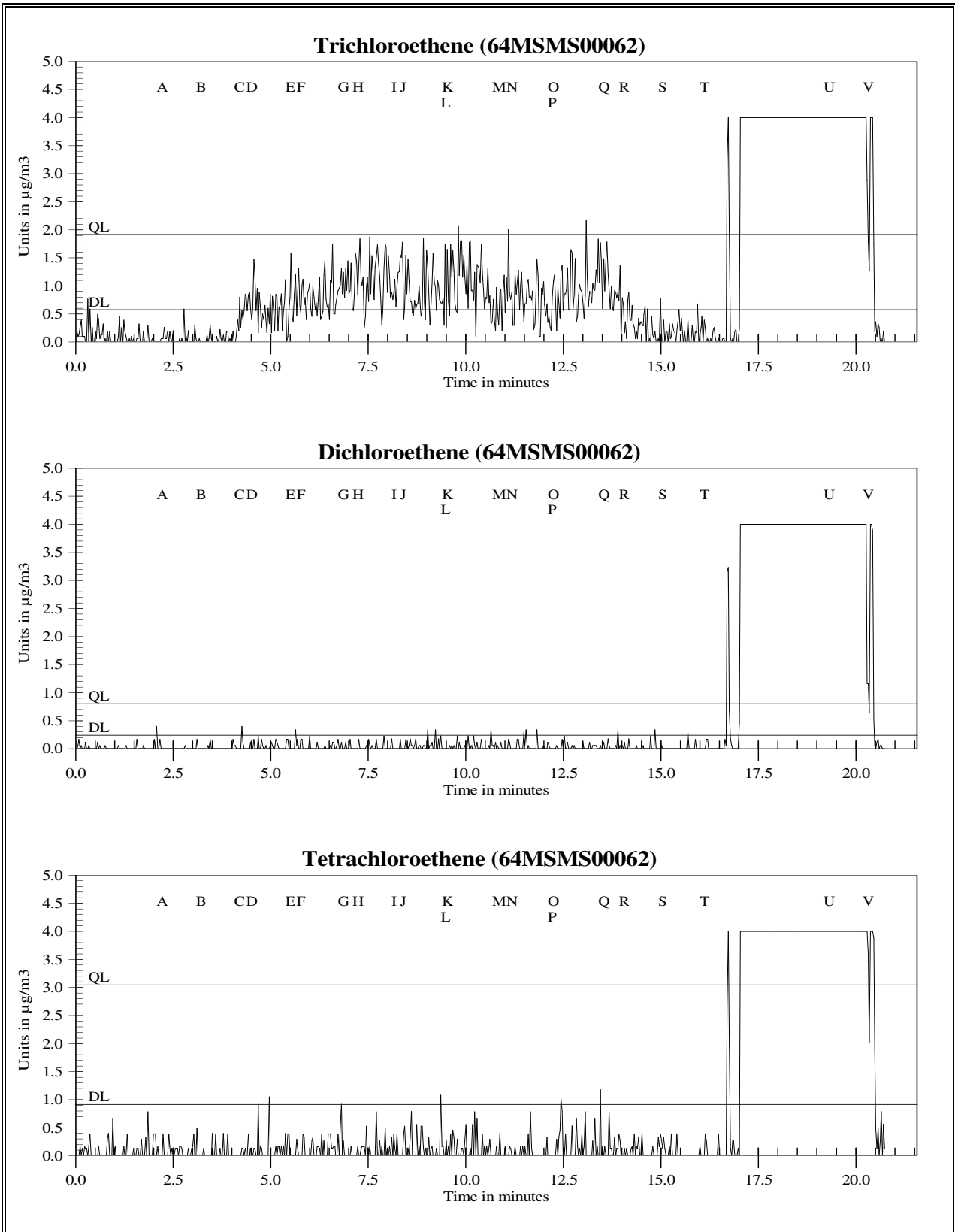


Figure 5g Unit 9 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

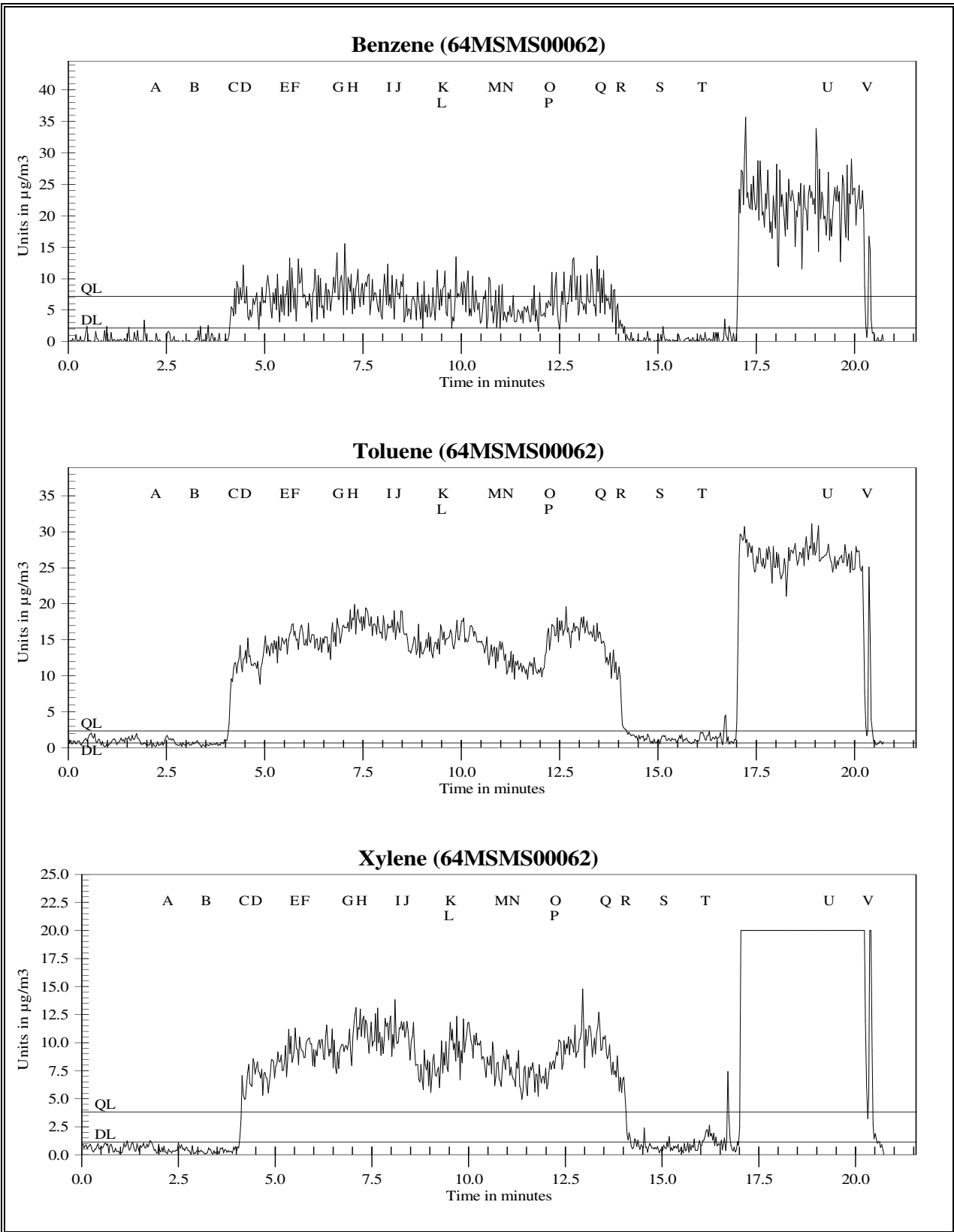


Figure 5h Unit 9 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

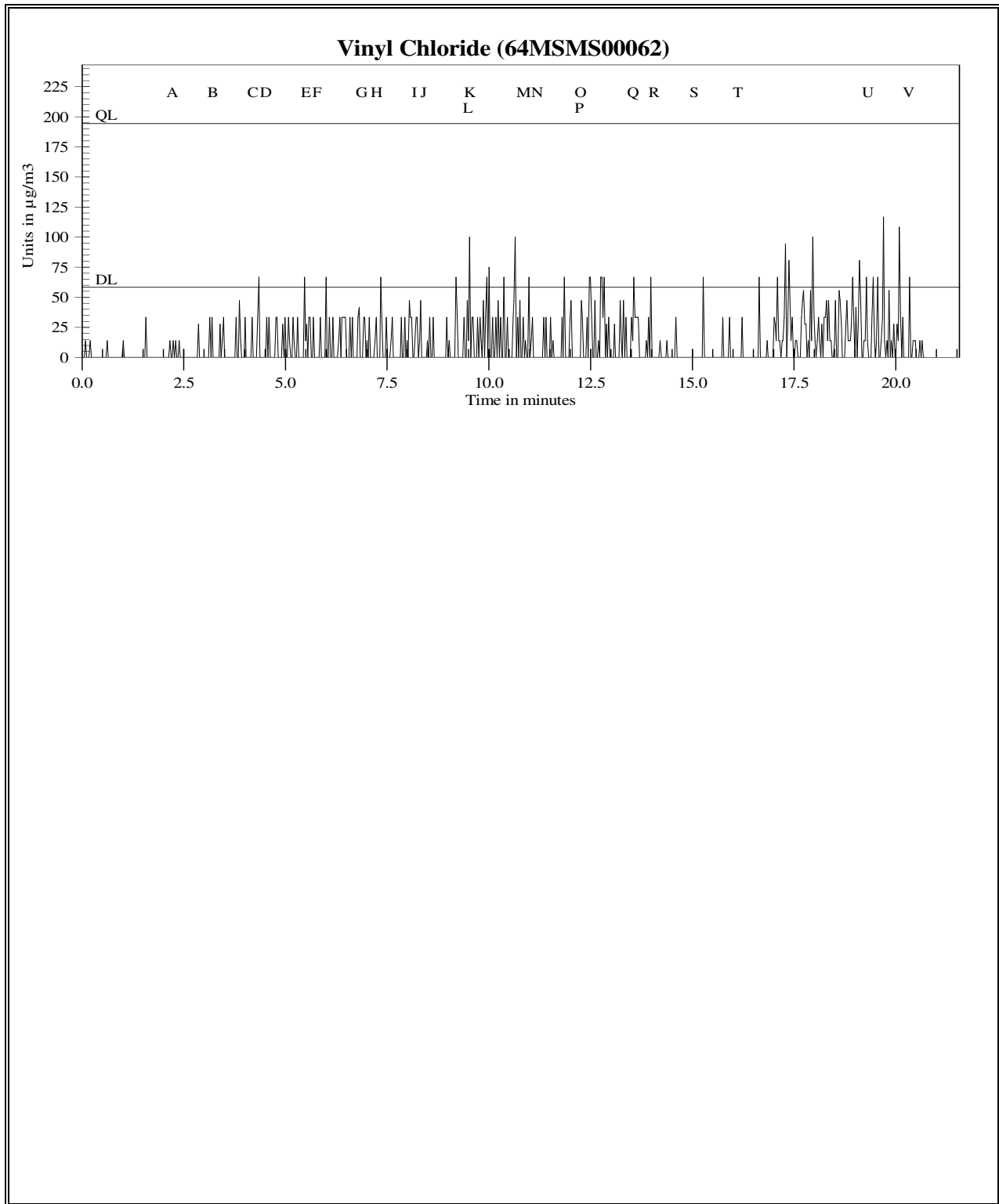


Figure 5i Unit 9 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 5j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 9 Survey File: 64MSMS00062 Acquired on 03 May 2016 at 13:57:08								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylene	Vinyl Chloride
Detection Limits - DL:		0.57	0.24	0.91	2.2	0.72	1.1	58
Quantitation Limits - QL:		1.9	0.80	3.0	7.2	2.4	3.8	190
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylene	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
D - E	Living room	0.62J	DL=0.24	DL=0.91	6.5J	13	7.7	DL=58.
F - G	Kitchen / dining area	0.79J	DL=0.24	DL=0.91	7.3	15	9.4	DL=58.
H - I	Bathroom	1.1J	DL=0.24	DL=0.91	7.7	17	11	DL=58.
J - K	Bedroom three	0.92J	DL=0.24	DL=0.91	6.3J	15	8.5	DL=58.
L - M	Bedroom two	1.1J	DL=0.24	DL=0.91	6.3J	15	9.4	DL=58.
N - O	Sub-slab port	0.81J	DL=0.24	DL=0.91	4.6J	11	7.0	DL=58.
P - Q	Bedroom one	0.94J	DL=0.24	DL=0.91	7.2J	16	10	DL=58.
S - T	Post-exit ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	1.1J	DL=1.1	DL=58.
U - V	30 mL/min spike	35	27	43	22	26	47	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

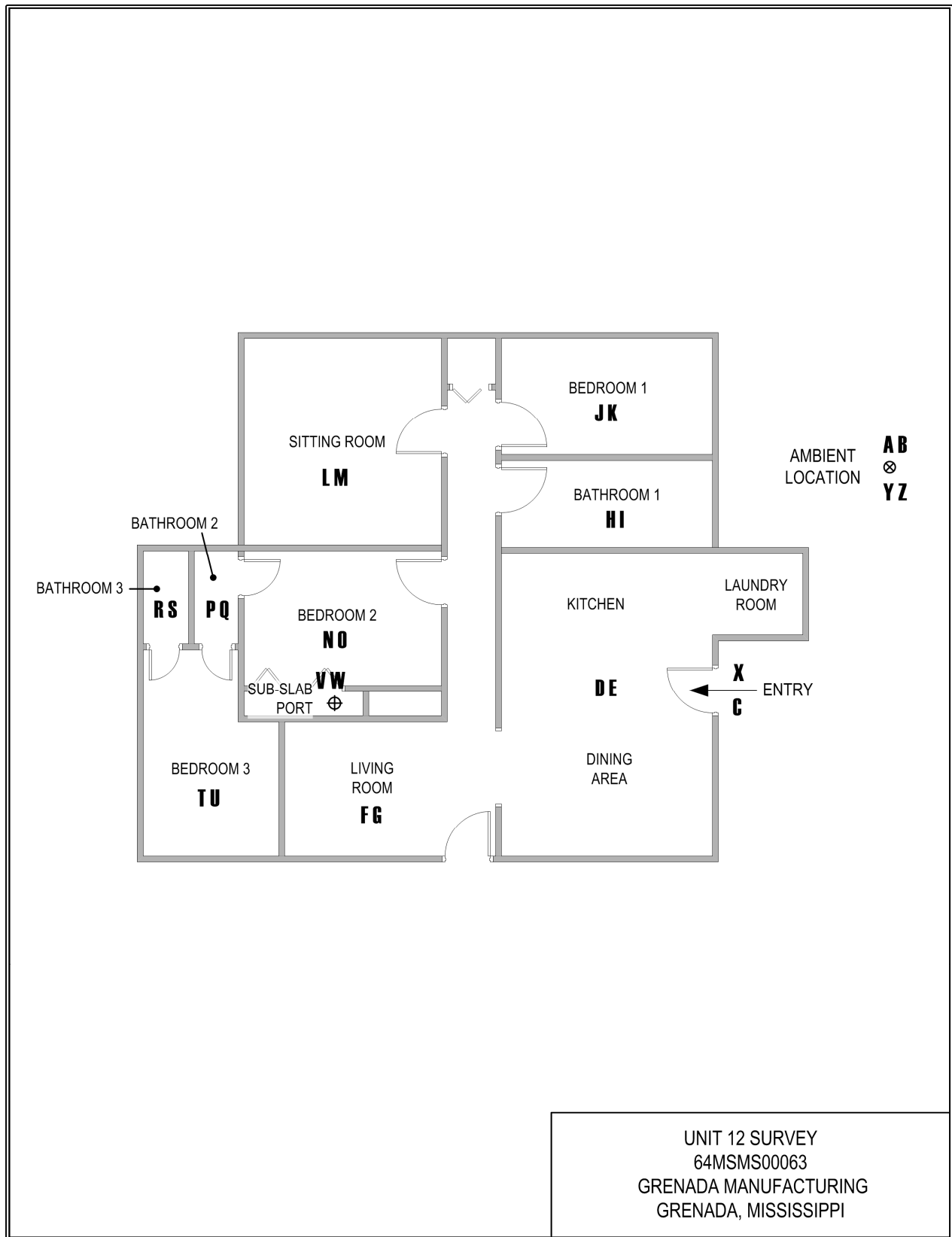


Figure 6a Unit 12 Survey Floor Plan, 64MSMS00063

Figure 6b

TAGA File Event Summary			
File: 64MSMS00063 Acquired on 03 May 2016 at 14:33:32			
Title: Unit 12 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.4	88	Start of the pre-entry ambient
B	3.4	124	End of the pre-entry ambient
C	4.7	168	Entering the unit
D	5.6	200	Start of the kitchen / dining area
E	6.7	241	End of the kitchen / dining area
F	7.0	250	Start of the living room
G	8.0	286	End of the living room
H	8.4	302	Start of bathroom one
I	9.4	338	End of bathroom one
J	9.7	347	Start of bedroom one
K	10.7	383	End of bedroom one
L	11.1	398	Start of the sitting room
M	12.1	434	End of the sitting room
N	12.6	452	Start of bedroom two
O	13.6	488	End of bedroom two
P	14.1	504	Start of bathroom two
Q	15.1	541	End of bathroom two
R	15.6	558	Start of bathroom three
S	16.6	594	End of bathroom three
T	16.9	603	Start of bedroom three
U	17.9	639	End of bedroom three
V	18.6	664	Start of the sub-slab port
W	19.6	701	End of the sub-slab port
X	20.4	728	Exiting the unit
Y	21.1	753	Start of the post-exit ambient
Z	22.1	790	End of the post-exit ambient
A1	25.5	910	Start of 30 mL/min spike
B1	26.4	945	End of 30 mL/min spike

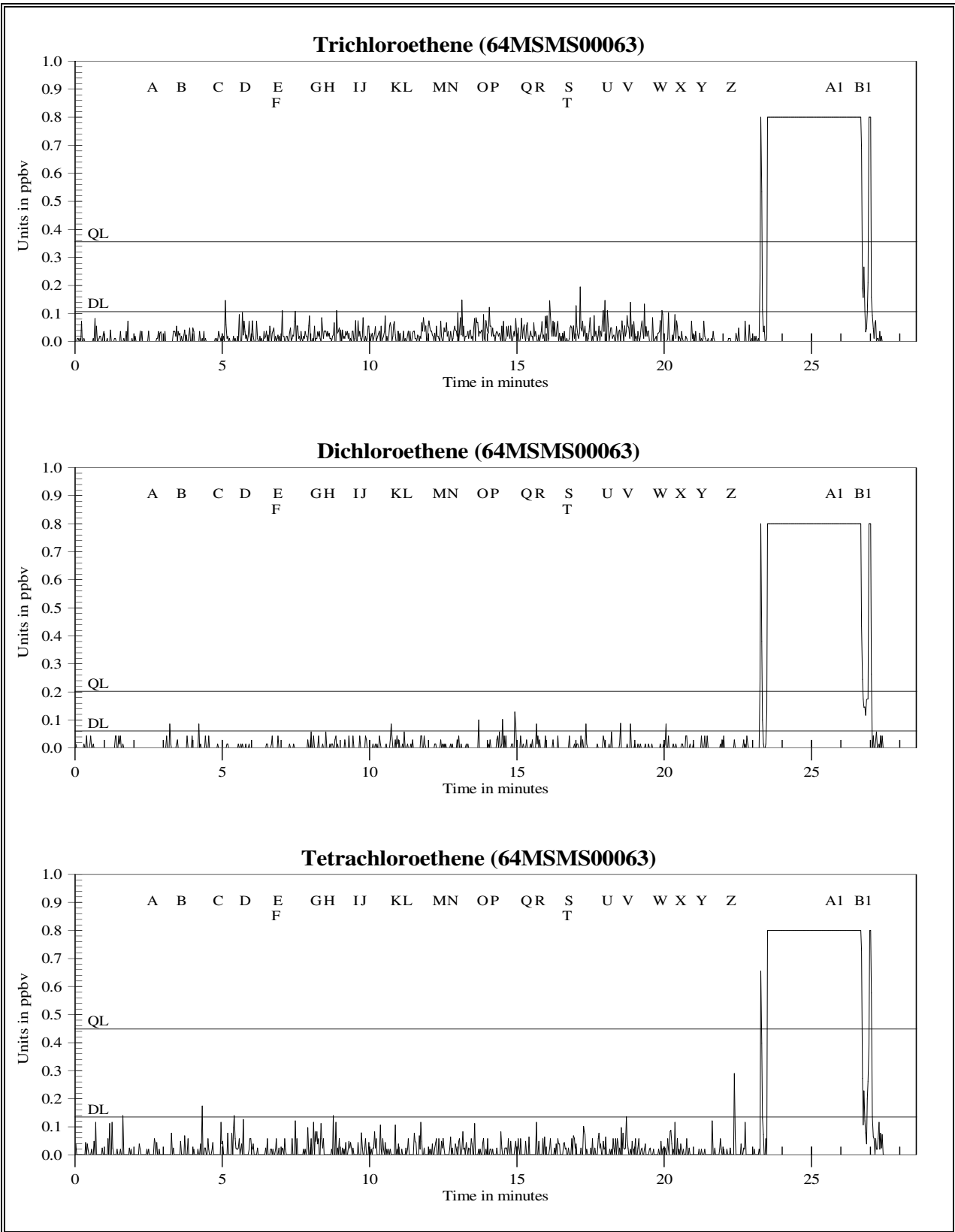


Figure 6c Unit 12 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

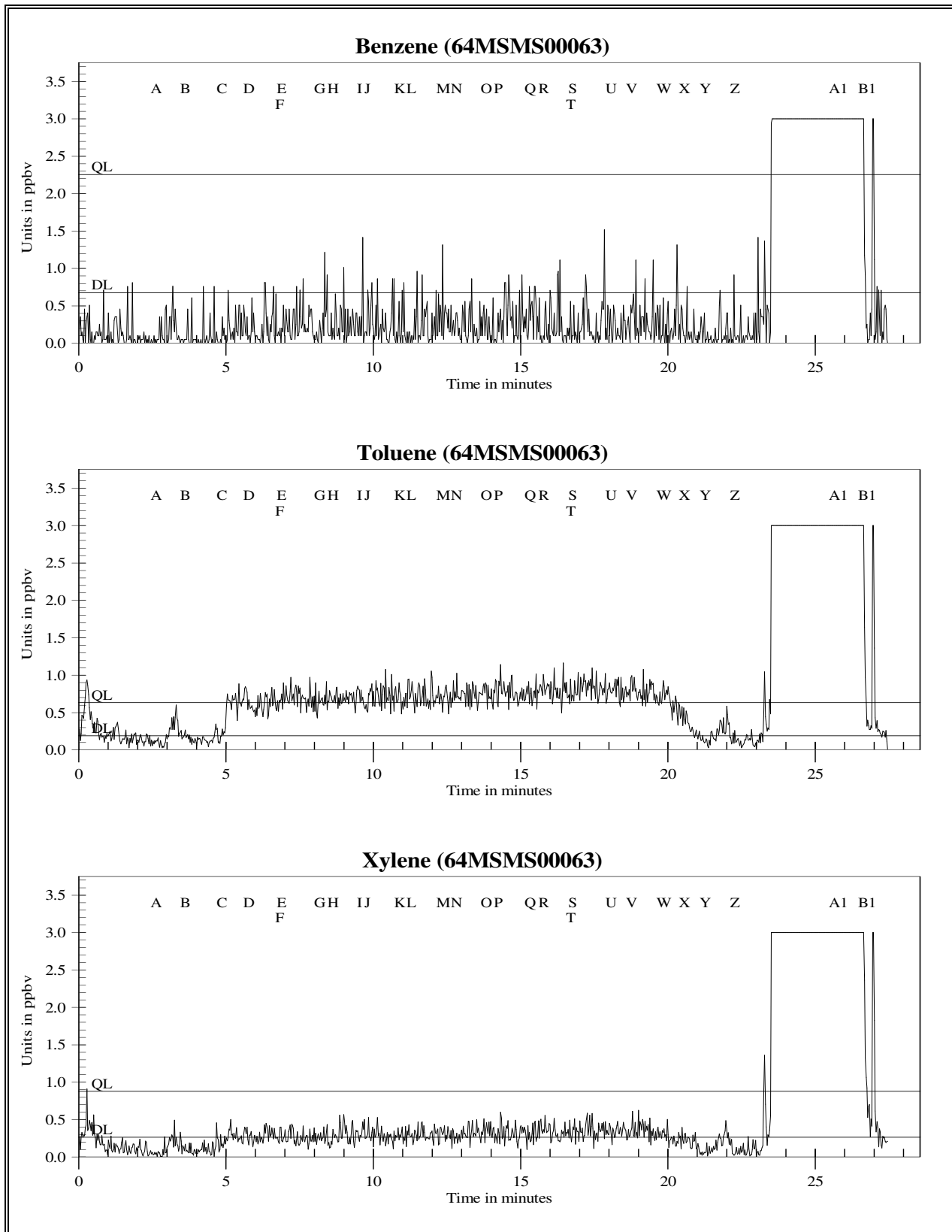


Figure 6d Unit 12 Survey in ppbv for Benzene, Toluene, and Xylenes

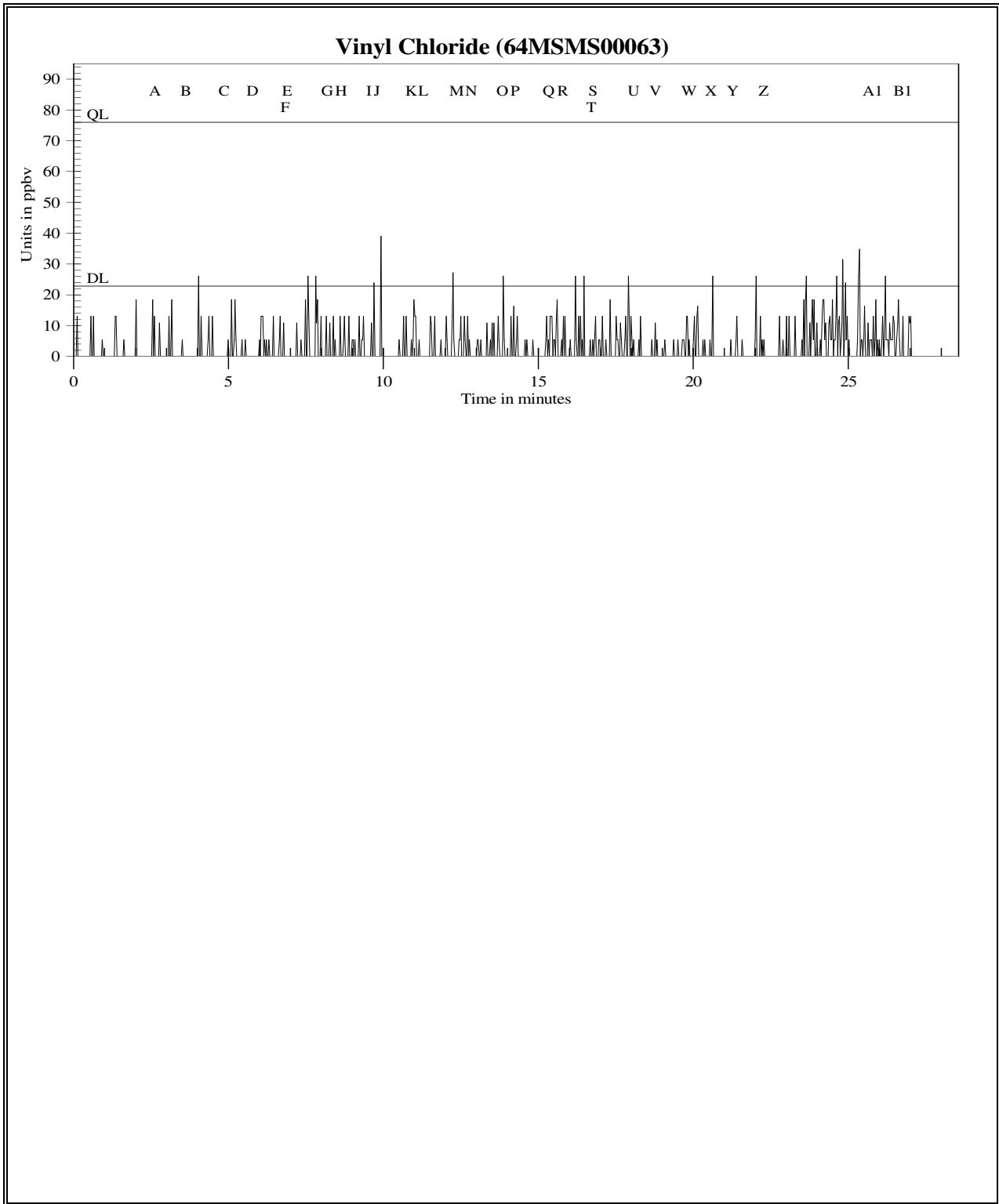


Figure 6e Unit 12 Survey in ppbv for Vinyl Chloride

Figure 6f

TAGA Target Compound Summary in ppbv for Unit 12 Survey File: 64MSMS00063 Acquired on 03 May 2016 at 14:33:32								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:		0.36	0.20	0.45	2.3	0.63	0.88	76
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.20J	DL=0.26	DL=23.
D - E	Kitchen / dining area	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.63J	0.29J	DL=23.
F - G	Living room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.70	0.27J	DL=23.
H - I	Bathroom one	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.69	0.30J	DL=23.
J - K	Bedroom one	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.71	0.29J	DL=23.
L - M	Sitting room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.73	0.30J	DL=23.
N - O	Bedroom two	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.74	0.30J	DL=23.
P - Q	Bathroom two	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.78	0.32J	DL=23.
R - S	Bathroom three	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.81	0.34J	DL=23.
T - U	Bedroom three	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.84	0.36J	DL=23.
V - W	Sub-slab port	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.78	0.35J	DL=23.
Y - Z	Post-exit ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.22J	DL=0.26	DL=23.
A1 - B1	30 mL/min spike	6.9	7.3	6.4	7.6	7.3	11	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

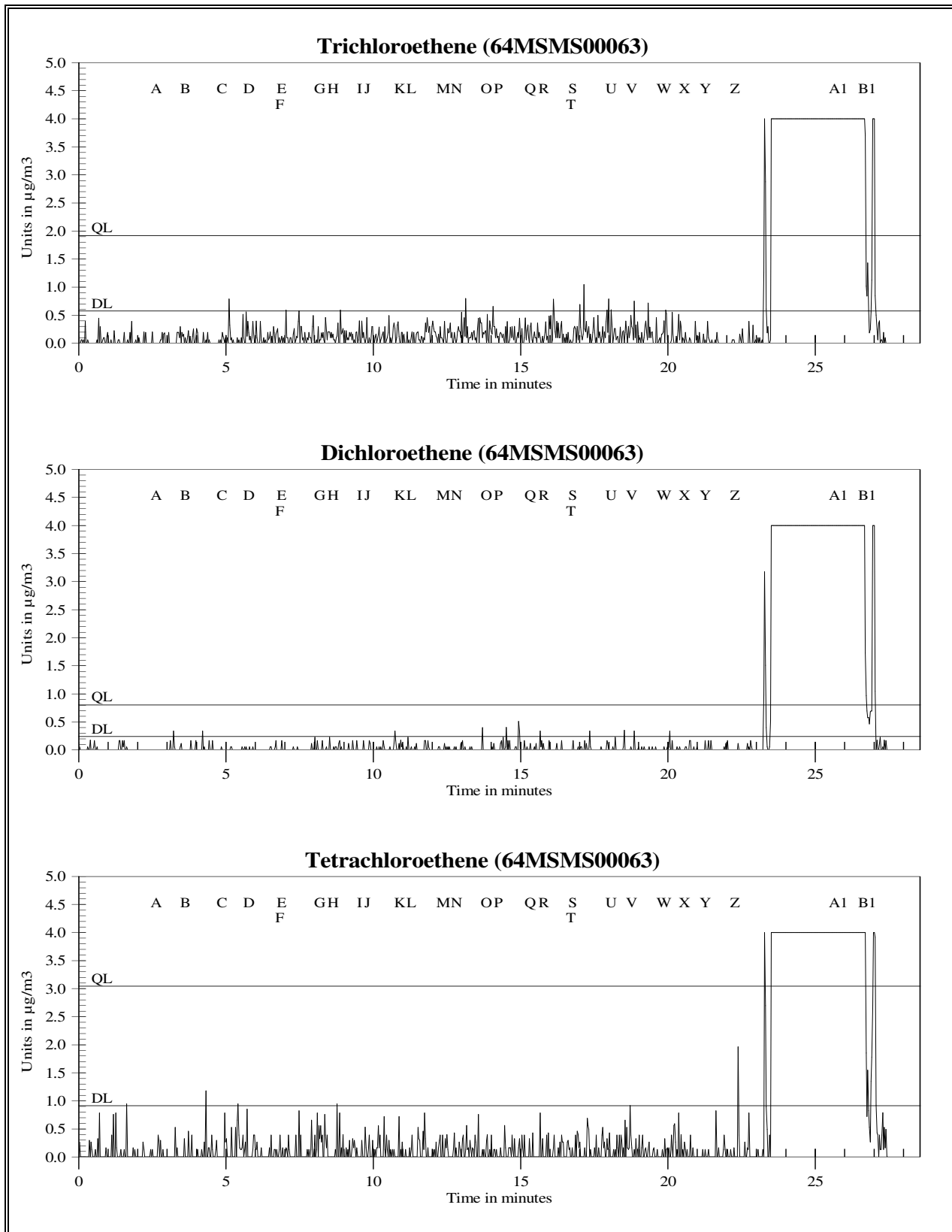


Figure 6g Unit 12 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

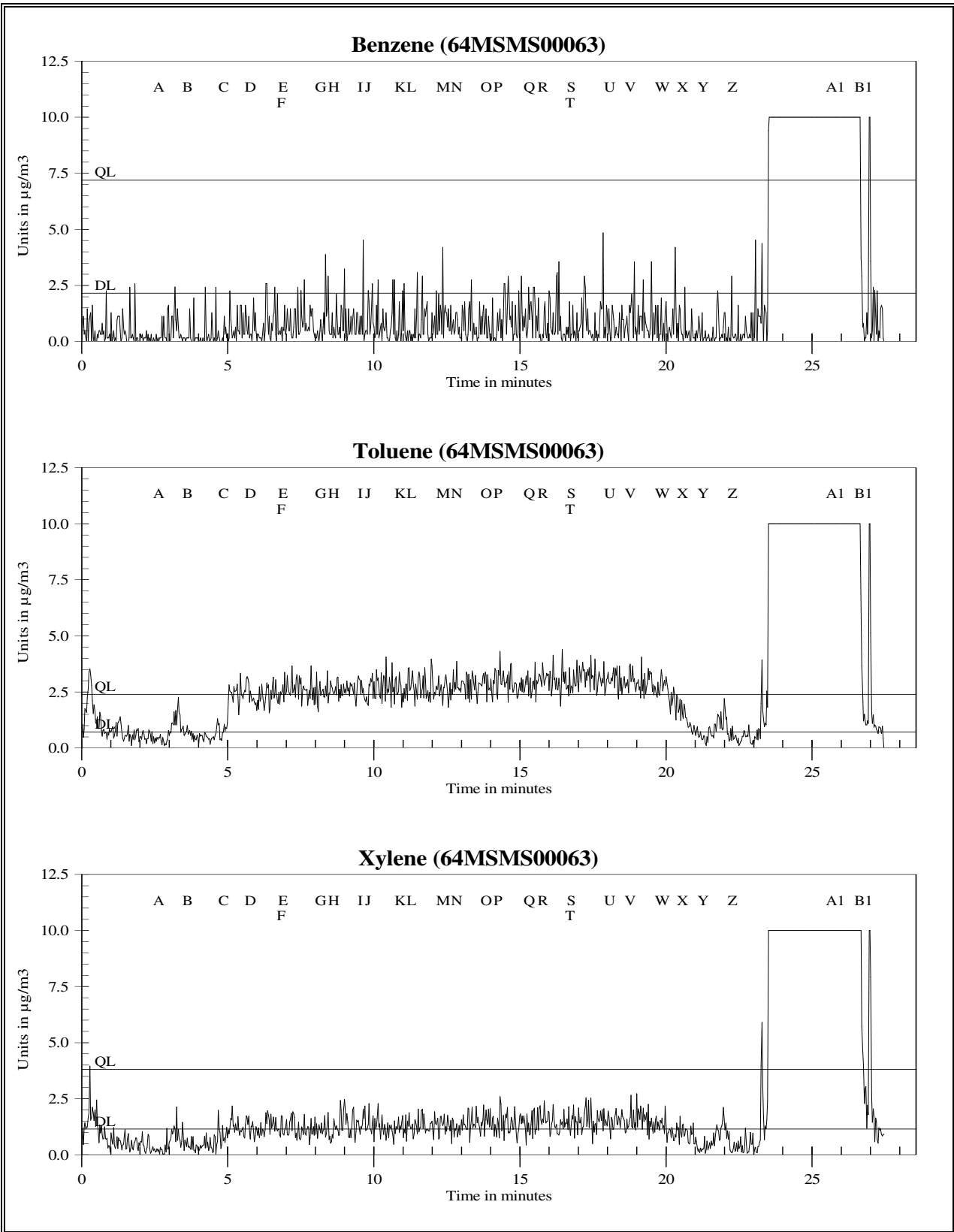


Figure 6h Unit 12 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

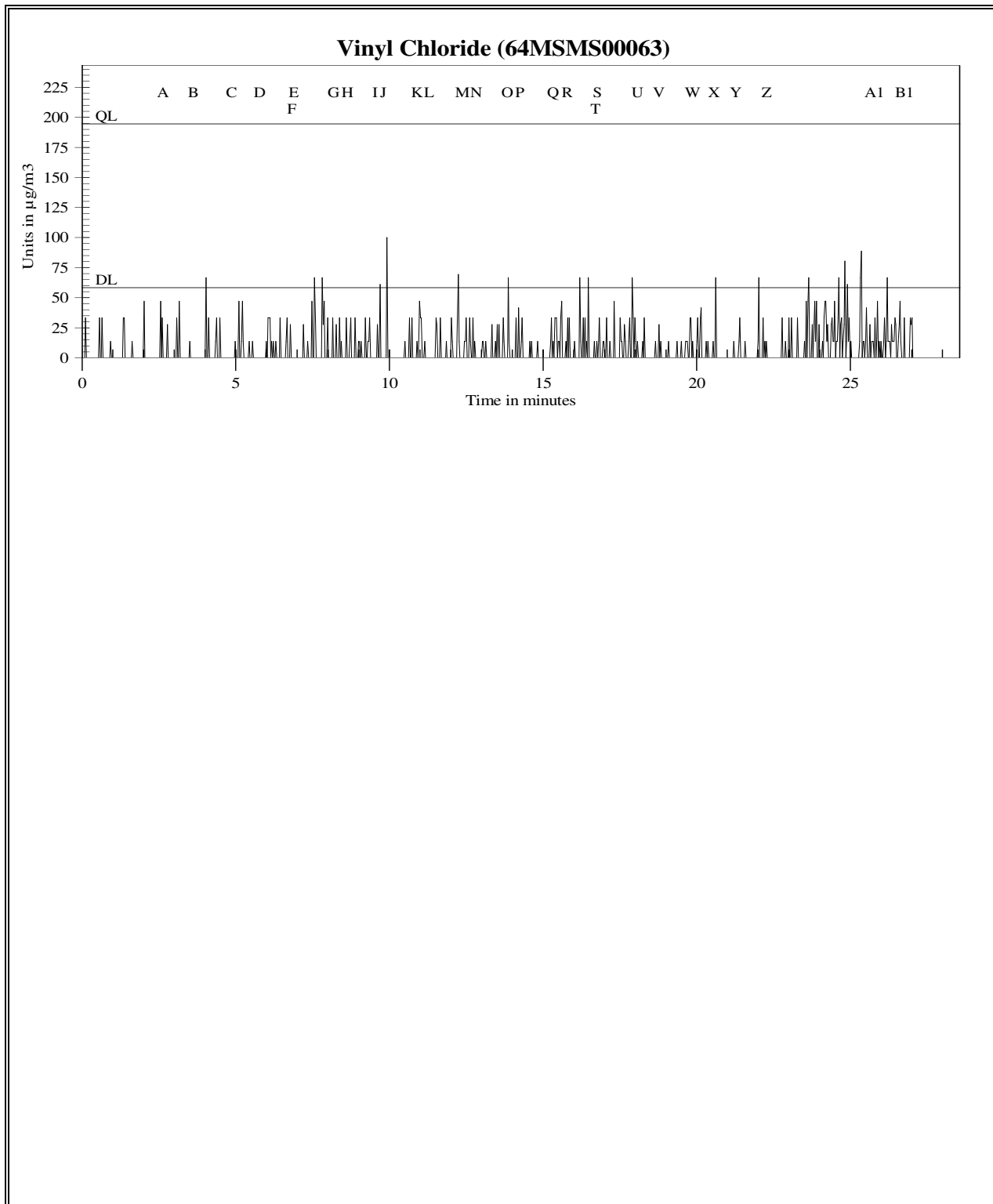


Figure 6i Unit 12 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 6j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 12 Survey File: 64MSMS00063 Acquired on 03 May 2016 at 14:33:32								
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride	
Detection Limits - DL:	0.57	0.24	0.91	2.2	0.72	1.1	58	
Quantitation Limits - QL:	1.9	0.80	3.0	7.2	2.4	3.8	190	
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	0.74J	DL=1.1	DL=58.
D - E	Kitchen / dining area	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.4J	1.2J	DL=58.
F - G	Living room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.7	1.2J	DL=58.
H - I	Bathroom one	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.6	1.3J	DL=58.
J - K	Bedroom one	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.7	1.3J	DL=58.
L - M	Sitting room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.8	1.3J	DL=58.
N - O	Bedroom two	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.8	1.3J	DL=58.
P - Q	Bathroom two	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.9	1.4J	DL=58.
R - S	Bathroom three	DL=0.57	DL=0.24	DL=0.91	DL=2.2	3.0	1.5J	DL=58.
T - U	Bedroom three	DL=0.57	DL=0.24	DL=0.91	DL=2.2	3.2	1.5J	DL=58.
V - W	Sub-slab port	DL=0.57	DL=0.24	DL=0.91	DL=2.2	3.0	1.5J	DL=58.
Y - Z	Post-exit ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	0.84J	DL=1.1	DL=58.
A1 - B1	30 mL/min spike	37	29	44	24	27	47	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

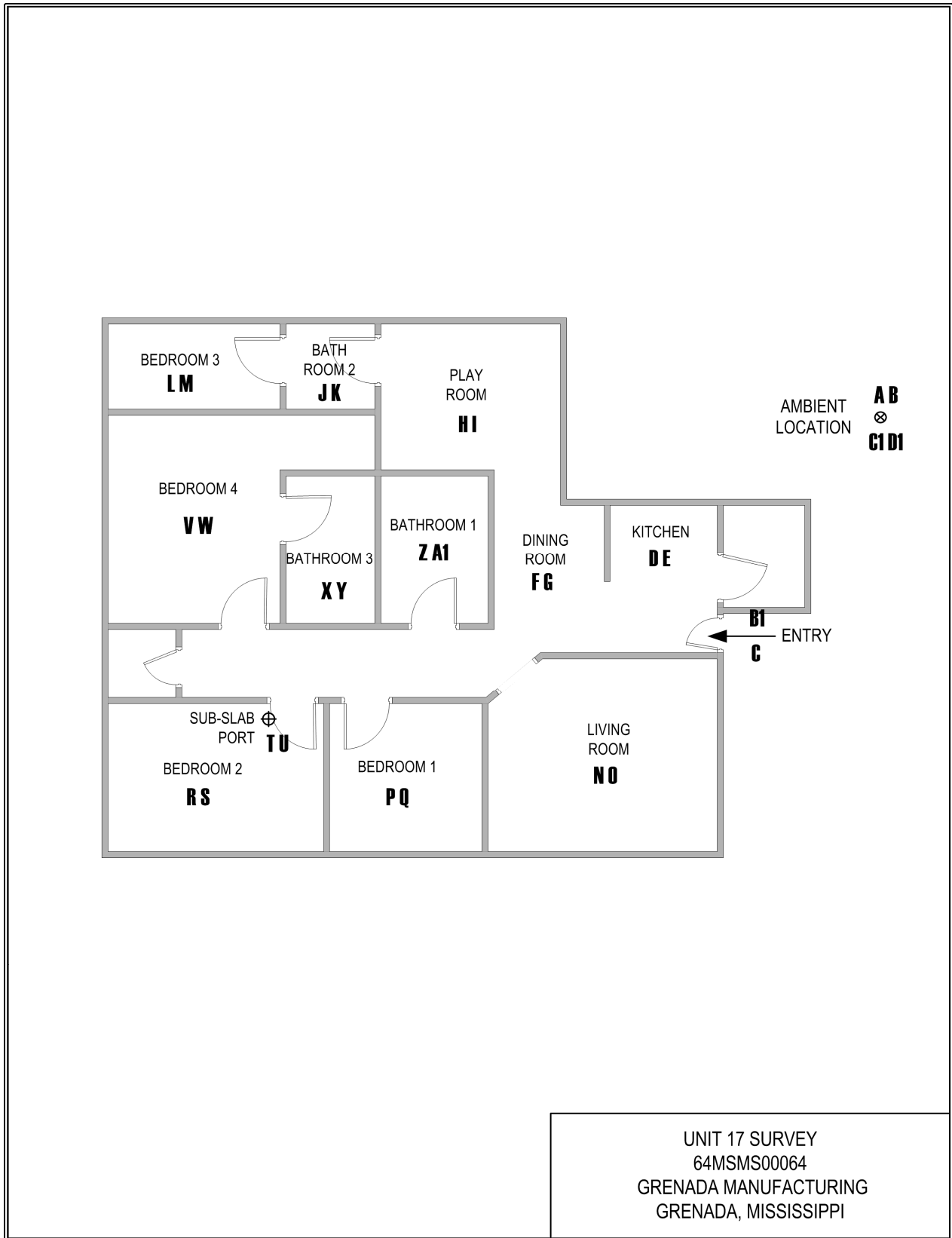


Figure 7a Unit 17 Survey Floor Plan, 64MSMS00064

Figure 7b

TAGA File Event Summary File: 64MSMS00064 Acquired on 03 May 2016 at 15:25:13 Title: Unit 17 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.6	92	Start of the pre-entry ambient
B	3.6	130	End of the pre-entry ambient
C	6.2	221	Entering the unit
D	7.2	259	Start of the kitchen
E	8.3	296	End of the kitchen
F	8.5	304	Start of the dining room
G	9.6	344	End of the dining room
H	10.1	360	Start of the play room
I	11.1	397	End of the play room
J	11.9	425	Start of bathroom two
K	12.9	462	End of bathroom two
L	13.1	470	Start of bedroom three
M	14.2	507	End of bedroom three
N	15.2	542	Start of the living room
O	16.4	586	End of the living room
P	16.9	605	Start of bedroom one
Q	18.0	644	End of bedroom one
R	18.5	661	Start of bedroom two
S	19.7	704	End of bedroom two
T	20.7	740	Start of the sub-slab port
U	21.8	778	End of the sub-slab port
V	23.1	825	Start of bedroom four
W	24.1	861	End of bedroom four
X	24.3	870	Start of bathroom three
Y	25.5	912	End of bathroom three
Z	26.6	952	Start of bathroom one
A1	27.7	988	End of bathroom one
B1	29.6	1059	Exiting the unit
C1	30.8	1100	Start of the post-exit ambient
D1	31.8	1137	End of the post-exit ambient
E1	34.8	1242	Start of 30 mL/min spike
F1	35.8	1279	End of 30 mL/min spike

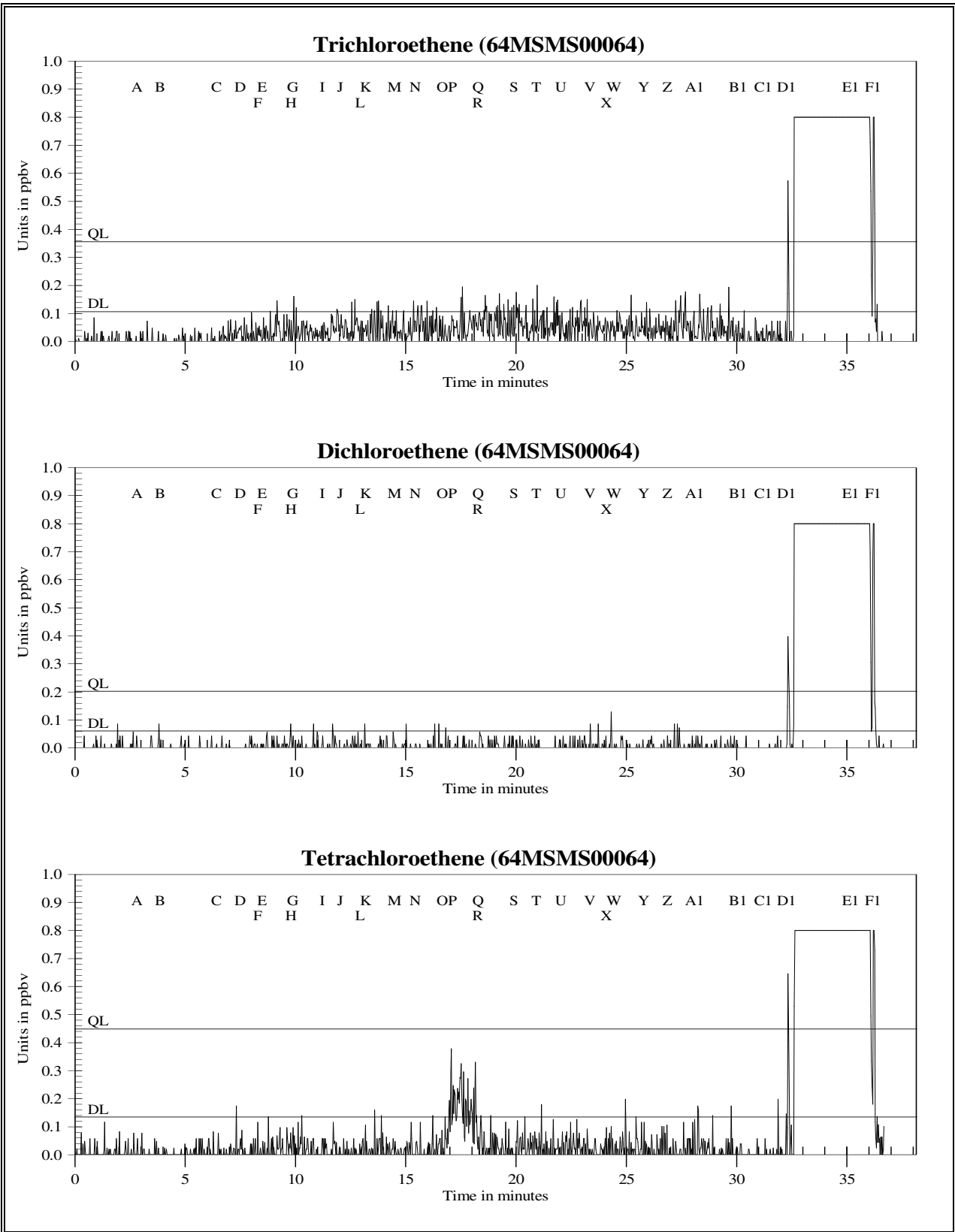


Figure 7c Unit 17 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

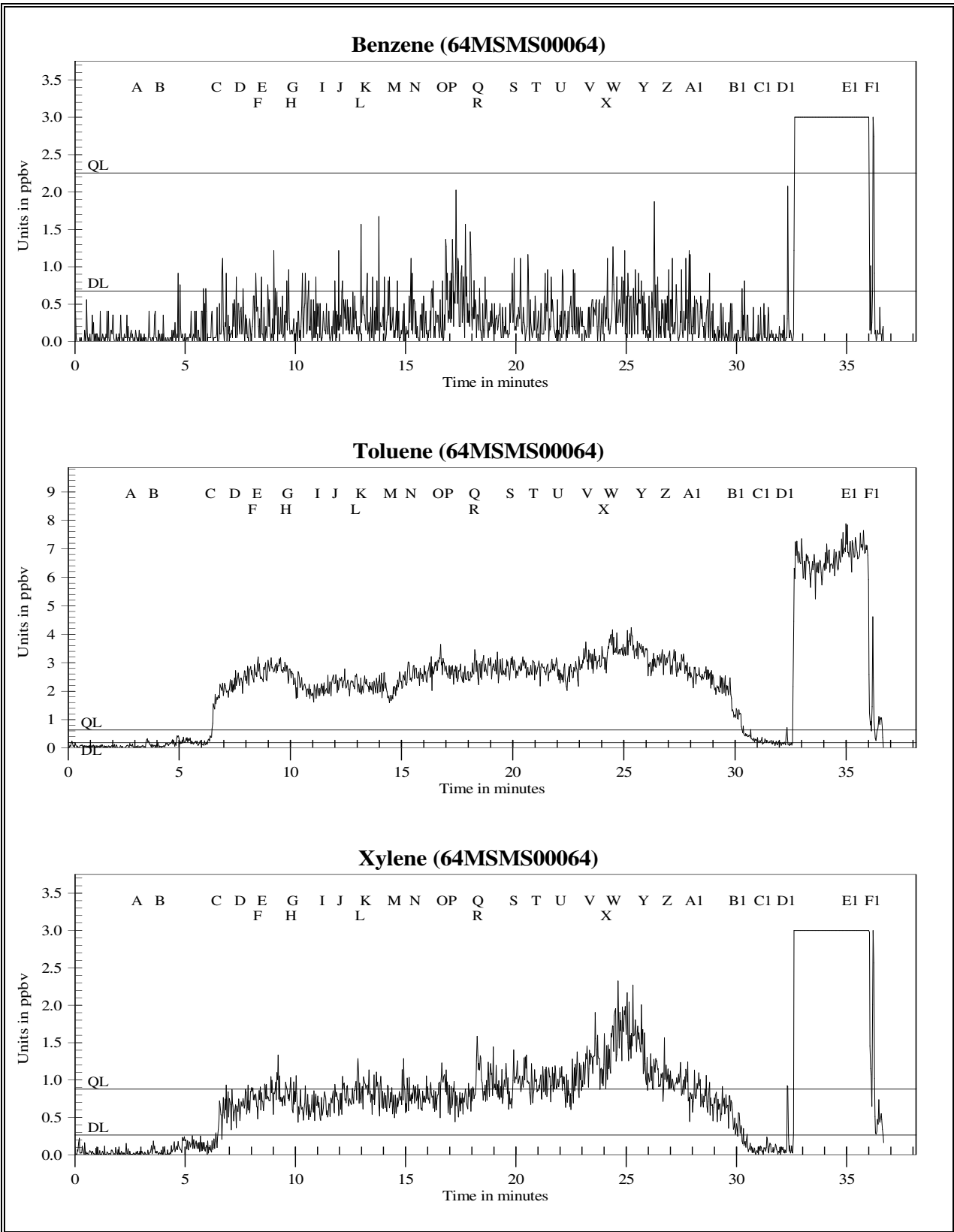


Figure 7d Unit 17 Survey in ppbv for Benzene, Toluene, and Xylenes

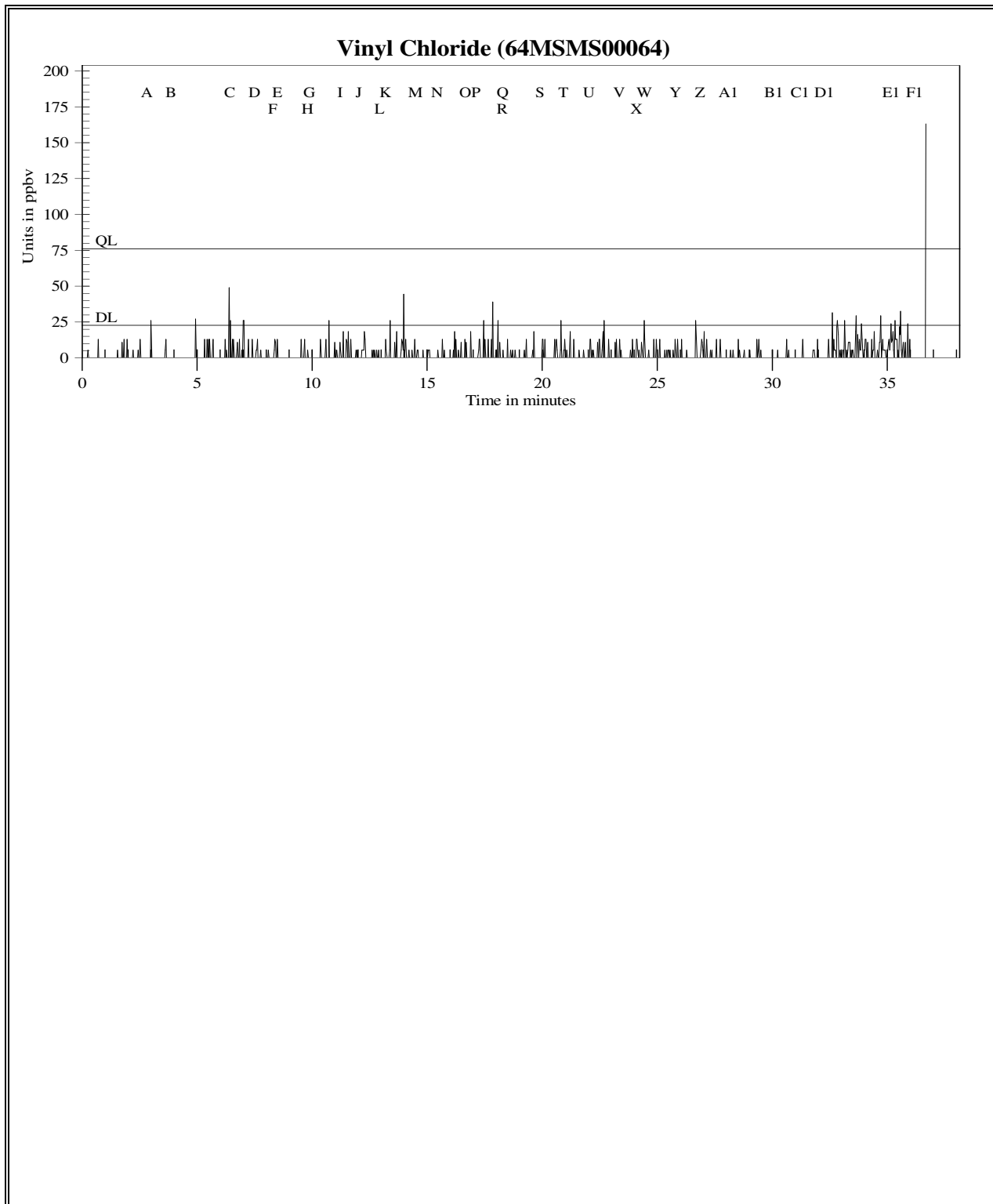


Figure 7e Unit 17 Survey in ppbv for Vinyl Chloride

Figure 7f

TAGA Target Compound Summary in ppbv for Unit 17 Survey File: 64MSMS00064 Acquired on 03 May 2016 at 15:25:13								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:		0.36	0.20	0.45	2.3	0.63	0.88	76
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
D - E	Kitchen	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.4	0.70J	DL=23.
F - G	Dining room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.8	0.82J	DL=23.
H - I	Play room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.2	0.65J	DL=23.
J - K	Bathroom two	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.3	0.81J	DL=23.
L - M	Bedroom three	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.2	0.82J	DL=23.
N - O	Living room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.6	0.78J	DL=23.
P - Q	Bedroom one	DL=0.11	DL=0.061	0.18J	DL=0.68	2.6	0.74J	DL=23.
R - S	Bedroom two	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.8	0.92	DL=23.
T - U	Sub-slab port	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.8	0.96	DL=23.
V - W	Bedroom four	DL=0.11	DL=0.061	DL=0.13	DL=0.68	3.1	1.2	DL=23.
X - Y	Bathroom three	DL=0.11	DL=0.061	DL=0.13	DL=0.68	3.6	1.7	DL=23.
Z - A1	Bathroom one	DL=0.11	DL=0.061	DL=0.13	DL=0.68	3.0	0.99	DL=23.
C1 - D1	Post-exit ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.23J	DL=0.26	DL=23.
E1 - F1	30 mL/min spike	5.9	6.4	5.4	6.6	7.0	9.8	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

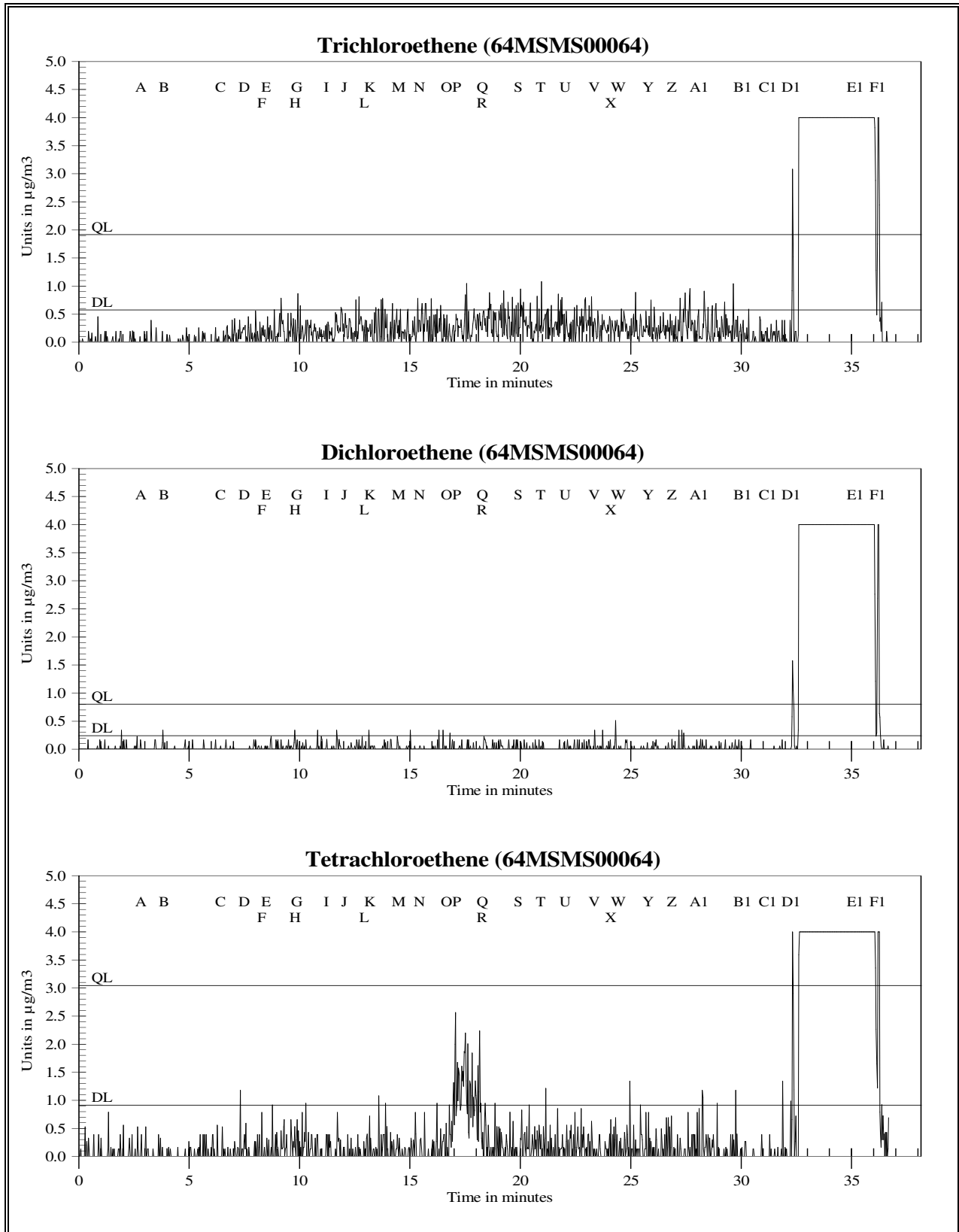


Figure 7g Unit 17 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

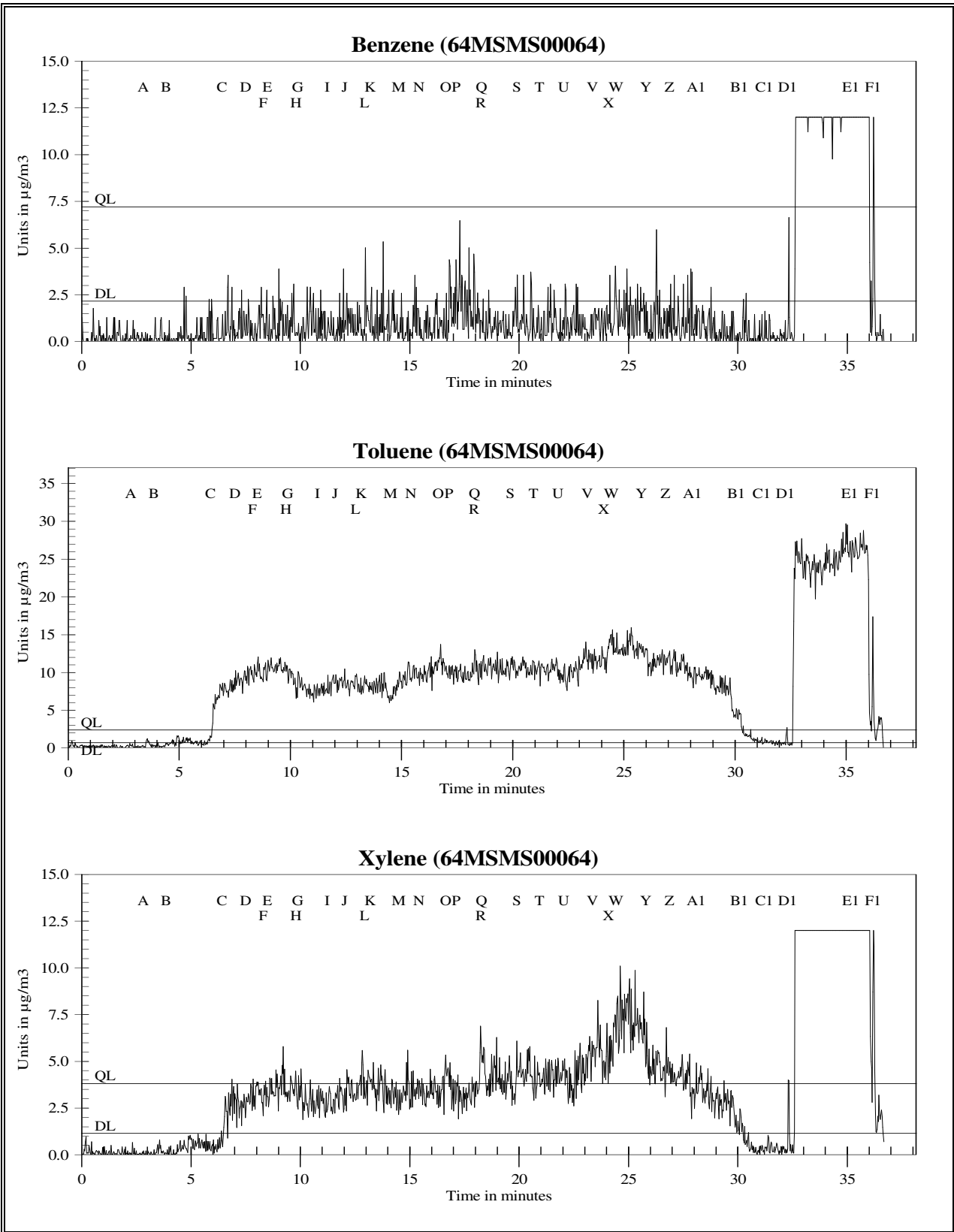


Figure 7h Unit 17 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

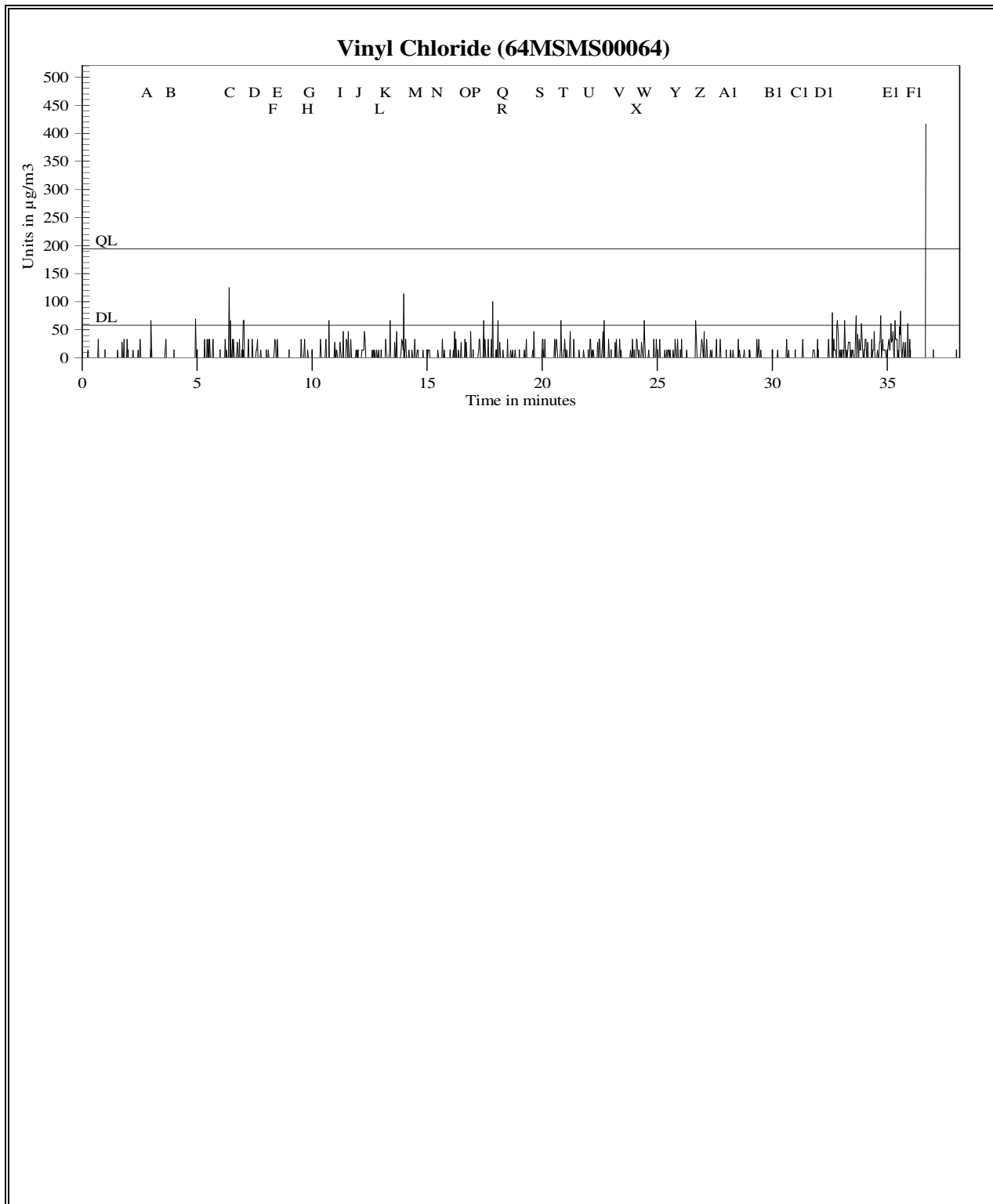


Figure 7i Unit 17 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 7j

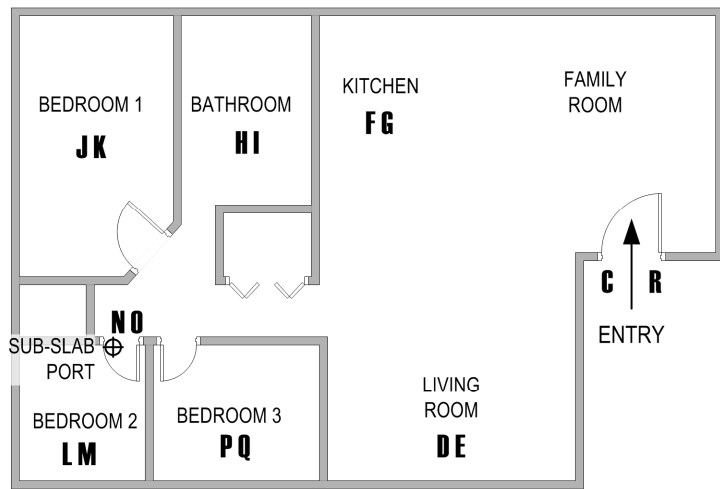
TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 17 Survey File: 64MSMS00064 Acquired on 03 May 2016 at 15:25:13								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits – DL:		0.57	0.24	0.91	2.2	0.72	1.1	58
Quantitation Limits – QL:		1.9	0.80	3.0	7.2	2.4	3.8	190
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A – B	Pre-entry ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
D – E	Kitchen	DL=0.57	DL=0.24	DL=0.91	DL=2.2	9.1	3.0J	DL=58.
F – G	Dining room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	10	3.6J	DL=58.
H – I	Play room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	8.1	2.8J	DL=58.
J – K	Bathroom two	DL=0.57	DL=0.24	DL=0.91	DL=2.2	8.6	3.5J	DL=58.
L – M	Bedroom three	DL=0.57	DL=0.24	DL=0.91	DL=2.2	8.2	3.6J	DL=58.
N – O	Living room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	9.8	3.4J	DL=58.
P – Q	Bedroom one	DL=0.57	DL=0.24	1.2J	DL=2.2	9.9	3.2J	DL=58.
R – S	Bedroom two	DL=0.57	DL=0.24	DL=0.91	DL=2.2	11	4.0	DL=58.
T – U	Sub-slab port	DL=0.57	DL=0.24	DL=0.91	DL=2.2	10	4.2	DL=58.
V – W	Bedroom four	DL=0.57	DL=0.24	DL=0.91	DL=2.2	12	5.4	DL=58.
X – Y	Bathroom three	DL=0.57	DL=0.24	DL=0.91	DL=2.2	14	7.4	DL=58.
Z – A1	Bathroom one	DL=0.57	DL=0.24	DL=0.91	DL=2.2	11	4.3	DL=58.
C1 – D1	Post-exit ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	0.88J	DL=1.1	DL=58.
E1 – F1	30 mL/min spike	32	25	37	21	27	43	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

AMBIENT
LOCATION

AB
⊗
ST



UNIT 20 SURVEY
64MSMS00065
GRENADA MANUFACTURING
GRENADA, MISSISSIPPI

Figure 8a Unit 20 Survey Floor Plan, 64MSMS00065

Figure 8b

TAGA File Event Summary			
File: 64MSMS00065 Acquired on 03 May 2016 at 16:24:31			
Title: Unit 20 Survey			
Flag	Offset Time	Offset Sequence	Description
A	3.5	125	Start of the pre-entry ambient
B	4.5	162	End of the pre-entry ambient
C	9.3	332	Entering the unit
D	10.1	363	Start of the living room
E	11.2	399	End of the living room
F	11.4	407	Start of the kitchen
G	12.4	443	End of the kitchen
H	12.8	459	Start of the bathroom
I	13.8	495	End of the bathroom
J	14.1	505	Start of bedroom one
K	15.2	542	End of bedroom one
L	15.5	553	Start of bedroom two
M	16.6	593	End of bedroom two
N	16.8	602	Start of the sub-slab port
O	18.0	644	End of the sub-slab port
P	18.3	653	Start of bedroom three
Q	19.4	692	End of bedroom three
R	20.0	714	Exiting the unit
S	21.4	765	Start of the post-exit ambient
T	22.4	801	End of the post-exit ambient
U	25.1	896	Start of 30 mL/spike
V	26.1	934	End of 30 mL/spike
Comment: The sub-slab port was installed under linoleum which was glued to the slab.			

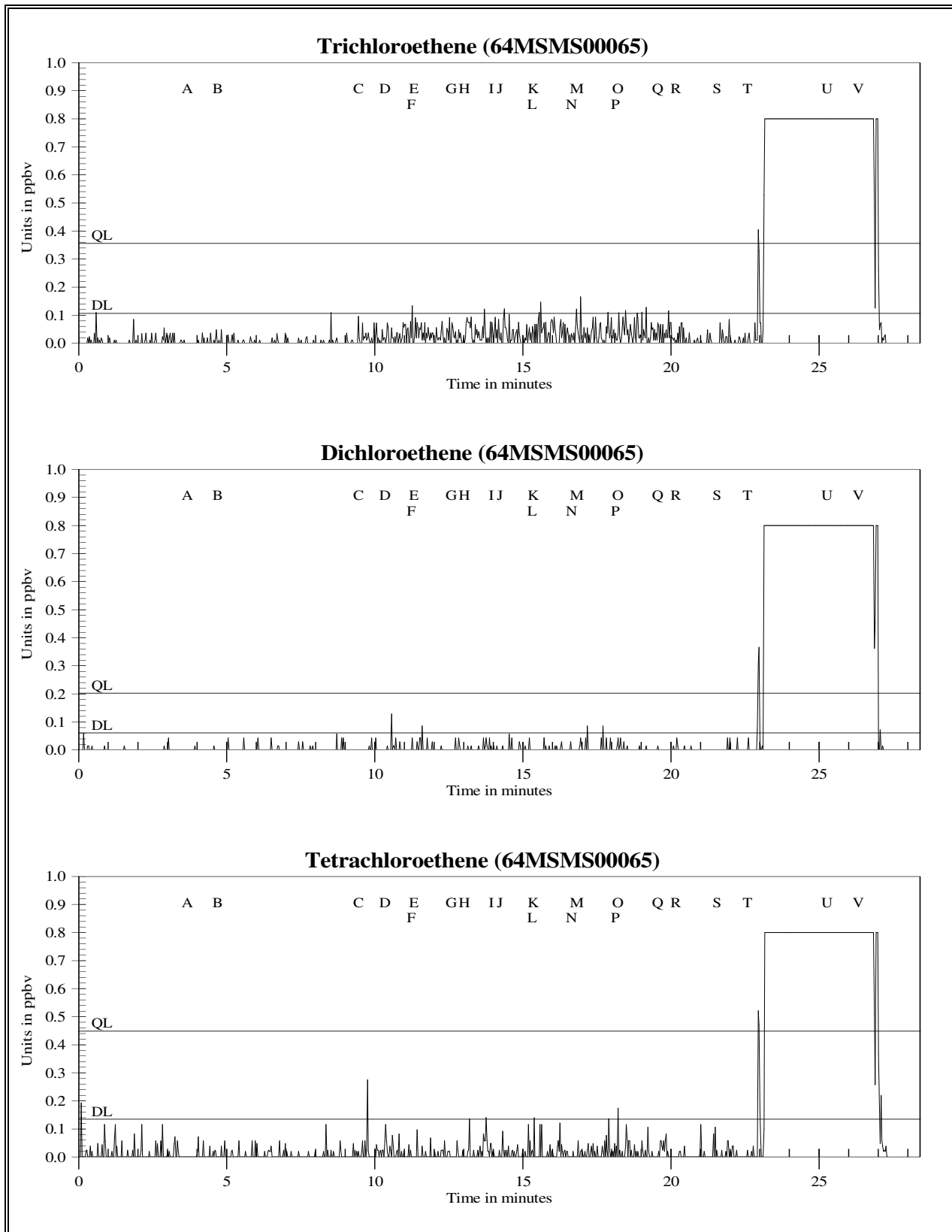


Figure 8c Unit 20 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

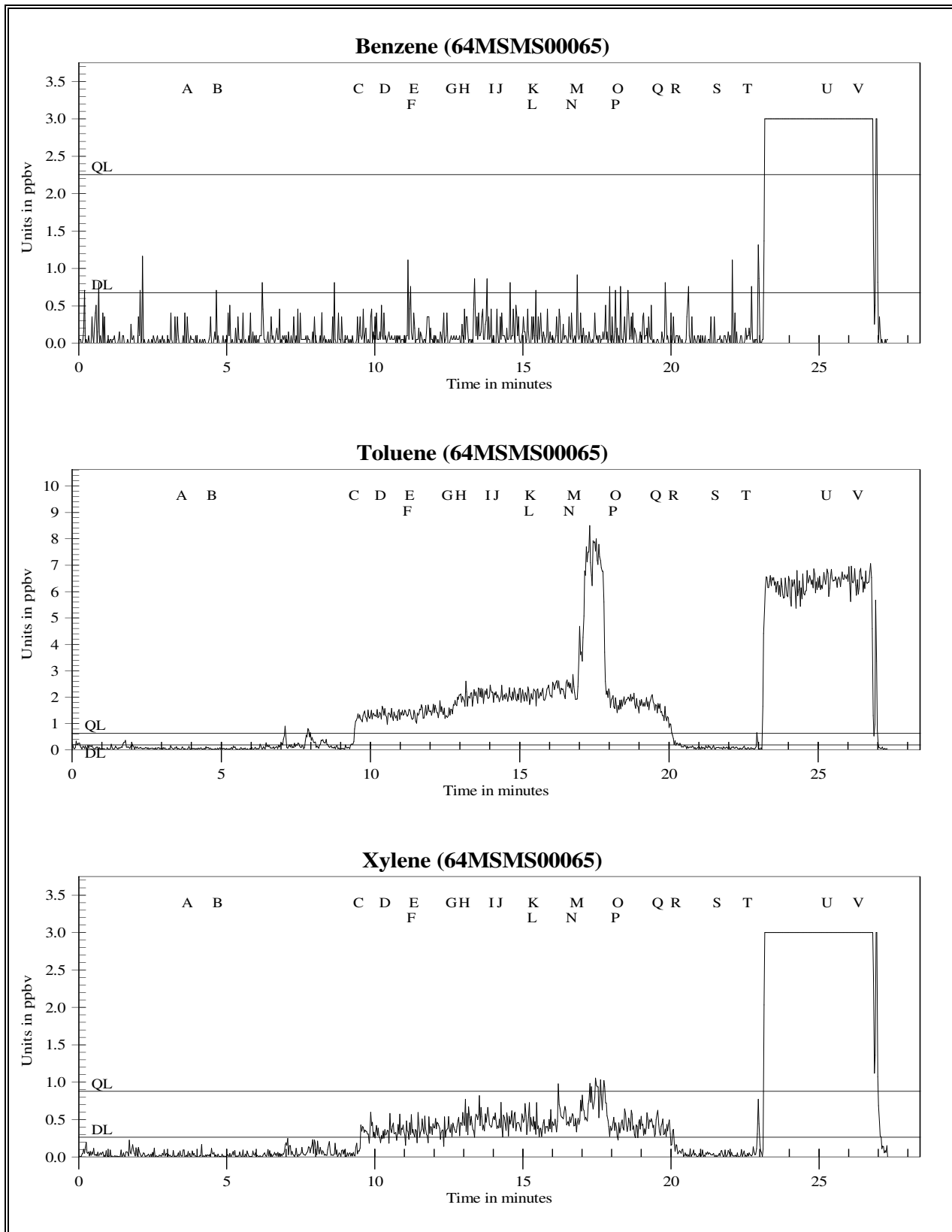


Figure 8d Unit 20 Survey in ppbv for Benzene, Toluene, and Xylenes

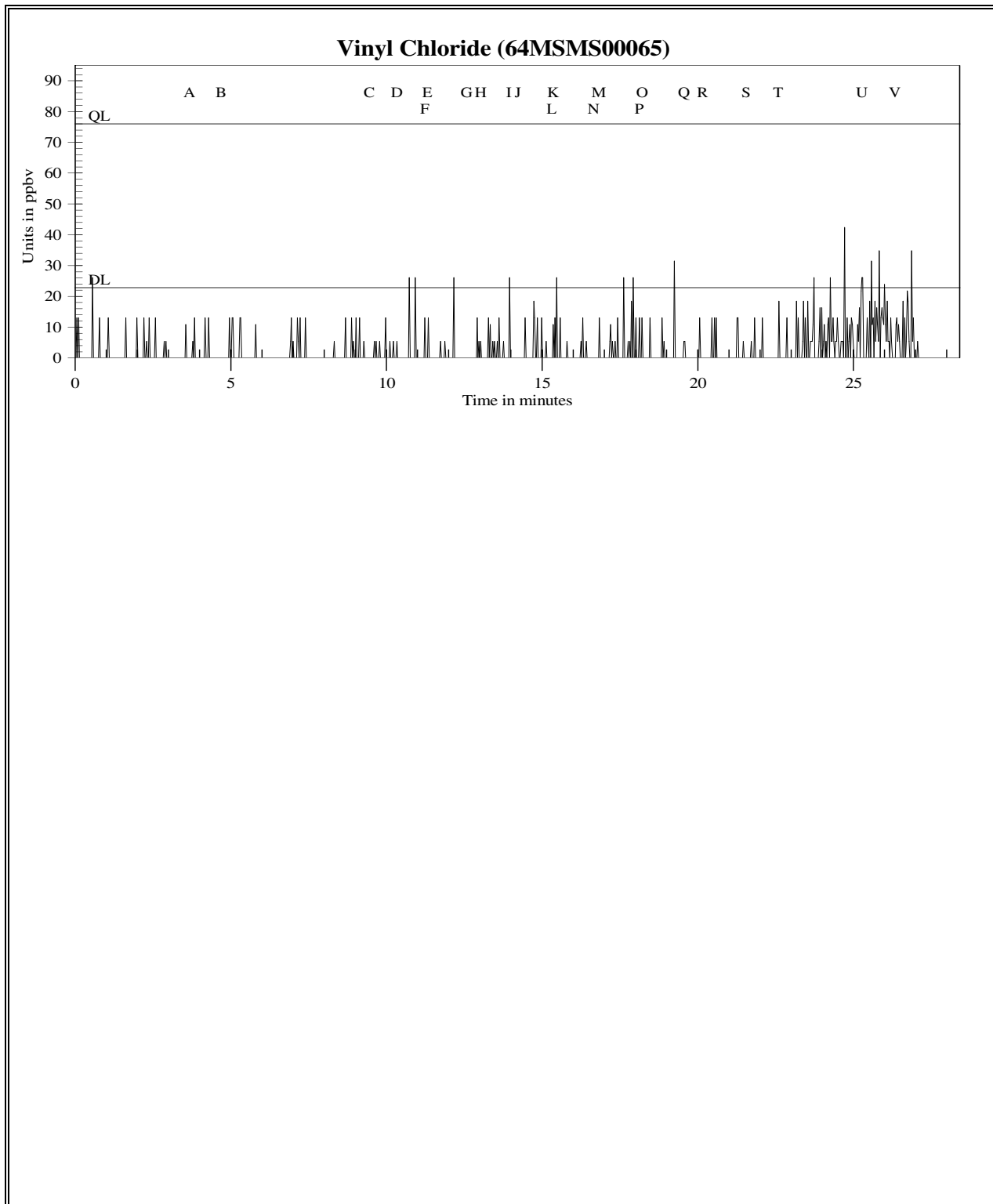


Figure 8e Unit 20 Survey in ppbv for Vinyl Chloride

Figure 8f

TAGA Target Compound Summary in ppbv for Unit 20 Survey File: 64MSMS00065 Acquired on 03 May 2016 at 16:24:31								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:		0.36	0.20	0.45	2.3	0.63	0.88	76
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
D - E	Living room	DL=0.11	DL=0.061	DL=0.13	DL=0.68	1.3	0.33J	DL=23.
F - G	Kitchen	DL=0.11	DL=0.061	DL=0.13	DL=0.68	1.4	0.37J	DL=23.
H - I	Bathroom	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.0	0.49J	DL=23.
J - K	Bedroom one	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.1	0.47J	DL=23.
L - M	Bedroom two	DL=0.11	DL=0.061	DL=0.13	DL=0.68	2.2	0.48J	DL=23.
N - O	Sub-slab port	DL=0.11	DL=0.061	DL=0.13	DL=0.68	5.3	0.68J	DL=23.
P - Q	Bedroom three	DL=0.11	DL=0.061	DL=0.13	DL=0.68	1.8	0.43J	DL=23.
S - T	Post-exit ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
U - V	30 mL/spike	5.8	6.3	5.3	6.7	6.4	9.2	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

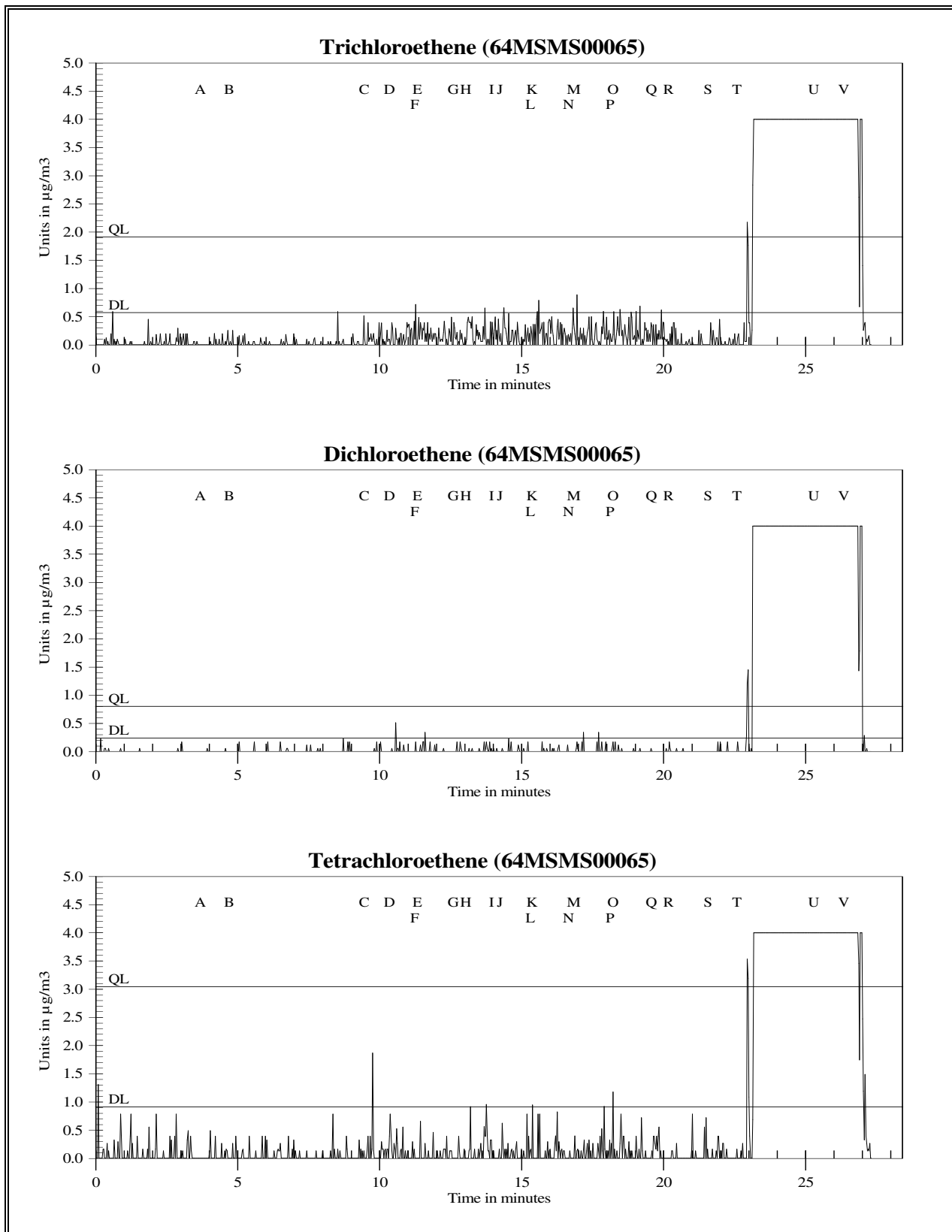


Figure 8g Unit 20 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

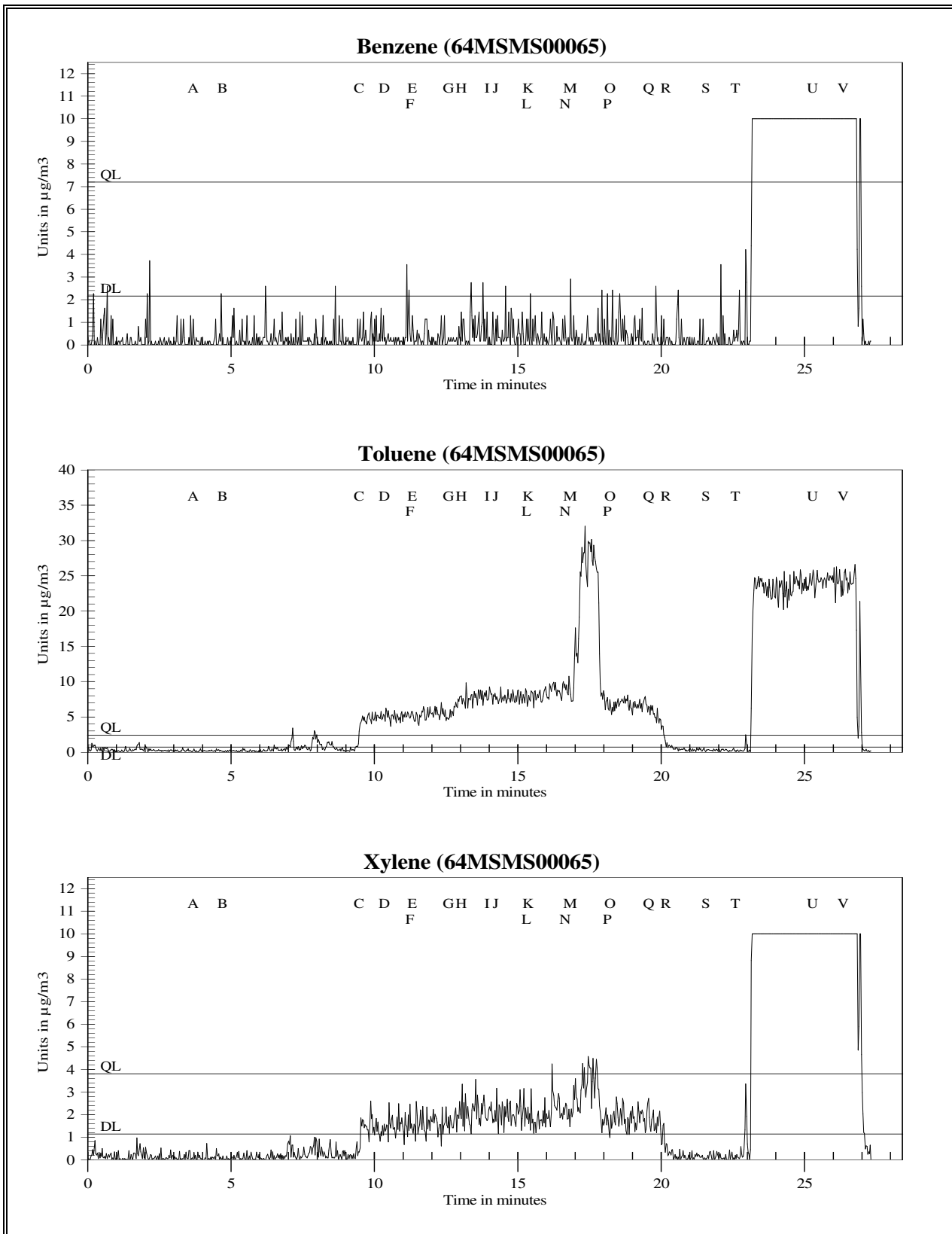


Figure 8h Unit 20 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

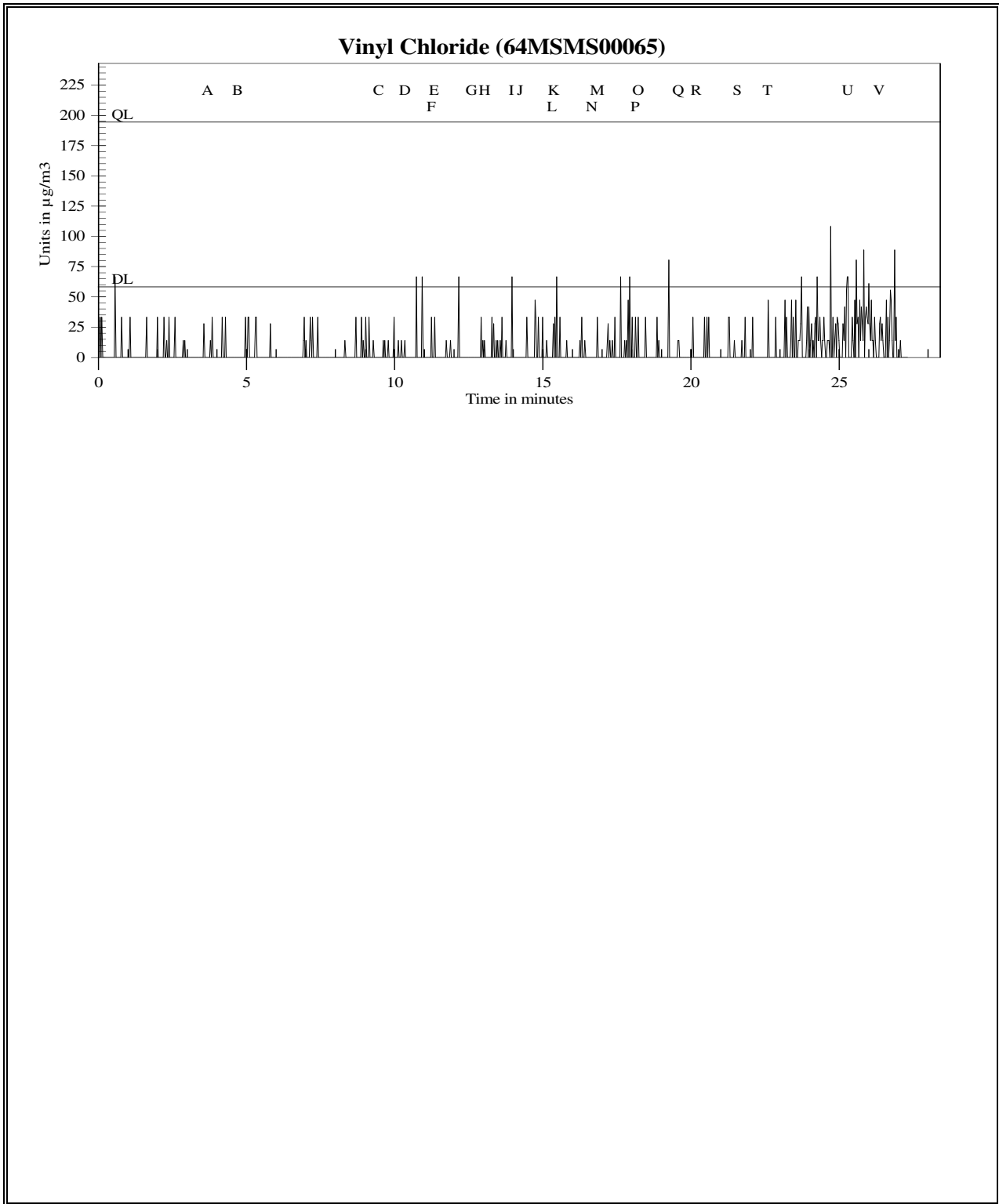


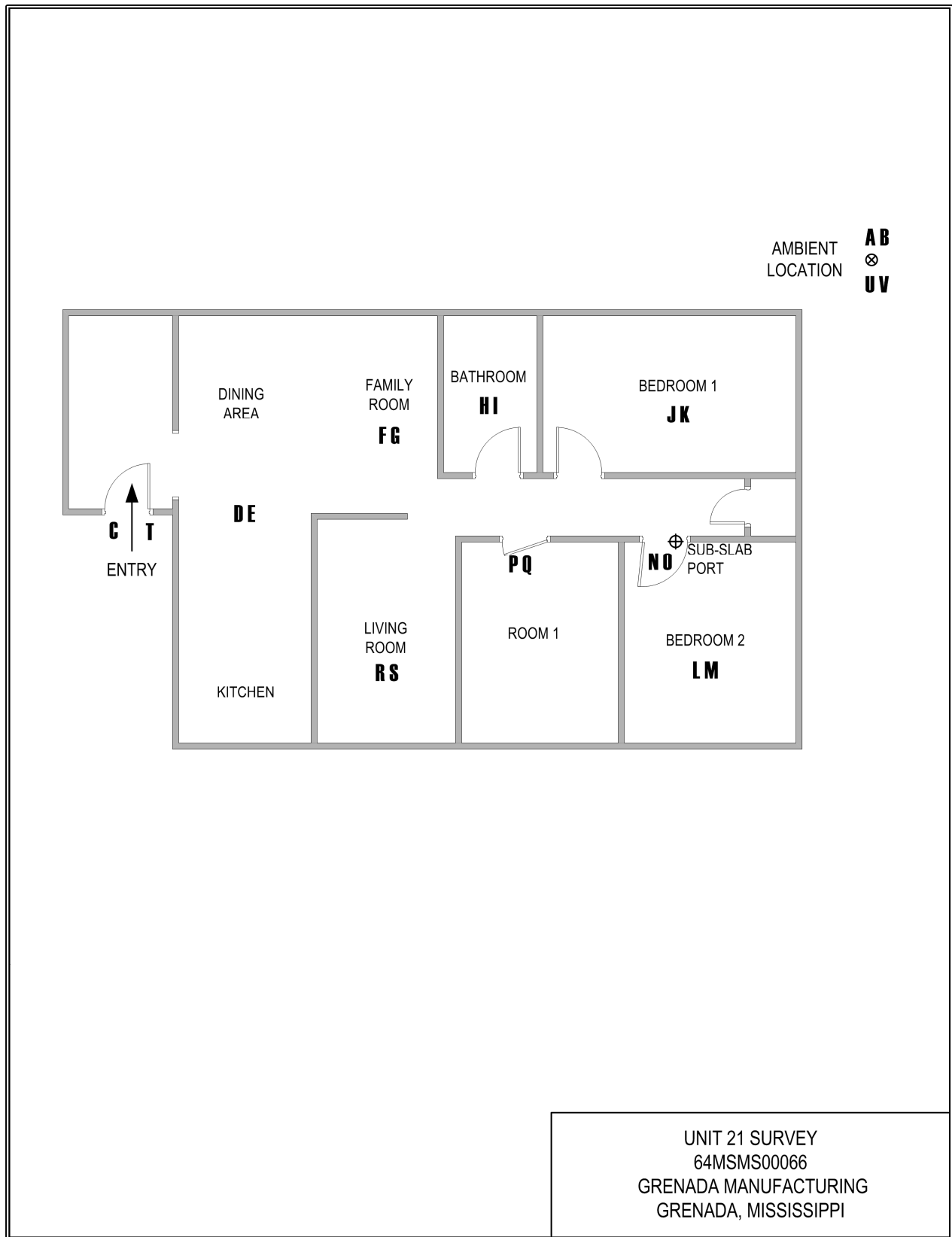
Figure 8i Unit 20 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 8j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 20 Survey File: 64MSMS00065 Acquired on 03 May 2016 at 16:24:31								
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride	
Detection Limits - DL:	0.57	0.24	0.91	2.2	0.72	1.1	58	
Quantitation Limits - QL:	1.9	0.80	3.0	7.2	2.4	3.8	190	
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
D - E	Living room	DL=0.57	DL=0.24	DL=0.91	DL=2.2	5.1	1.4J	DL=58.
F - G	Kitchen	DL=0.57	DL=0.24	DL=0.91	DL=2.2	5.4	1.6J	DL=58.
H - I	Bathroom	DL=0.57	DL=0.24	DL=0.91	DL=2.2	7.6	2.1J	DL=58.
J - K	Bedroom one	DL=0.57	DL=0.24	DL=0.91	DL=2.2	7.7	2.0J	DL=58.
L - M	Bedroom two	DL=0.57	DL=0.24	DL=0.91	DL=2.2	8.4	2.1J	DL=58.
N - O	Sub-slab port	DL=0.57	DL=0.24	DL=0.91	DL=2.2	20	2.9J	DL=58.
P - Q	Bedroom three	DL=0.57	DL=0.24	DL=0.91	DL=2.2	6.7	1.9J	DL=58.
S - T	Post-exit ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
U - V	30 mL/spike	31	25	36	21	24	40	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit



UNIT 21 SURVEY
 64MSMS00066
 GRENADA MANUFACTURING
 GRENADA, MISSISSIPPI

Figure 9a Unit 21 Survey Floor Plan, 64MSMS00066

Figure 9b

TAGA File Event Summary			
File: 64MSMS00066 Acquired on 03 May 2016 at 17:27:15			
Title: Unit 21 Survey			
Flag	Offset Time	Offset Sequence	Description
A	3.0	109	Start of the pre-entry ambient
B	4.0	144	End of the pre-entry ambient
C	7.0	252	Entering the unit
D	7.5	268	Start of the kitchen / dining area
E	8.5	305	End of the kitchen / dining area
F	8.8	316	Start of the family room
G	9.8	352	End of the family room
H	10.6	378	Start of the bathroom
I	11.6	415	End of the bathroom
J	11.9	426	Start of bedroom one
K	13.1	468	End of bedroom one
L	13.4	480	Start of bedroom two
M	14.4	516	End of bedroom two
N	14.7	524	Start of the sub-slab port
O	15.7	560	End of the sub-slab port
P	16.4	585	Start of room one
Q	17.3	620	End of room one
R	18.2	652	Start of the living room
S	19.2	688	End of the living room
T	20.0	714	Exiting the unit
U	22.0	787	Start of the post-exit ambient
V	23.4	836	End of the post-exit ambient
W	26.5	947	Start of 30 mL/min spike
X	28.2	1007	End of 30 mL/min spike
Comment: Access to room one was restricted and monitoring was performed by placing the distal end of the hose under the locked door.			

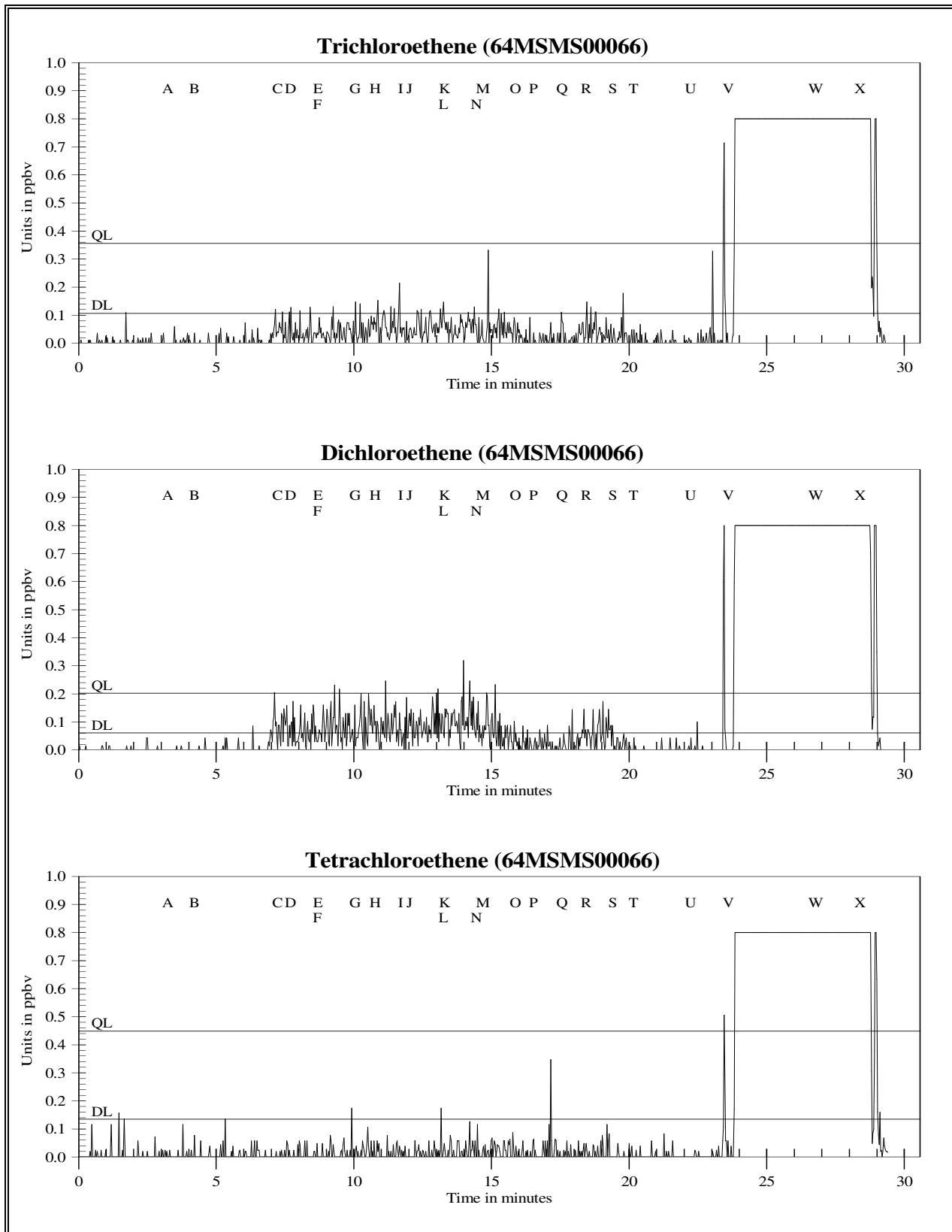


Figure 9c Unit 21 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

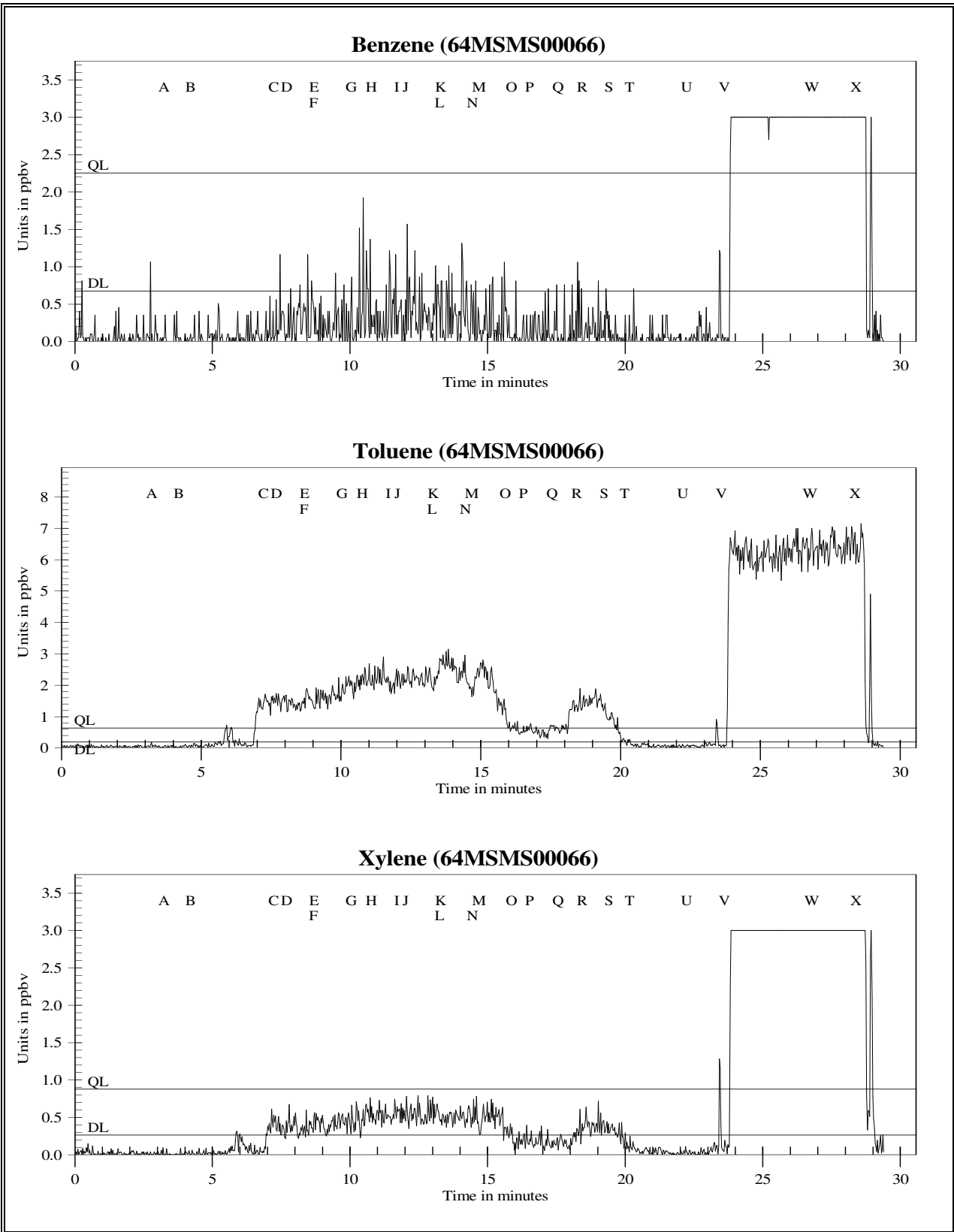


Figure 9d Unit 21 Survey in ppbv for Benzene, Toluene, and Xylenes

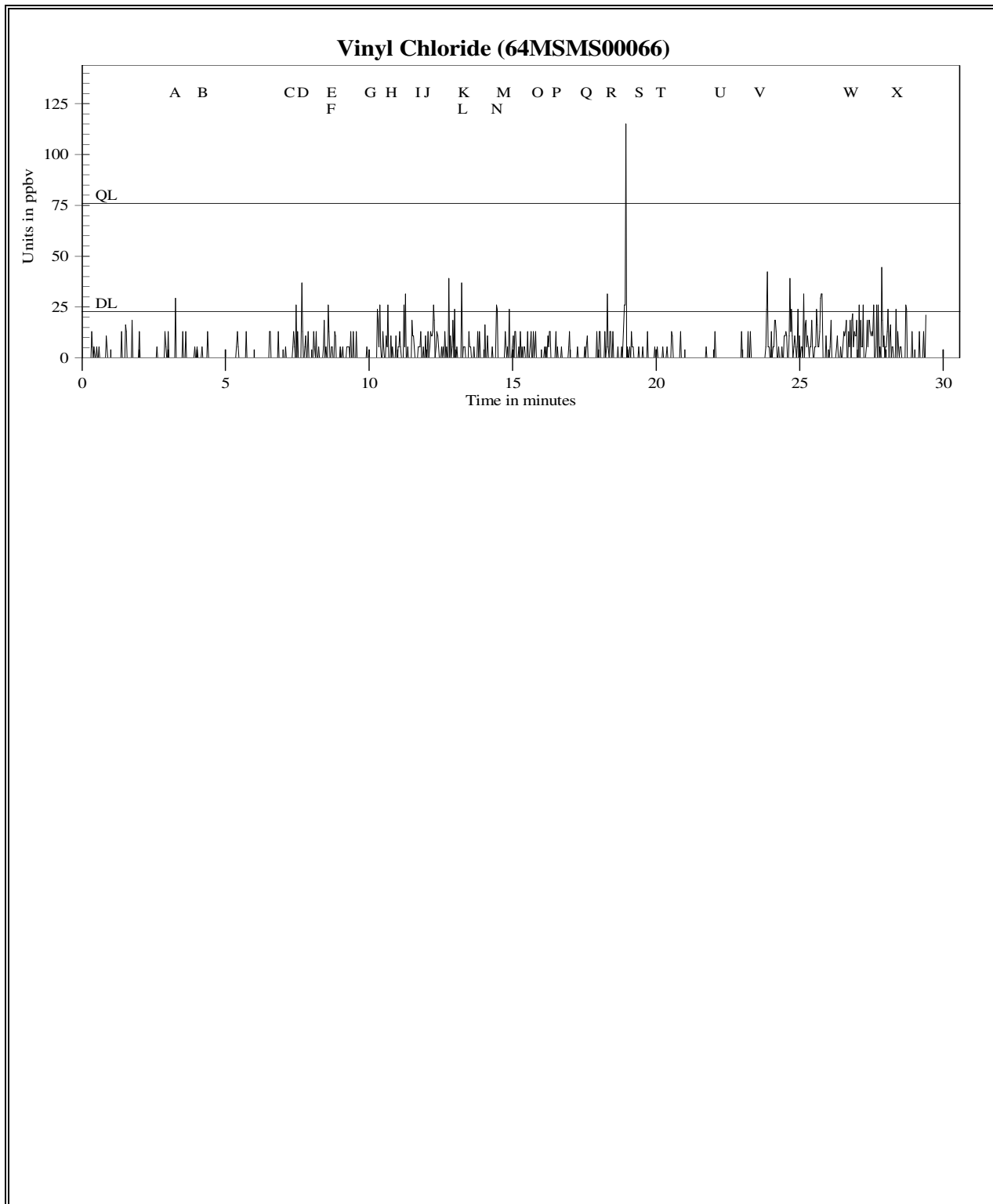


Figure 9e Unit 21 Survey in ppbv for Vinyl Chloride

Figure 9f

TAGA Target Compound Summary in ppbv for Unit 21 Survey File: 64MSMS00066 Acquired on 03 May 2016 at 17:27:15								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:		0.36	0.20	0.45	2.3	0.63	0.88	76
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
D - E	Kitchen / dining area	DL=0.11	0.069J	DL=0.13	DL=0.68	1.5	0.36J	DL=23.
F - G	Family room	DL=0.11	0.087J	DL=0.13	DL=0.68	1.6	0.42J	DL=23.
H - I	Bathroom	DL=0.11	0.088J	DL=0.13	DL=0.68	2.2	0.53J	DL=23.
J - K	Bedroom one	DL=0.11	0.088J	DL=0.13	DL=0.68	2.2	0.55J	DL=23.
L - M	Bedroom two	DL=0.11	0.11J	DL=0.13	DL=0.68	2.6	0.50J	DL=23.
N - O	Sub-slab port	DL=0.11	0.068J	DL=0.13	DL=0.68	2.1	0.48J	DL=23.
P - Q	Room one	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.53J	DL=0.26	DL=23.
R - S	Living room	DL=0.11	0.064J	DL=0.13	DL=0.68	1.5	0.39J	DL=23.
U - V	Post-exit ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
W - X	30 mL/min spike	5.7	6.3	5.1	6.8	6.4	9.1	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

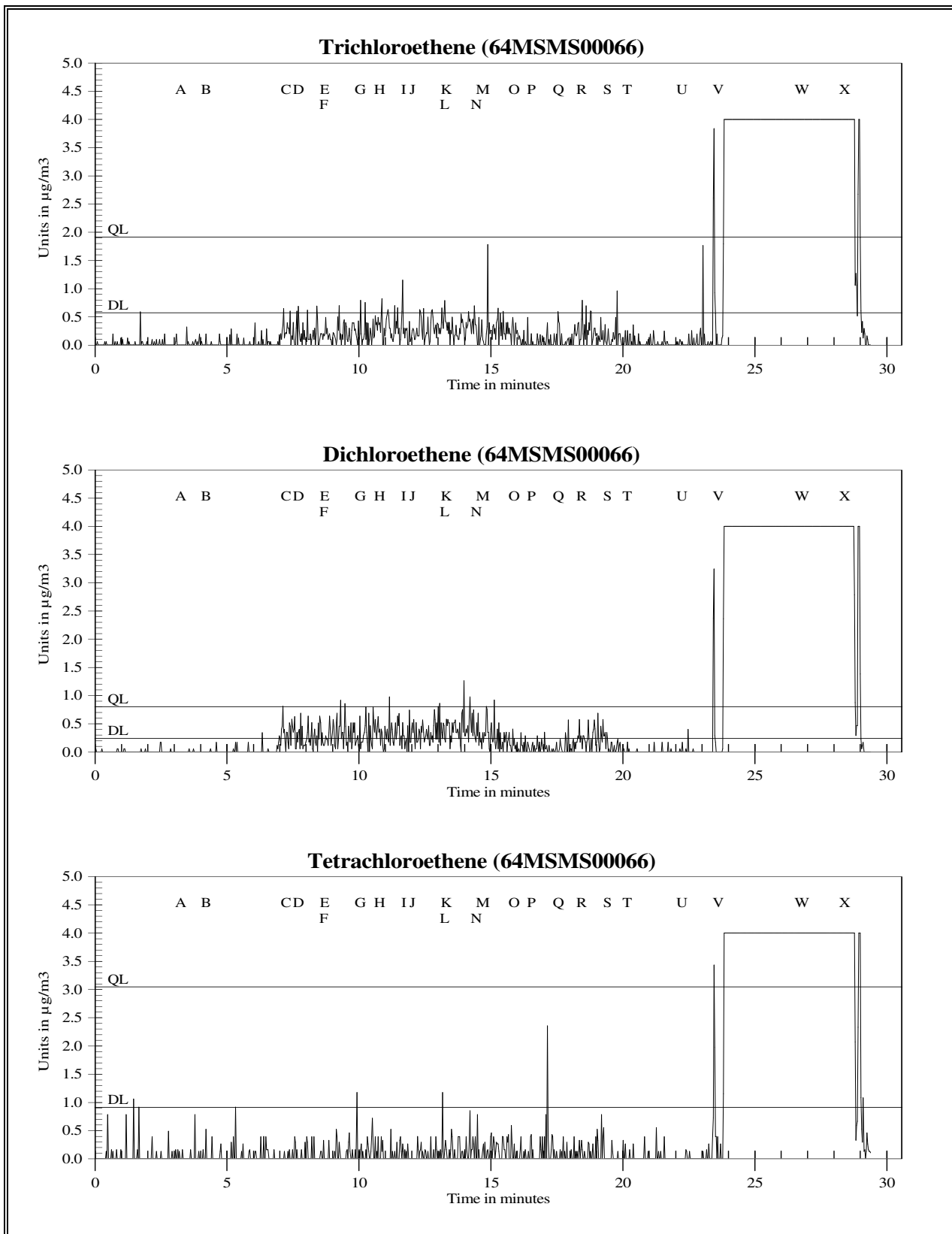


Figure 9g Unit 21 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

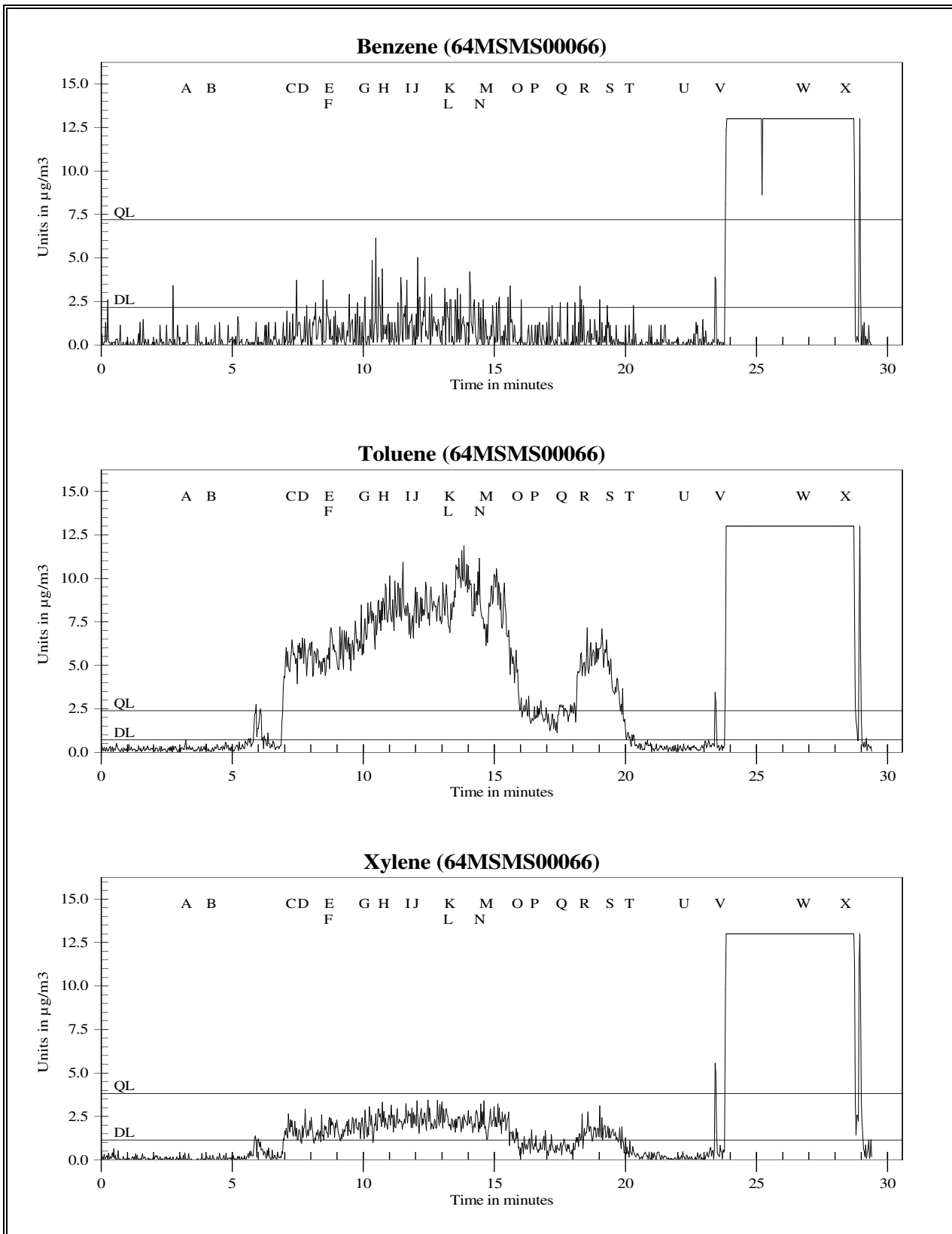


Figure 9h Unit 21 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

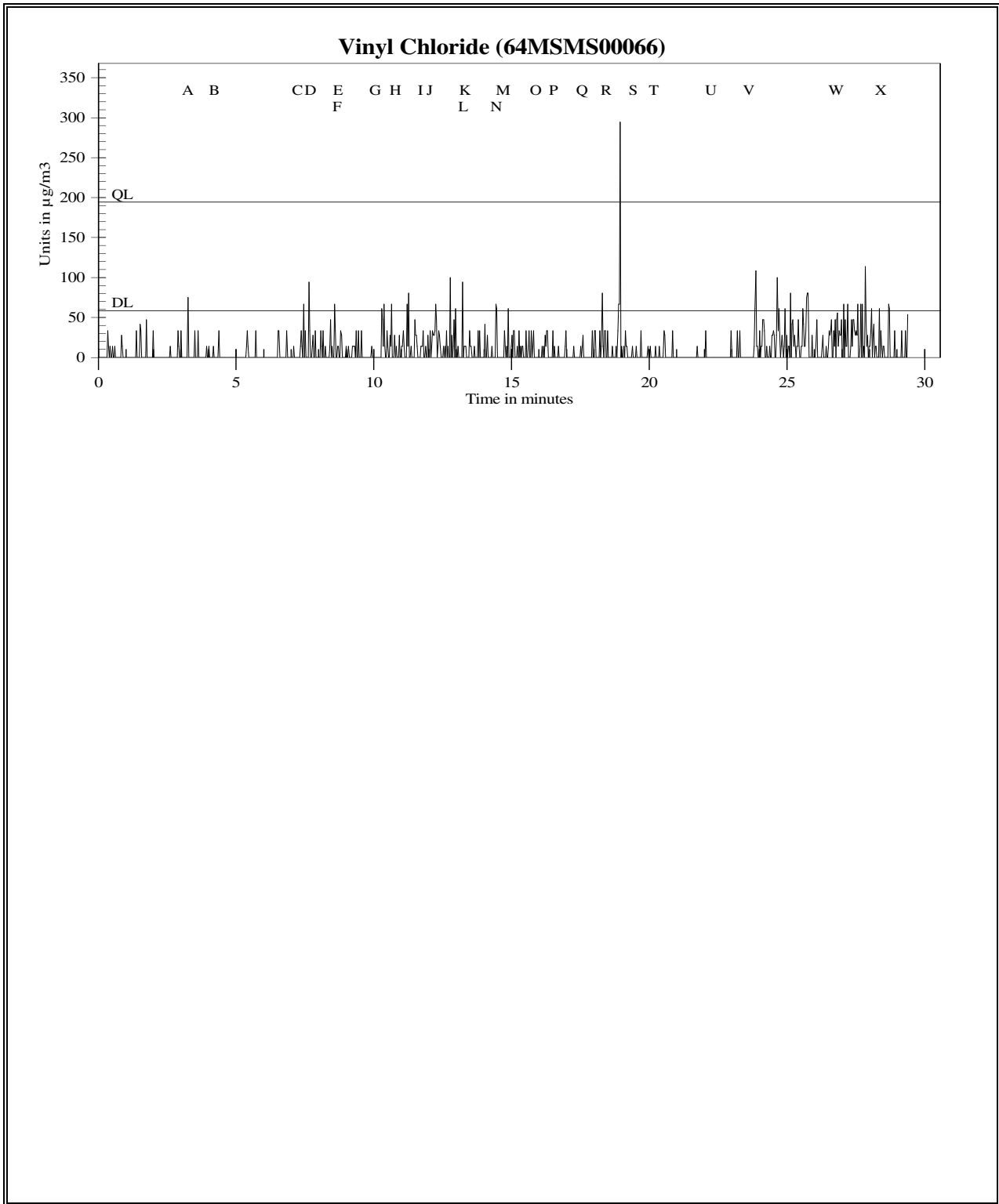


Figure 9i Unit 21 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 9j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 21 Survey File: 64MSMS00066 Acquired on 03 May 2016 at 17:27:15								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.57	0.24	0.91	2.2	0.72	1.1	58
Quantitation Limits - QL:		1.9	0.80	3.0	7.2	2.4	3.8	190
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
D - E	Kitchen / dining area	DL=0.57	0.27J	DL=0.91	DL=2.2	5.5	1.6J	DL=58.
F - G	Family room	DL=0.57	0.34J	DL=0.91	DL=2.2	6.0	1.8J	DL=58.
H - I	Bathroom	DL=0.57	0.35J	DL=0.91	DL=2.2	8.4	2.3J	DL=58.
J - K	Bedroom one	DL=0.57	0.35J	DL=0.91	DL=2.2	8.3	2.4J	DL=58.
L - M	Bedroom two	DL=0.57	0.43J	DL=0.91	DL=2.2	9.7	2.2J	DL=58.
N - O	Sub-slab port	DL=0.57	0.27J	DL=0.91	DL=2.2	8.1	2.1J	DL=58.
P - Q	Room one	DL=0.57	DL=0.24	DL=0.91	DL=2.2	2.0J	DL=1.1	DL=58.
R - S	Living room	DL=0.57	0.25J	DL=0.91	DL=2.2	5.5	1.7J	DL=58.
U - V	Post-exit ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
W - X	30 mL/min spike	31	25	35	22	24	39	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit



Figure 20a Drainage Ditch Investigation Area Map, 64MSMS00067

Figure 10b

TAGA File Event Summary			
File: 64MSMS00067 Acquired on 03 May 2016 at 18:15:11			
Title: Drainage Ditch Investigation			
Flag	Offset Time	Offset Sequence	Description
A	2.5	90	Start of the pre-run ambient
B	3.5	126	End of the pre-run ambient
C	5.0	179	Start of the south to north move along the drainage ditch
D	6.4	228	End of the south to north move along the drainage ditch
E	11.9	424	Ending the investigation run
F	13.3	476	Start of the post-run ambient
G	14.3	513	End of the post-run ambient
H	16.9	603	Start of 30 mL/min spike
I	17.8	638	End of 30 mL/min spike

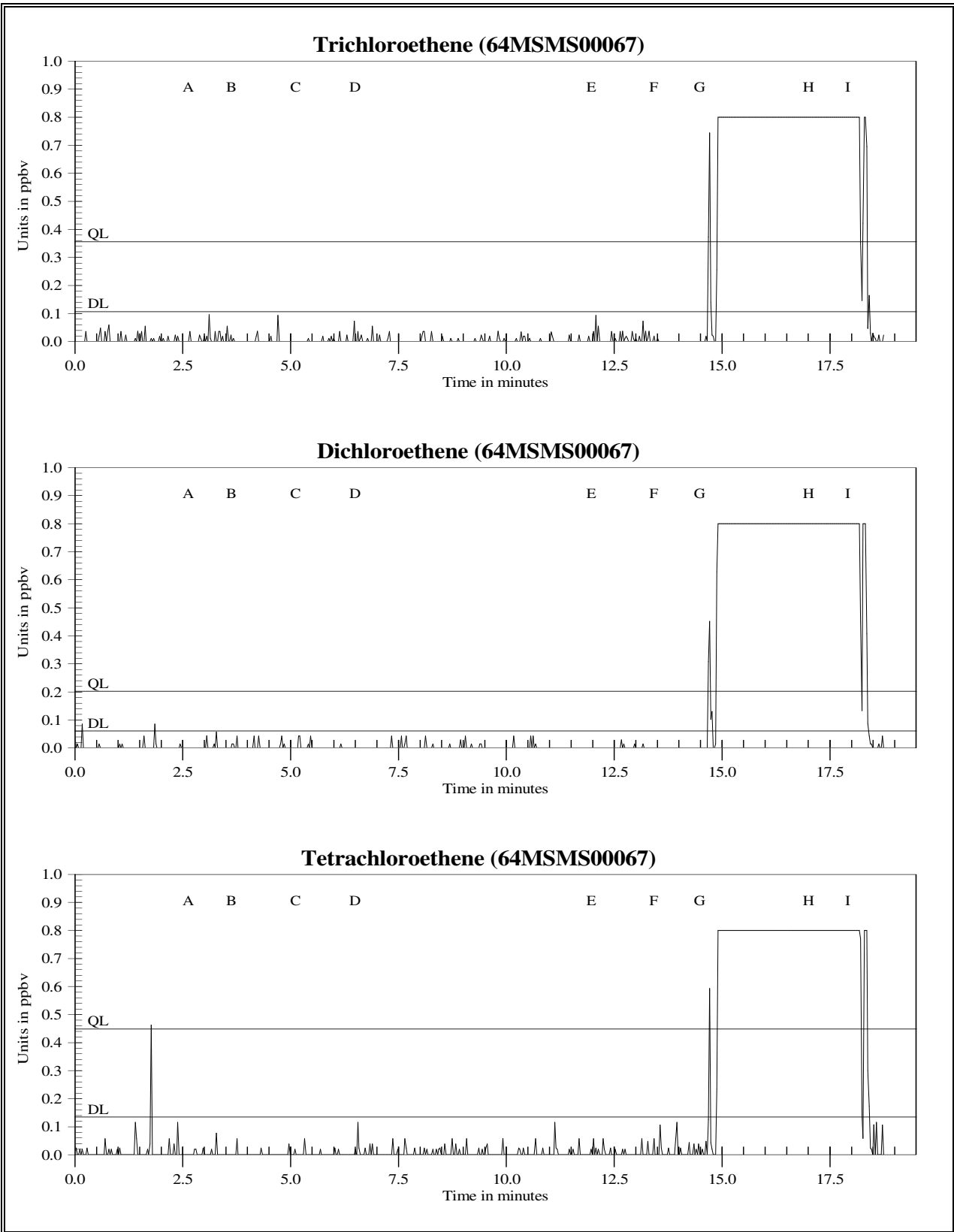


Figure 10c Drainage Ditch Investigation in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

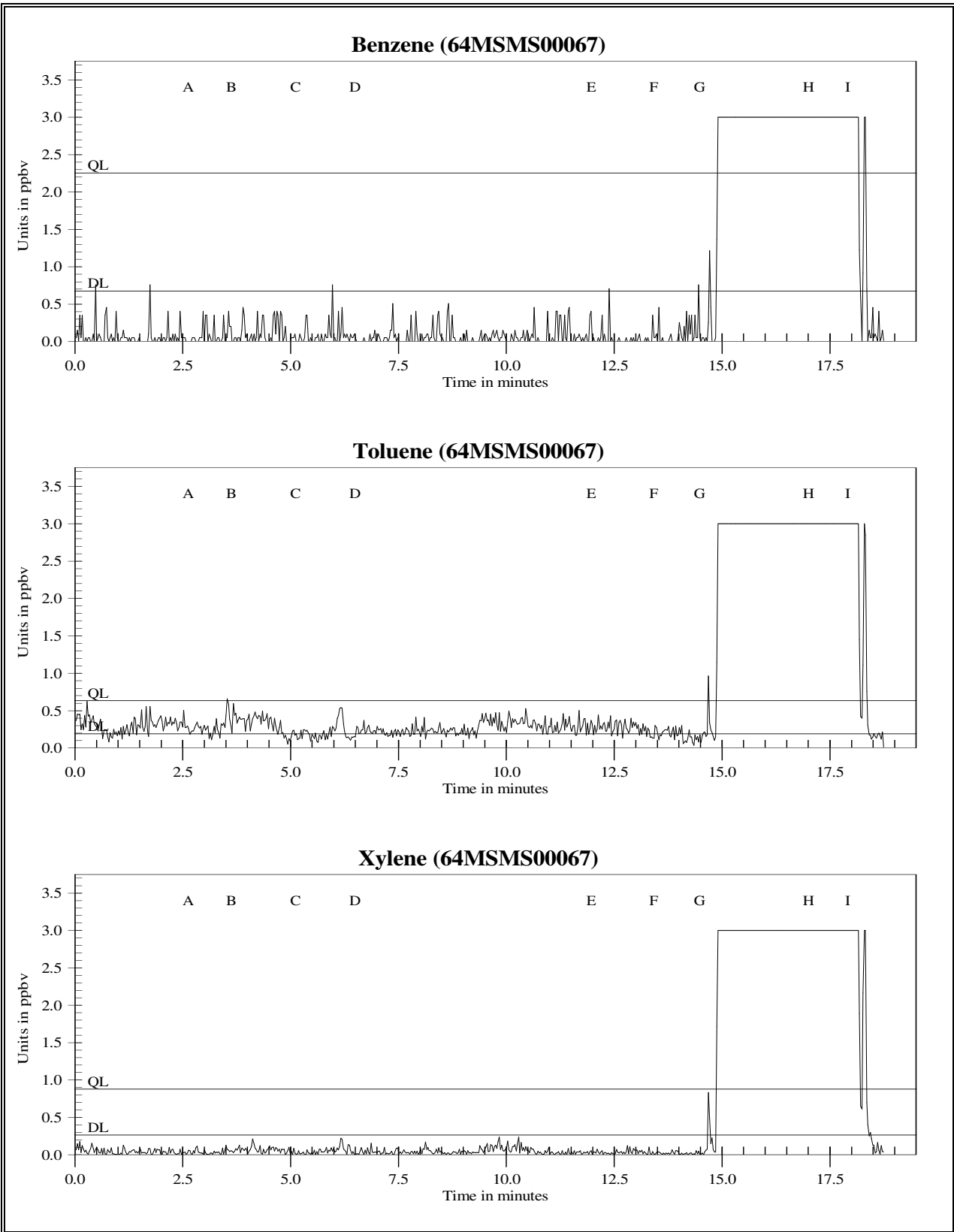


Figure 10d Drainage Ditch Investigation in ppbv for Benzene, Toluene, and Xylenes

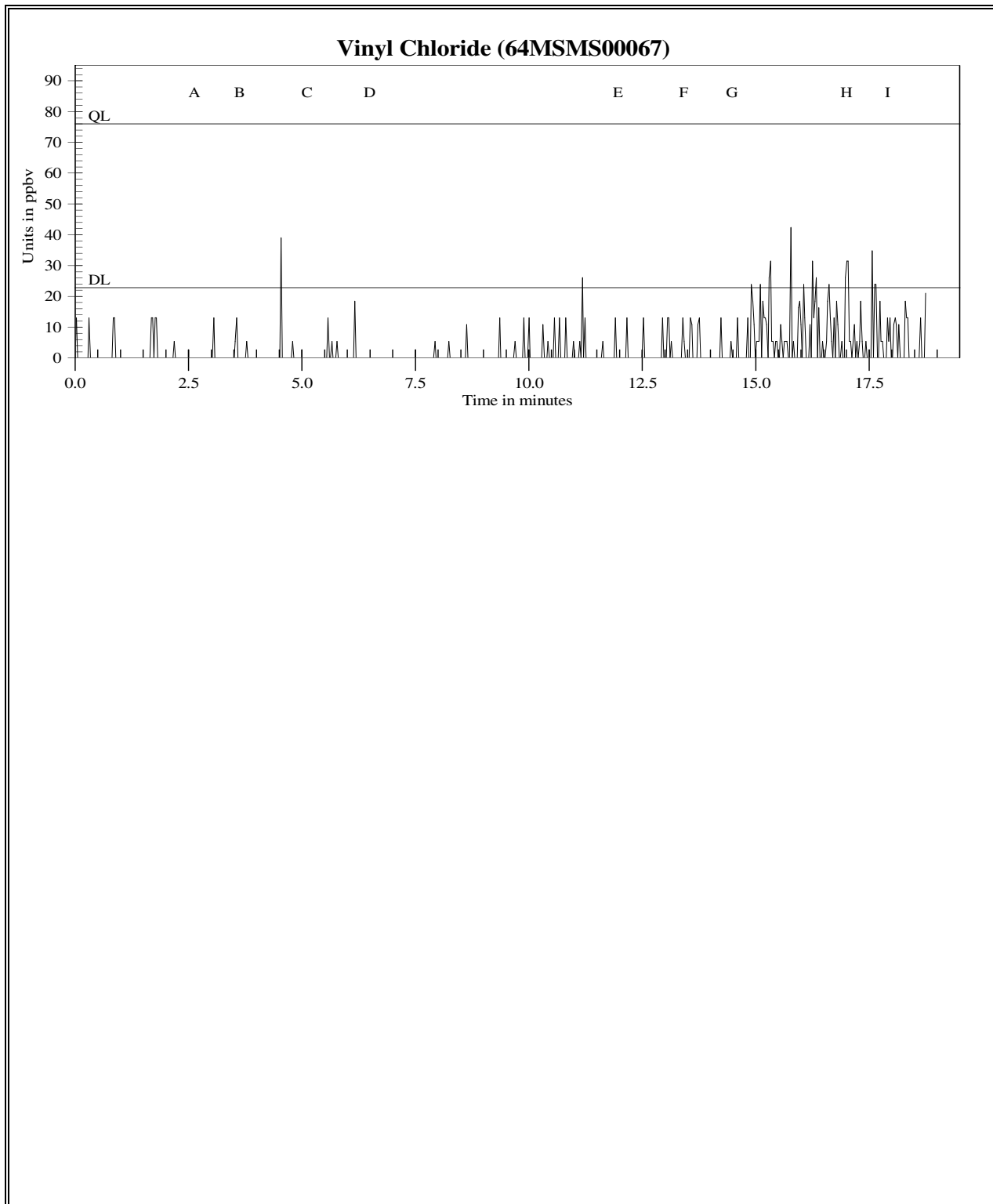


Figure 10e Drainage Ditch Investigation in ppbv for Vinyl Chloride

Figure 10f

TAGA Target Compound Summary in ppbv for Drainage Ditch Investigation File: 64MSMS00067 Acquired on 03 May 2016 at 18:15:11								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.11	0.061	0.13	0.68	0.19	0.26	23
Quantitation Limits - QL:		0.36	0.20	0.45	2.3	0.63	0.88	76
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-run ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.27J	DL=0.26	DL=23.
C - D	South to north move along the drainage ditch	DL=0.11	DL=0.061	DL=0.13	DL=0.68	0.21J	DL=0.26	DL=23.
F - G	Post-run ambient	DL=0.11	DL=0.061	DL=0.13	DL=0.68	DL=0.19	DL=0.26	DL=23.
H - I	30 mL/min spike	5.5	6.2	4.4	6.3	5.8	7.5	DL=23.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

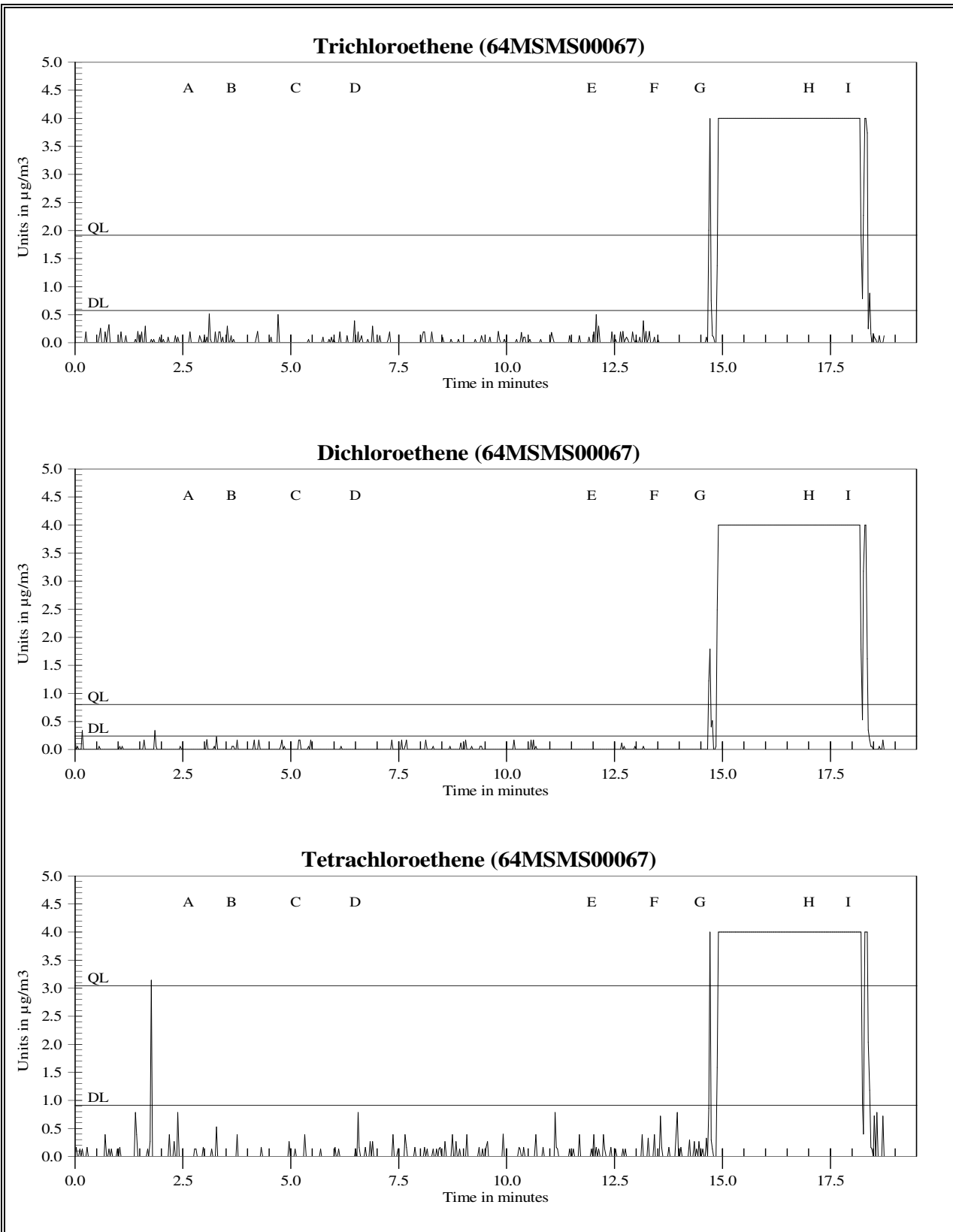


Figure 10g Drainage Ditch Investigation in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

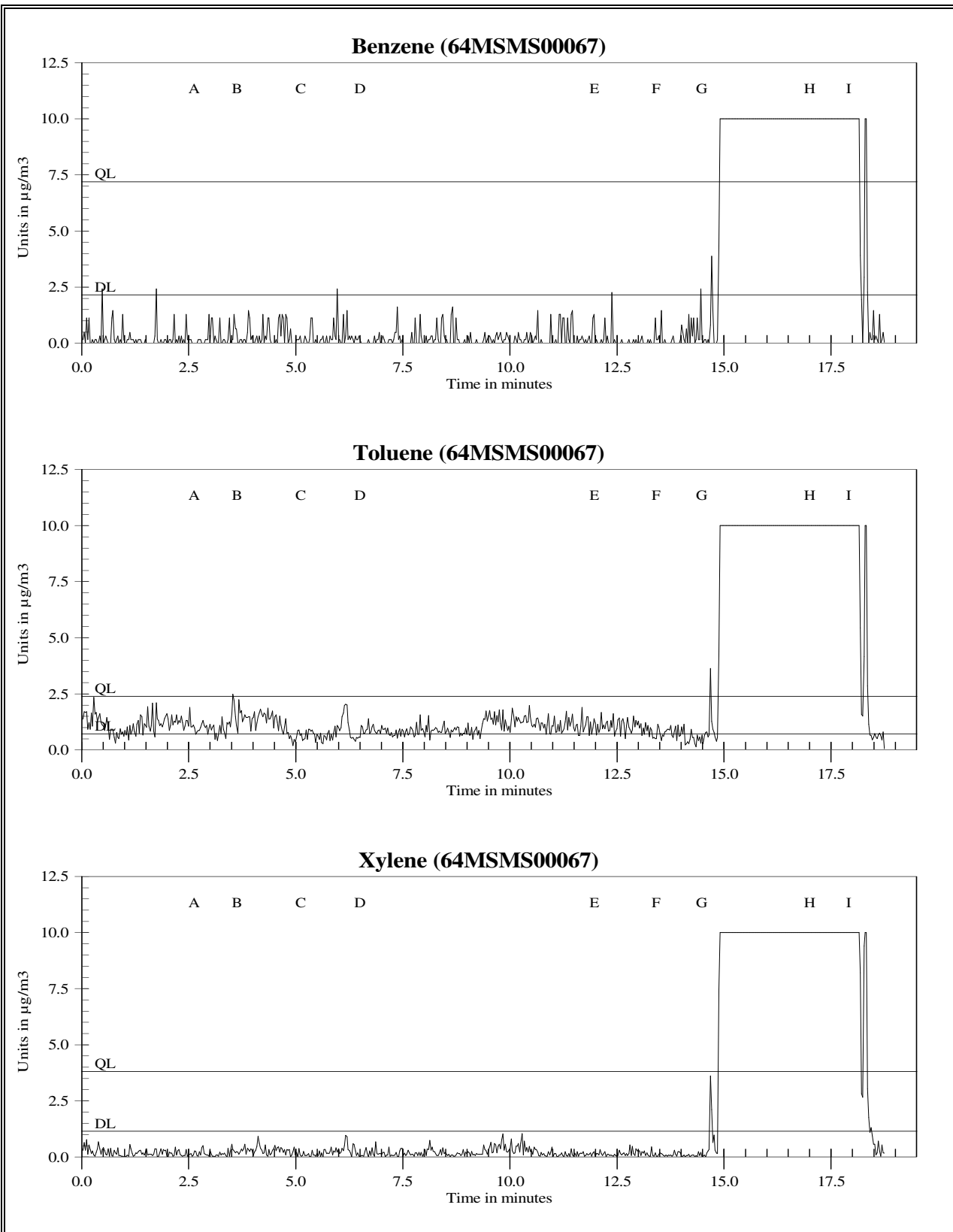


Figure 10h Drainage Ditch Investigation in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

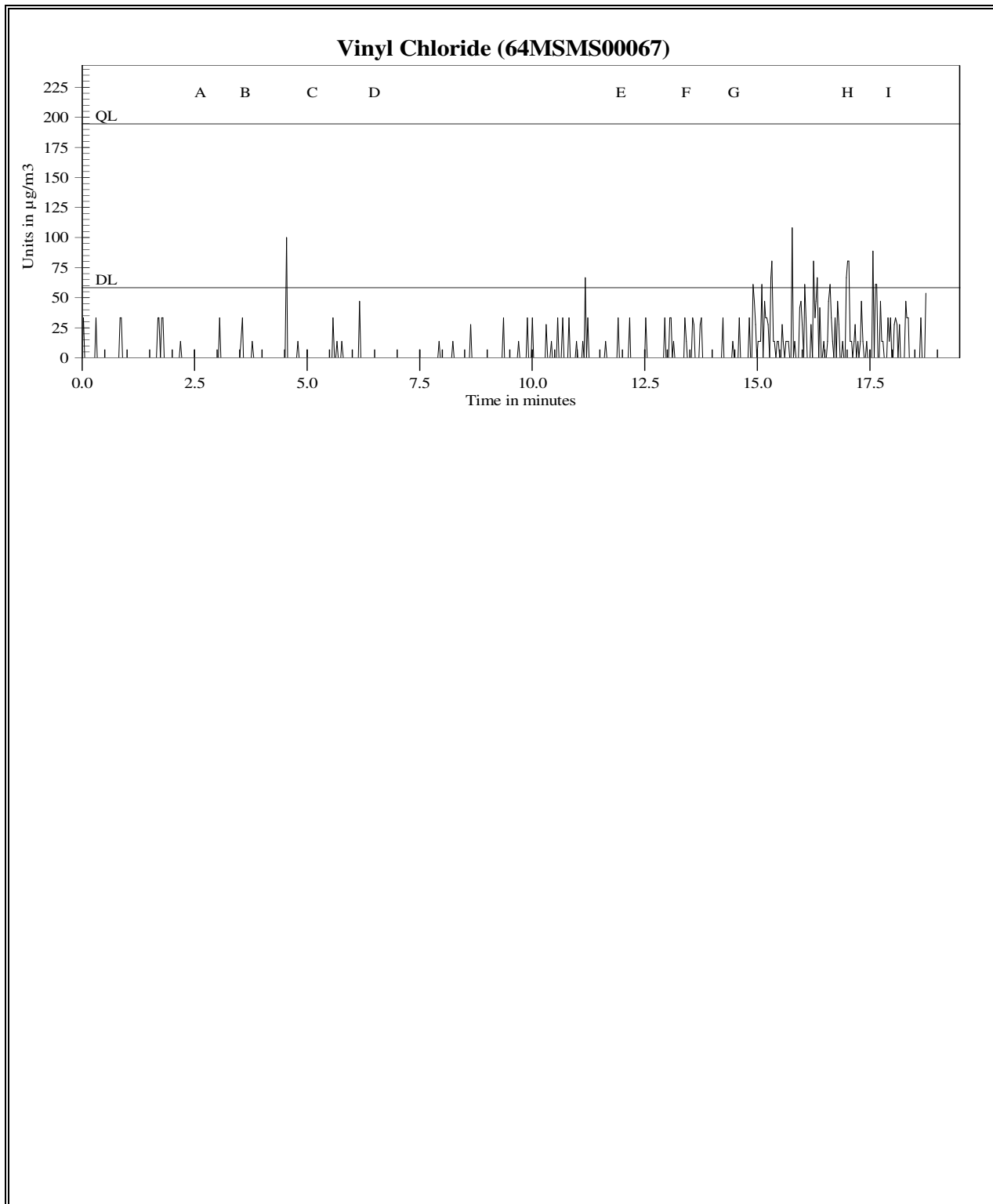


Figure 10i Drainage Ditch Investigation in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

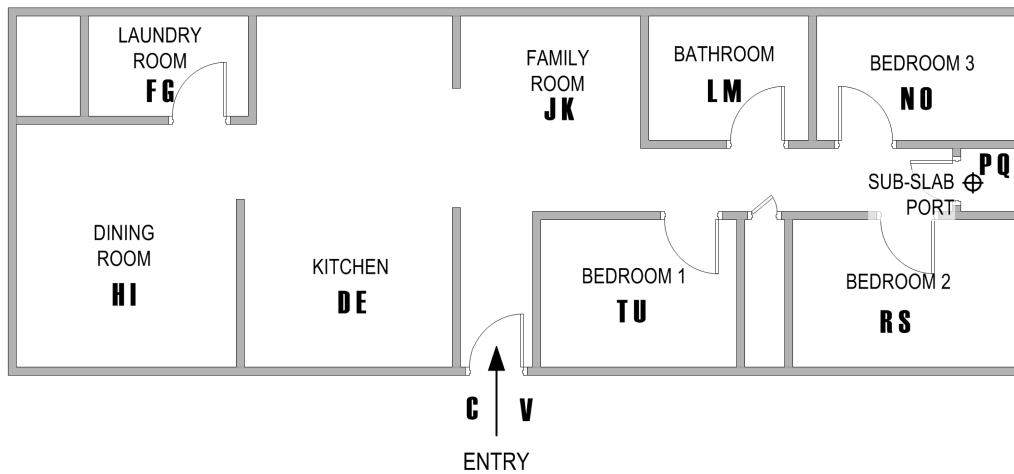
Figure 10j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Drainage Ditch Investigation File: 64MSMS00067 Acquired on 03 May 2016 at 18:15:11								
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride	
Detection Limits - DL:	0.57	0.24	0.91	2.2	0.72	1.1	58	
Quantitation Limits - QL:	1.9	0.80	3.0	7.2	2.4	3.8	190	
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-run ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	1.0J	DL=1.1	DL=58.
C - D	South to north move along the drainage ditch	DL=0.57	DL=0.24	DL=0.91	DL=2.2	0.80J	DL=1.1	DL=58.
F - G	Post-run ambient	DL=0.57	DL=0.24	DL=0.91	DL=2.2	DL=0.72	DL=1.1	DL=58.
H - I	30 mL/min spike	29	25	30	20	22	33	DL=58.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

AB
⊗
WX AMBIENT
LOCATION



UNIT 13 SURVEY
64MSMS00073
GRENADA MANUFACTURING
GRENADA, MISSISSIPPI

Figure 31a Unit 13 Survey Floor Plan, 64MSMS00073

Figure 11b

TAGA File Event Summary			
File: 64MSMS00073 Acquired on 04 May 2016 at 08:05:53			
Title: Unit 13 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.0	74	Start of the pre-entry ambient
B	3.1	110	End of the pre-entry ambient
C	5.3	190	Entering the unit
D	6.1	217	Start of the kitchen
E	7.1	254	End of the kitchen
F	7.9	282	Start of the laundry room
G	9.0	322	End of the laundry room
H	9.2	328	Start of the dining room
I	10.2	365	End of the dining room
J	10.6	378	Start of the family room
K	11.7	420	End of the family room
L	11.9	427	Start of the bathroom
M	12.9	463	End of the bathroom
N	13.3	475	Start of bedroom three
O	14.3	511	End of bedroom three
P	14.6	522	Start of the sub-slab port
Q	15.6	559	End of the sub-slab port
R	15.9	567	Start of bedroom two
S	16.9	604	End of bedroom two
T	17.1	613	Start of bedroom one
U	18.2	649	End of bedroom one
V	18.7	669	Exiting the unit
W	20.2	722	Start of the post-exit ambient
X	21.2	758	End of the post-exit ambient
Y	25.0	895	Start of 30 mL/min spike
Z	26.1	933	End of 30 mL/min spike

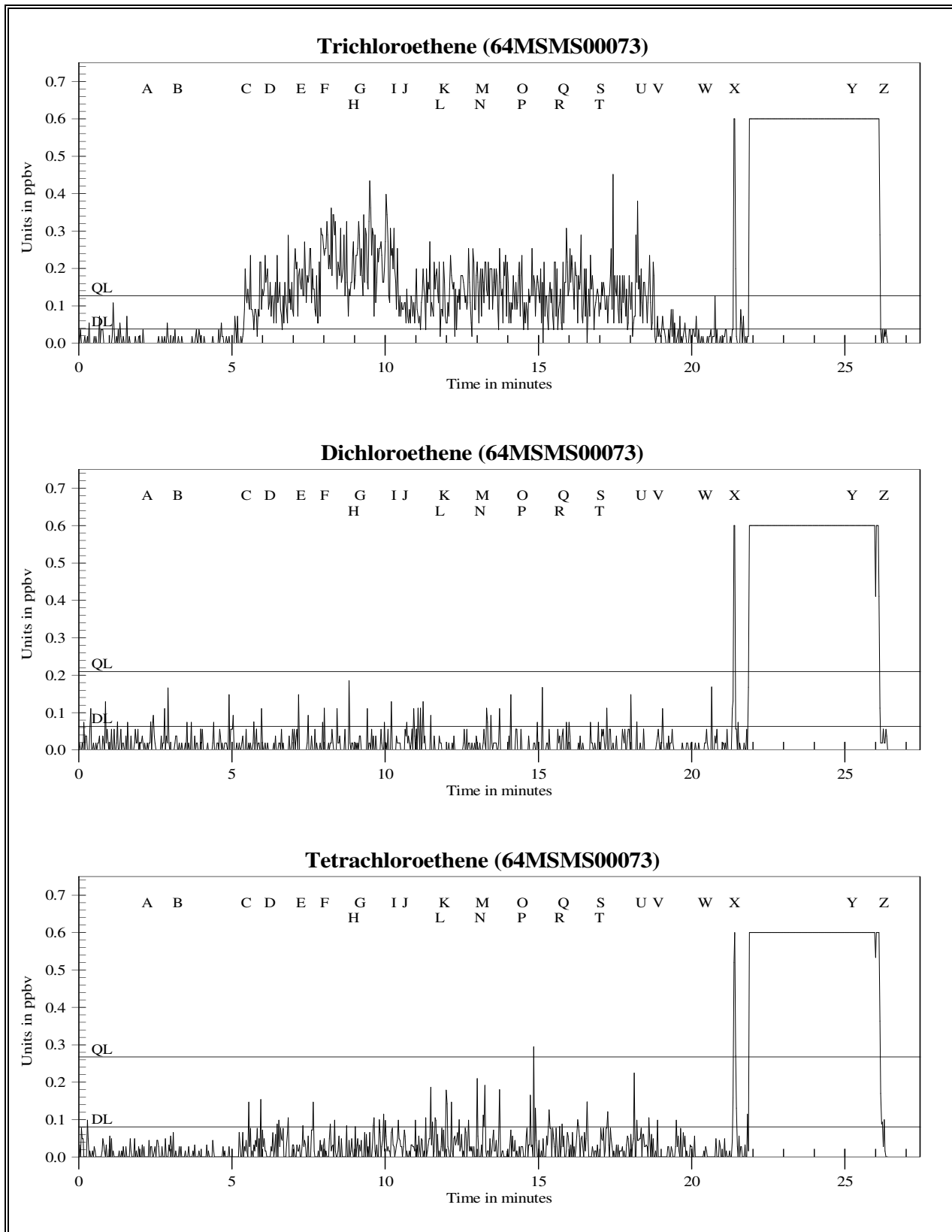


Figure 11c Unit 13 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

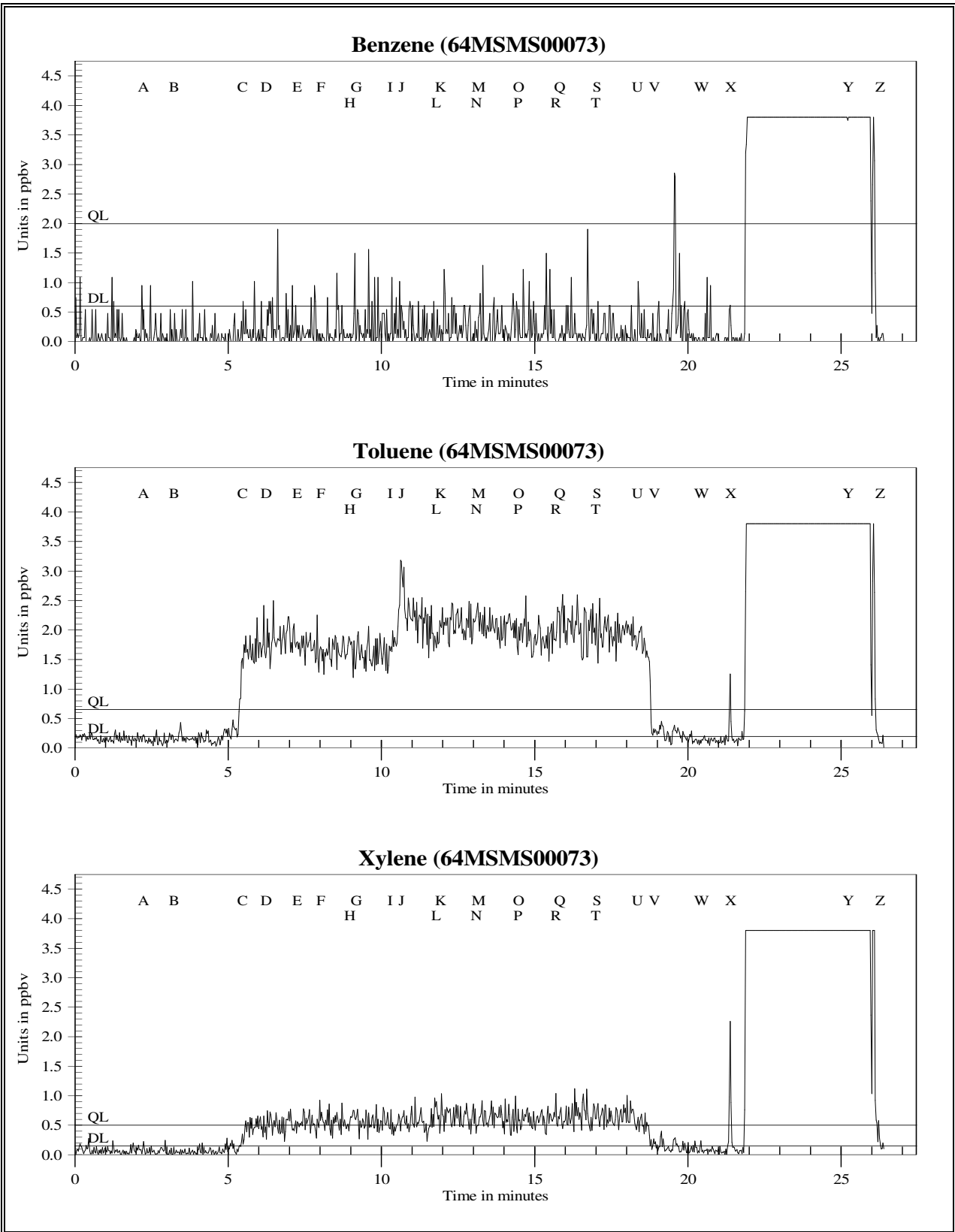


Figure 11d Unit 13 Survey in ppbv for Benzene, Toluene, and Xylenes

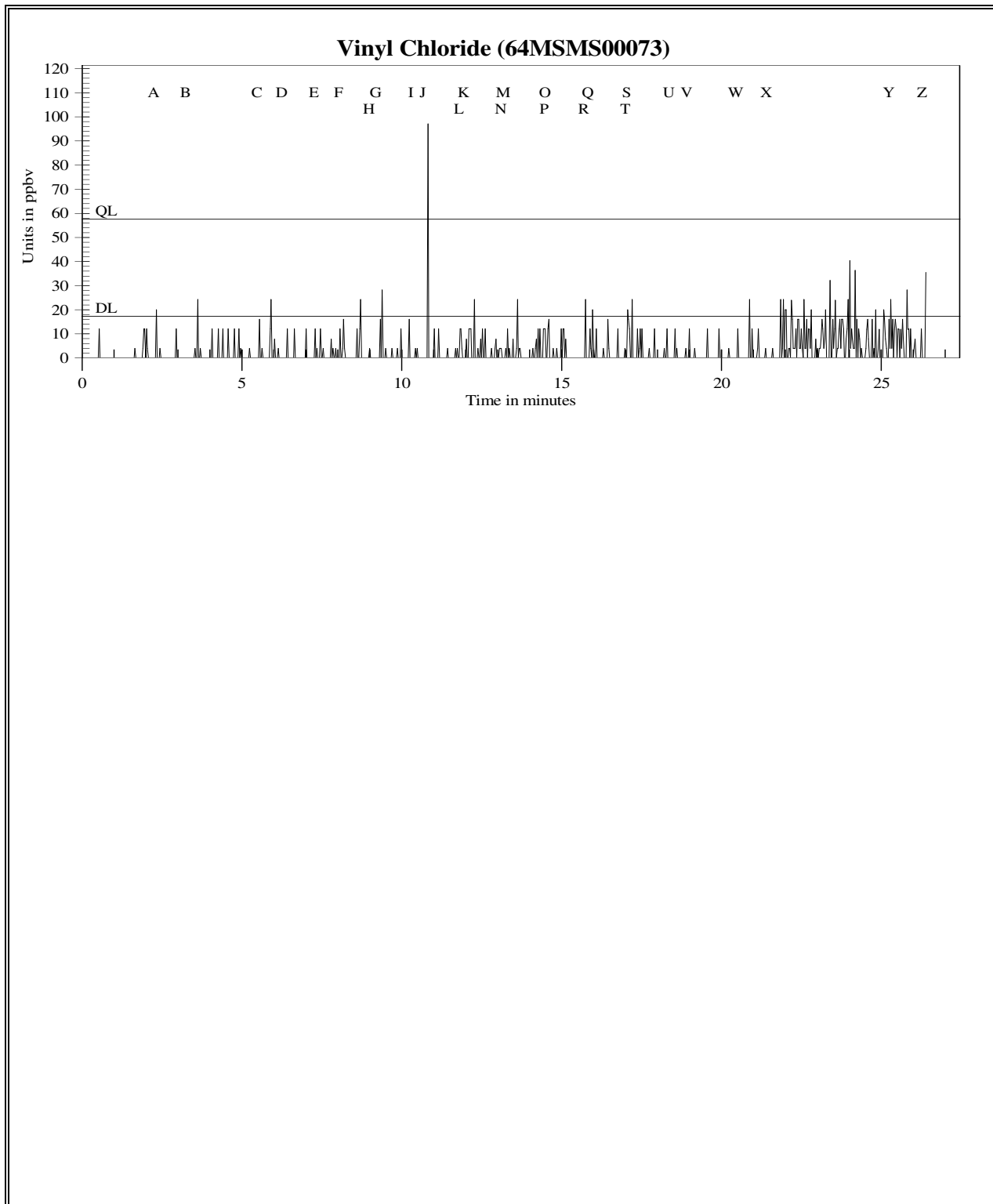


Figure 11e Unit 13 Survey in ppbv for Vinyl Chloride

Figure 11f

TAGA Target Compound Summary in ppbv for Unit 13 Survey File: 64MSMS00073 Acquired on 04 May 2016 at 08:05:53								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:		0.13	0.21	0.27	2.0	0.65	0.50	58
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
D - E	Kitchen	0.13	DL=0.063	DL=0.080	DL=0.60	1.8	0.52	DL=17.
F - G	Laundry room	0.23	DL=0.063	DL=0.080	DL=0.60	1.7	0.55	DL=17.
H - I	Dining room	0.24	DL=0.063	DL=0.080	DL=0.60	1.6	0.56	DL=17.
J - K	Family room	0.11J	DL=0.063	DL=0.080	DL=0.60	2.3	0.57	DL=17.
L - M	Bathroom	0.13	DL=0.063	DL=0.080	DL=0.60	2.1	0.65	DL=17.
N - O	Bedroom three	0.15	DL=0.063	DL=0.080	DL=0.60	2.1	0.64	DL=17.
P - Q	Sub-slab port	0.12J	DL=0.063	DL=0.080	DL=0.60	1.9	0.61	DL=17.
R - S	Bedroom two	0.15	DL=0.063	DL=0.080	DL=0.60	2.1	0.66	DL=17.
T - U	Bedroom one	0.12J	DL=0.063	DL=0.080	DL=0.60	2.0	0.66	DL=17.
W - X	Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
Y - Z	30 mL/min spike	6.3	6.9	5.2	6.7	6.0	8.4	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

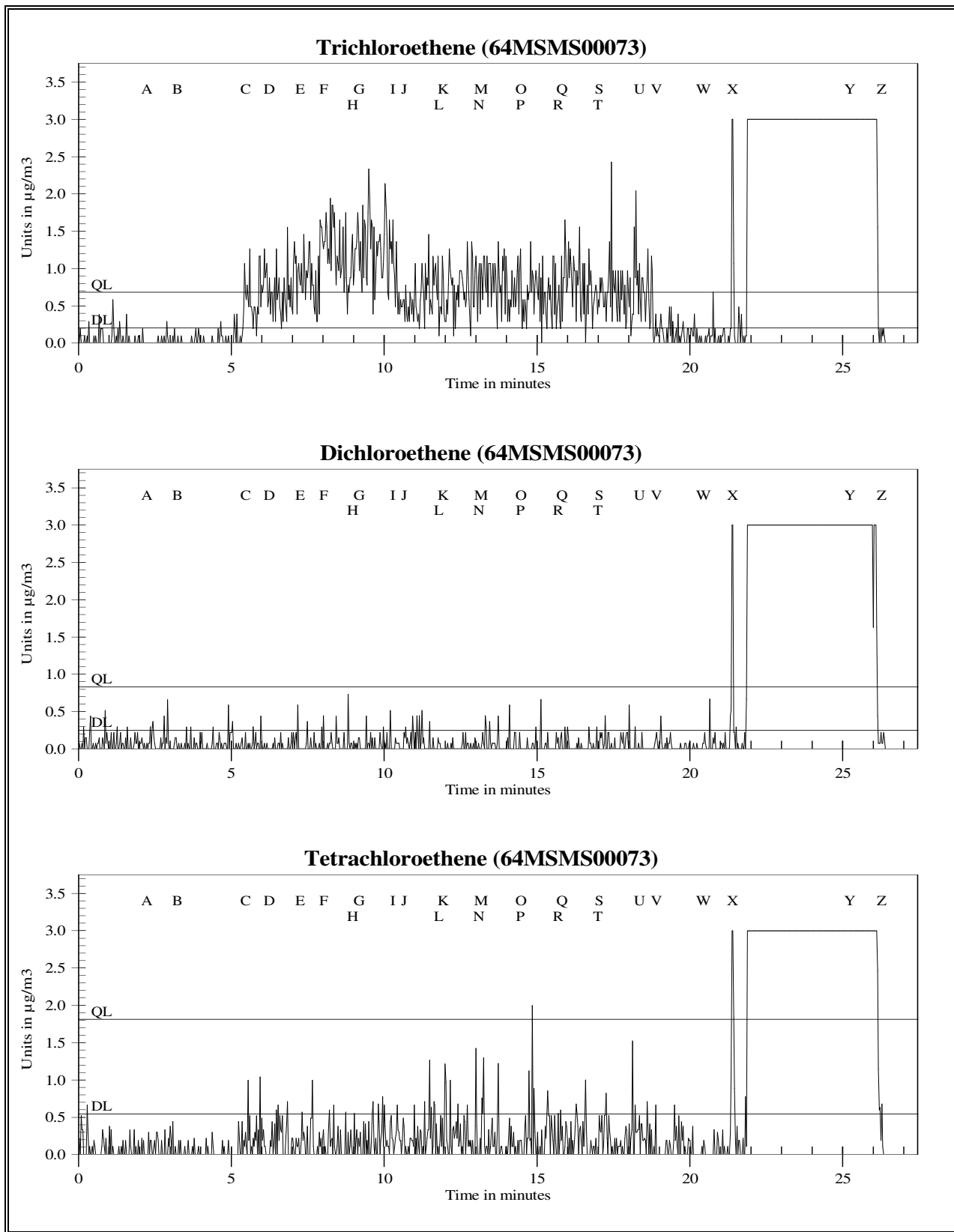


Figure 11g Unit 13 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

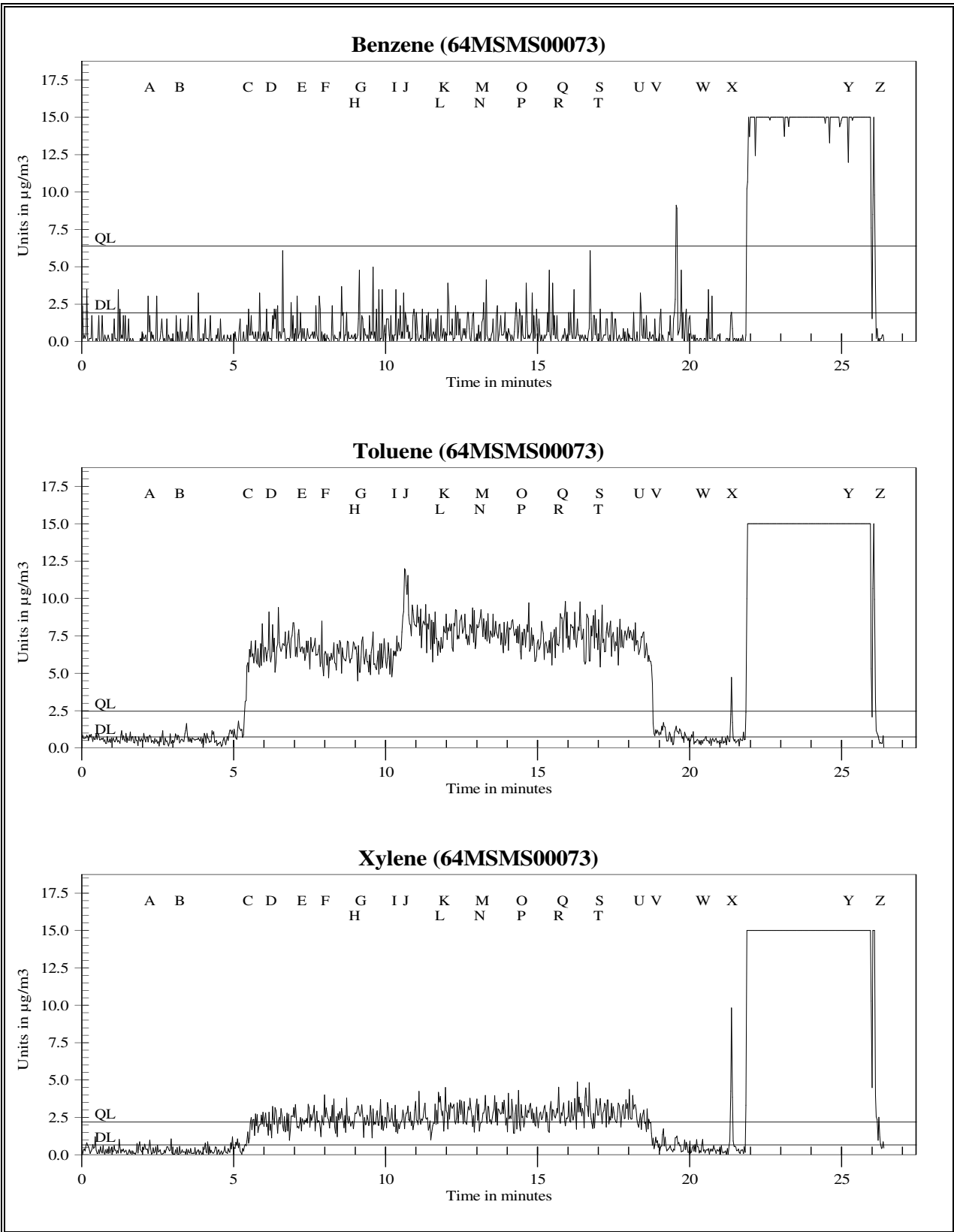


Figure 11h Unit 13 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

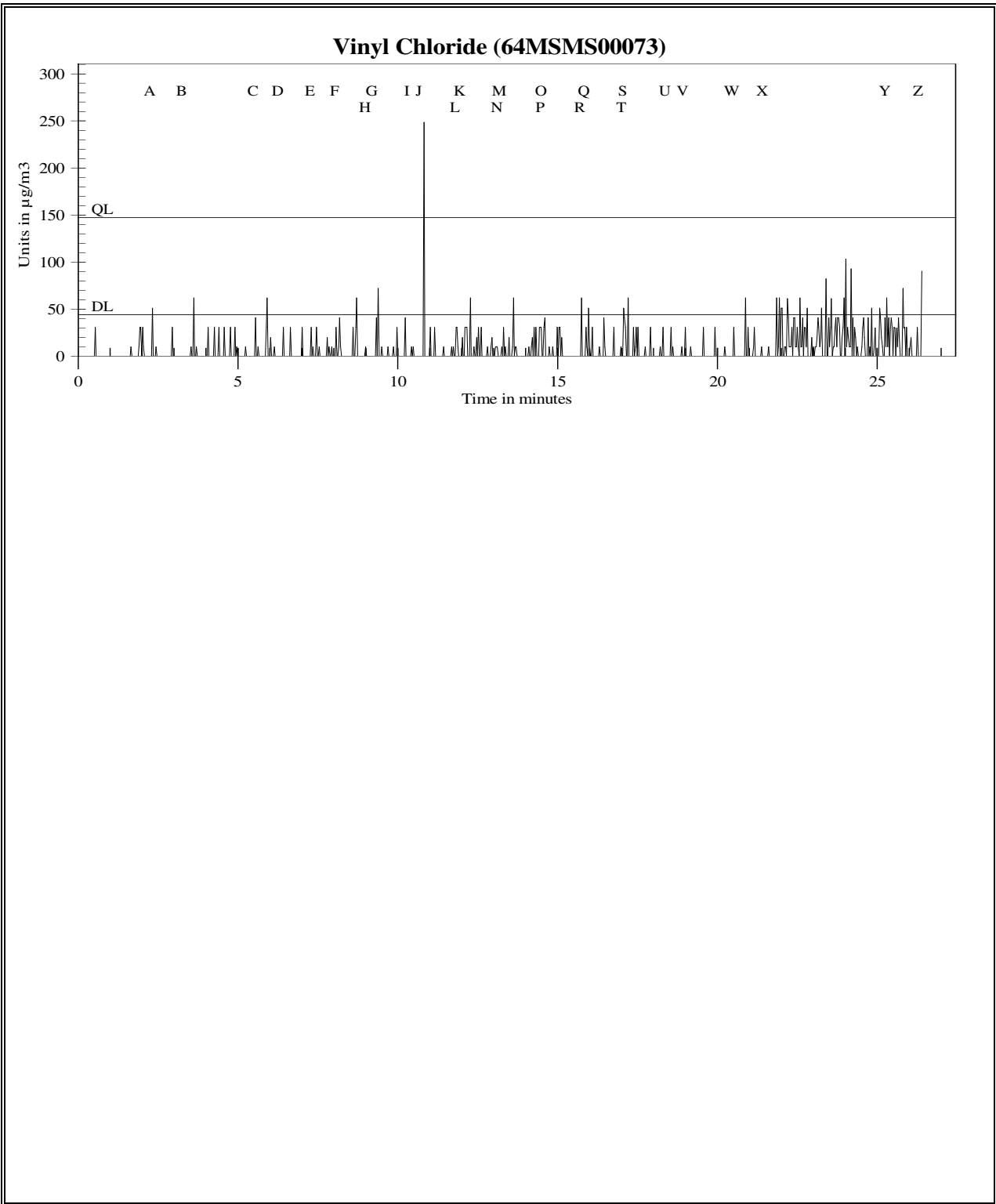


Figure 11i Unit 13 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 11j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 13 Survey File: 64MSMS00073 Acquired on 04 May 2016 at 08:05:53								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:		0.68	0.83	1.8	6.4	2.5	2.2	150
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
D - E	Kitchen	0.71	DL=0.25	DL=0.54	DL=1.9	6.9	2.3	DL=44.
F - G	Laundry room	1.2	DL=0.25	DL=0.54	DL=1.9	6.2	2.4	DL=44.
H - I	Dining room	1.3	DL=0.25	DL=0.54	DL=1.9	6.0	2.4	DL=44.
J - K	Family room	0.62J	DL=0.25	DL=0.54	DL=1.9	8.5	2.5	DL=44.
L - M	Bathroom	0.69	DL=0.25	DL=0.54	DL=1.9	7.9	2.8	DL=44.
N - O	Bedroom three	0.78	DL=0.25	DL=0.54	DL=1.9	7.7	2.8	DL=44.
P - Q	Sub-slab port	0.67J	DL=0.25	DL=0.54	DL=1.9	7.1	2.7	DL=44.
R - S	Bedroom two	0.81	DL=0.25	DL=0.54	DL=1.9	7.8	2.9	DL=44.
T - U	Bedroom one	0.66J	DL=0.25	DL=0.54	DL=1.9	7.4	2.9	DL=44.
W - X	Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
Y - Z	30 mL/min spike	34	28	35	21	23	36	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

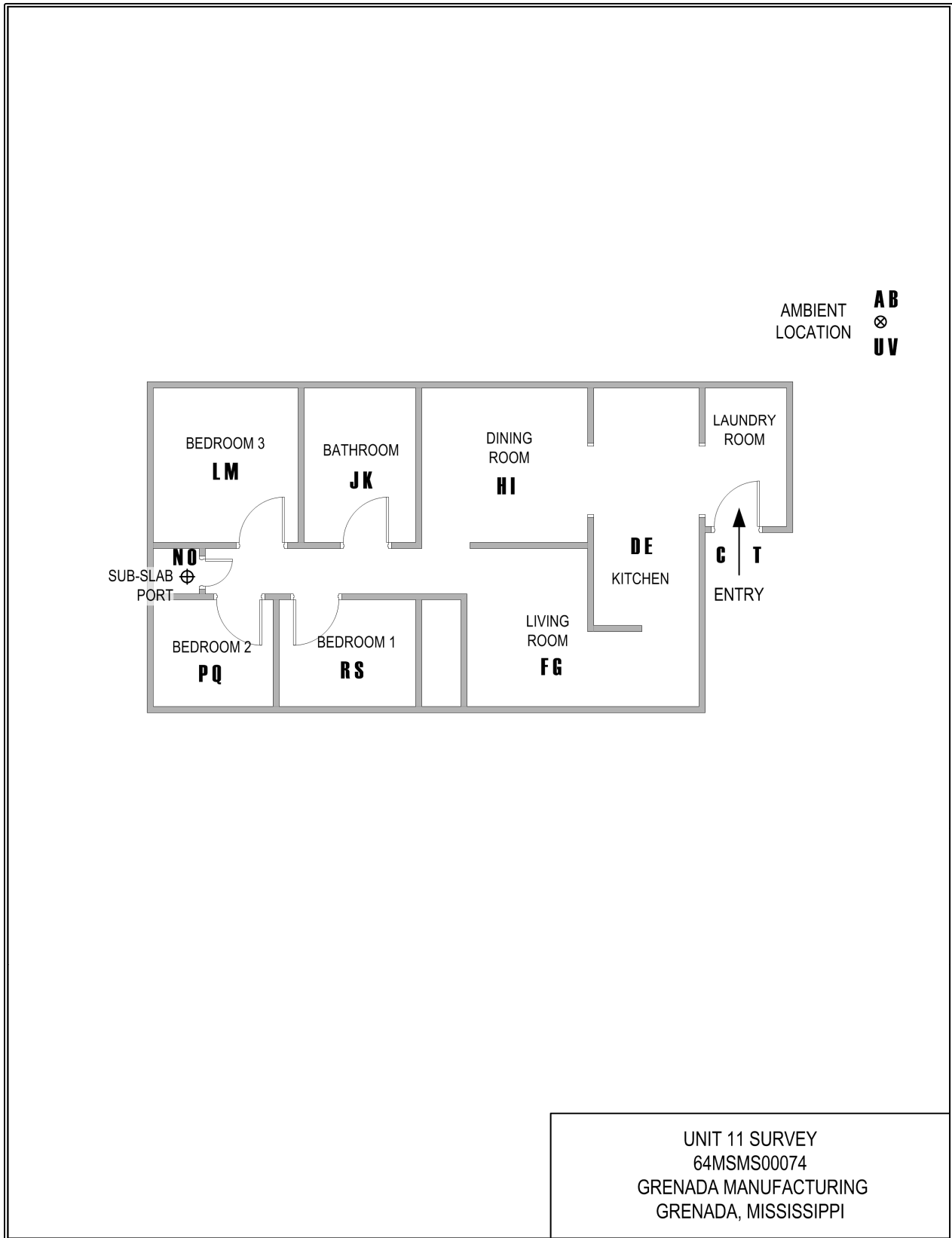


Figure 42a Unit 11 Survey Floor Plan, 64MSMS00074

Figure 12b

TAGA File Event Summary			
File: 64MSMS00074 Acquired on 04 May 2016 at 08:53:35			
Title: Unit 11 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.1	77	Start of the pre-entry ambient
B	3.1	113	End of the pre-entry ambient
C	5.8	208	Entering the unit
D	7.0	251	Start of the kitchen
E	8.0	287	End of the kitchen
F	8.7	313	Start of the living room
G	10.0	359	End of the living room
H	10.9	390	Start of the dining room
I	11.9	425	End of the dining room
J	12.3	439	Start of the bathroom
K	13.3	475	End of the bathroom
L	13.6	486	Start of bedroom three
M	14.6	522	End of bedroom three
N	15.1	540	Start of the sub-slab port
O	16.2	580	End of the sub-slab port
P	16.6	593	Start of bedroom two
Q	17.6	630	End of bedroom two
R	18.1	647	Start of bedroom one
S	19.2	685	End of bedroom one
T	19.8	708	Exiting the unit
U	21.0	751	Start of the post-exit ambient
V	22.2	794	End of the post-exit ambient
W	25.3	903	Start of 30 mL/min spike
X	26.3	939	End of 30 mL/min spike

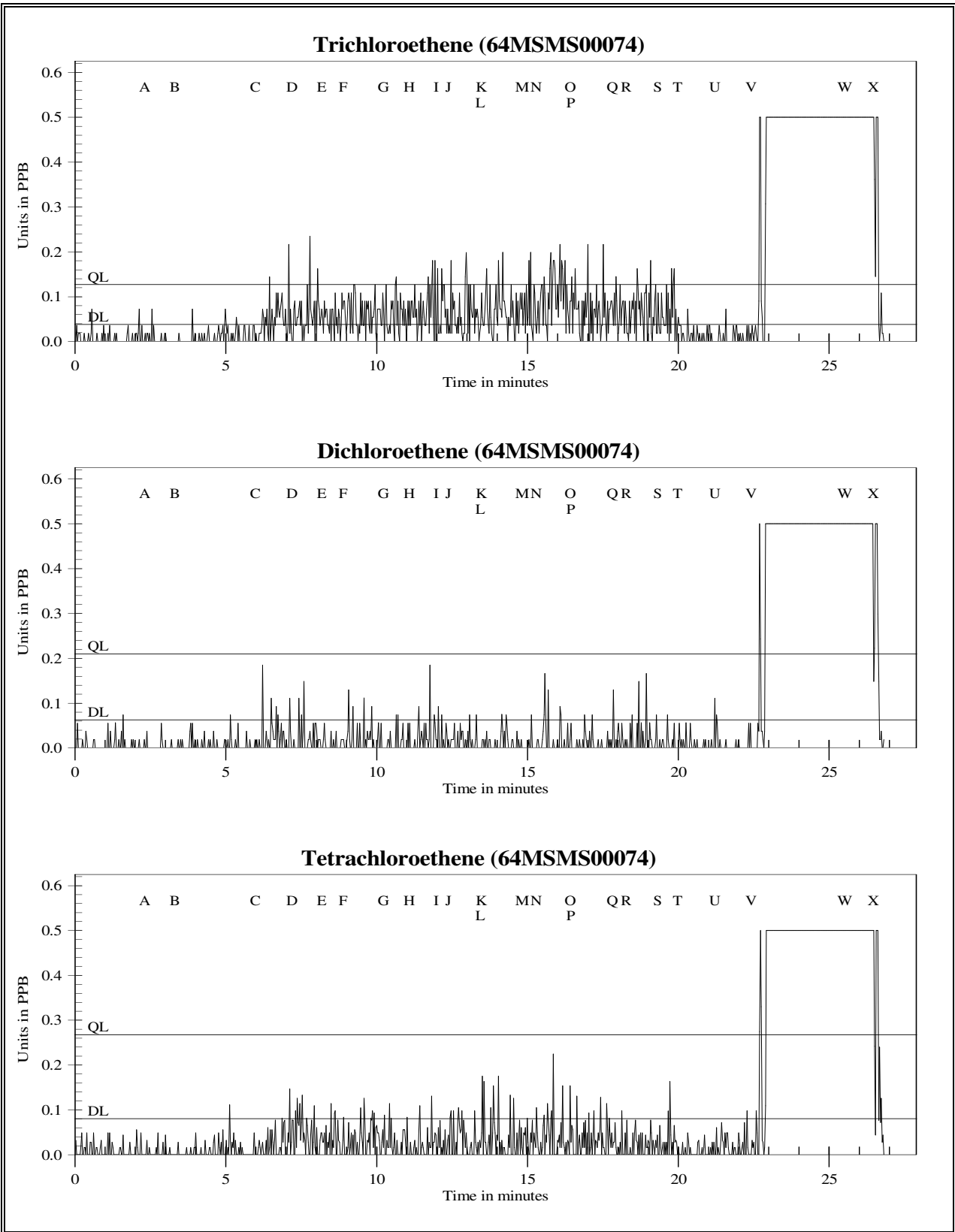


Figure 12c Unit 11 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

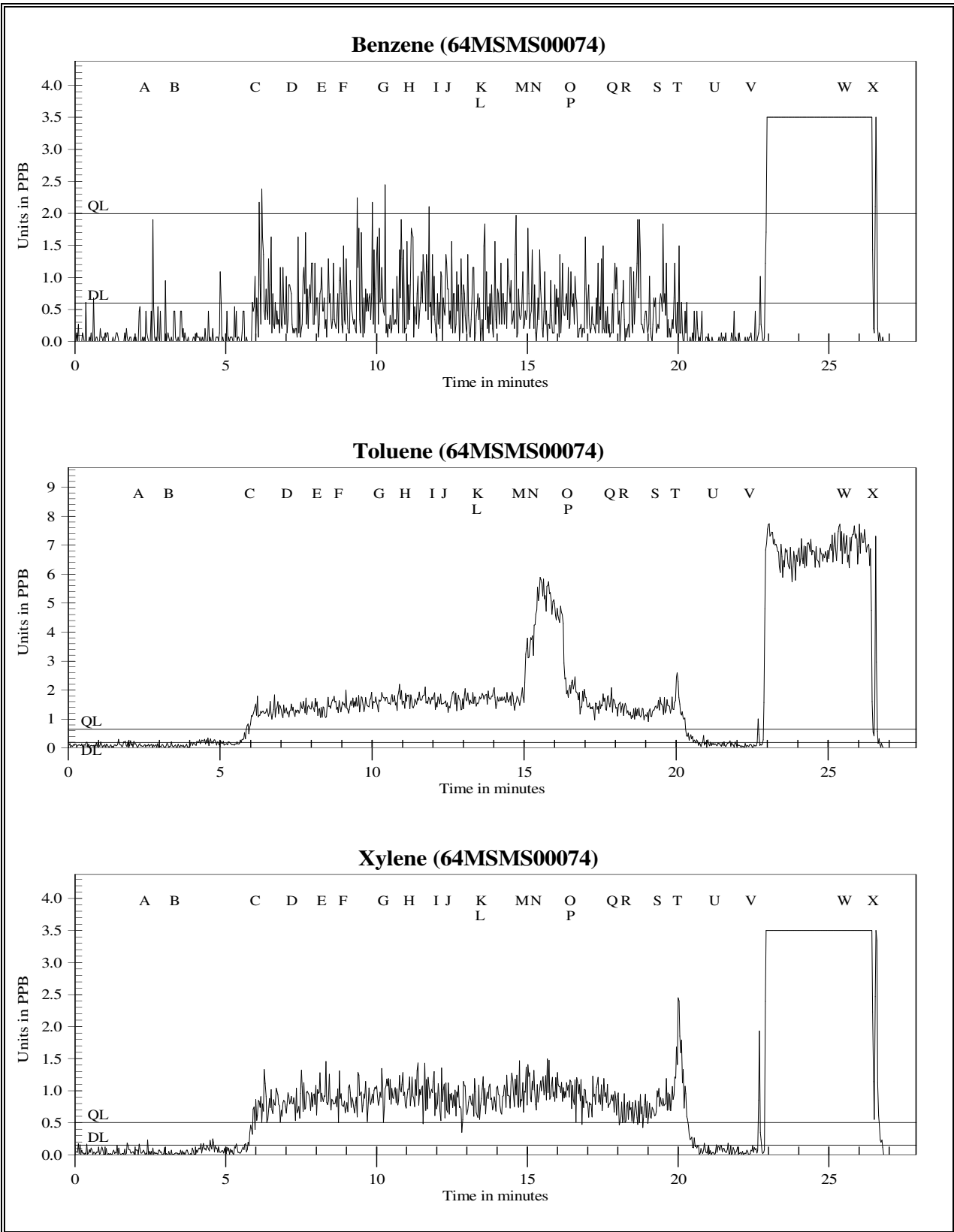


Figure 12d Unit 11 Survey in ppbv for Benzene, Toluene, and Xylenes

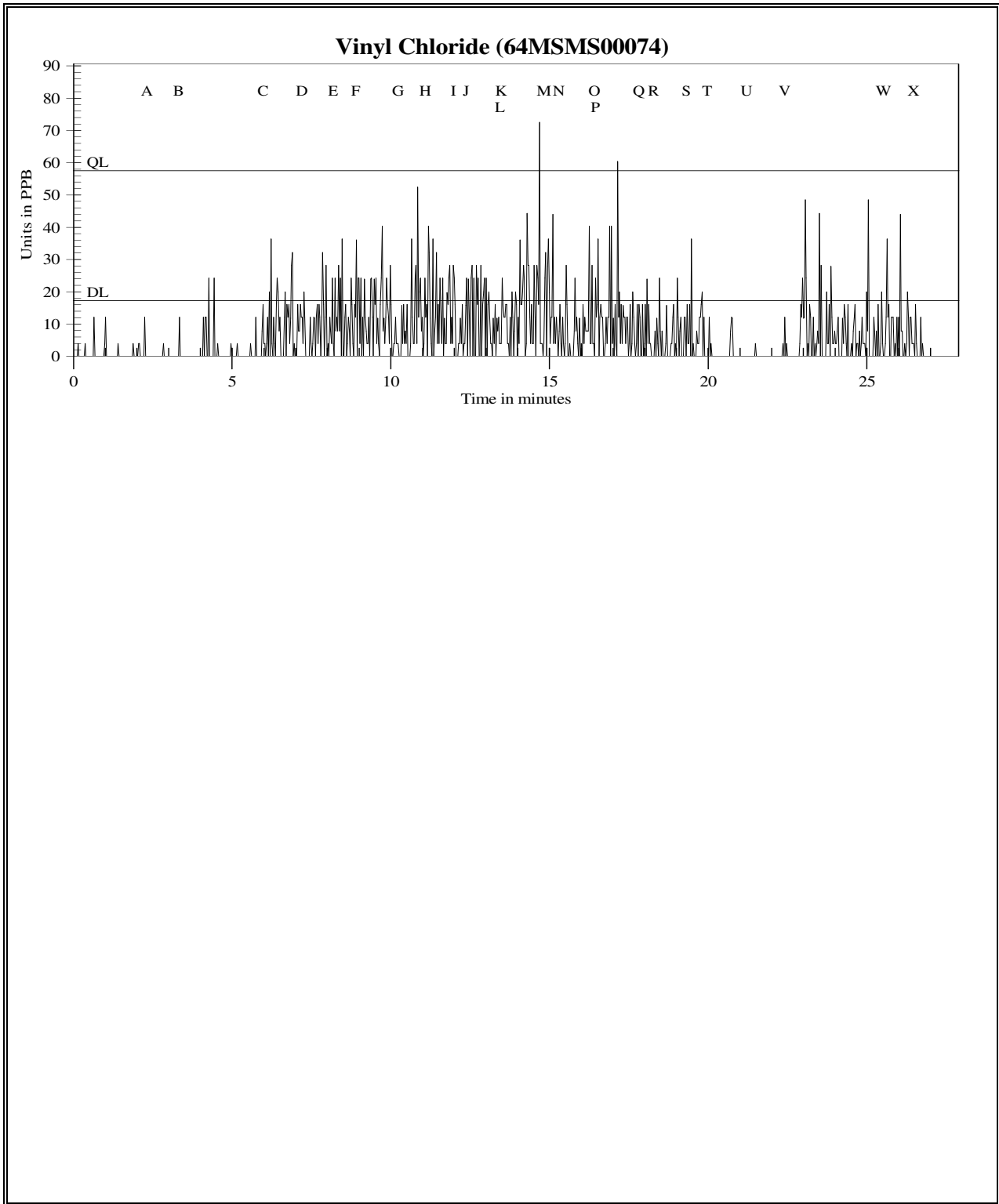


Figure 12e Unit 11 Survey in ppbv for Vinyl Chloride

Figure 12f

TAGA Target Compound Summary in ppbv for Unit 11 Survey File: 64MSMS00074 Acquired on 04 May 2016 at 08:53:35								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:		0.13	0.21	0.27	2.0	0.65	0.50	58
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
D - E	Kitchen	0.055J	DL=0.063	DL=0.080	0.61J	1.3	0.85	DL=17.
F - G	Living room	0.060J	DL=0.063	DL=0.080	0.70J	1.5	0.88	DL=17.
H - I	Dining room	0.068J	DL=0.063	DL=0.080	0.81J	1.7	0.98	DL=17.
J - K	Bathroom	0.063J	DL=0.063	DL=0.080	DL=0.60	1.6	0.84	DL=17.
L - M	Bedroom three	0.068J	DL=0.063	DL=0.080	0.63J	1.7	0.92	DL=17.
N - O	Sub-slab port	0.099J	DL=0.063	DL=0.080	DL=0.60	4.8	1.0	DL=17.
P - Q	Bedroom two	0.064J	DL=0.063	DL=0.080	DL=0.60	1.6	0.91	DL=17.
R - S	Bedroom one	0.064J	DL=0.063	DL=0.080	DL=0.60	1.2	0.68	DL=17.
U - V	Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
W - X	30 mL/min spike	6.2	6.7	5.4	7.0	7.1	11	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

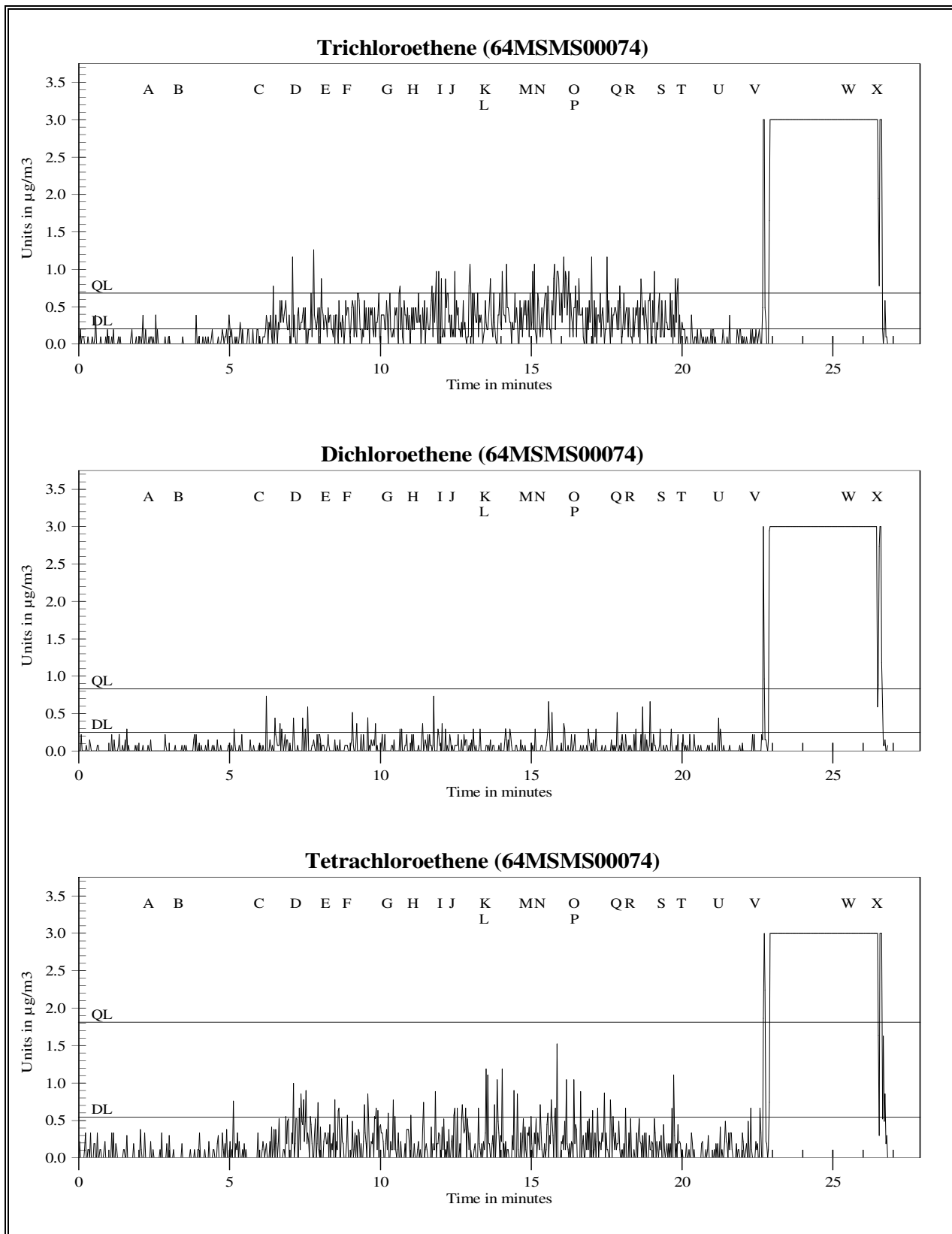


Figure 12g Unit 11 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

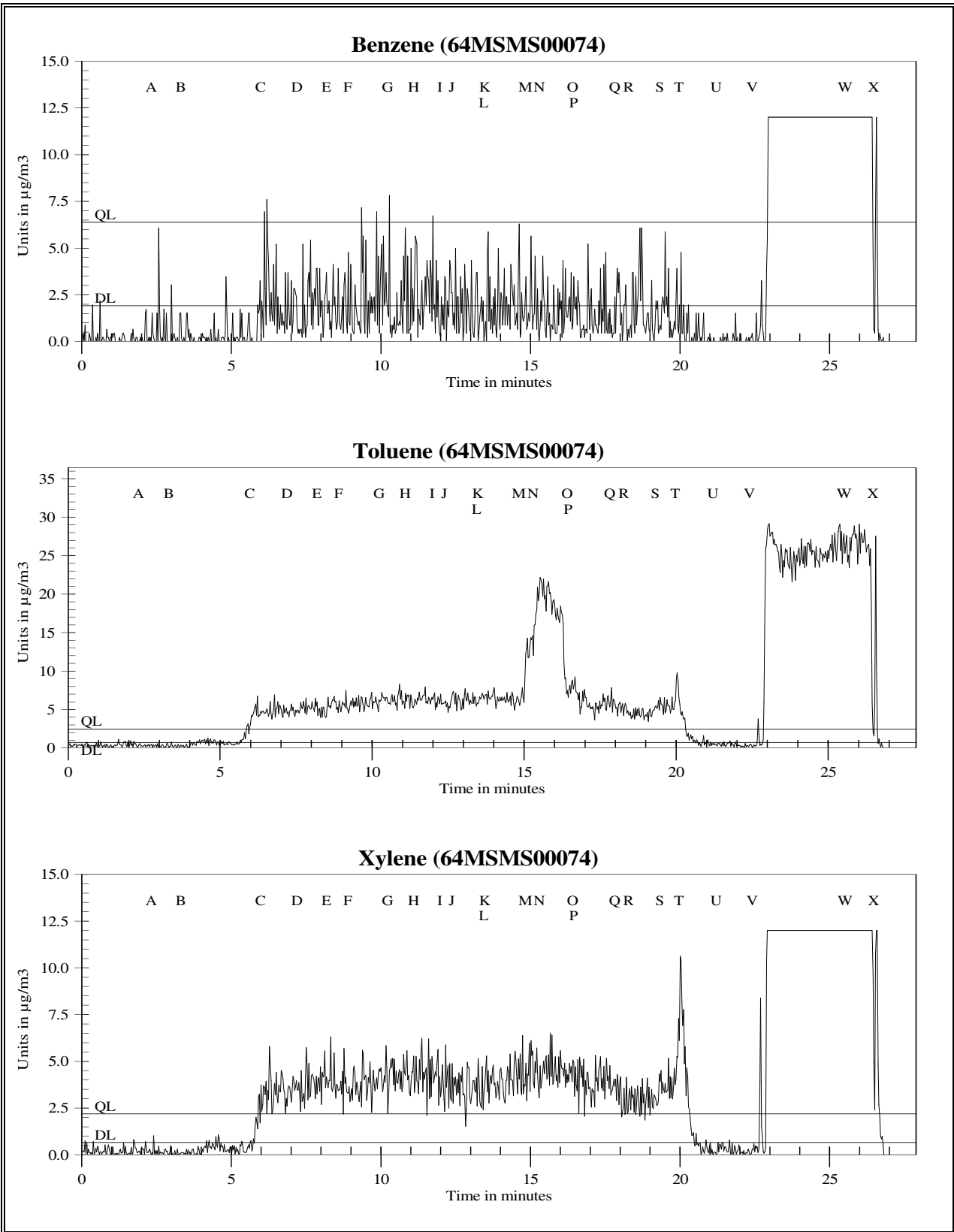


Figure 12h Unit 11 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

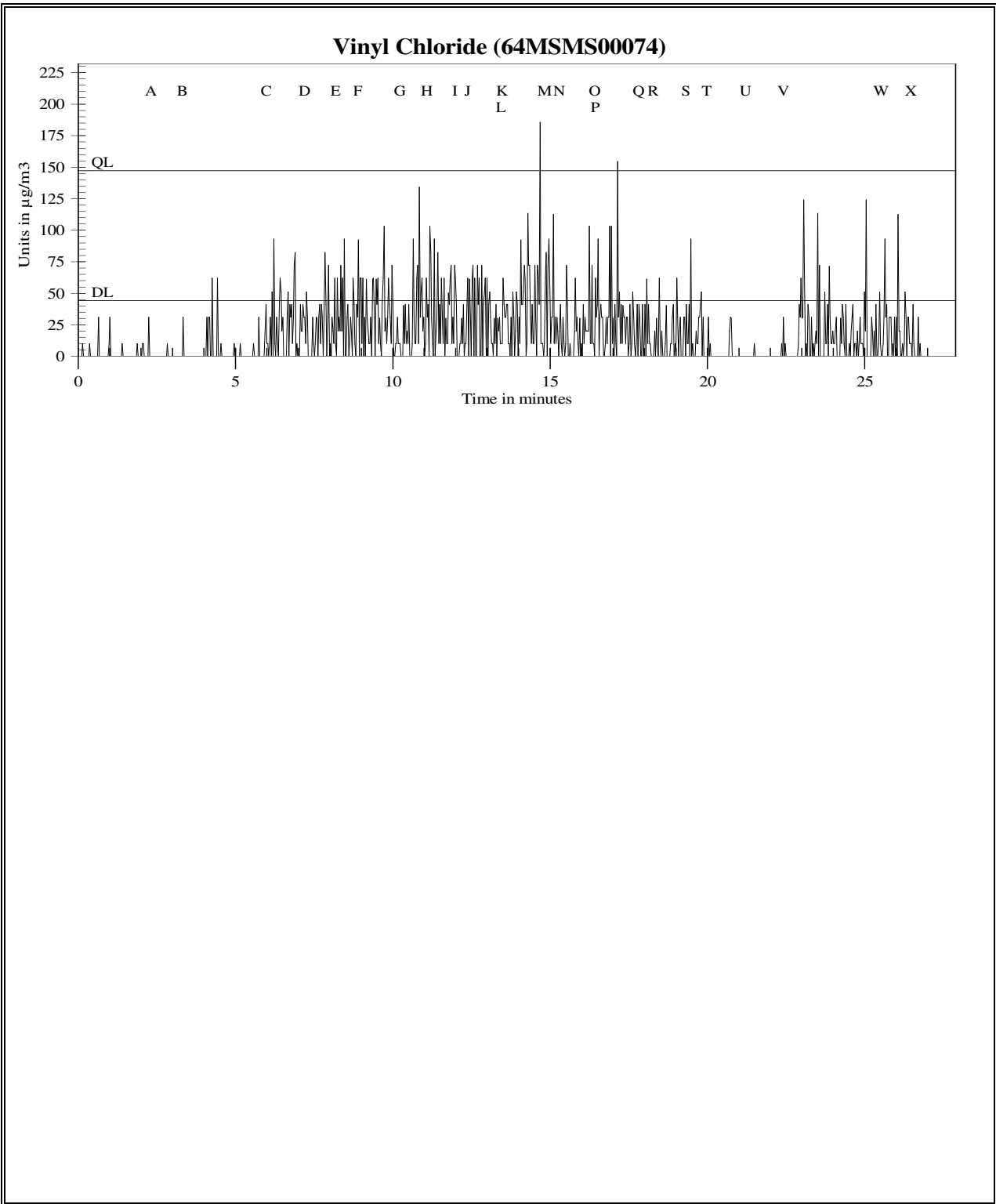


Figure 12i Unit 11 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 12j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 11 Survey File: 64MSMS00074 Acquired on 04 May 2016 at 08:53:35								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:		0.68	0.83	1.8	6.4	2.5	2.2	150
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
D - E	Kitchen	0.29J	DL=0.25	DL=0.54	1.9J	5.0	3.7	DL=44.
F - G	Living room	0.32J	DL=0.25	DL=0.54	2.2J	5.7	3.8	DL=44.
H - I	Dining room	0.36J	DL=0.25	DL=0.54	2.6J	6.4	4.3	DL=44.
J - K	Bathroom	0.34J	DL=0.25	DL=0.54	DL=1.9	6.1	3.6	DL=44.
L - M	Bedroom three	0.37J	DL=0.25	DL=0.54	2.0J	6.5	4.0	DL=44.
N - O	Sub-slab port	0.53J	DL=0.25	DL=0.54	DL=1.9	18	4.5	DL=44.
P - Q	Bedroom two	0.35J	DL=0.25	DL=0.54	DL=1.9	6.1	4.0	DL=44.
R - S	Bedroom one	0.35J	DL=0.25	DL=0.54	DL=1.9	4.7	2.9	DL=44.
U - V	Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
W - X	30 mL/min spike	33	27	37	22	27	46	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit



Figure 53a Mobile Monitoring One Path, 64MSMS00075

Figure 13b

TAGA File Event Summary			
File: 64MSMS00075 Acquired on 04 May 2016 at 09:51:56			
Title: Mobile Monitoring One			
Flag	Time	Sequence	Description
A	1.1	39	Start of the mobile monitoring
B	15.8	566	End of the mobile monitoring
C	18.5	663	Start of 30 mL/min spike
D	20.5	734	End of 30 mL/min spike

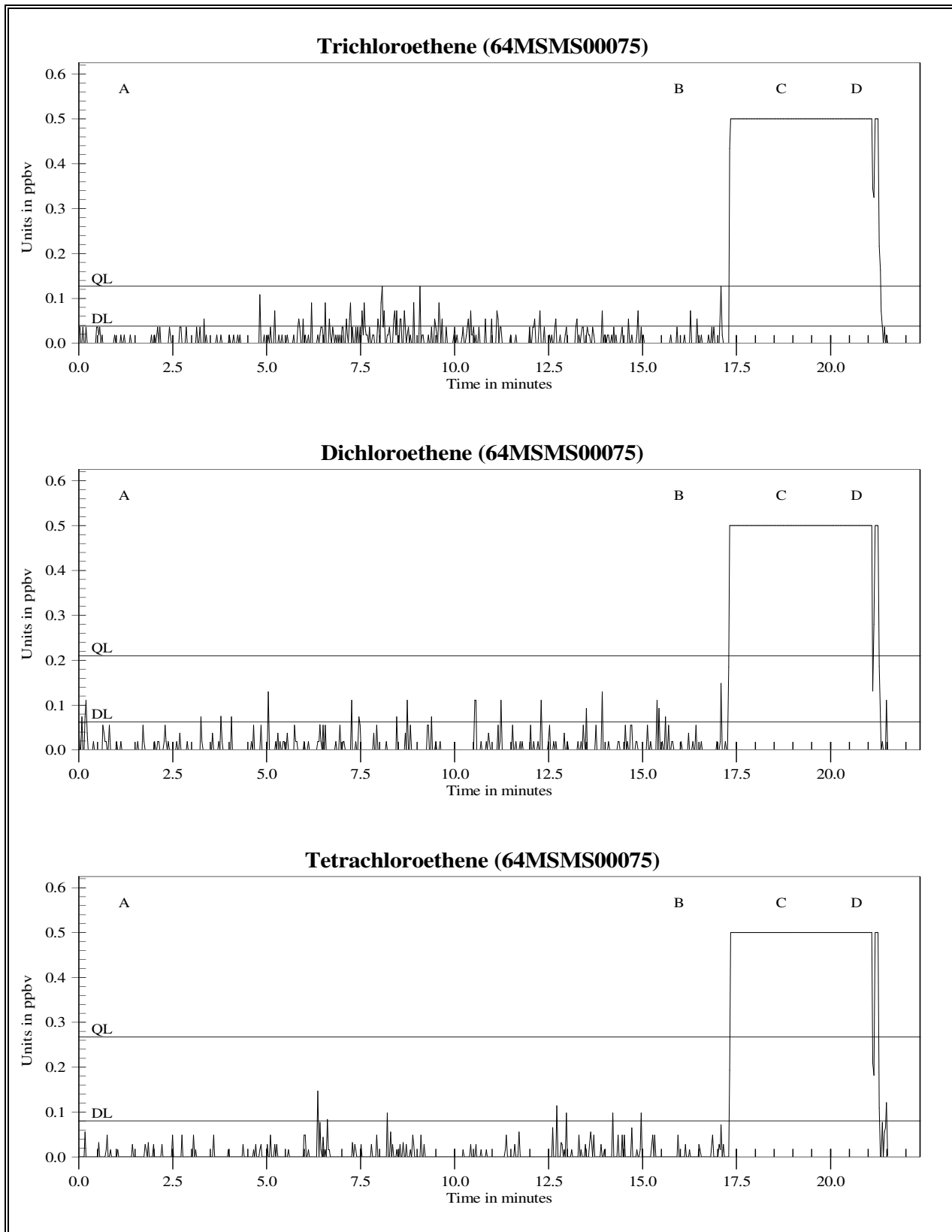


Figure 13c Mobile Monitoring One in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

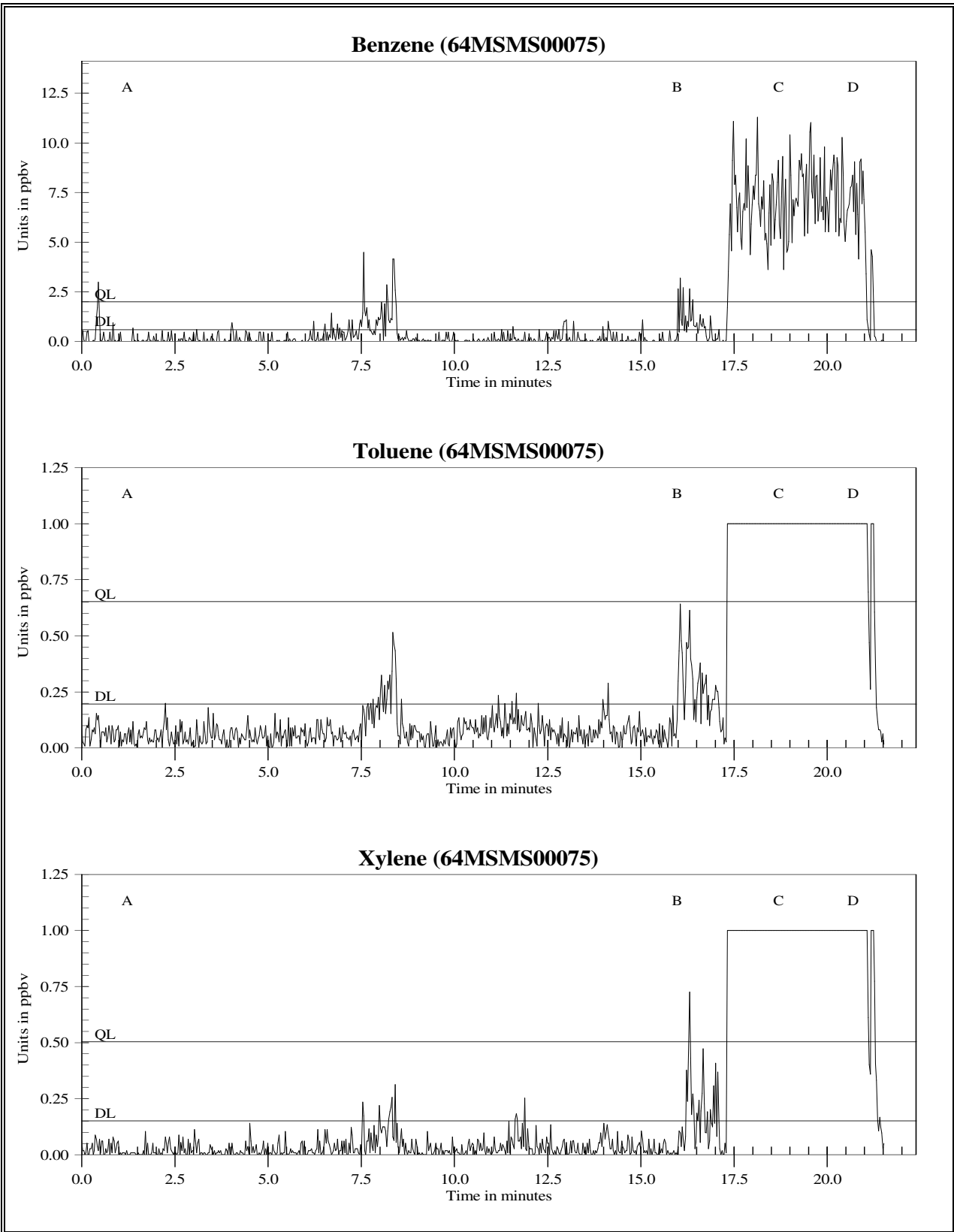


Figure 13d Mobile Monitoring One in ppbv for Benzene, Toluene, and Xylenes

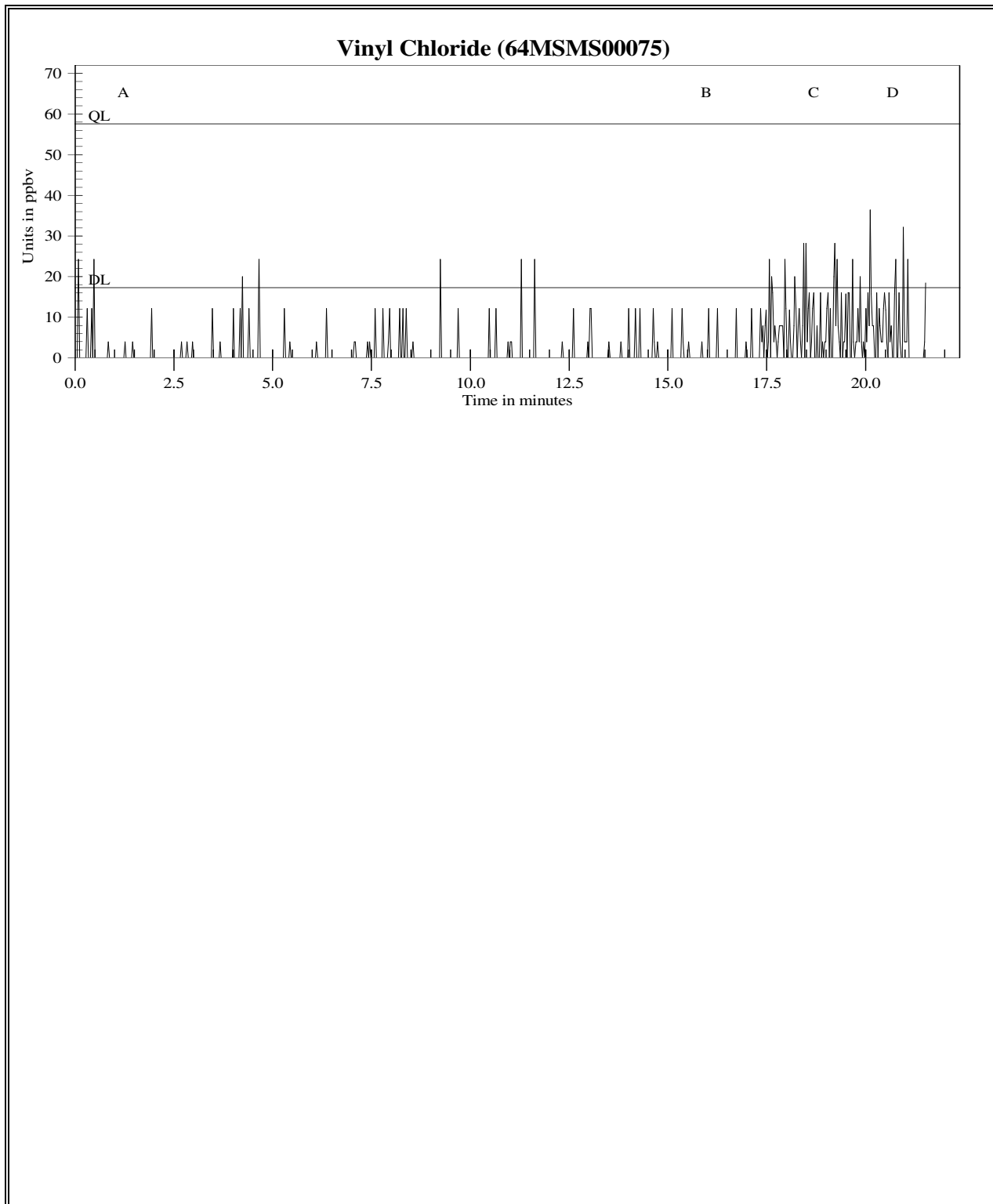


Figure 13e Mobile Monitoring One in ppbv for Vinyl Chloride

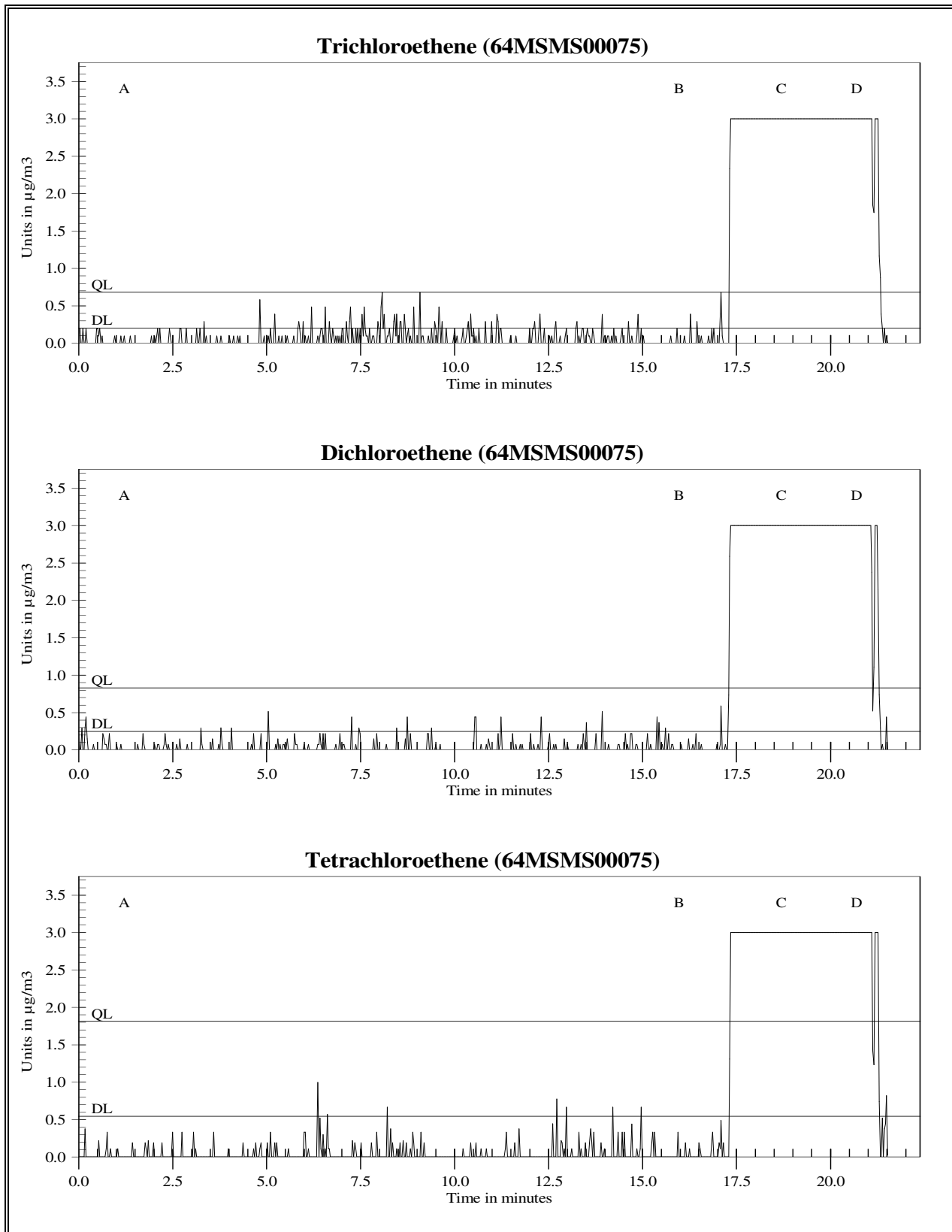


Figure 13f Mobile Monitoring One in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

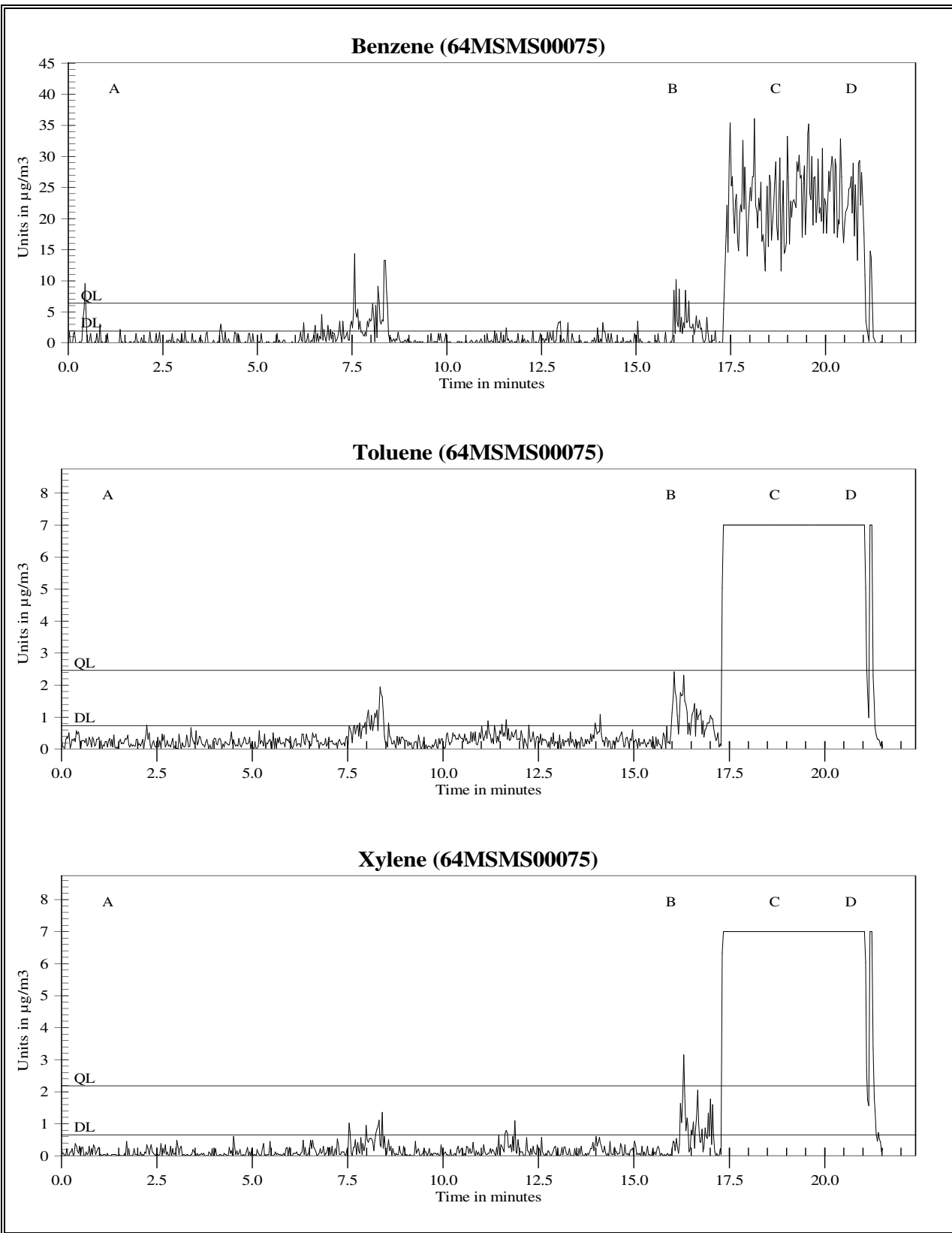


Figure 13g Mobile Monitoring One in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

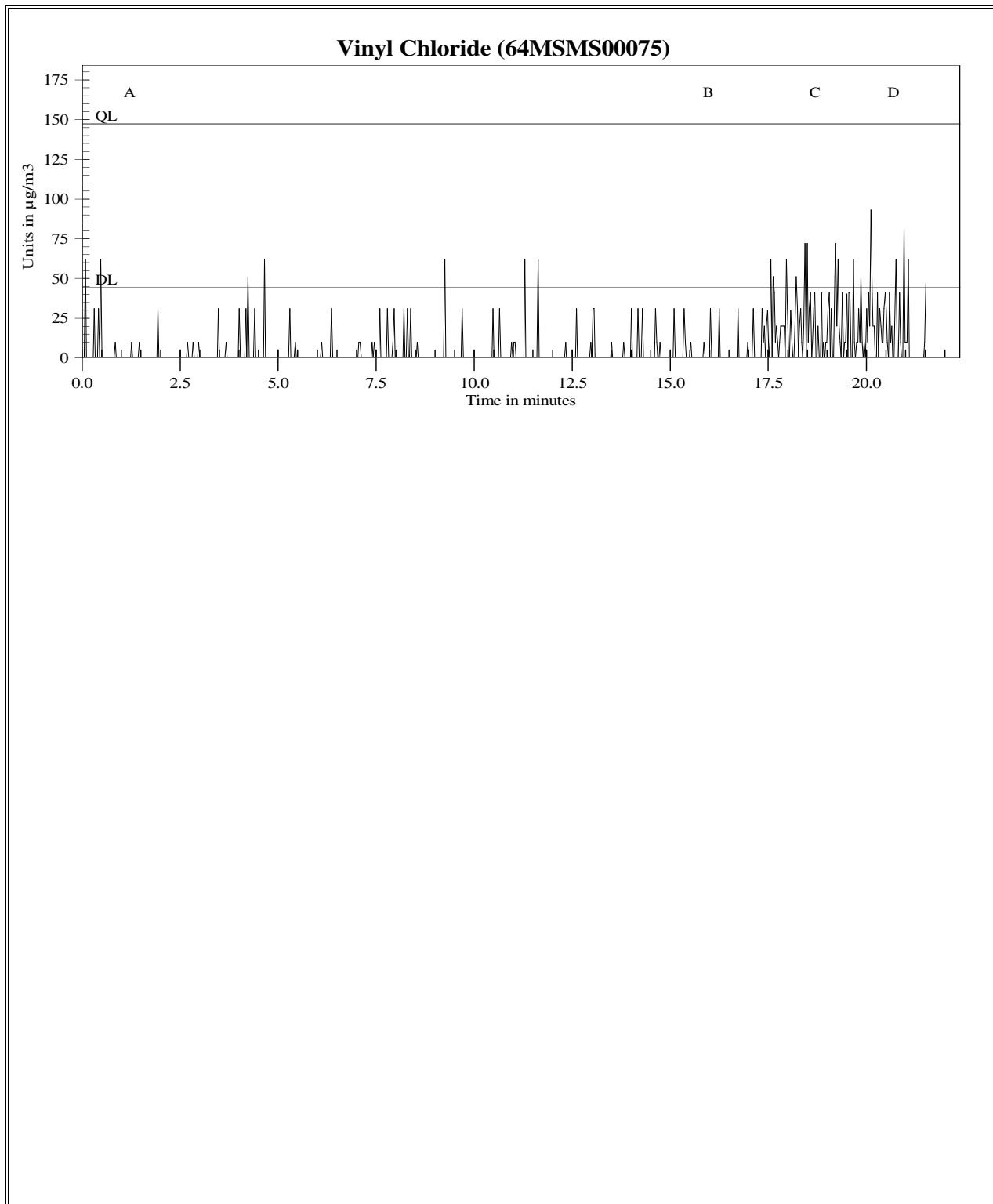


Figure 13h Mobile Monitoring One in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

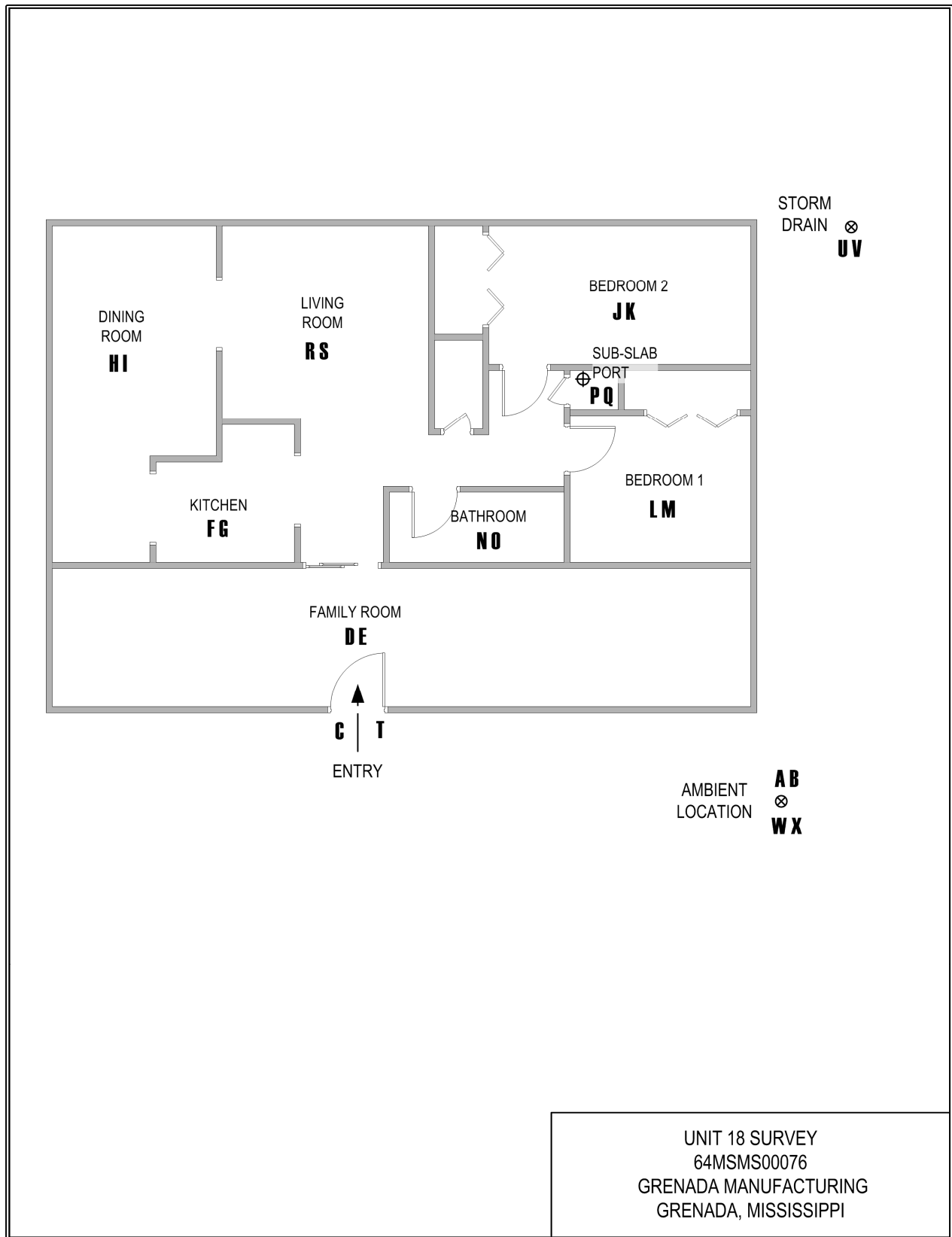


Figure 64a Unit 18 Survey Floor Plan, 64MSMS00076

Figure 14b

TAGA File Event Summary			
File: 64MSMS00076 Acquired on 04 May 2016 at 10:24:54			
Title: Unit 18 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.0	73	Start of the pre-entry ambient
B	3.0	108	End of the pre-entry ambient
C	5.0	181	Entering the unit
D	6.8	243	Start of the family room
E	7.8	279	End of the family room
F	8.4	299	Start of the kitchen
G	9.4	335	End of the kitchen
H	10.1	361	Start of the dining room
I	11.1	398	End of the dining room
J	12.4	442	Start of bedroom two
K	13.3	477	End of bedroom two
L	13.8	495	Start of bedroom one
M	14.9	532	End of bedroom one
N	15.3	546	Start of the bathroom
O	16.2	580	End of the bathroom
P	16.8	601	Start of the sub-slab port
Q	17.8	637	End of the sub-slab port
R	19.1	683	Start of the living room
S	20.1	718	End of the living room
T	21.0	750	Exiting the unit
U	22.3	796	Start of the storm drain
V	23.5	838	End of the storm drain
W	24.0	857	Start of the post-exit ambient
X	25.0	895	End of the post-exit ambient
Y	27.6	985	Start of 30 mL/min spike
Z	29.7	1061	End of 30 mL/min spike

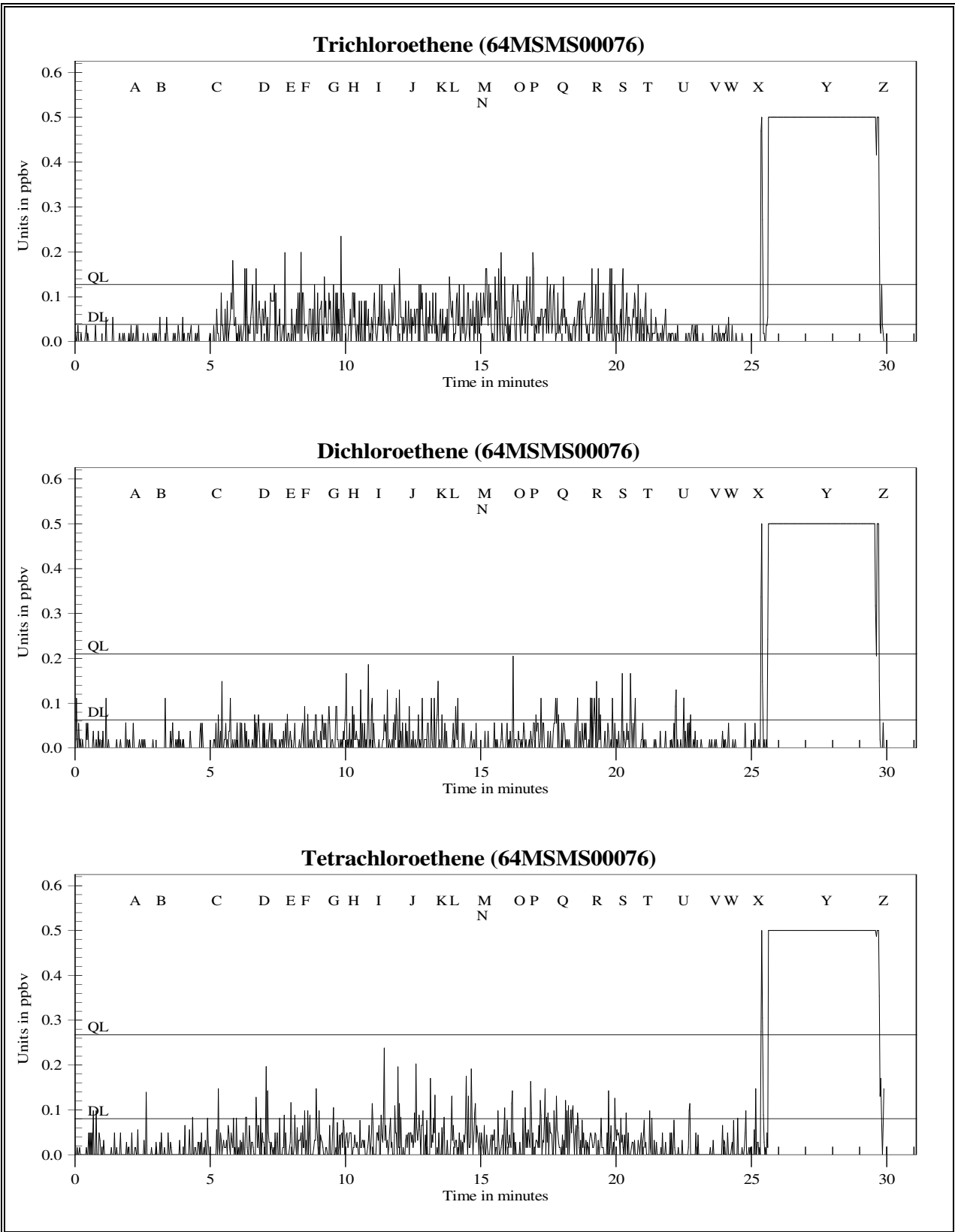


Figure 14c Unit 18 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

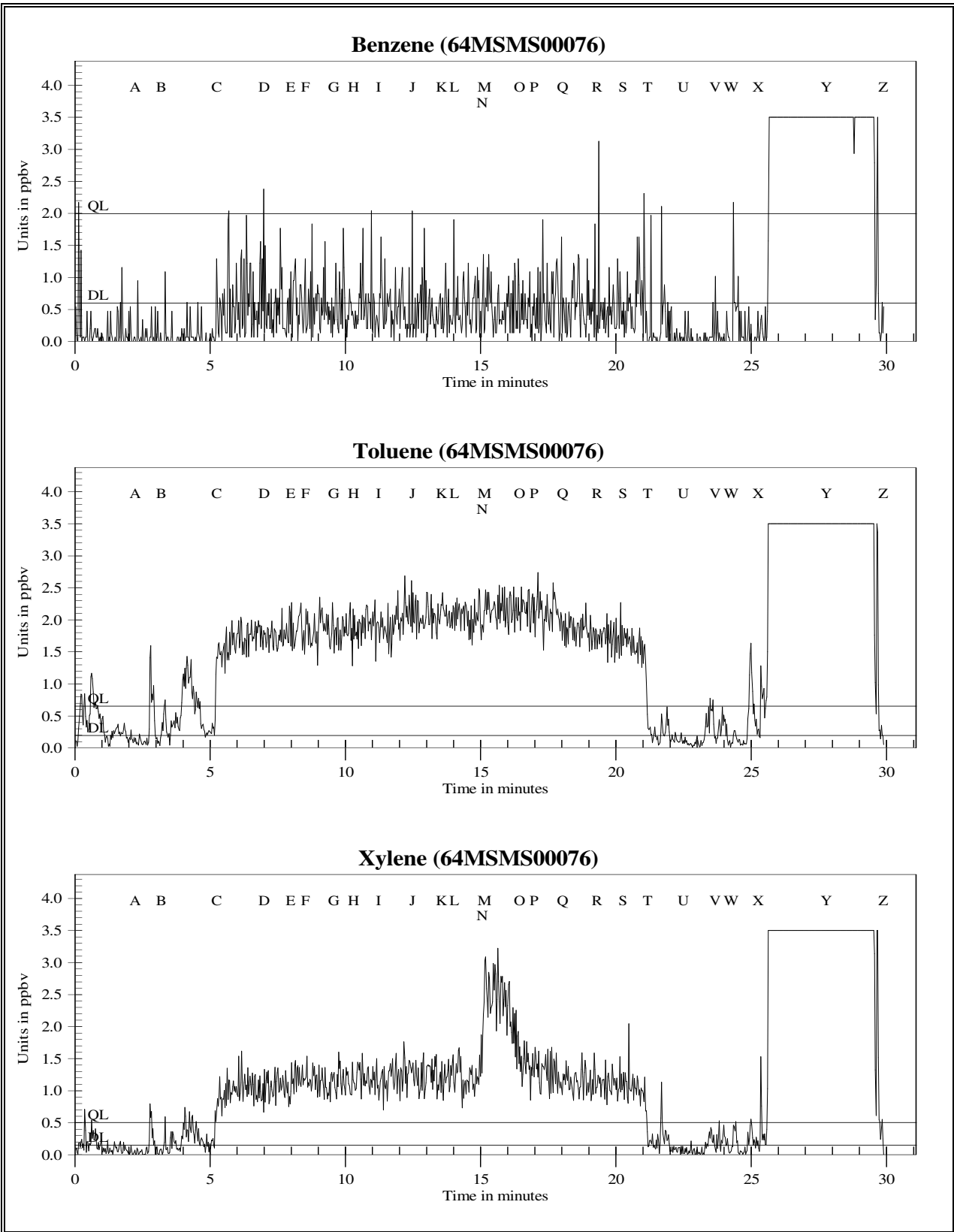


Figure 14d Unit 18 Survey in ppbv for Benzene, Toluene, and Xylenes

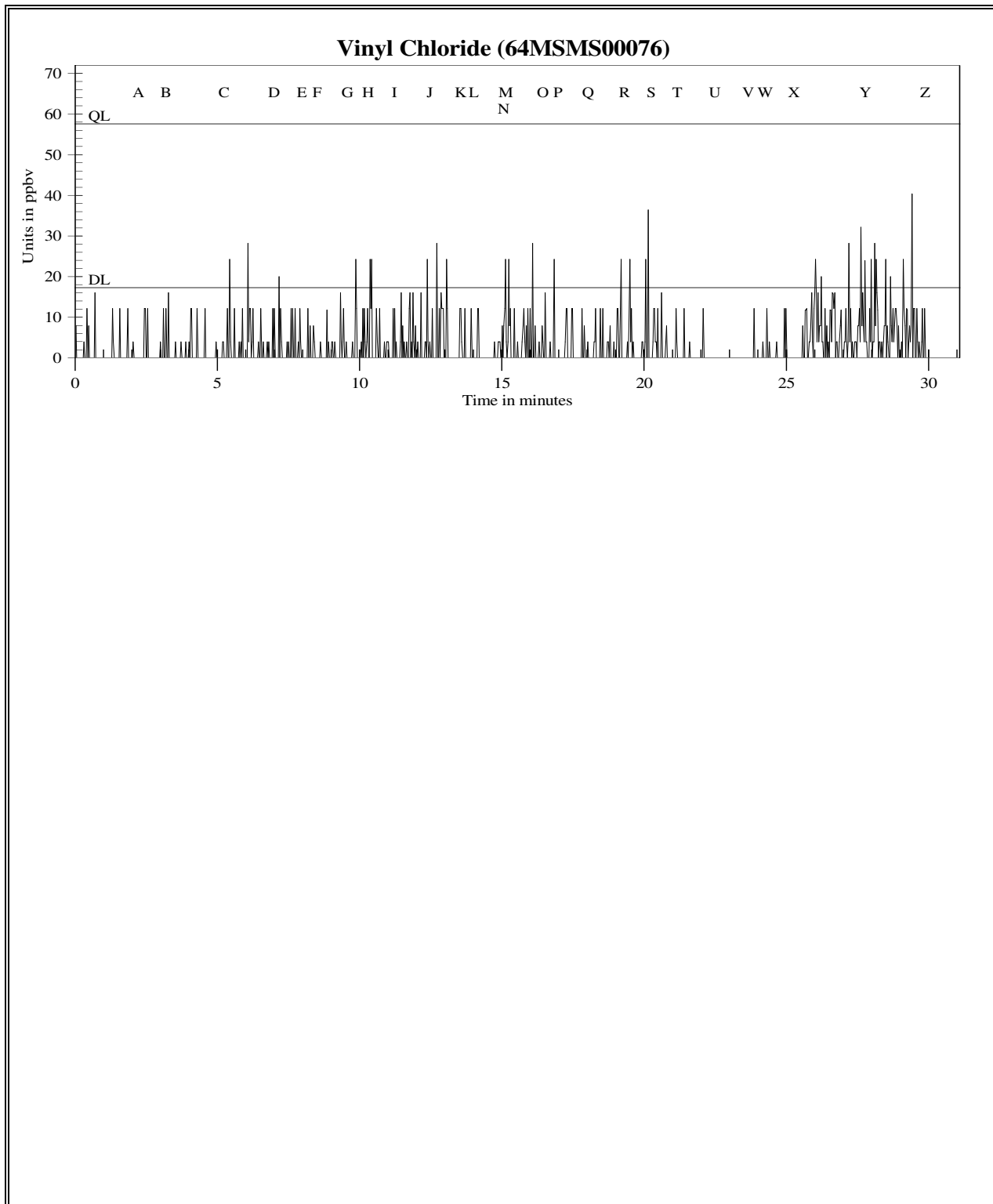


Figure 14e Unit 18 Survey in ppbv for Vinyl chloride

Figure 14f

TAGA Target Compound Summary in ppbv for Unit 18 Survey File: 64MSMS00076 Acquired on 04 May 2016 at 10:24:54								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:		0.13	0.21	0.27	2.0	0.65	0.50	58
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	0.29J	DL=0.15	DL=17.
D - E	Family room	0.052J	DL=0.063	DL=0.080	0.61J	1.7	1.1	DL=17.
F - G	Kitchen	0.050J	DL=0.063	DL=0.080	DL=0.60	1.9	1.2	DL=17.
H - I	Dining room	0.041J	DL=0.063	DL=0.080	DL=0.60	1.9	1.2	DL=17.
J - K	Bedroom two	0.050J	DL=0.063	DL=0.080	DL=0.60	2.1	1.3	DL=17.
L - M	Bedroom one	0.053J	DL=0.063	DL=0.080	DL=0.60	2.0	1.2	DL=17.
N - O	Bathroom	0.058J	DL=0.063	DL=0.080	DL=0.60	2.2	2.4	DL=17.
P - Q	Sub-slab port	0.061J	DL=0.063	DL=0.080	DL=0.60	2.1	1.3	DL=17.
R - S	Living room	0.050J	DL=0.063	DL=0.080	DL=0.60	1.7	1.1	DL=17.
U - V	Storm drain	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
W - X	Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	0.31J	0.19J	DL=17.
Y - Z	30 mL/min spike	5.7	6.2	4.9	6.2	6.7	9.1	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

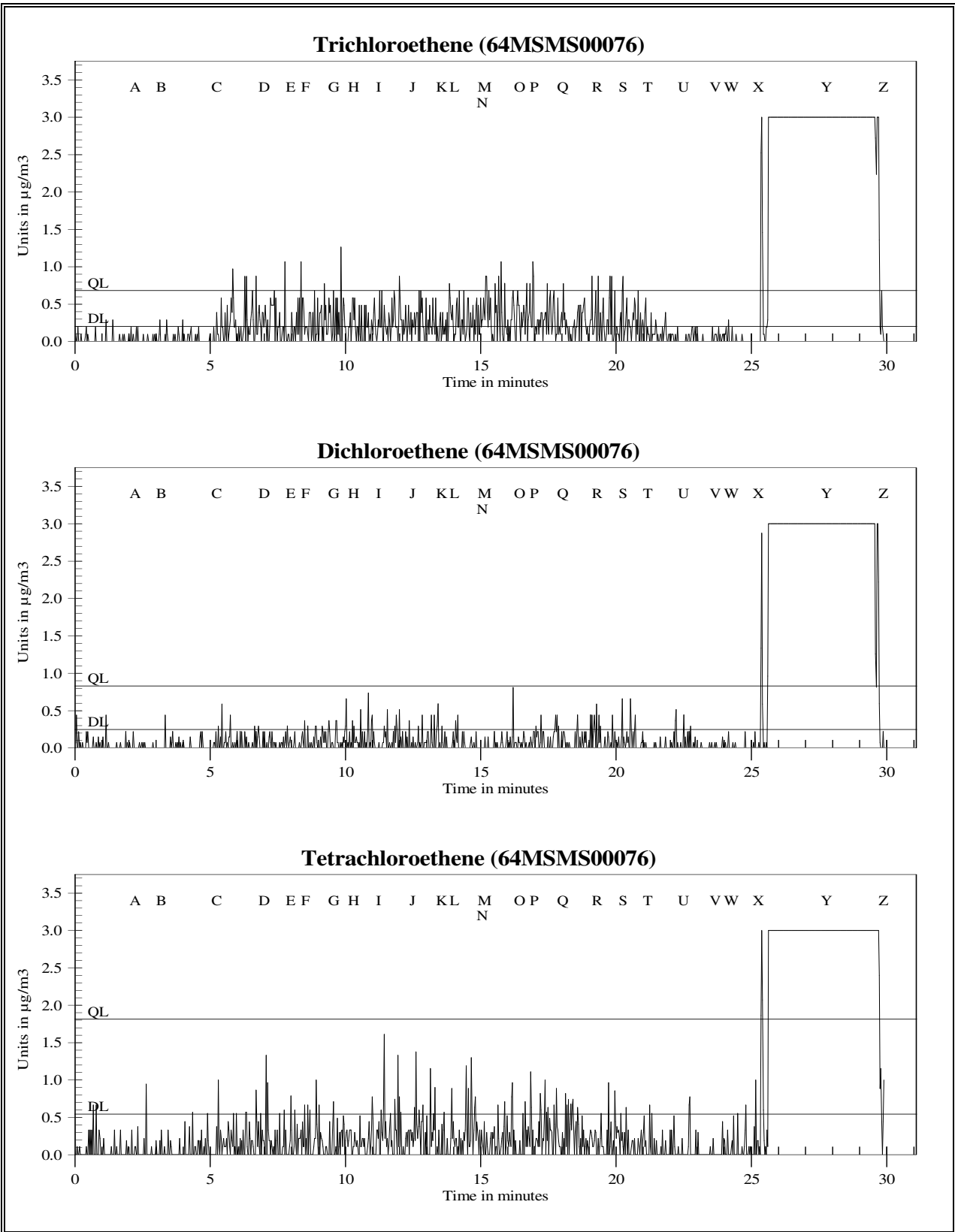


Figure 14g Unit 18 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

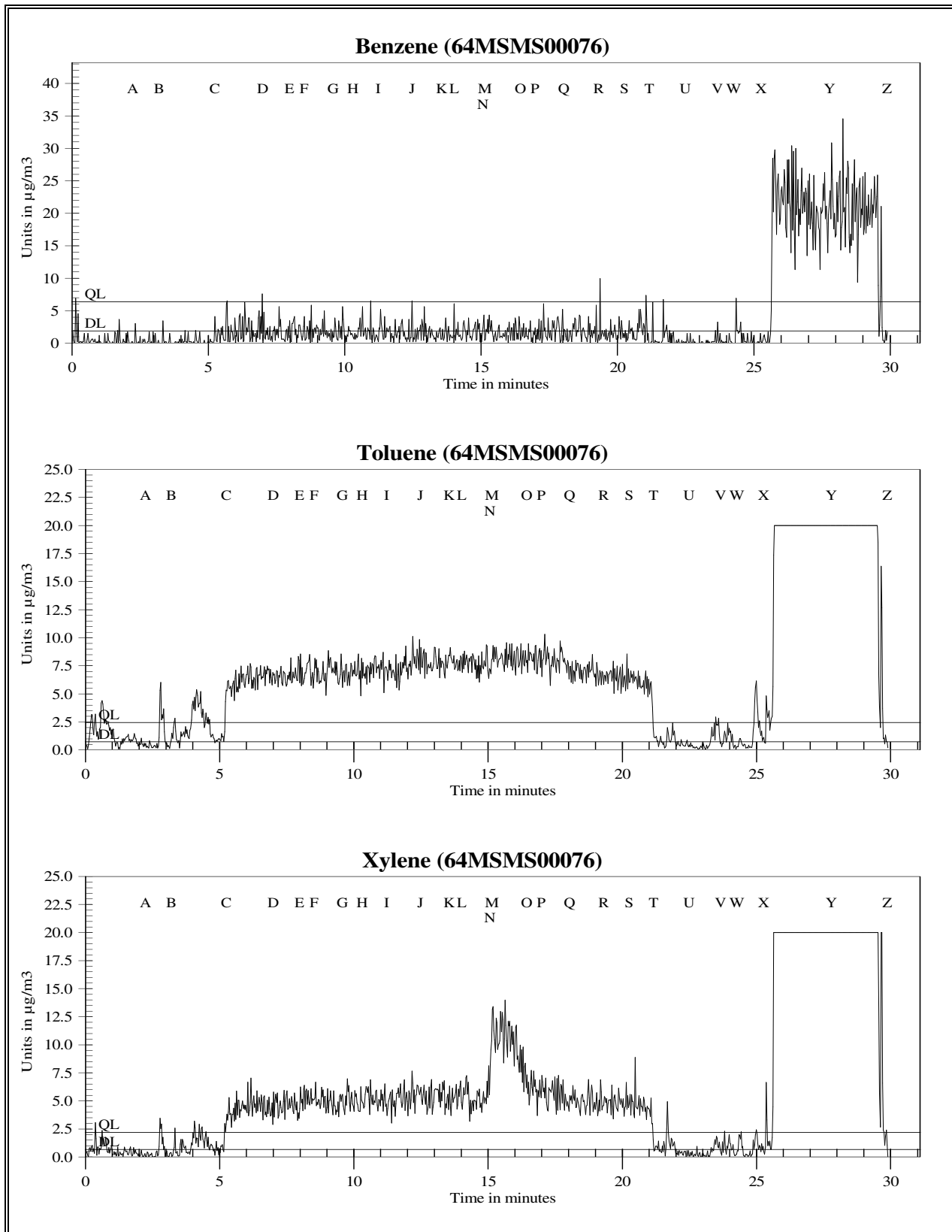


Figure 14h Unit 18 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

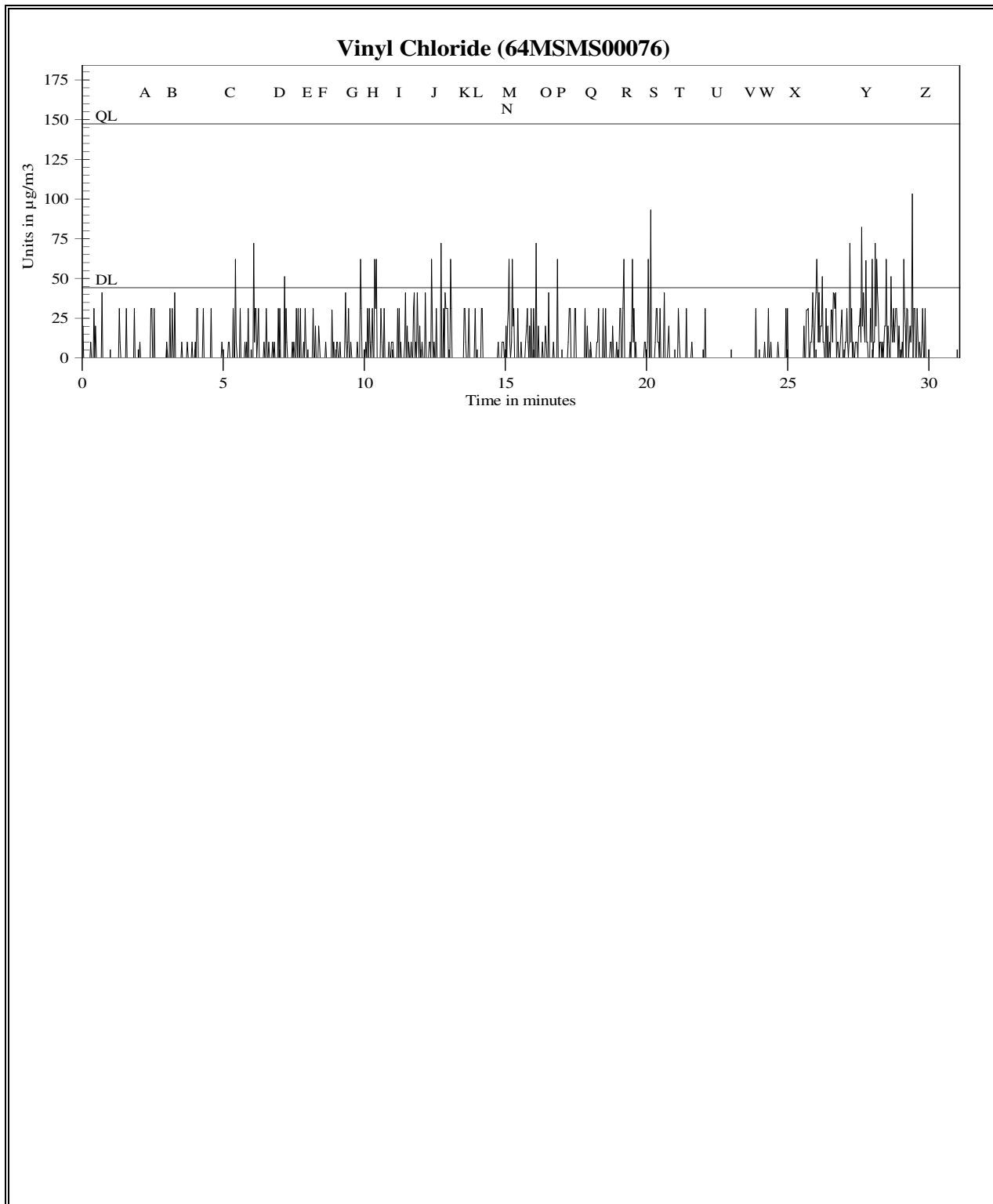


Figure 14i Unit 18 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 14j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 18 Survey File: 64MSMS00076 Acquired on 04 May 2016 at 10:24:54								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:		0.68	0.83	1.8	6.4	2.5	2.2	150
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	1.1J	DL=0.66	DL=44.
D - E	Family room	0.28J	DL=0.25	DL=0.54	2.0J	6.6	4.6	DL=44.
F - G	Kitchen	0.27J	DL=0.25	DL=0.54	DL=1.9	7.0	5.0	DL=44.
H - I	Dining room	0.22J	DL=0.25	DL=0.54	DL=1.9	7.2	5.1	DL=44.
J - K	Bedroom two	0.27J	DL=0.25	DL=0.54	DL=1.9	7.9	5.5	DL=44.
L - M	Bedroom one	0.29J	DL=0.25	DL=0.54	DL=1.9	7.7	5.2	DL=44.
N - O	Bathroom	0.31J	DL=0.25	DL=0.54	DL=1.9	8.2	11	DL=44.
P - Q	Sub-slab port	0.33J	DL=0.25	DL=0.54	DL=1.9	8.0	5.7	DL=44.
R - S	Living room	0.27J	DL=0.25	DL=0.54	DL=1.9	6.5	4.8	DL=44.
U - V	Storm drain	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
W - X	Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	1.2J	0.82J	DL=44.
Y - Z	30 mL/min spike	31	24	33	20	25	39	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

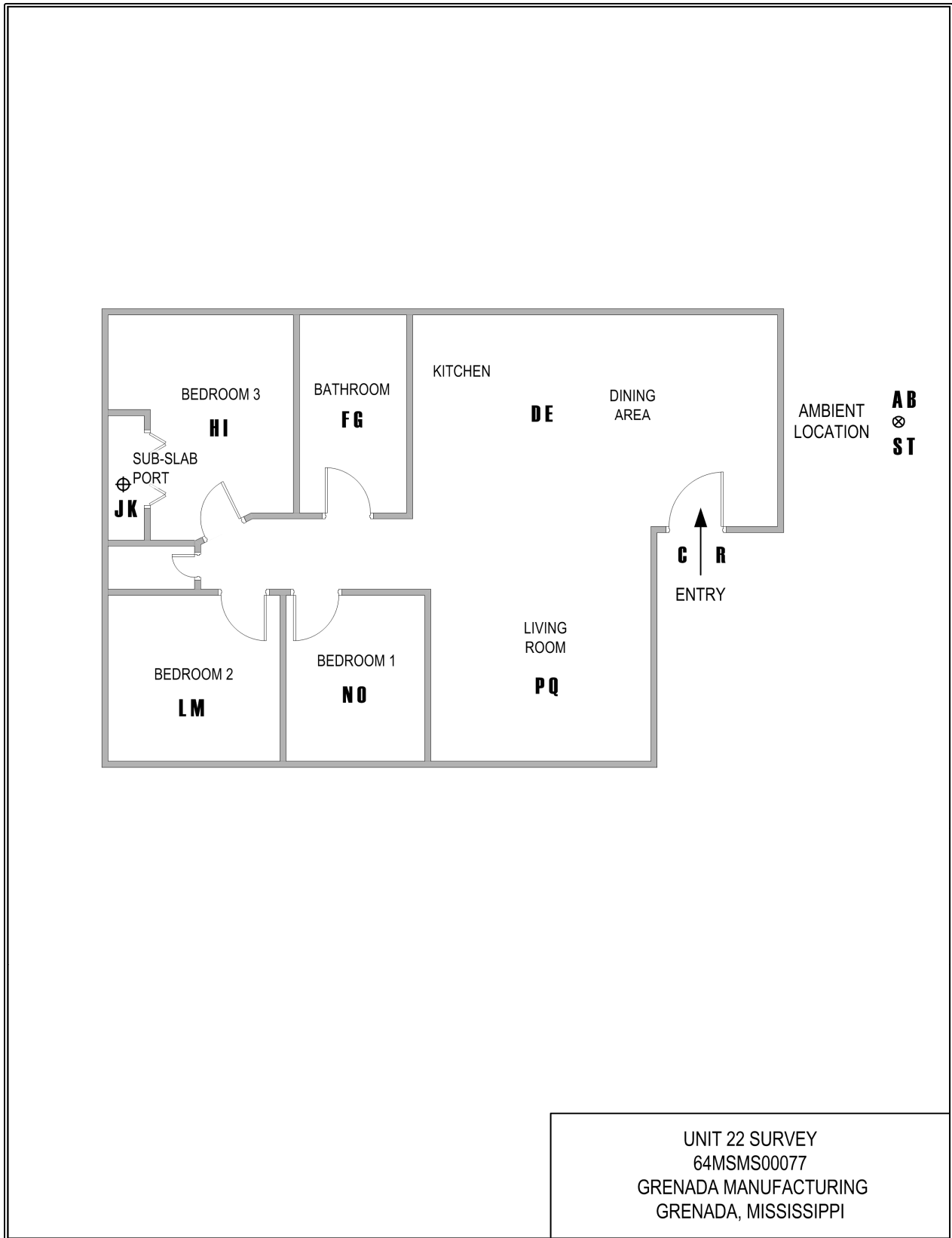


Figure 75a Unit 22 Survey Floor Plan, 64MSMS00077

Figure 15b

TAGA File Event Summary			
File: 64MSMS00077 Acquired on 04 May 2016 at 11:19:28			
Title: Unit 22 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.9	104	Start of the pre-entry ambient
B	3.9	140	End of the pre-entry ambient
C	6.3	227	Entering the unit
D	6.9	246	Start of the kitchen / dining area
E	7.9	282	End of the kitchen / dining area
F	8.5	304	Start of the bathroom
G	9.5	340	End of the bathroom
H	9.7	346	Start of bedroom three
I	10.7	384	End of bedroom three
J	10.9	390	Start of the sub-slab port
K	11.9	425	End of the sub-slab port
L	12.2	436	Start of bedroom two
M	13.1	467	End of bedroom two
N	13.4	478	Start of bedroom one
O	14.4	516	End of bedroom one
P	14.9	533	Start of the living room
Q	16.0	571	End of the living room
R	16.6	593	Exiting the unit
S	17.7	634	Start of the post-exit ambient
T	18.8	672	End of the post-exit ambient
U	21.5	770	Start of 30 mL/min spike
V	23.4	835	End of 30 mL/min spike

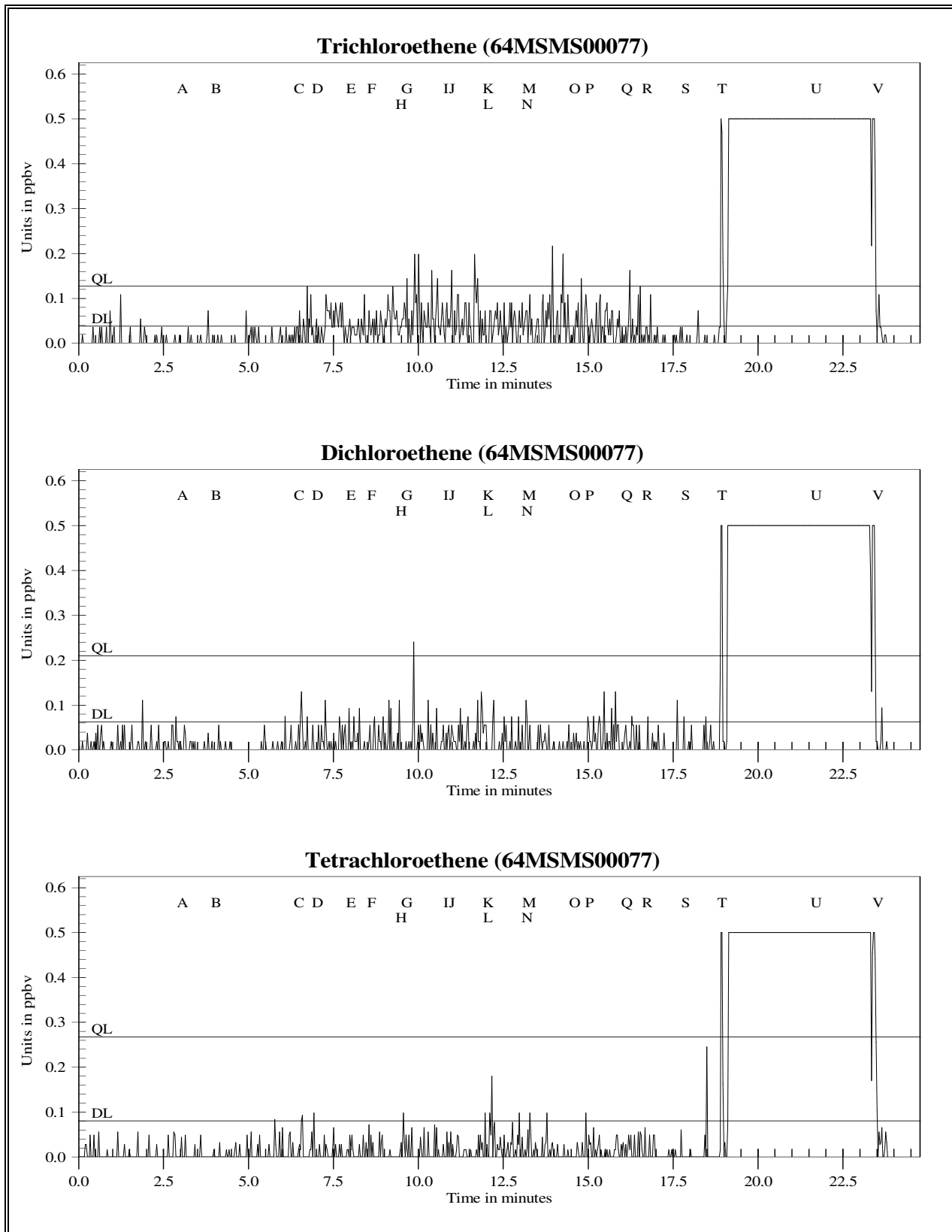


Figure 15c Unit 22 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

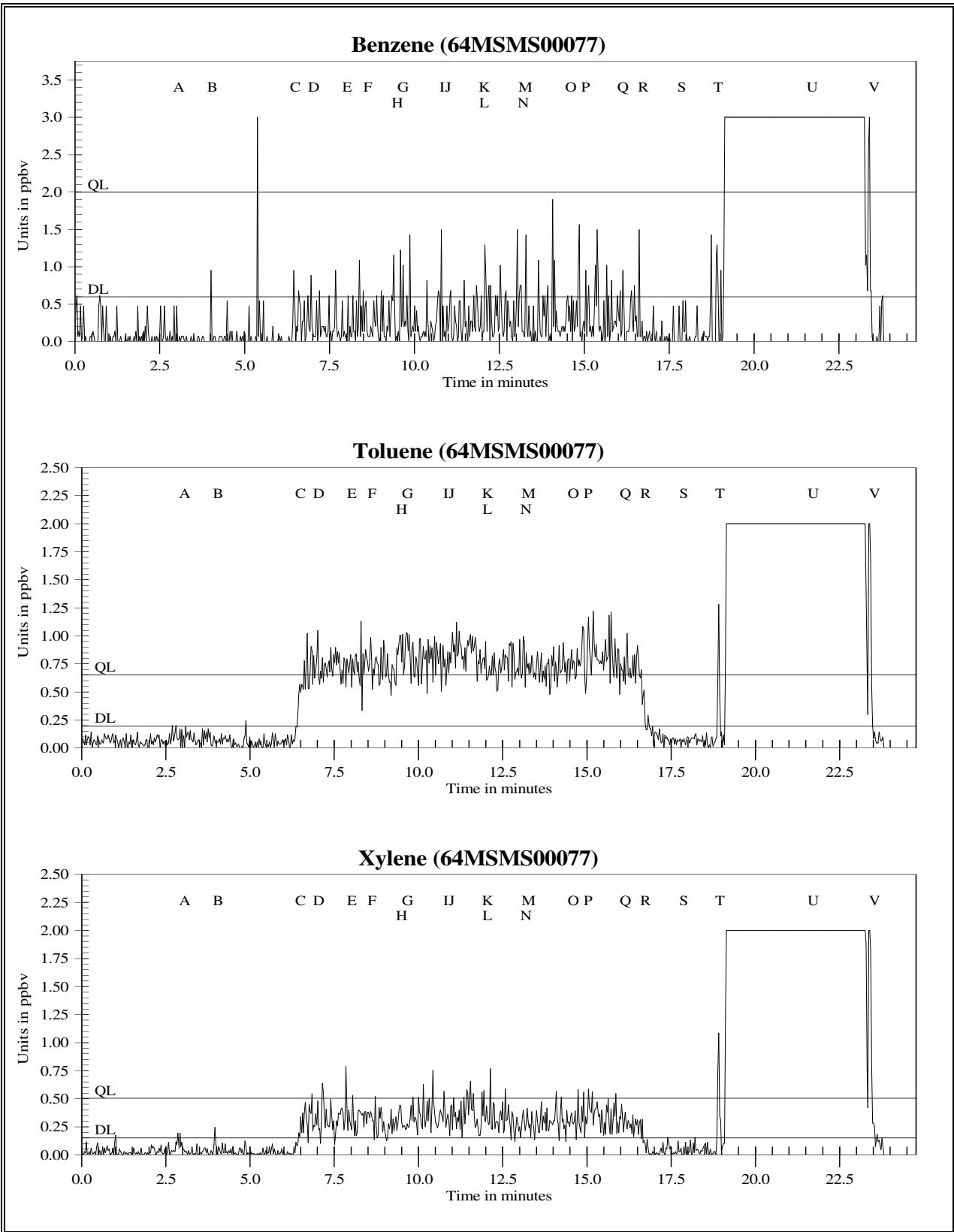


Figure 15d Unit 22 Survey in ppbv for Benzene, Toluene, and Xylenes

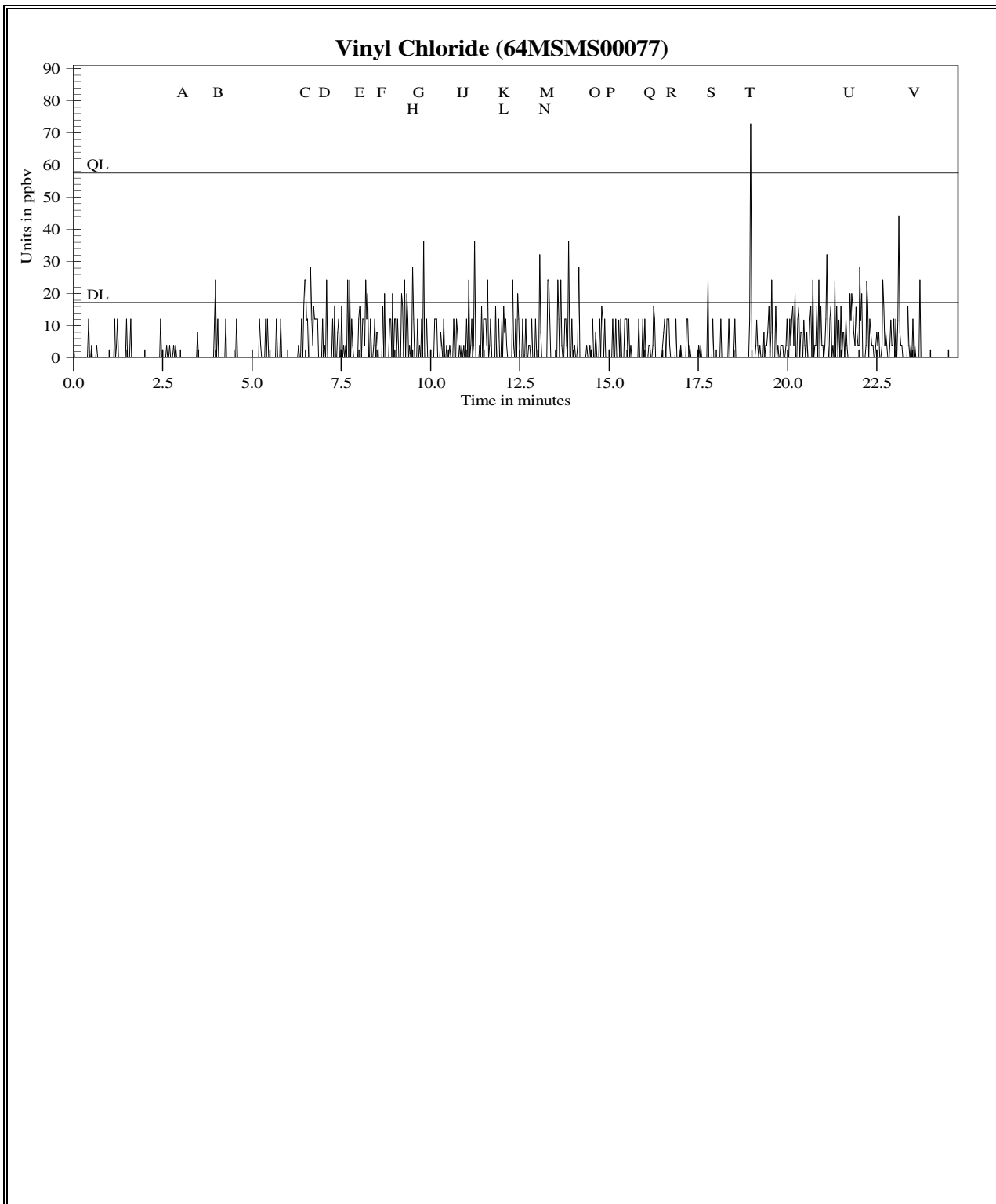


Figure 15e Unit 22 Survey in ppbv for Vinyl Chloride

Figure 15f

TAGA Target Compound Summary in ppbv for Unit 22 Survey File: 64MSMS00077 Acquired on 04 May 2016 at 11:19:28								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:		0.13	0.21	0.27	2.0	0.65	0.50	58
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
D - E	Kitchen / dining area	0.042J	DL=0.063	DL=0.080	DL=0.60	0.73	0.33J	DL=17.
F - G	Bathroom	0.042J	DL=0.063	DL=0.080	DL=0.60	0.74	0.30J	DL=17.
H - I	Bedroom three	0.062J	DL=0.063	DL=0.080	DL=0.60	0.80	0.35J	DL=17.
J - K	Sub-slab port	0.054J	DL=0.063	DL=0.080	DL=0.60	0.86	0.36J	DL=17.
L - M	Bedroom two	0.042J	DL=0.063	DL=0.080	DL=0.60	0.75	0.30J	DL=17.
N - O	Bedroom one	0.048J	DL=0.063	DL=0.080	DL=0.60	0.71	0.30J	DL=17.
P - Q	Living room	0.039J	DL=0.063	DL=0.080	DL=0.60	0.83	0.35J	DL=17.
S - T	Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
U - V	30 mL/min spike	5.5	6.1	4.7	6.4	6.1	8.4	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

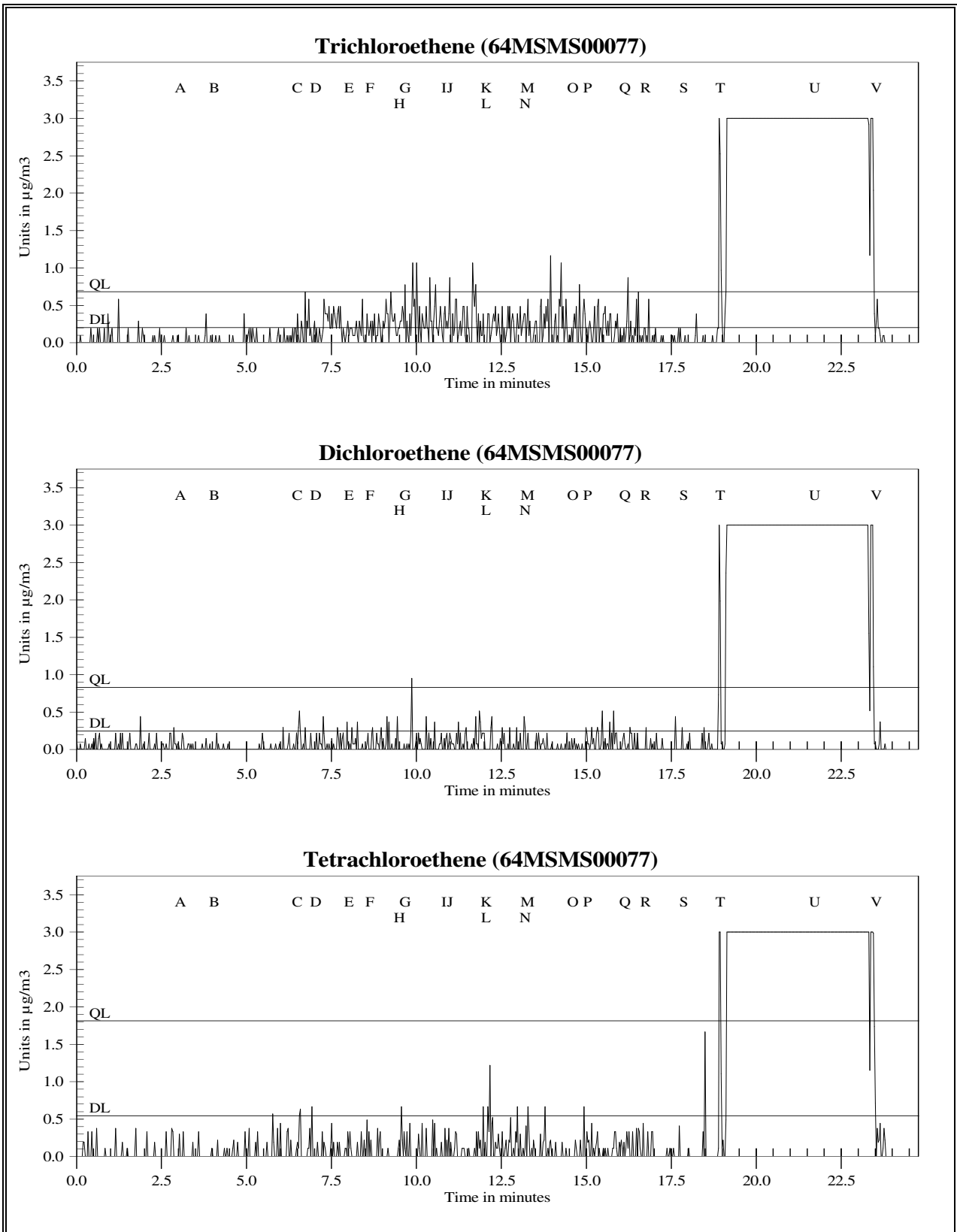


Figure 15g Unit 22 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

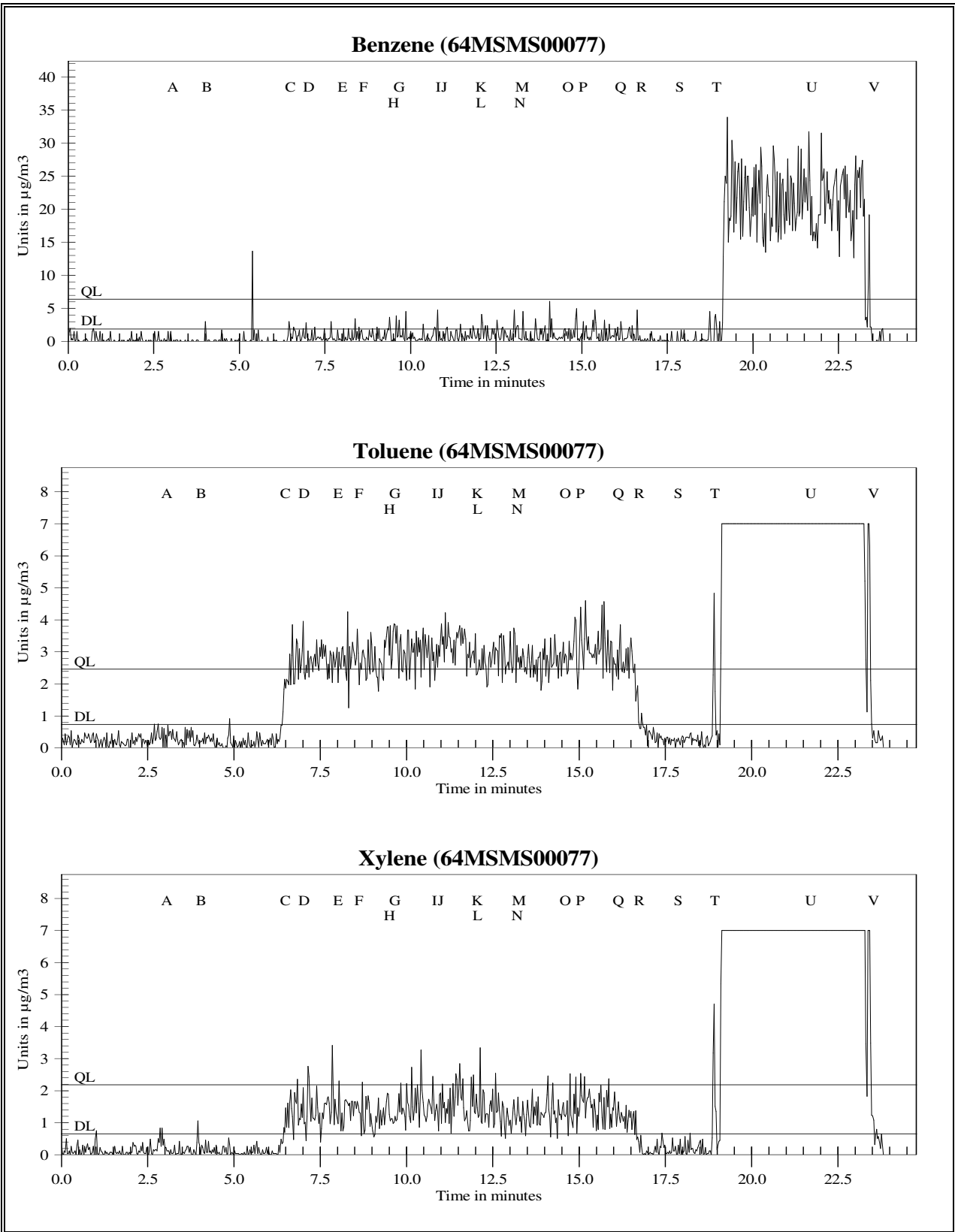


Figure 15h Unit 22 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

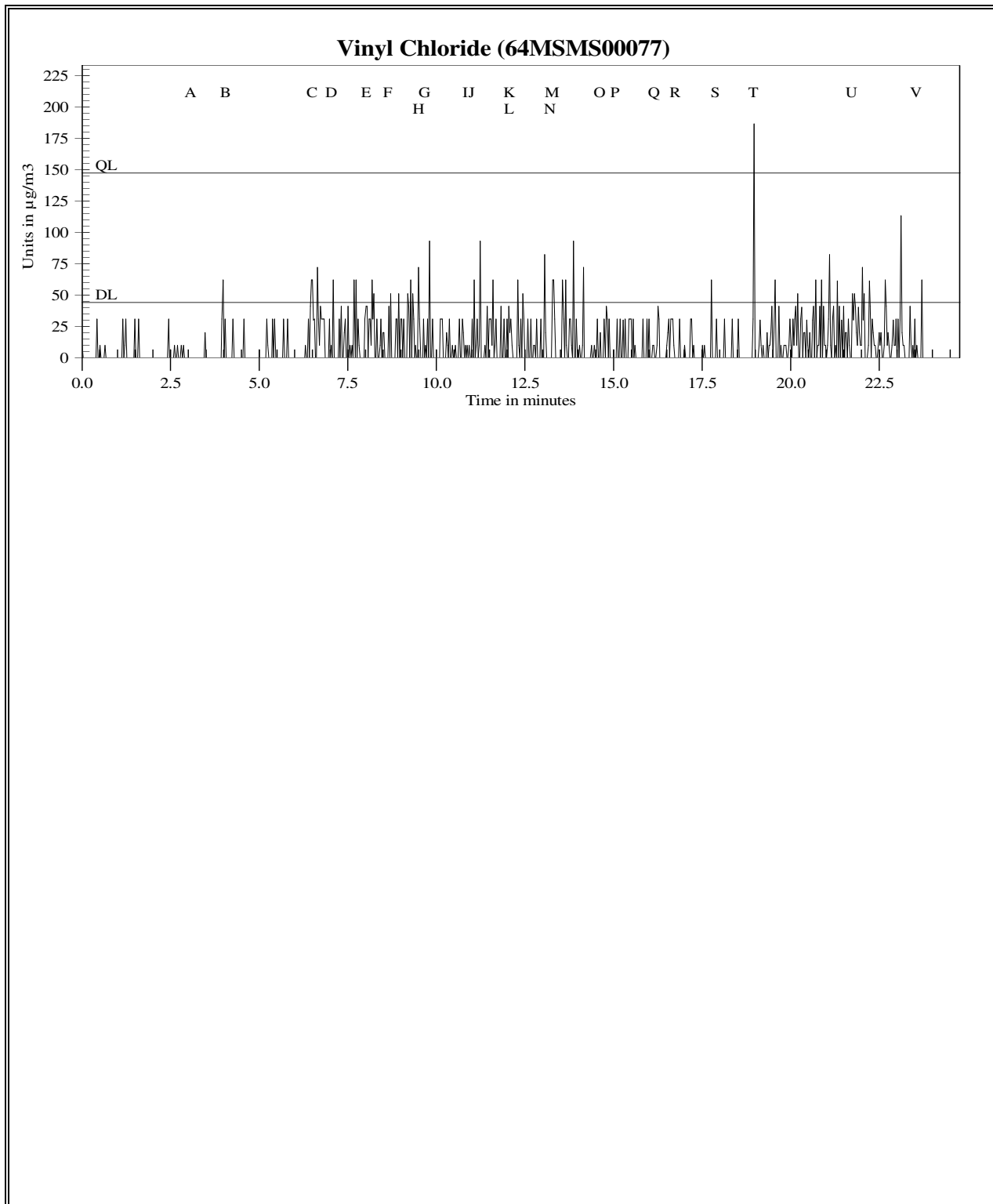


Figure 15i Unit 22 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 15j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 22 Survey File: 64MSMS00077 Acquired on 04 May 2016 at 11:19:28								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:		0.68	0.83	1.8	6.4	2.5	2.2	150
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
D - E	Kitchen / dining area	0.23J	DL=0.25	DL=0.54	DL=1.9	2.7	1.4J	DL=44.
F - G	Bathroom	0.23J	DL=0.25	DL=0.54	DL=1.9	2.8	1.3J	DL=44.
H - I	Bedroom three	0.33J	DL=0.25	DL=0.54	DL=1.9	3.0	1.5J	DL=44.
J - K	Sub-slab port	0.29J	DL=0.25	DL=0.54	DL=1.9	3.2	1.6J	DL=44.
L - M	Bedroom two	0.22J	DL=0.25	DL=0.54	DL=1.9	2.8	1.3J	DL=44.
N - O	Bedroom one	0.26J	DL=0.25	DL=0.54	DL=1.9	2.7	1.3J	DL=44.
P - Q	Living room	0.21J	DL=0.25	DL=0.54	DL=1.9	3.1	1.5J	DL=44.
S - T	Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
U - V	30 mL/min spike	30	24	32	21	23	36	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

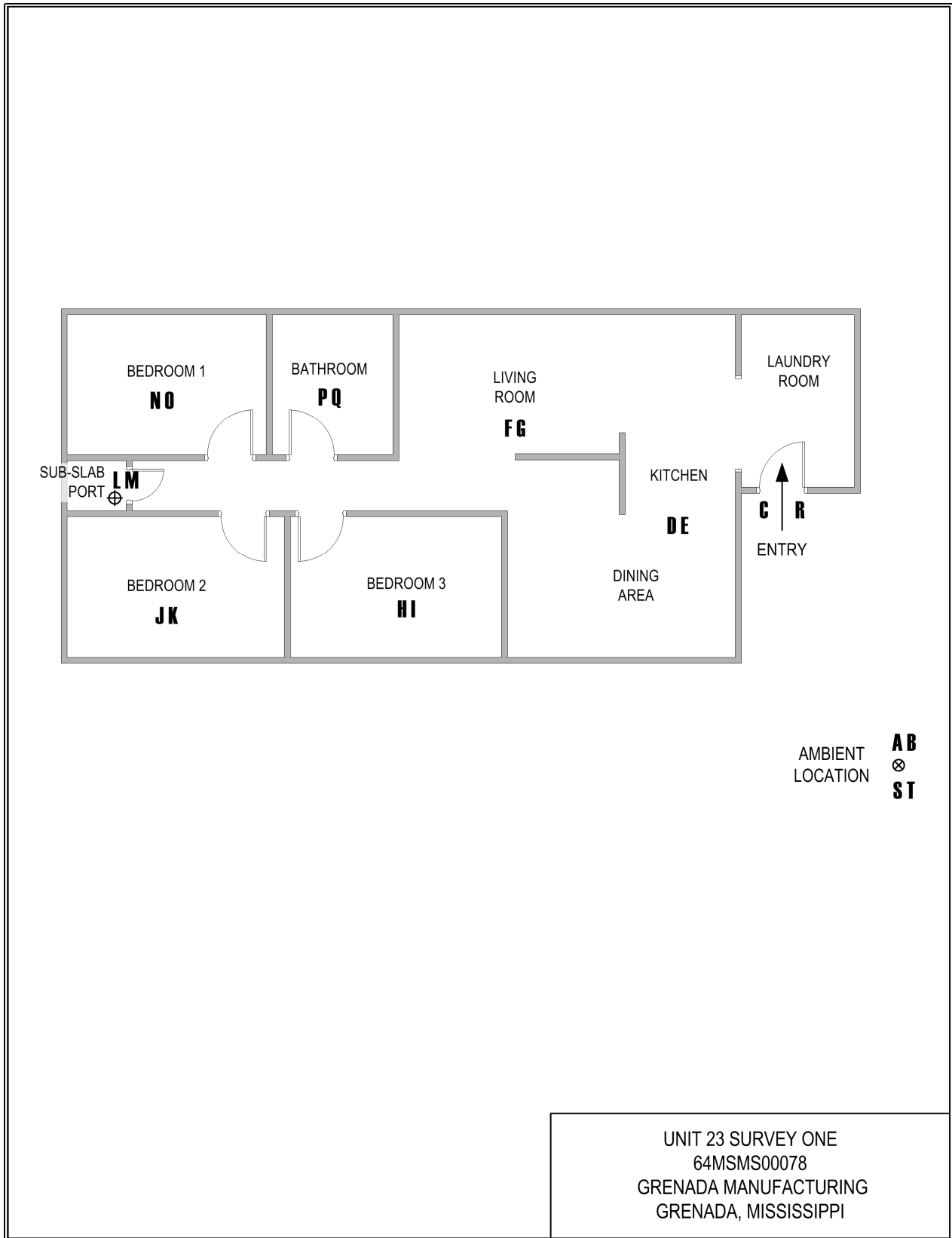


Figure 86a Unit 23 Survey One Floor Plan, 64MSMS00078

Figure 16b

TAGA File Event Summary			
File: 64MSMS00078 Acquired on 04 May 2016 at 11:58:55			
Title: Unit 23 Survey One			
Flag	Offset Time	Offset Sequence	Description
A	2.7	96	Start of the pre-entry ambient
B	4.4	157	End of the pre-entry ambient
C	9.9	355	Entering the unit
D	10.4	372	Start of the kitchen / dining area
E	11.7	419	End of the kitchen / dining area
F	12.1	434	Start of the living room
G	13.2	472	End of the living room
H	13.6	486	Start of bedroom three
I	14.6	523	End of bedroom three
J	14.9	533	Start of bedroom two
K	16.0	571	End of bedroom two
L	16.3	583	Start of the sub-slab port
M	17.3	619	End of the sub-slab port
N	18.1	646	Start of bedroom one
O	19.3	689	End of bedroom one
P	19.5	697	Start of the bathroom
Q	20.5	734	End of the bathroom
R	21.4	766	Exiting the unit
S	23.2	829	Start of the post-exit ambient
T	24.7	884	End of the post-exit ambient
U	26.8	959	Start of 30 mL/min spike
V	27.9	996	End of 30 mL/min spike

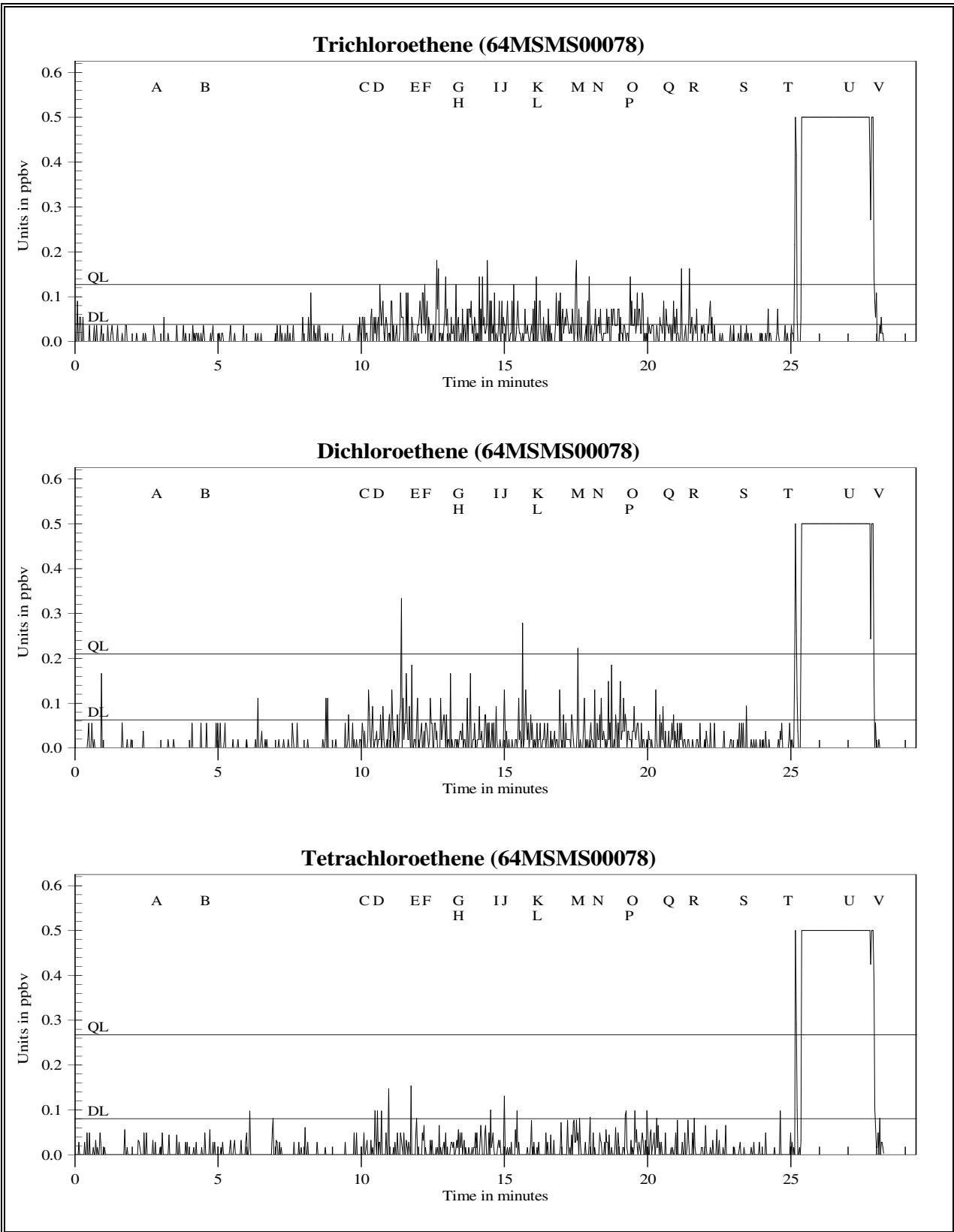


Figure 16c Unit 23 Survey One in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

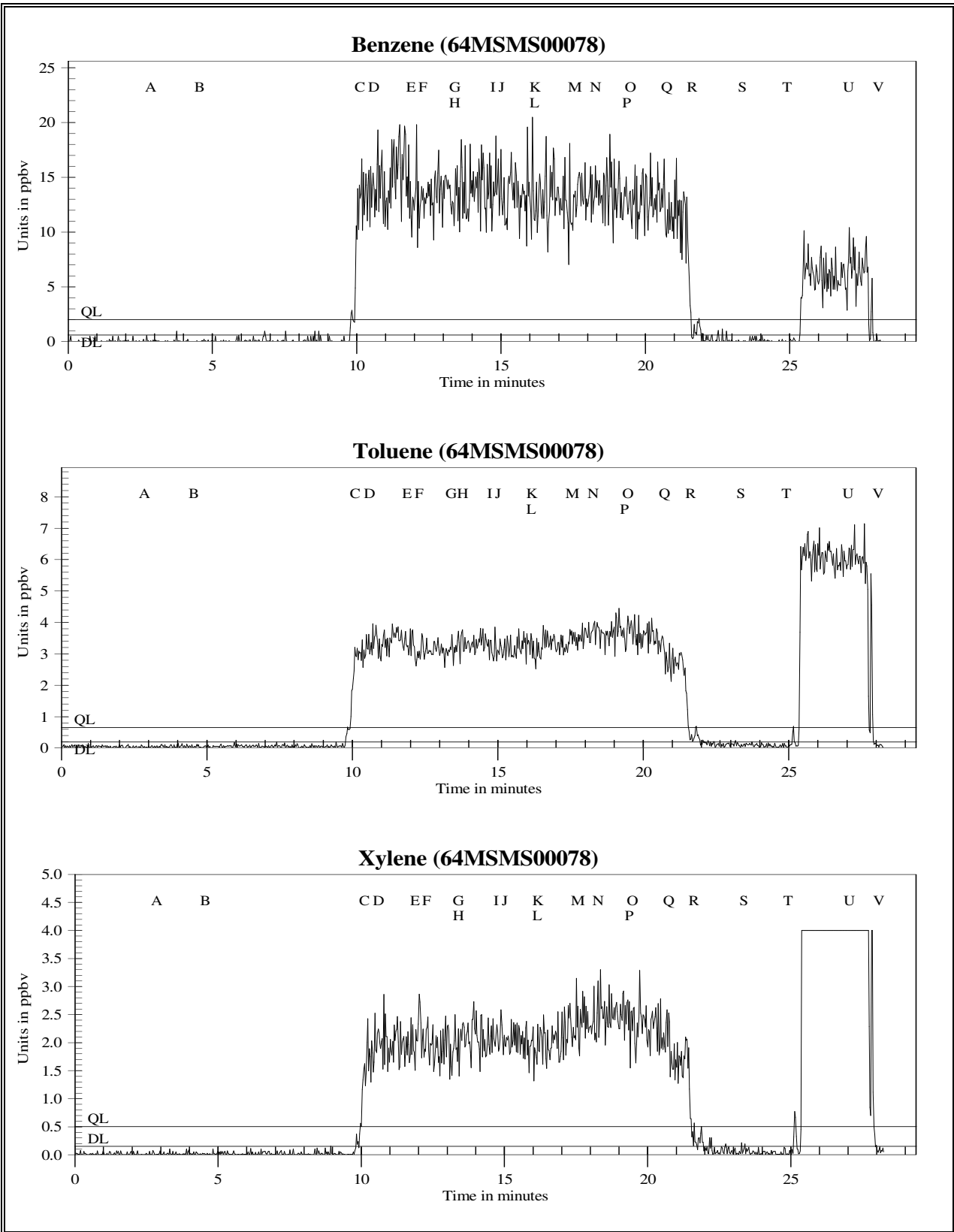


Figure 16d Unit 23 Survey One in ppbv for Benzene, Toluene, and Xylenes

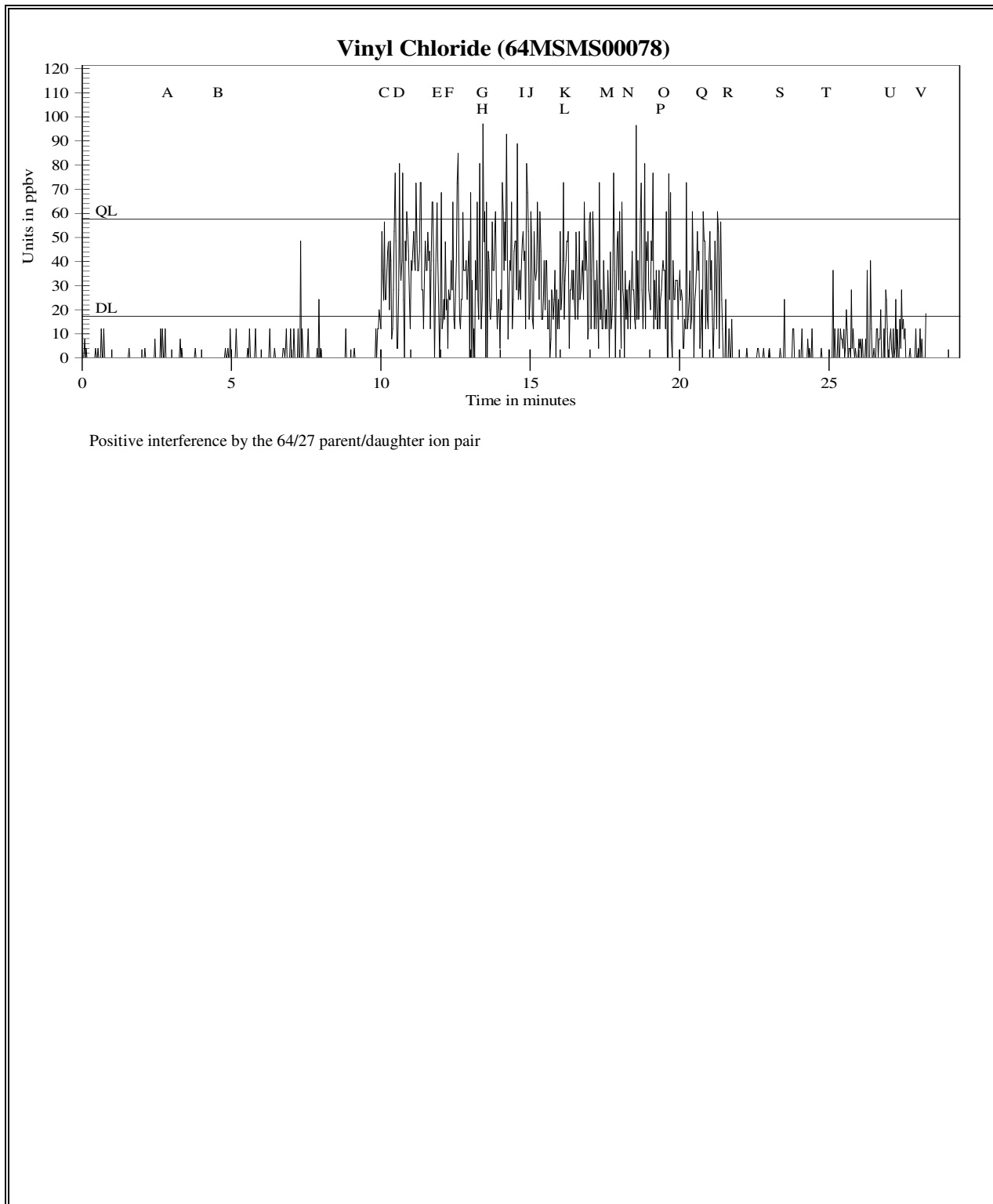


Figure 16e Unit 23 Survey One in ppbv for Vinyl Chloride

Figure 16f

TAGA Target Compound Summary in ppbv for Unit 23 Survey One File: 64MSMS00078 Acquired on 04 May 2016 at 11:58:55								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:		0.13	0.21	0.27	2.0	0.65	0.50	58
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
D - E	Kitchen / dining area	DL=0.038	DL=0.063	DL=0.080	15	3.4	2.0	40.JI
F - G	Living room	0.044J	DL=0.063	DL=0.080	14	3.1	1.9	31.JI
H - I	Bedroom three	0.042J	DL=0.063	DL=0.080	14	3.3	2.1	38.JI
J - K	Bedroom two	DL=0.038	DL=0.063	DL=0.080	14	3.2	2.0	30.JI
L - M	Sub-slab port	DL=0.038	DL=0.063	DL=0.080	13	3.3	2.1	33.JI
N - O	Bedroom one	DL=0.038	DL=0.063	DL=0.080	14	3.7	2.5	32.JI
P - Q	Bathroom	DL=0.038	DL=0.063	DL=0.080	13	3.6	2.3	27.JI
S - T	Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
U - V	30 mL/min spike	4.9	5.2	4.4	5.9	5.4	7.8	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

I = Positive interference by the 64/27 parent/daughter ion pair

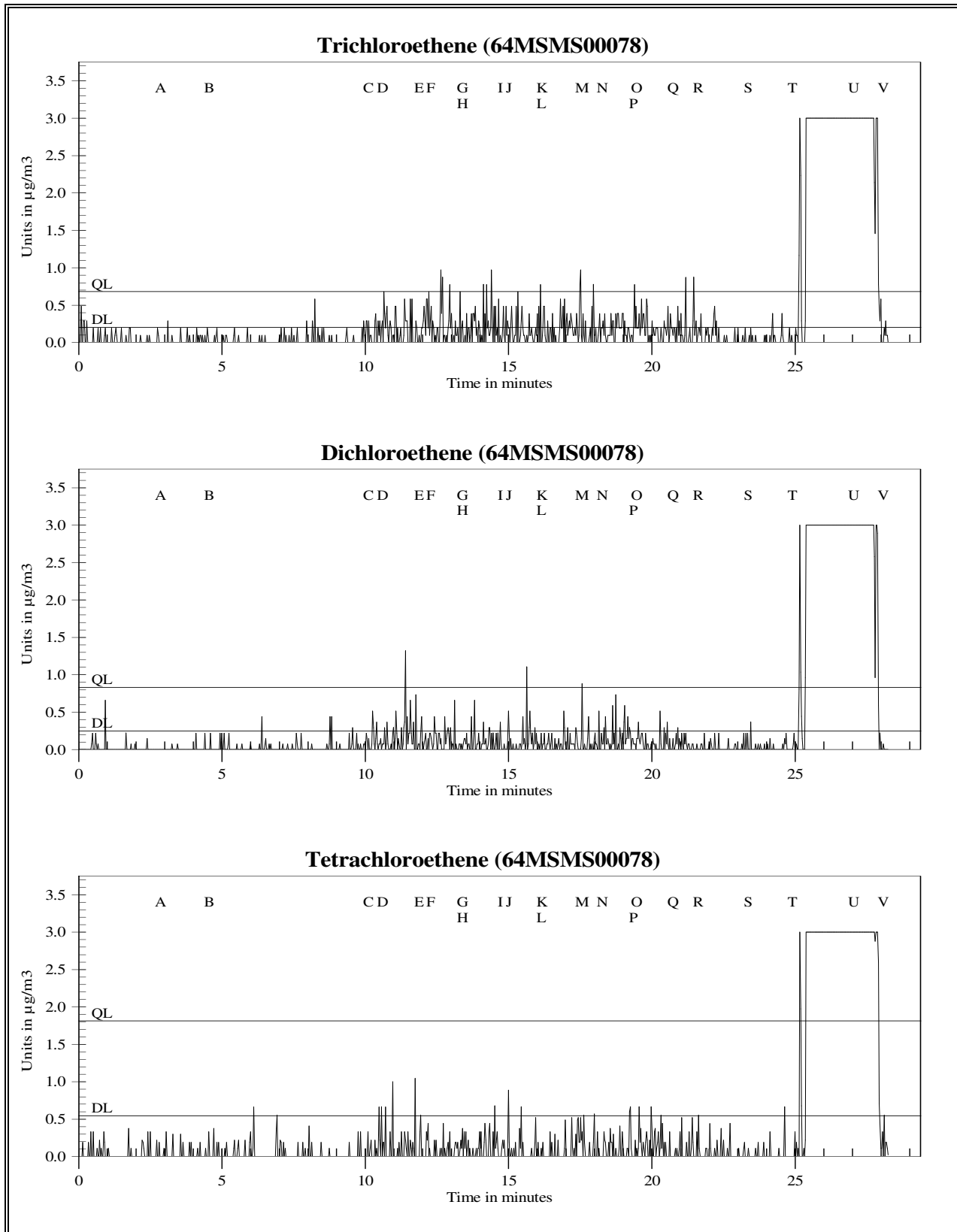


Figure 16g Unit 23 Survey One in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

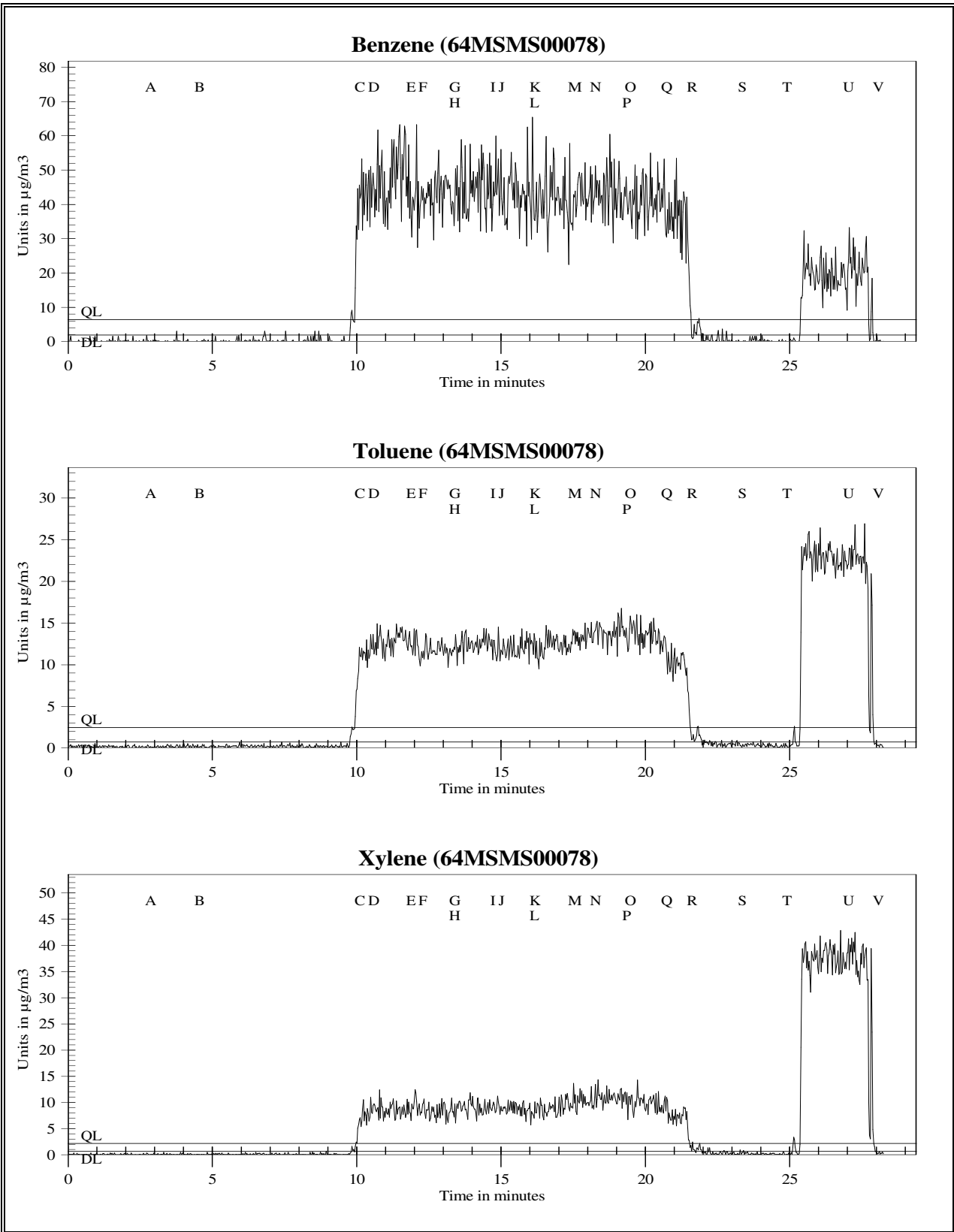


Figure 16h Unit 23 Survey One in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

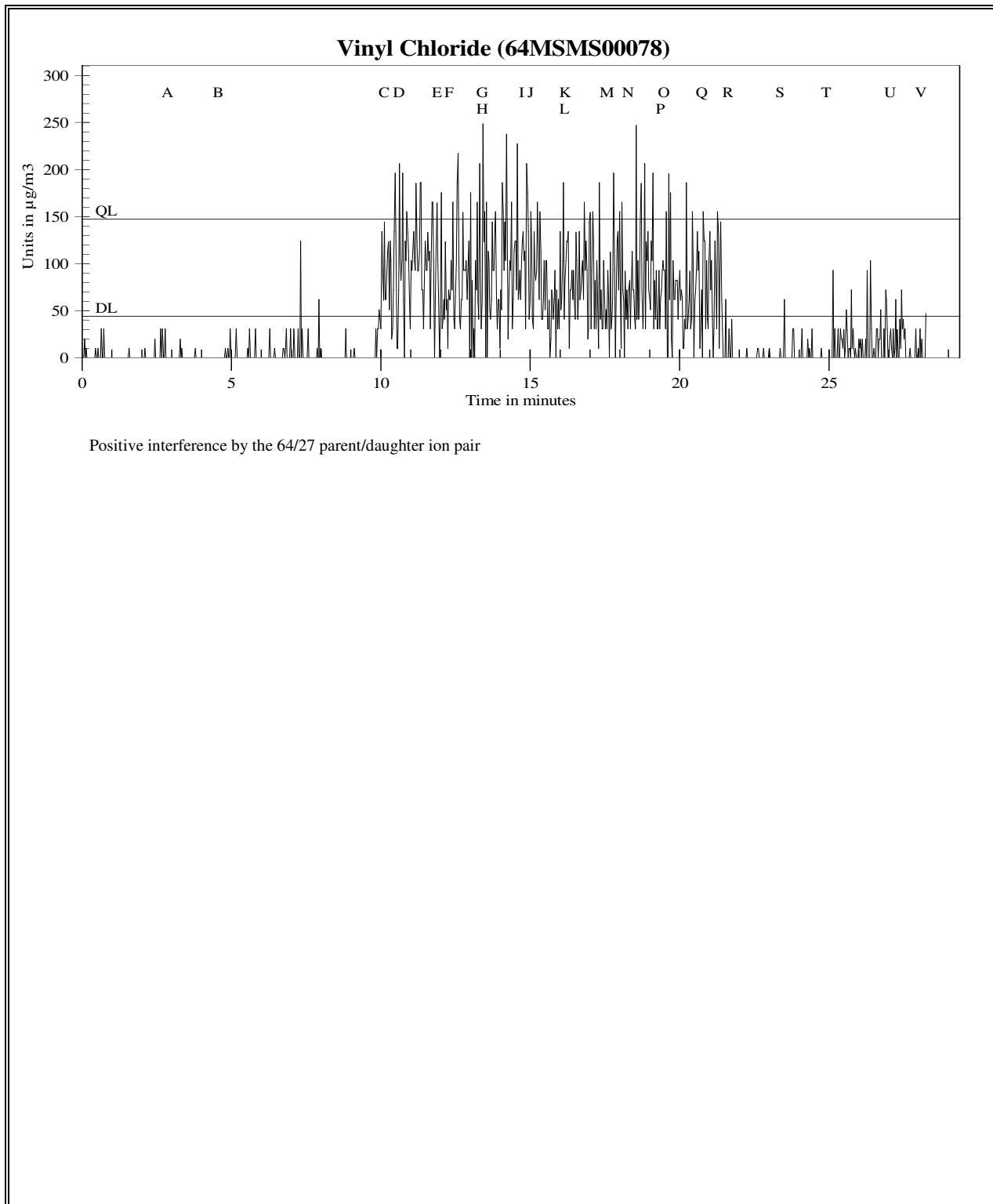


Figure 16i Unit 23 Survey One in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 16j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 23 Survey One File: 64MSMS00078 Acquired on 04 May 2016 at 11:58:55								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:		0.68	0.83	1.8	6.4	2.5	2.2	150
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
D - E	Kitchen / dining area	DL=0.20	DL=0.25	DL=0.54	47	13	8.5	100JI
F - G	Living room	0.24J	DL=0.25	DL=0.54	43	12	8.4	78.JI
H - I	Bedroom three	0.23J	DL=0.25	DL=0.54	45	13	9.1	98.JI
J - K	Bedroom two	DL=0.20	DL=0.25	DL=0.54	43	12	8.8	76.JI
L - M	Sub-slab port	DL=0.20	DL=0.25	DL=0.54	42	12	9.0	84.JI
N - O	Bedroom one	DL=0.20	DL=0.25	DL=0.54	43	14	11	83.JI
P - Q	Bathroom	DL=0.20	DL=0.25	DL=0.54	41	14	9.9	68.JI
S - T	Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
U - V	30 mL/min spike	26	21	30	19	20	34	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

I = Positive interference by the 64/27 parent/daughter ion pair

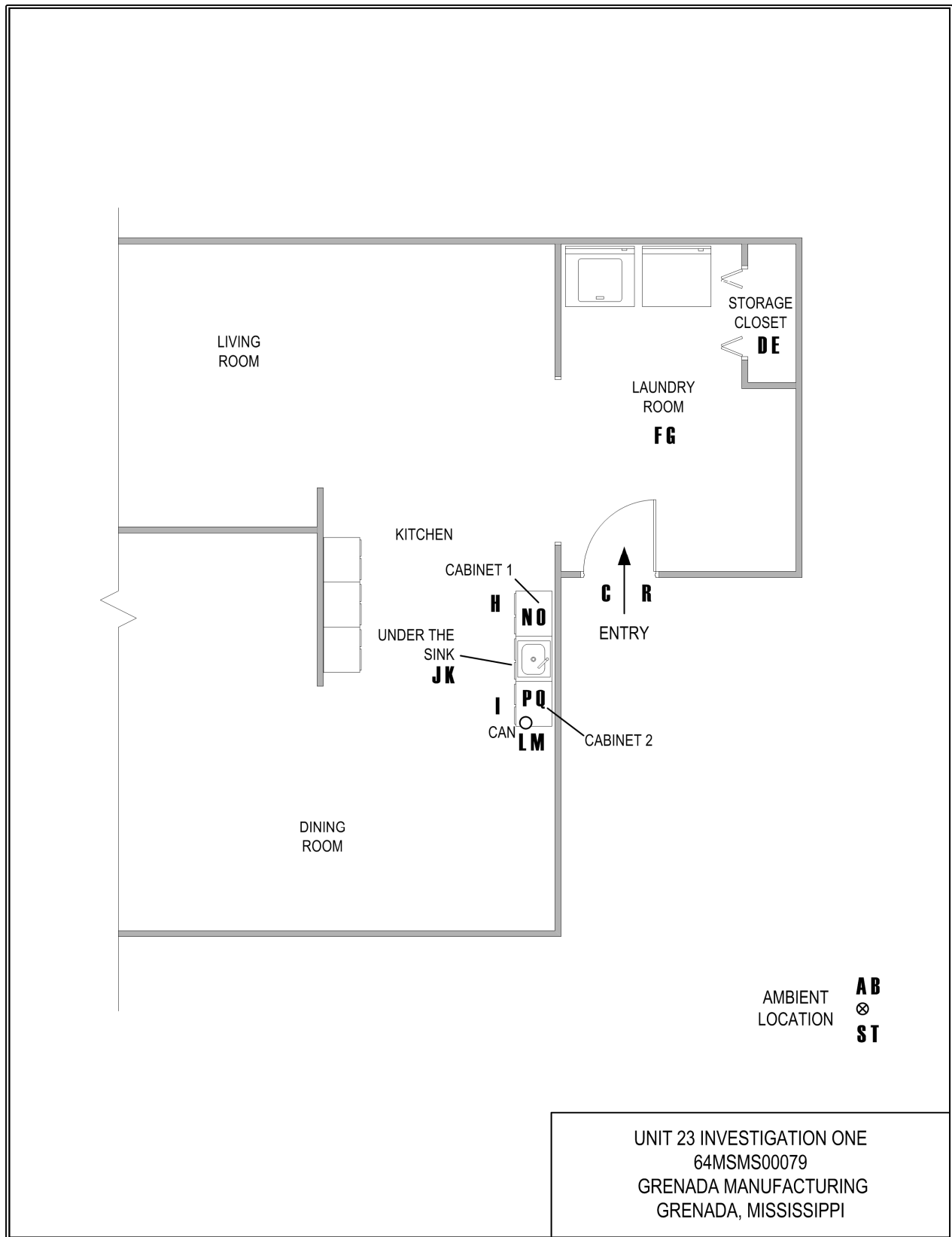


Figure 17a Unit 23 Investigation One Floor Plan, 64MSMS00079

Figure 17b

TAGA File Event Summary			
File: 64MSMS00079 Acquired on 04 May 2016 at 12:29:21			
Title: Unit 23 Investigation One			
Flag	Offset Time	Offset Sequence	Description
A	2.1	76	Start of the pre-entry ambient
B	3.1	111	End of the pre-entry ambient
C	4.5	160	Entering the unit
D	5.3	189	Start of the laundry room storage closet
E	5.7	206	End of the laundry room storage closet
F	6.2	223	Start of the laundry room
G	6.9	248	End of the laundry room
H	7.4	265	Start of the kitchen cabinets and sink
I	8.9	320	End of the kitchen cabinets and sink
J	10.2	365	Start of the space under the kitchen sink
K	12.3	439	End of the space under the kitchen sink
L	13.9	496	Start of the wood filler can
M	14.9	534	End of the wood filler can
N	15.9	569	Start of cabinet one under the kitchen sink
O	16.8	600	End of cabinet one under the kitchen sink
P	17.0	609	Start of cabinet two under the kitchen sink
Q	18.2	650	End of cabinet two under the kitchen sink
R	46.0	1644	Exiting the unit
S	47.7	1705	Start of the post-exit ambient
T	48.8	1744	End of the post-exit ambient
U	50.8	1813	Start of 30 mL/min spike
V	51.7	1848	End of 30 mL/min spike

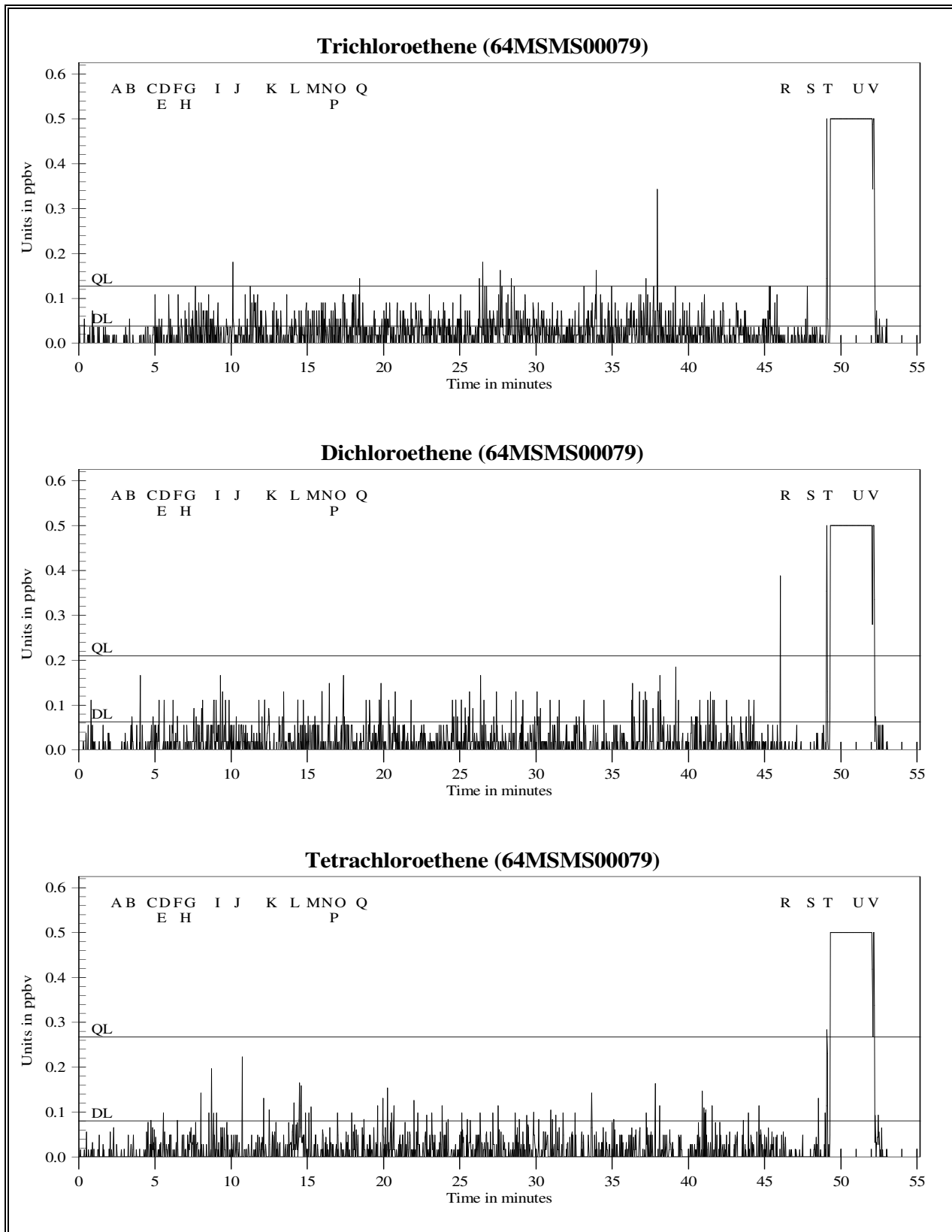


Figure 17c Unit 23 Investigation One in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

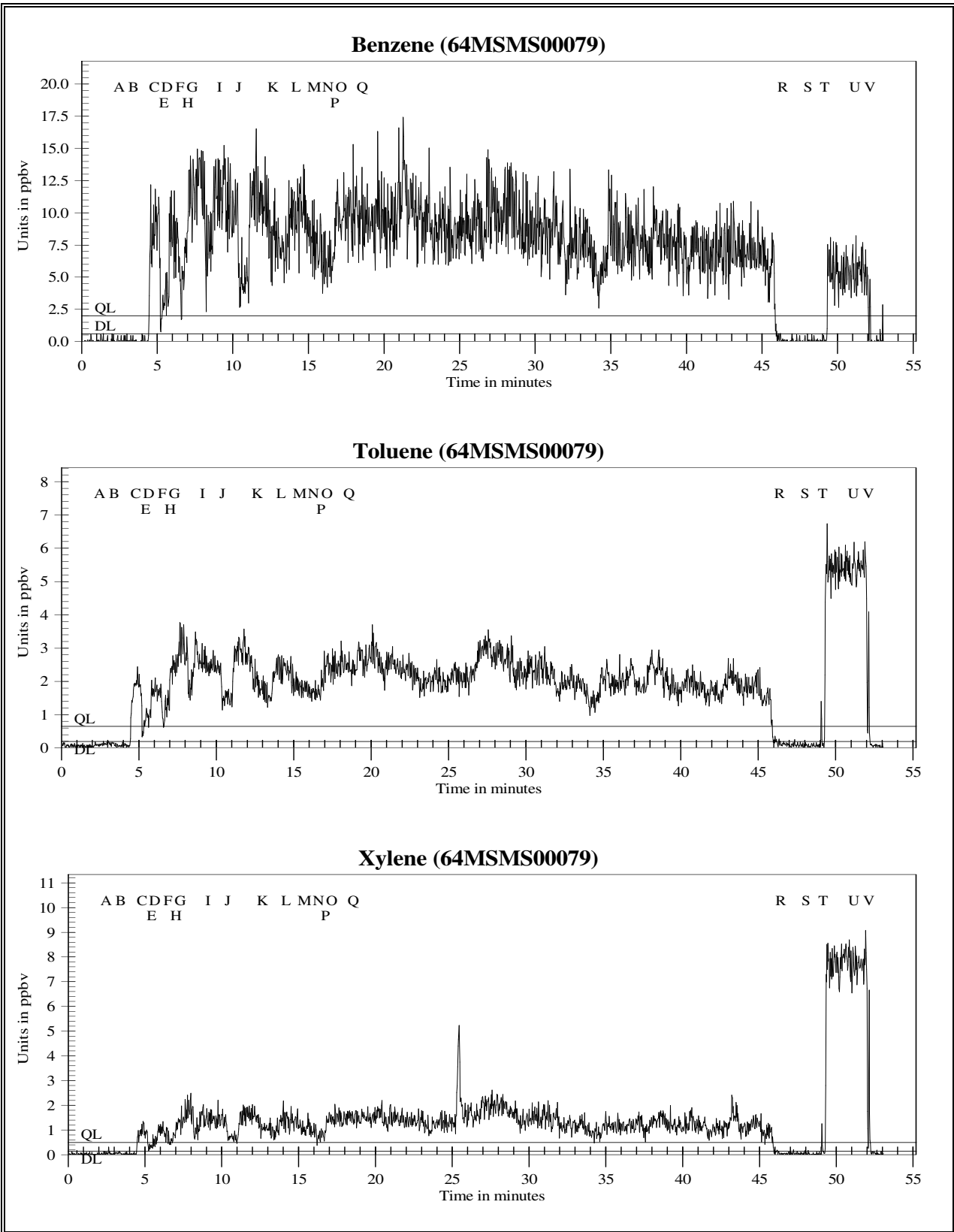


Figure 17d Unit 23 Investigation One in ppbv for Benzene, Toluene, and Xylenes

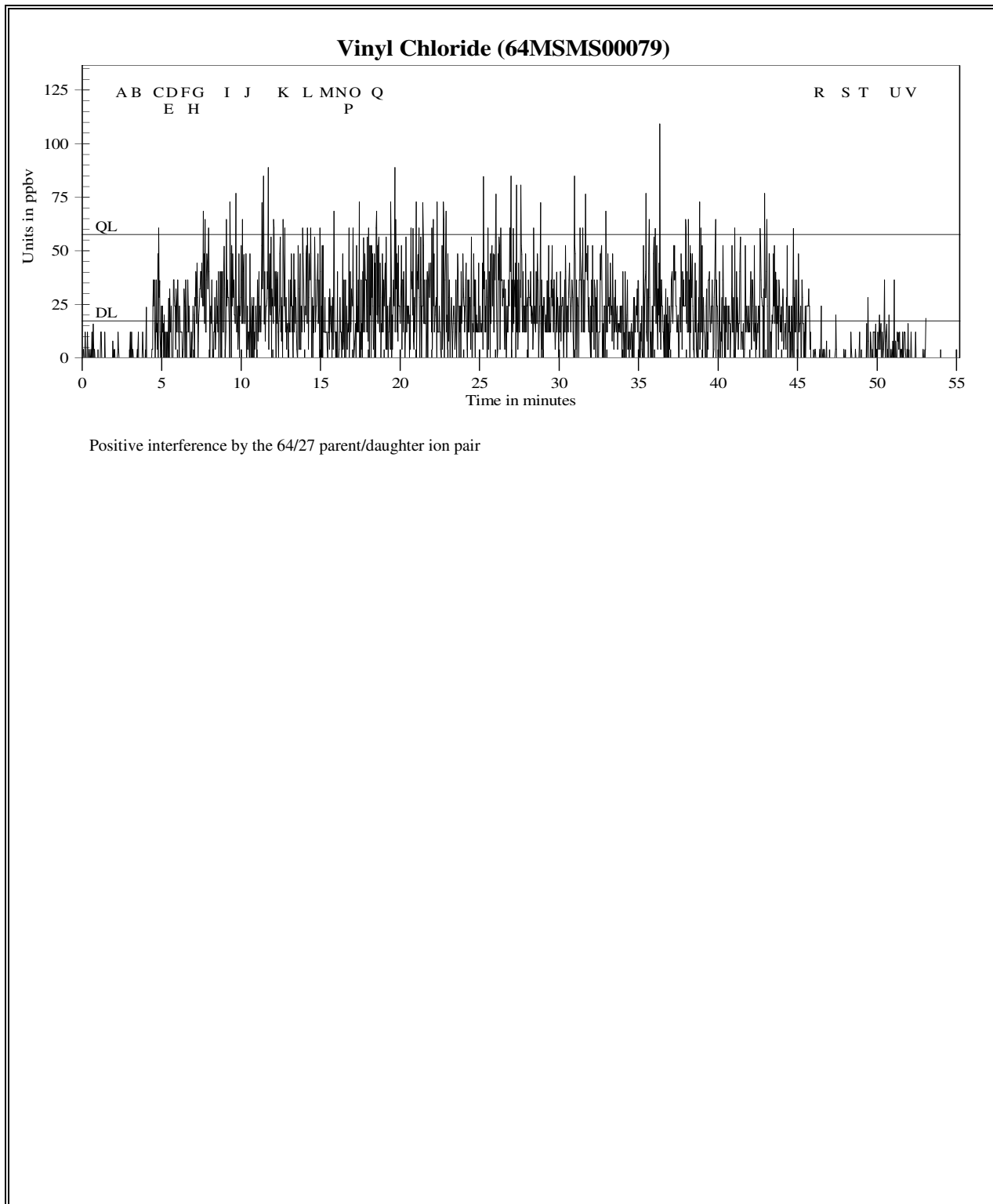


Figure 17e Unit 23 Investigation One in ppbv for Vinyl Chloride

Figure 17f

TAGA Target Compound Summary in ppbv for Unit 23 Investigation One File: 64MSMS00079 Acquired on 04 May 2016 at 12:29:21								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.038	0.063	0.080	0.60	0.20	0.15	17
Quantitation Limits - QL:		0.13	0.21	0.27	2.0	0.65	0.50	58
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
D - E	Laundry room storage closet	DL=0.038	DL=0.063	DL=0.080	3.3	0.87	0.43J	DL=17.
F - G	Laundry room	DL=0.038	DL=0.063	DL=0.080	6.0	1.3	0.73	DL=17.
H - I	Kitchen cabinets and sink	DL=0.038	DL=0.063	DL=0.080	11	2.7	1.4	27.JI
J - K	Space under the kitchen sink	DL=0.038	DL=0.063	DL=0.080	8.8	2.3	1.3	25.JI
L - M	Wood filler can	DL=0.038	DL=0.063	DL=0.080	10	2.4	1.4	30.JI
N - O	Cabinet one under the kitchen sink	DL=0.038	DL=0.063	DL=0.080	6.3	1.7	0.83	DL=17.
P - Q	Cabinet two under the kitchen sink	0.038J	DL=0.063	DL=0.080	9.9	2.5	1.5	25.JI
S - T	Post-exit ambient	DL=0.038	DL=0.063	DL=0.080	DL=0.60	DL=0.20	DL=0.15	DL=17.
U - V	30 mL/min spike	4.9	4.9	4.4	5.5	5.4	7.7	DL=17.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

I = Positive interference by the 64/27 parent/daughter ion pair

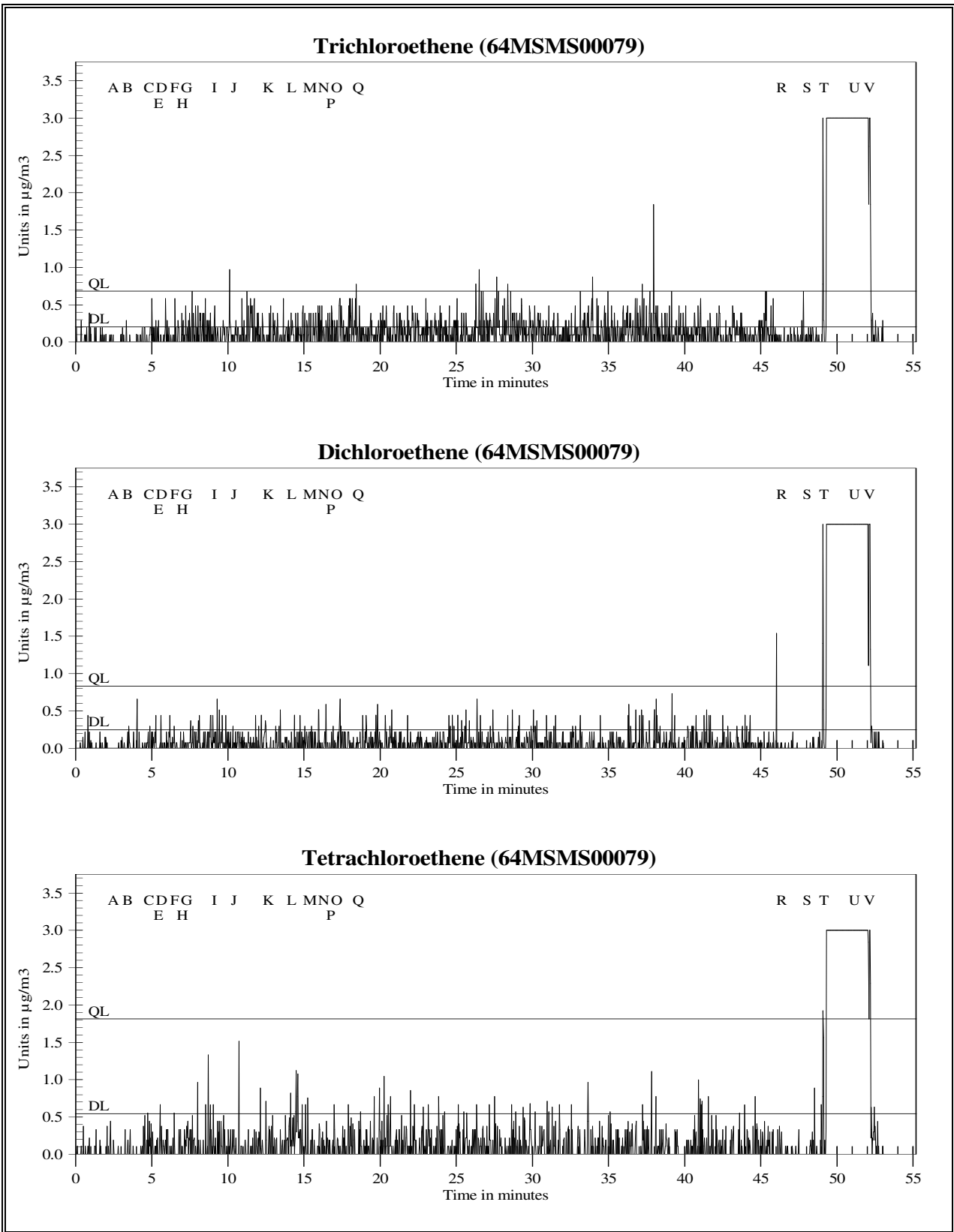


Figure 17g Unit 23 Investigation One in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

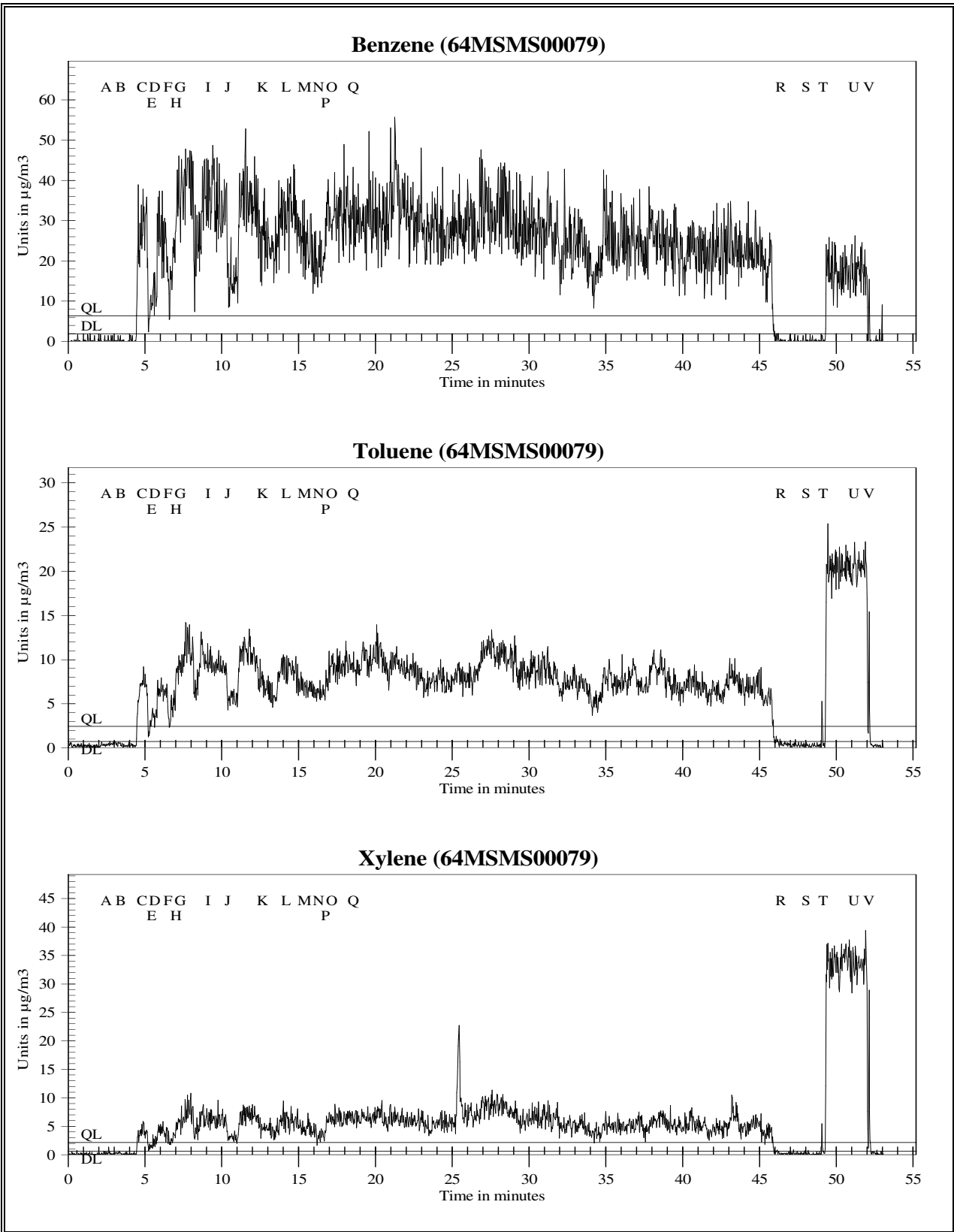


Figure 17h Unit 23 Investigation One in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

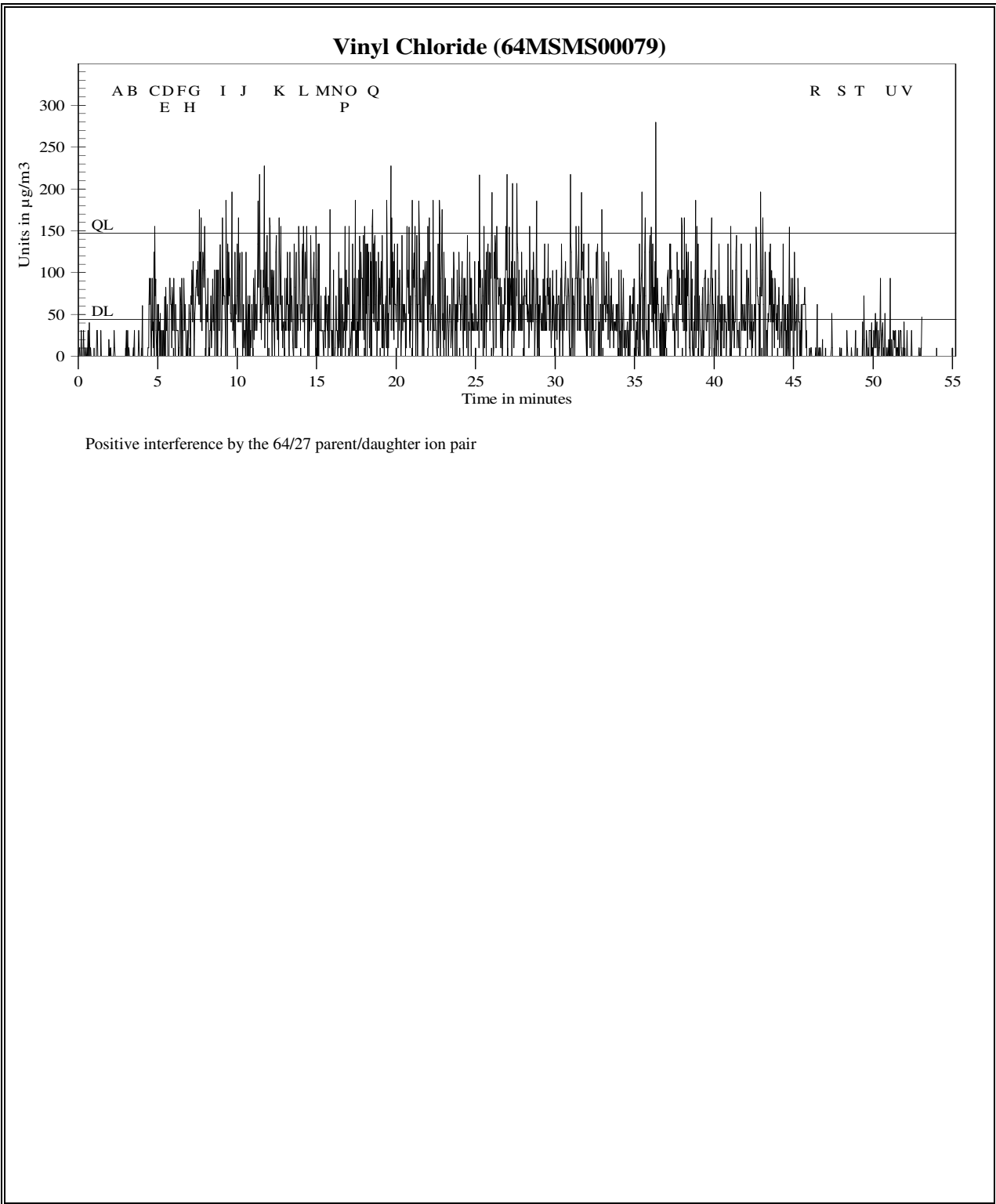


Figure 17i Unit 23 Investigation One in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

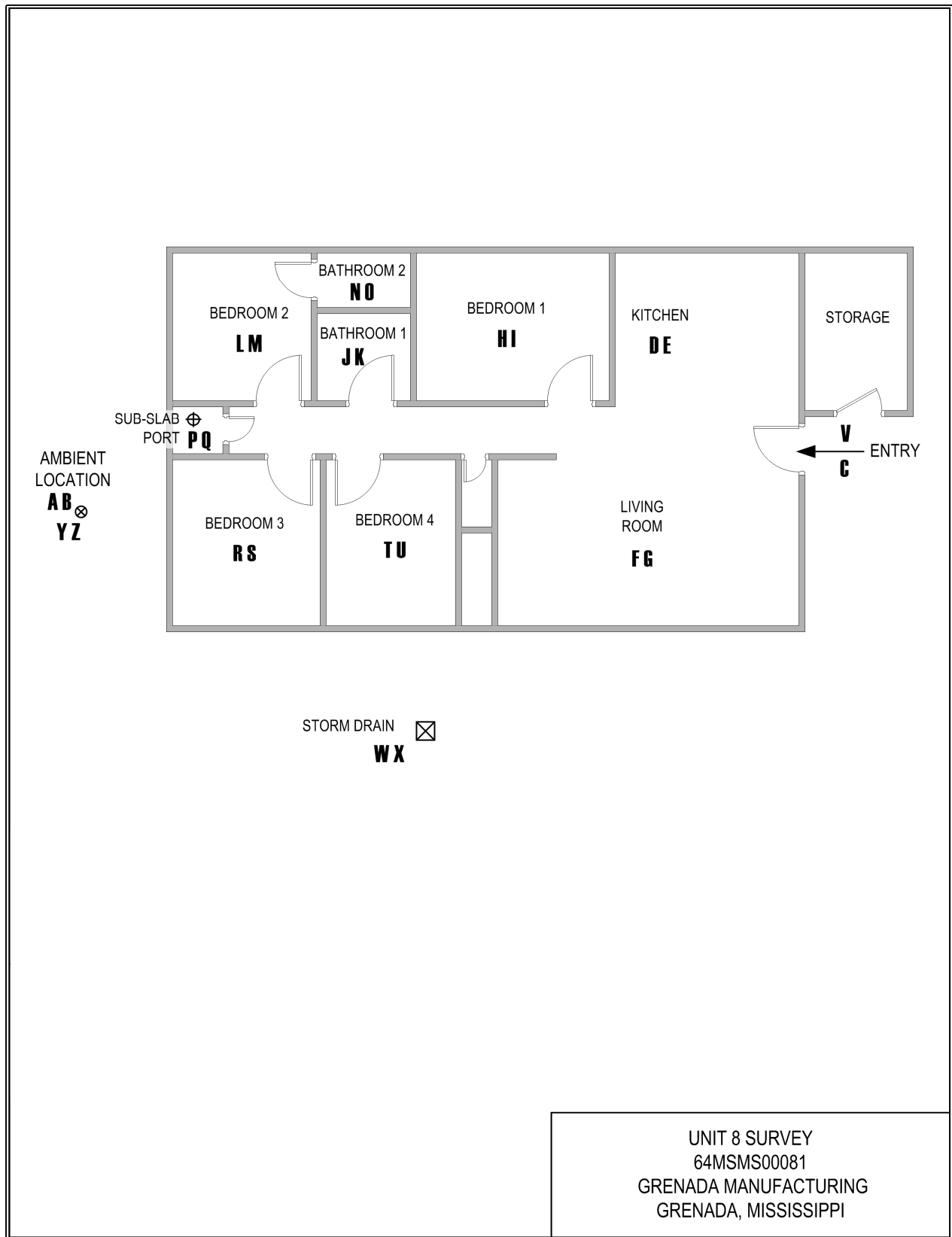
Figure 17j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 23 Investigation One File: 64MSMS00079 Acquired on 04 May 2016 at 12:29:21								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.20	0.25	0.54	1.9	0.74	0.66	44
Quantitation Limits - QL:		0.68	0.83	1.8	6.4	2.5	2.2	150
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
D - E	Laundry room storage closet	DL=0.20	DL=0.25	DL=0.54	10	3.3	1.9J	DL=44.
F - G	Laundry room	DL=0.20	DL=0.25	DL=0.54	19	5.0	3.2	DL=44.
H - I	Kitchen cabinets and sink	DL=0.20	DL=0.25	DL=0.54	34	10	6.3	68.JI
J - K	Space under the kitchen sink	DL=0.20	DL=0.25	DL=0.54	28	8.8	5.5	65.JI
L - M	Wood filler can	DL=0.20	DL=0.25	DL=0.54	33	8.9	6.1	77.JI
N - O	Cabinet one under the kitchen sink	DL=0.20	DL=0.25	DL=0.54	20	6.3	3.6	DL=44.
P - Q	Cabinet two under the kitchen sink	0.21J	DL=0.25	DL=0.54	32	9.3	6.4	63.JI
S - T	Post-exit ambient	DL=0.20	DL=0.25	DL=0.54	DL=1.9	DL=0.74	DL=0.66	DL=44.
U - V	30 mL/min spike	26	19	30	18	20	33	DL=44.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

I = Positive interference by the 64/27 parent/daughter ion pair



UNIT 8 SURVEY
 64MSMS00081
 GRENADA MANUFACTURING
 GRENADA, MISSISSIPPI

Figure 98a Unit 8 Survey Floor Plan, 64MSMS00081

Figure 18b

TAGA File Event Summary			
File: 64MSMS00081 Acquired on 04 May 2016 at 15:04:56			
Title: Unit 8 Survey			
Flag	Offset Time	Offset Sequence	Description
A	3.1	110	Start of the pre-entry ambient
B	4.1	146	End of the pre-entry ambient
C	6.0	216	Entering the unit
D	6.8	243	Start of the kitchen
E	7.8	280	End of the kitchen
F	8.1	291	Start of the living room
G	9.2	330	End of the living room
H	9.4	337	Start of bedroom one
I	10.4	373	End of bedroom one
J	10.8	386	Start of bathroom one
K	11.9	427	End of bathroom one
L	12.4	443	Start of bedroom two
M	13.4	479	End of bedroom two
N	13.6	488	Start of bathroom two
O	14.7	524	End of bathroom two
P	15.0	536	Start of the sub-slab port
Q	16.1	576	End of the sub-slab port
R	16.4	588	Start of bedroom three
S	17.5	625	End of bedroom three
T	17.8	637	Start of bedroom four
U	18.9	675	End of bedroom four
V	19.7	704	Exiting the unit
W	22.3	796	Start of the storm drain
X	23.3	832	End of the storm drain
Y	25.0	895	Start of the post-exit ambient
Z	26.1	932	End of the post-exit ambient
A1	29.8	1064	Start of 30 mL/min spike
B1	30.8	1101	End of 30 mL/min spike

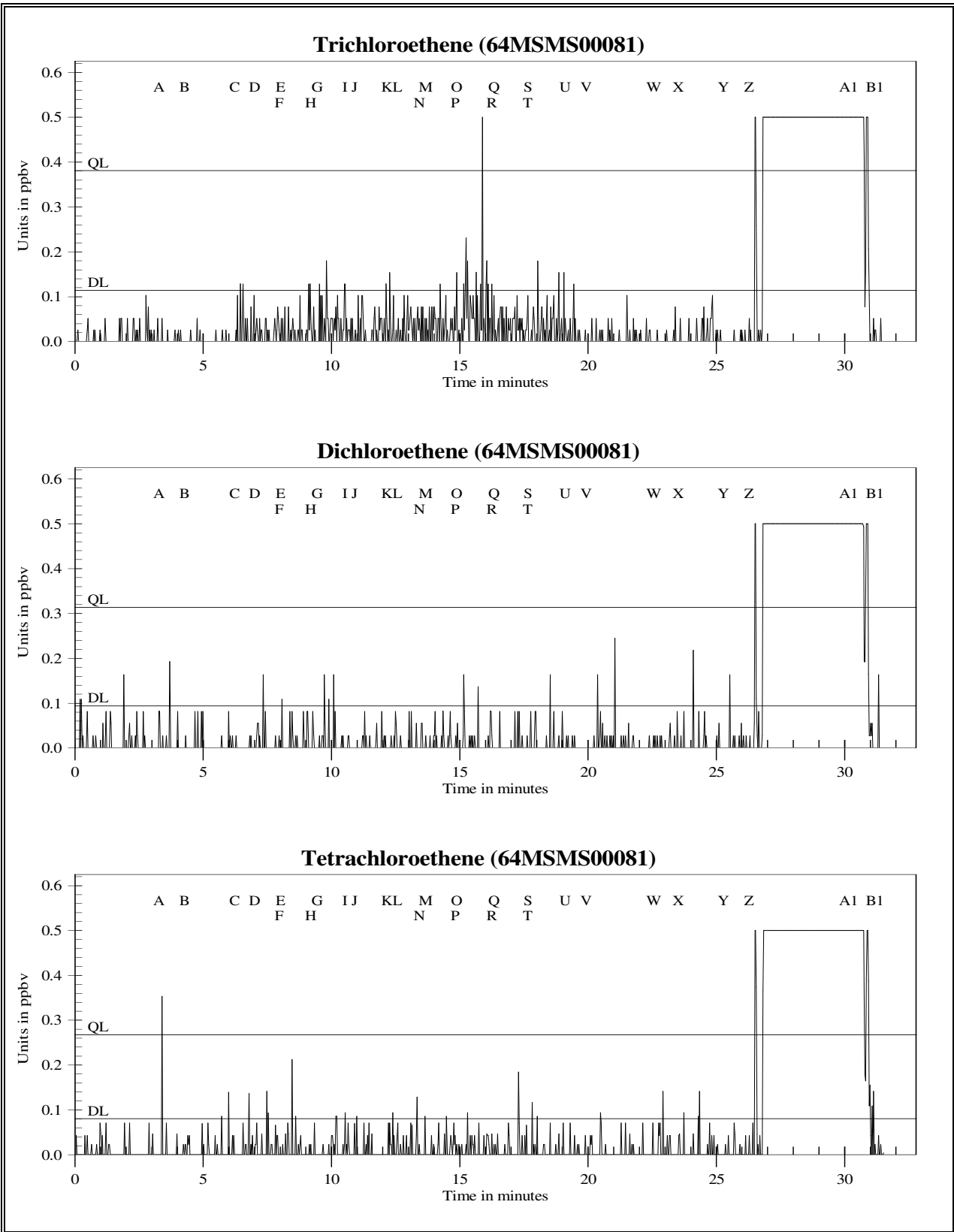


Figure 18c Unit 8 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

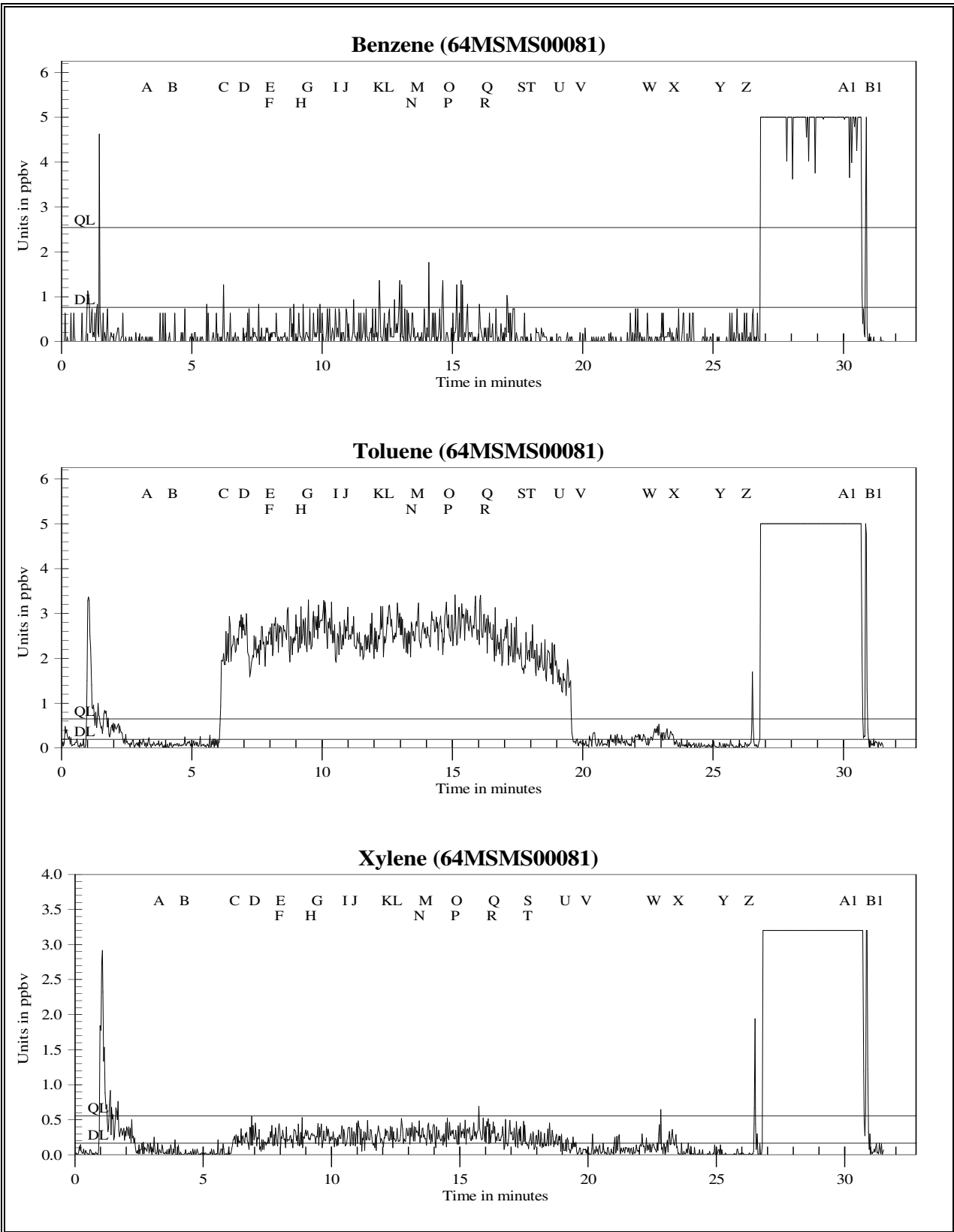


Figure 18d Unit 8 Survey in ppbv for Benzene, Toluene, and Xylenes

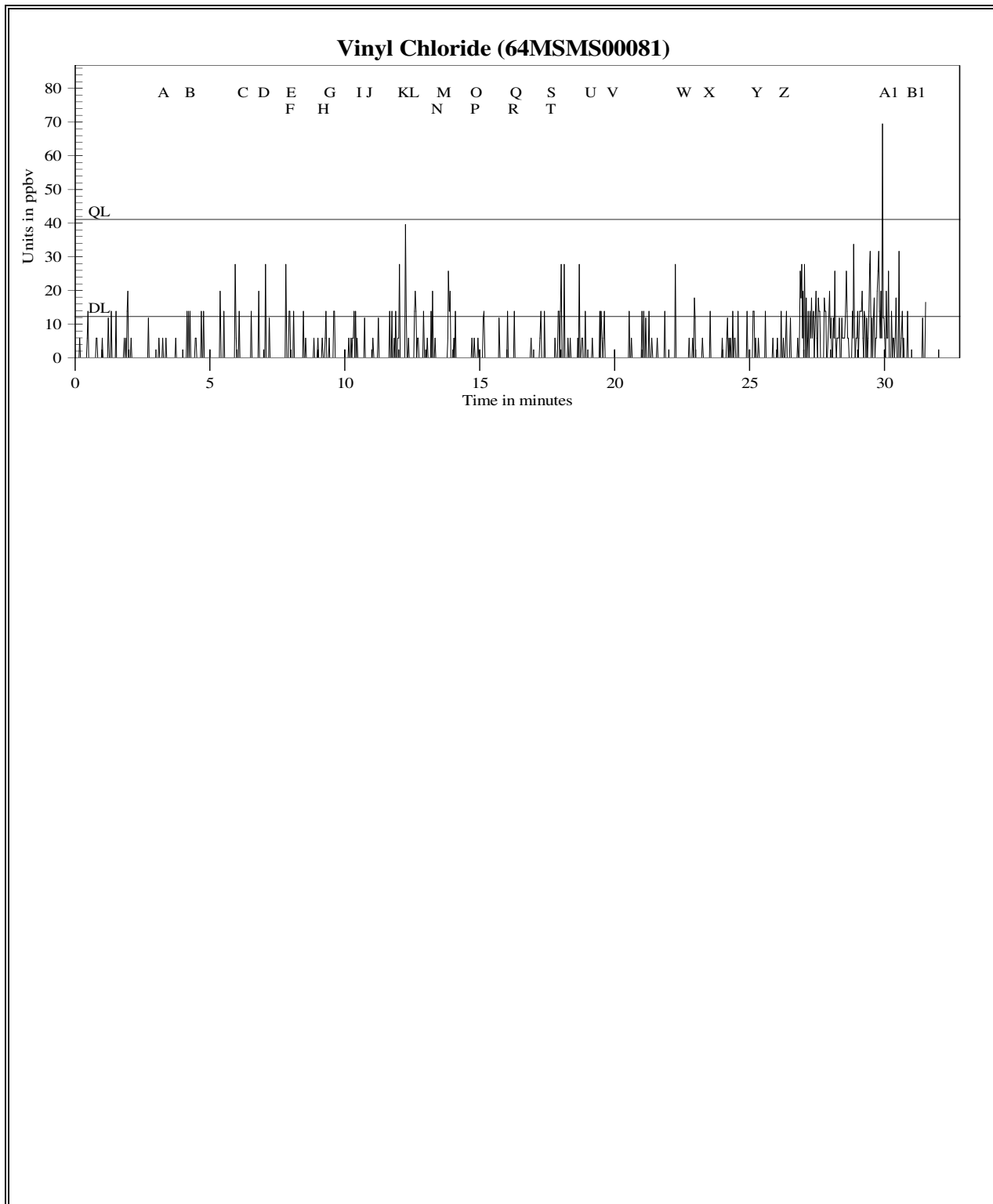


Figure 18e Unit 8 Survey in ppbv for Vinyl Chloride

Figure 18f

TAGA Target Compound Summary in ppbv for Unit 8 Summary File: 64MSMS00081 Acquired on 04 May 2016 at 15:04:56								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.11	0.094	0.080	0.76	0.19	0.17	12
Quantitation Limits - QL:		0.38	0.31	0.27	2.5	0.65	0.56	41
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	DL=0.19	DL=0.17	DL=12.
D - E	Kitchen	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.3	0.23J	DL=12.
F - G	Living room	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.5	0.25J	DL=12.
H - I	Bedroom one	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.7	0.26J	DL=12.
J - K	Bathroom one	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.5	0.26J	DL=12.
L - M	Bedroom two	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.6	0.28J	DL=12.
N - O	Bathroom two	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.6	0.28J	DL=12.
P - Q	Sub-slab port	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.8	0.33J	DL=12.
R - S	Bedroom three	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.4	0.26J	DL=12.
T - U	Bedroom four	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.0	0.21J	DL=12.
W - X	Storm drain	DL=0.11	DL=0.094	DL=0.080	DL=0.76	0.27J	DL=0.17	DL=12.
Y - Z	Post-exit ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	DL=0.19	DL=0.17	DL=12.
A1 - B1	30 mL/min spike	5.9	6.3	4.9	5.8	5.9	7.9	DL=12.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

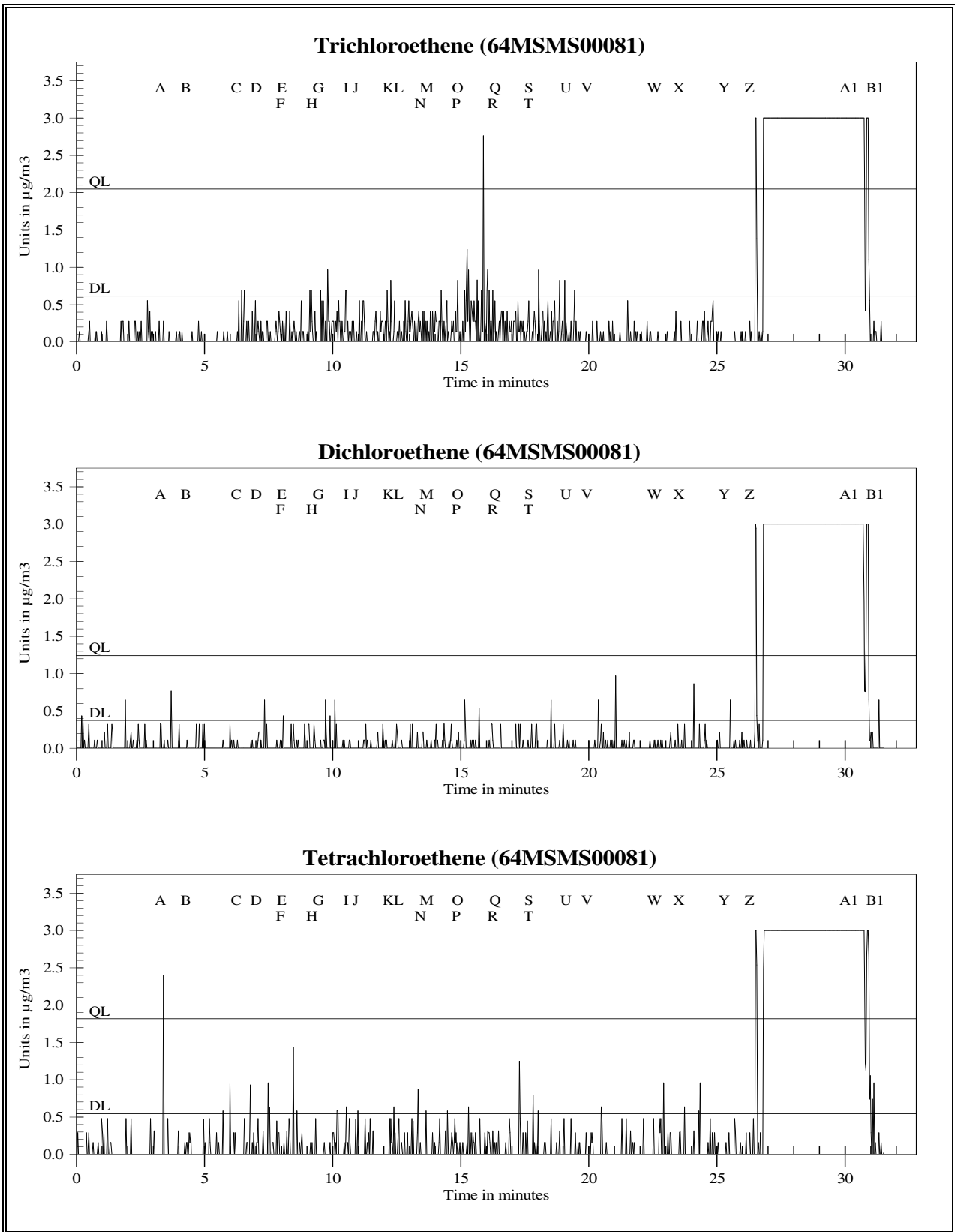


Figure 18g Unit 8 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

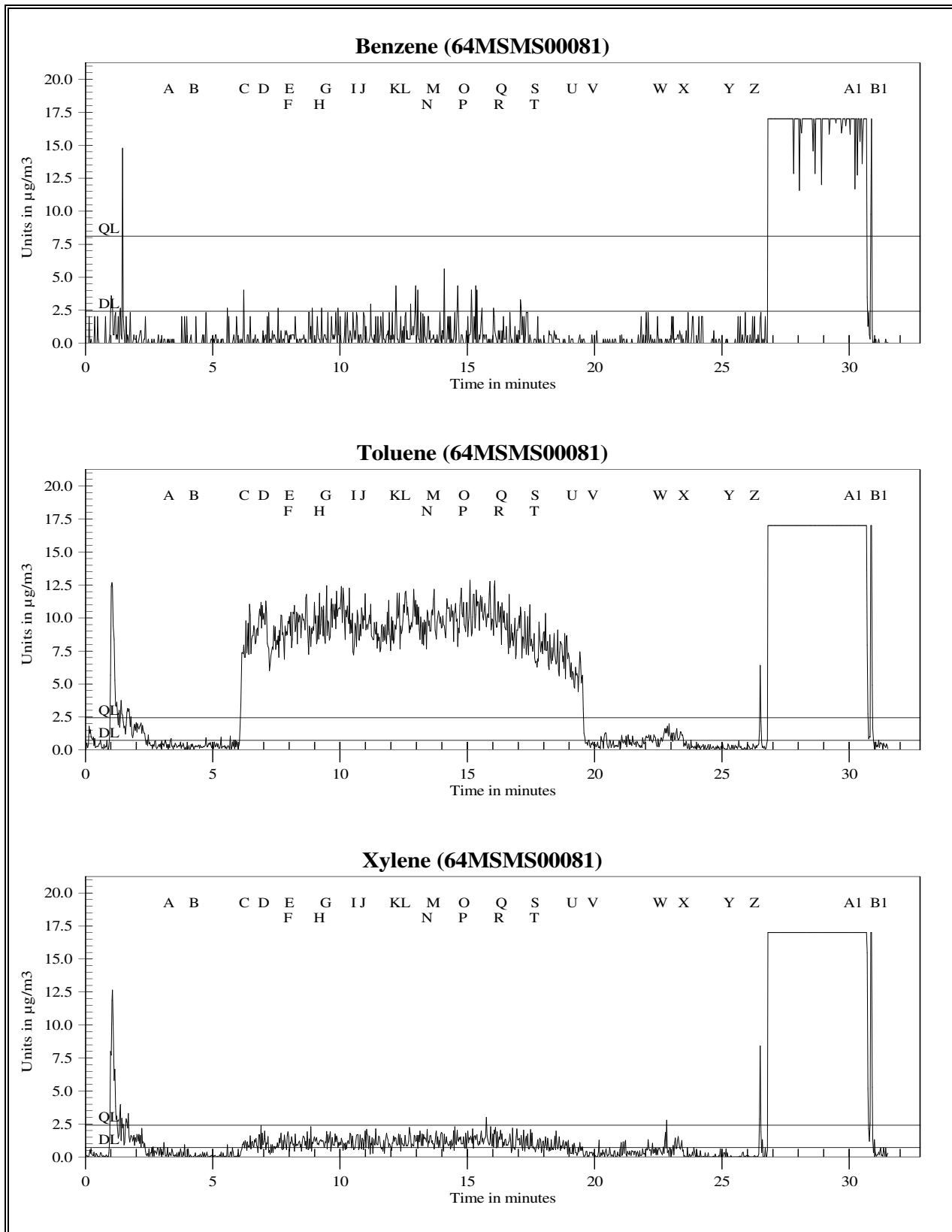


Figure 18h Unit 8 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

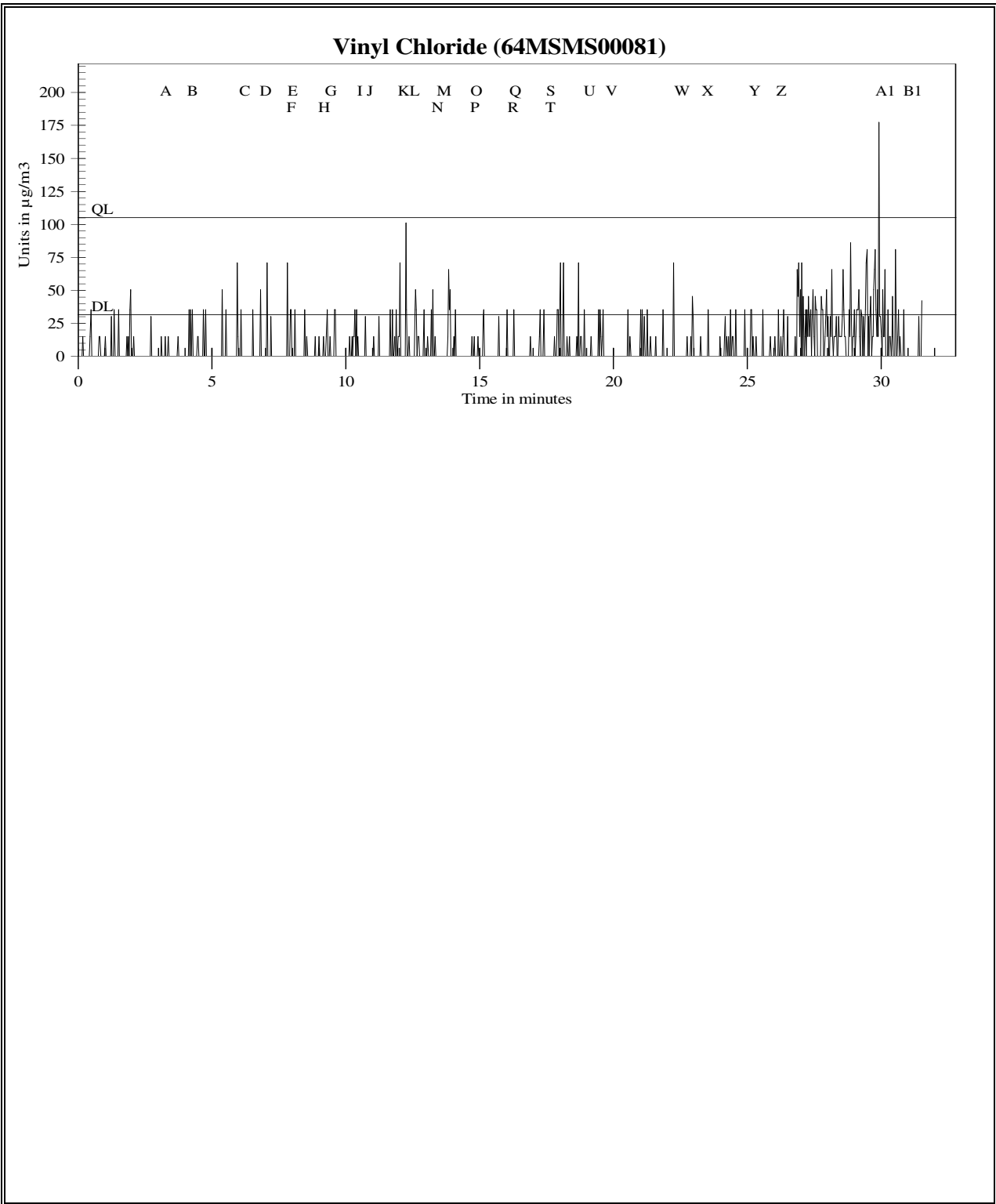


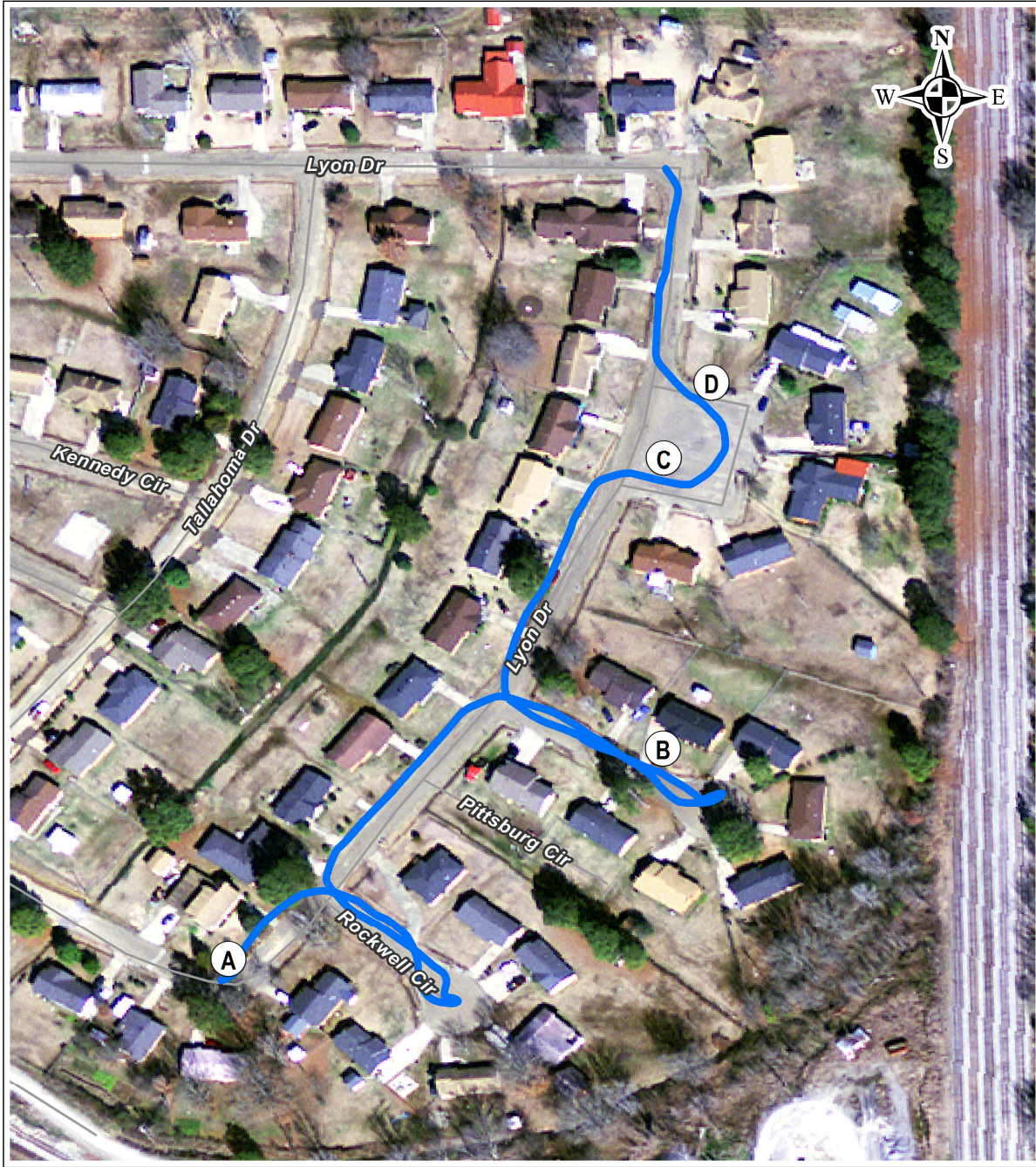
Figure 18i Unit 8 Survey in µg/m³ for Vinyl Chloride

Figure 18j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 8 Survey File: 64MSMS00081 Acquired on 04 May 2016 at 15:04:56								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.61	0.37	0.54	2.4	0.73	0.73	32
Quantitation Limits - QL:		2.0	1.2	1.8	8.1	2.4	2.4	110
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	DL=0.73	DL=0.73	DL=32.
D - E	Kitchen	DL=0.61	DL=0.37	DL=0.54	DL=2.4	8.8	0.99J	DL=32.
F - G	Living room	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.5	1.1J	DL=32.
H - I	Bedroom one	DL=0.61	DL=0.37	DL=0.54	DL=2.4	10	1.1J	DL=32.
J - K	Bathroom one	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.2	1.1J	DL=32.
L - M	Bedroom two	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.9	1.2J	DL=32.
N - O	Bathroom two	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.9	1.2J	DL=32.
P - Q	Sub-slab port	DL=0.61	DL=0.37	DL=0.54	DL=2.4	11	1.4J	DL=32.
R - S	Bedroom three	DL=0.61	DL=0.37	DL=0.54	DL=2.4	8.9	1.1J	DL=32.
T - U	Bedroom four	DL=0.61	DL=0.37	DL=0.54	DL=2.4	7.6	0.93J	DL=32.
W - X	Storm drain	DL=0.61	DL=0.37	DL=0.54	DL=2.4	1.0J	DL=0.73	DL=32.
Y - Z	Post-exit ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	DL=0.73	DL=0.73	DL=32.
A1 - B1	30 mL/min spike	32	25	33	19	22	34	DL=32.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit



Legend

— TAGA Path

MOBILE MONITORING TWO
64MSMS00084
GRENADA MANUFACTURING
GRENADA, MISSISSIPPI

Figure 109a Mobile Monitoring Two Path, 64MSMS00084

Figure 19b

TAGA File Event Summary			
File: 64MSMS00084 Acquired on 04 May 2016 at 15:55:56			
Title: Mobile Monitoring Two			
Flag	Time	Sequence	Description
A	0.8	30	Start of the mobile monitoring
B	15.1	539	End of the mobile monitoring
C	18.3	654	Start of 30mL/min spike
D	19.3	690	End of 30mL/min spike

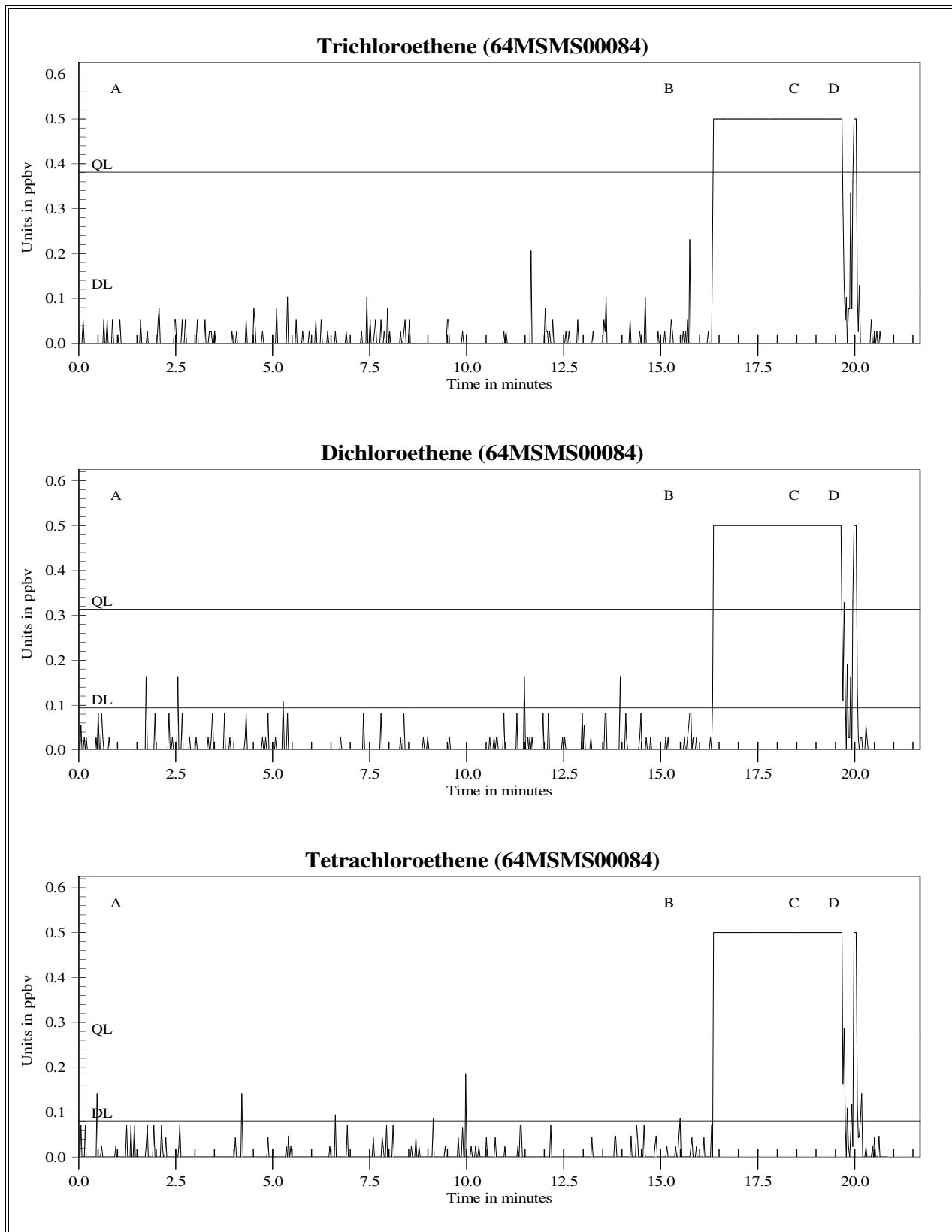


Figure 19c Mobile Monitoring Two in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

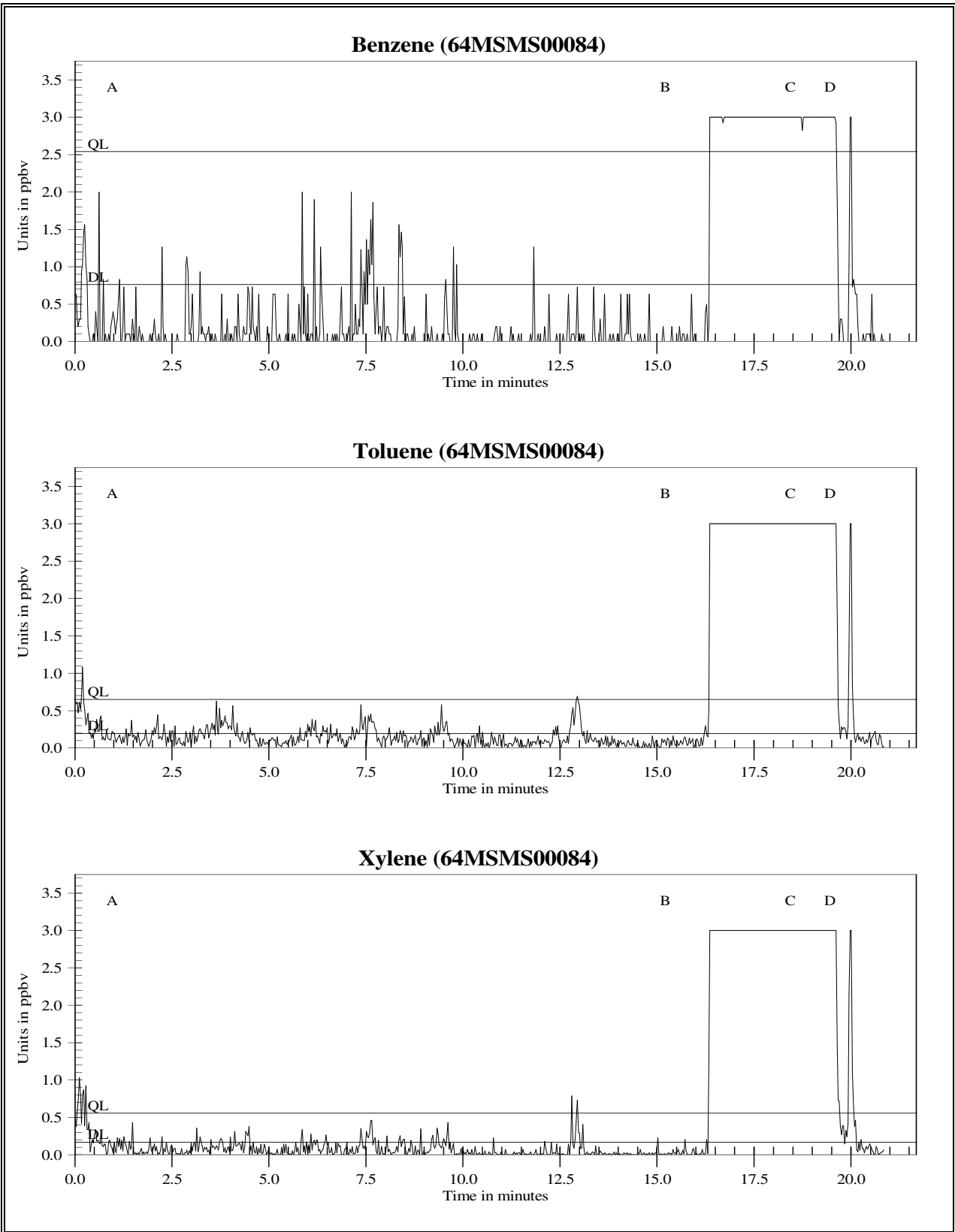


Figure 19d Mobile Monitoring Two in ppbv for Benzene, Toluene, and Xylenes

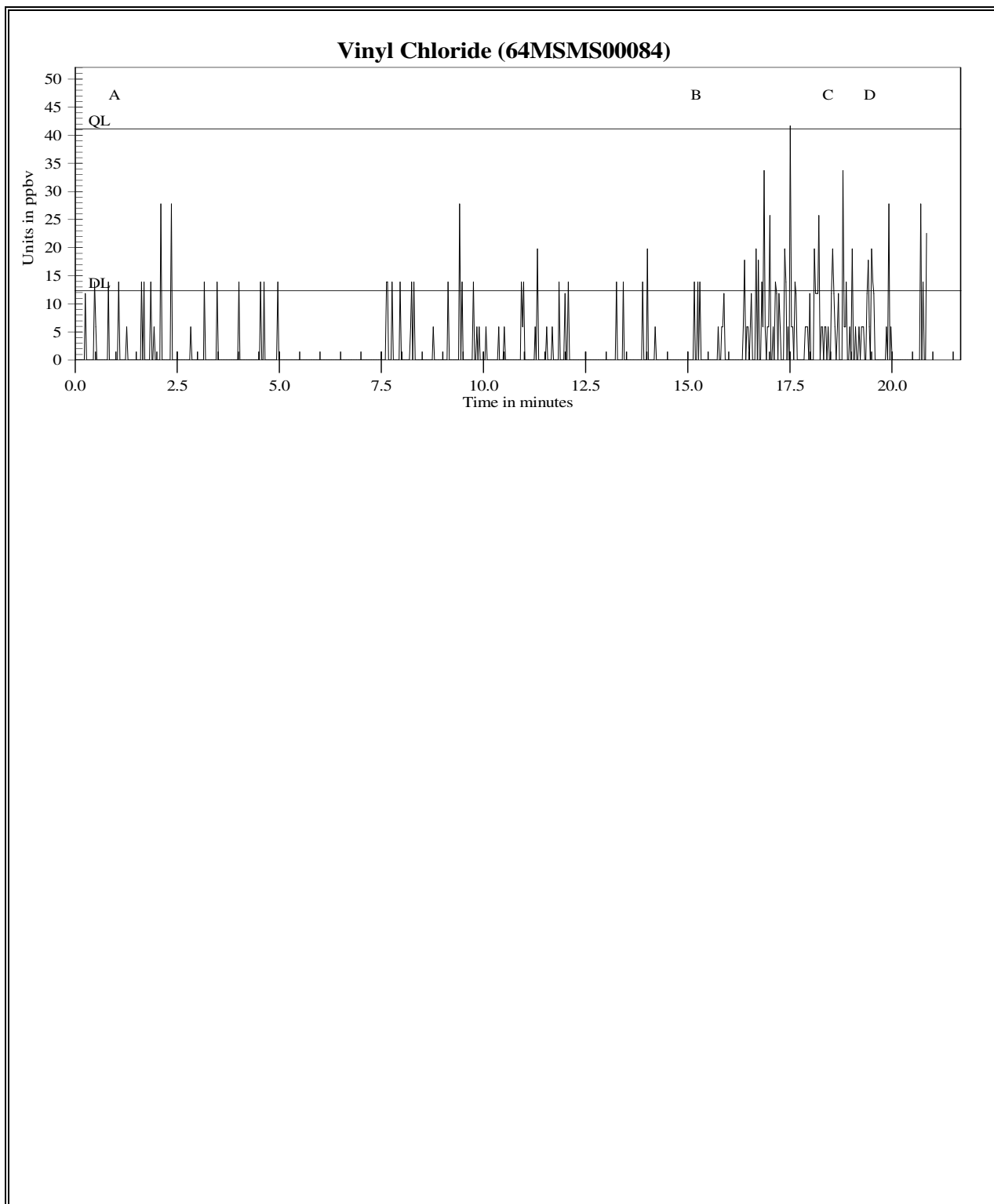


Figure 19e Mobile Monitoring Two in ppbv for Vinyl Chloride

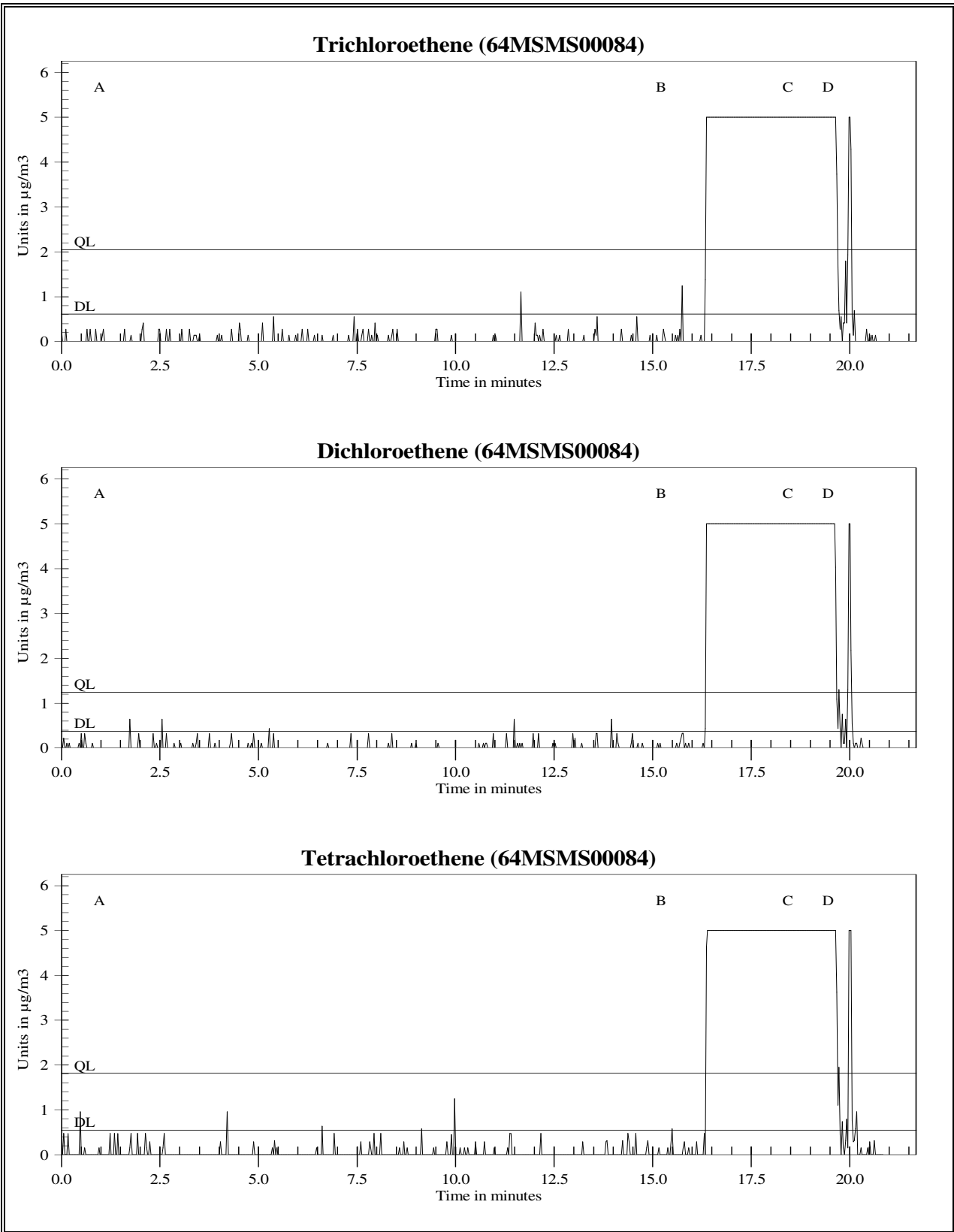


Figure 19f Mobile Monitoring Two in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

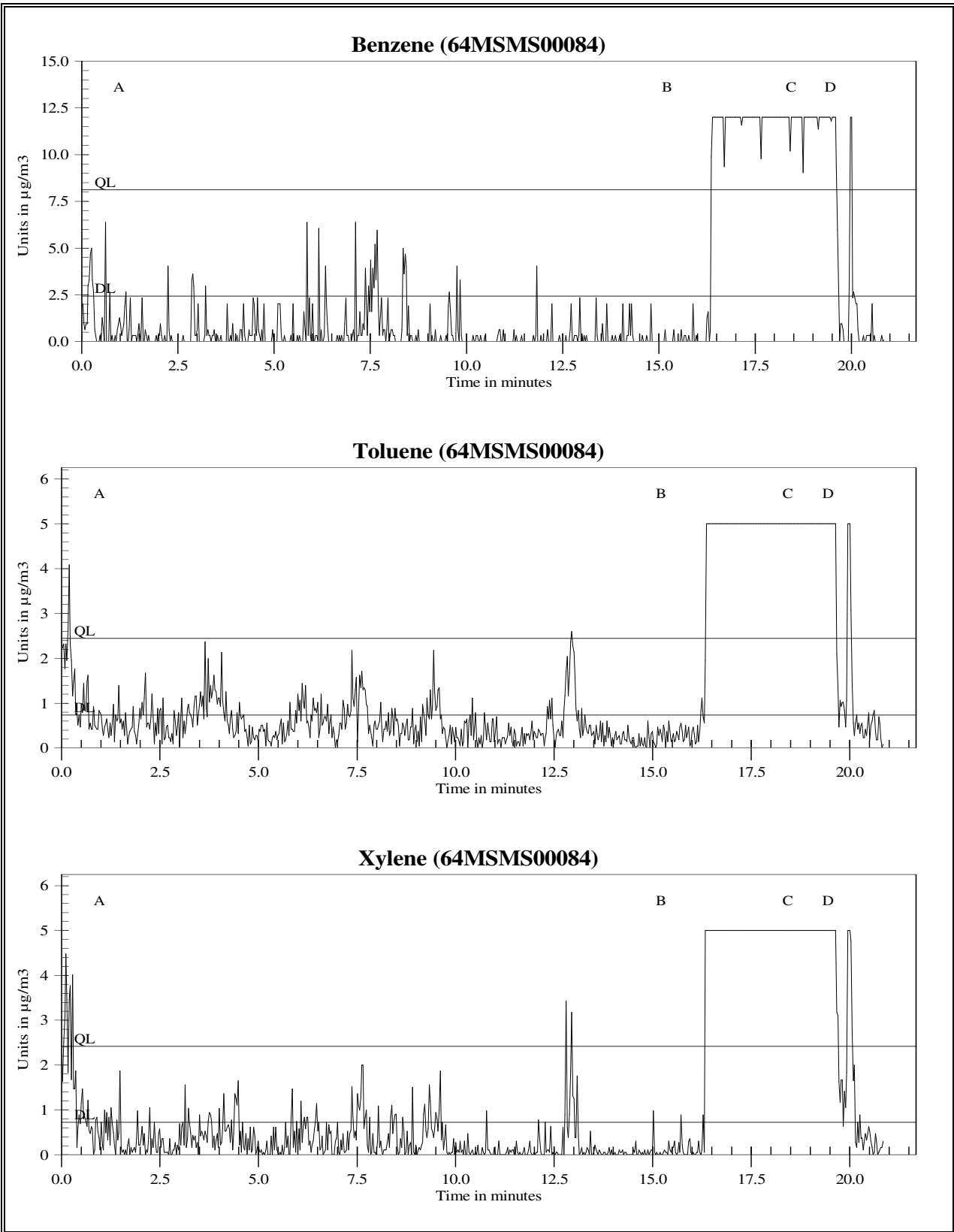


Figure 19g Mobile Monitoring Two in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

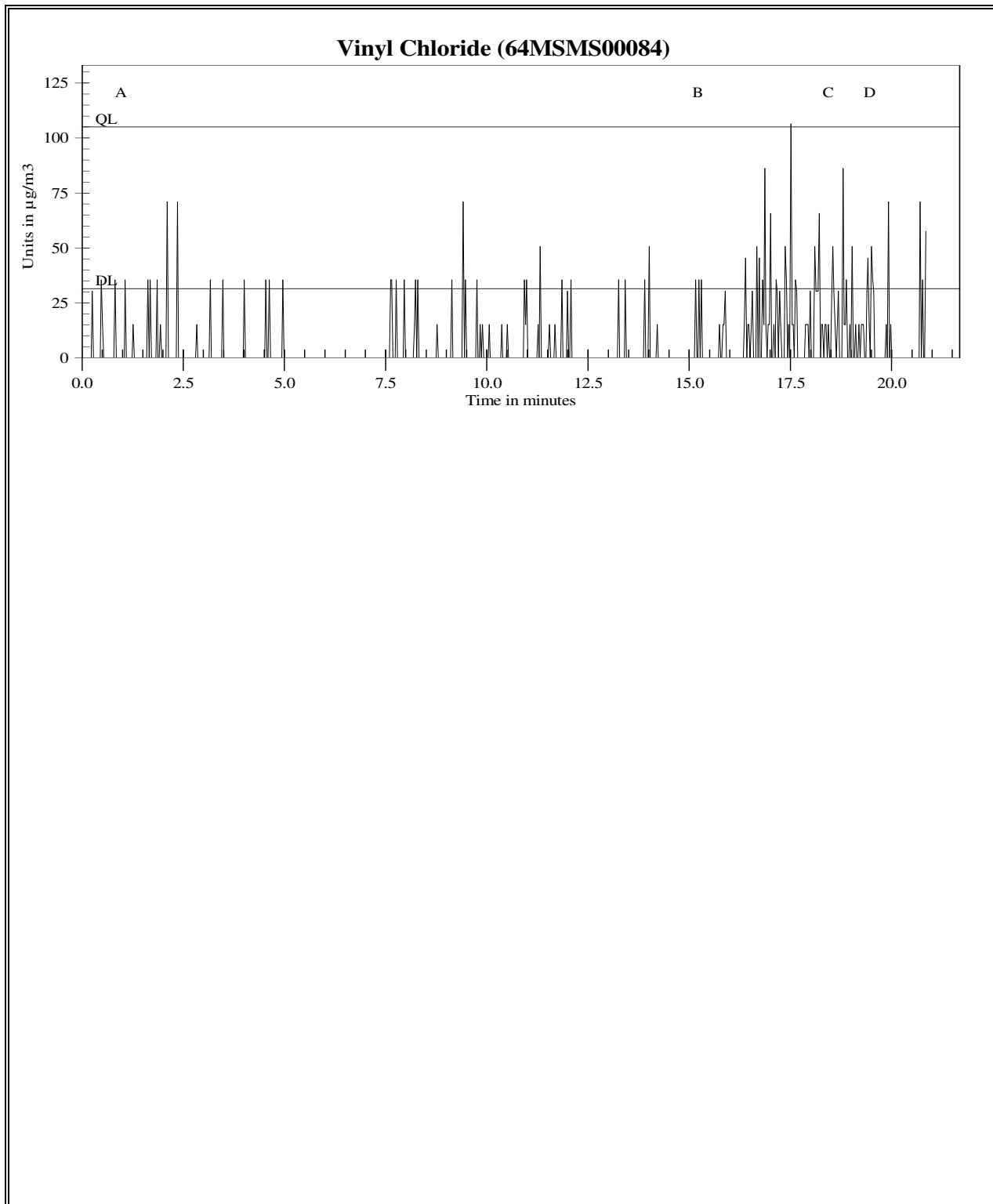
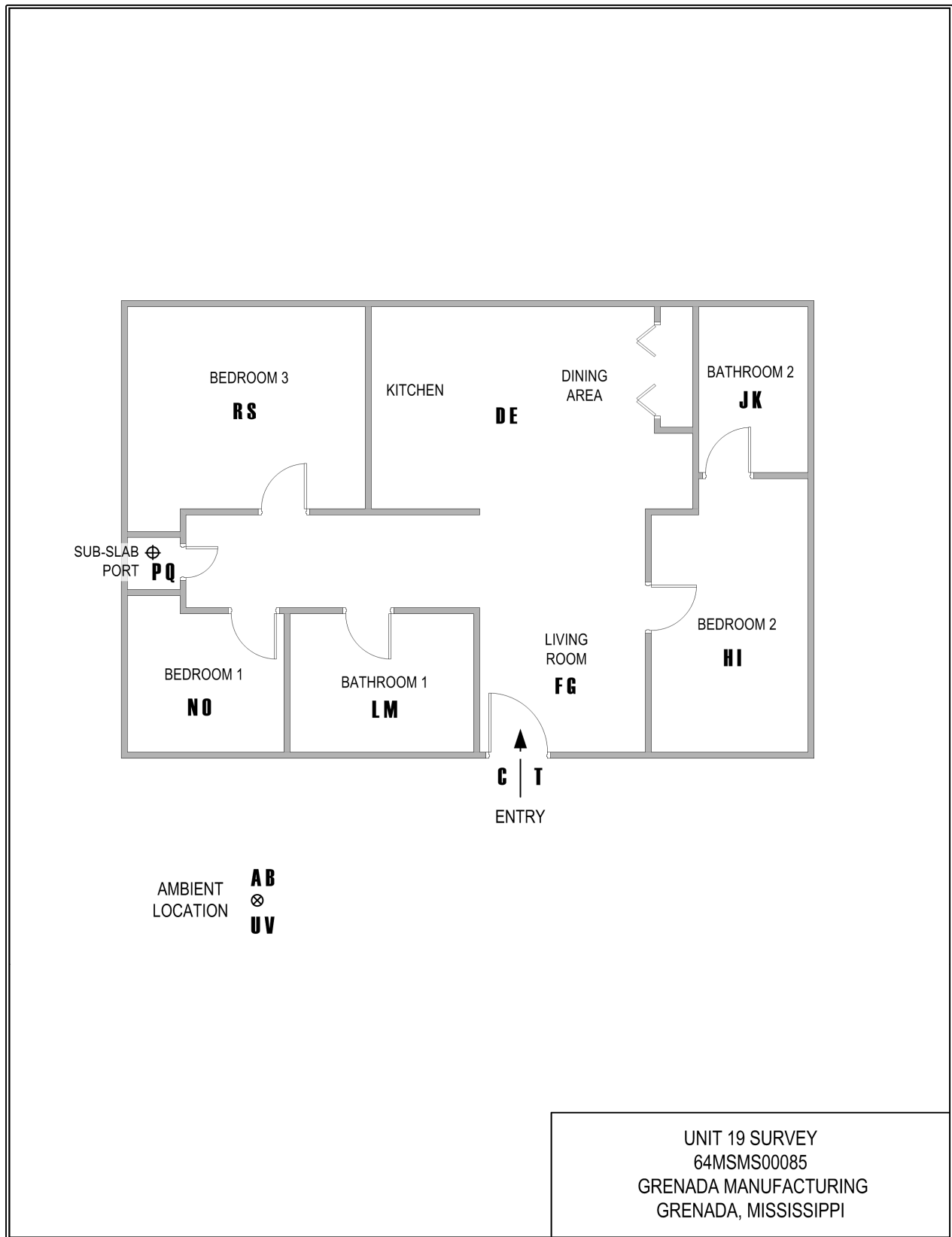


Figure 19h Mobile Monitoring Two in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride



UNIT 19 SURVEY
 64MSMS00085
 GRENADA MANUFACTURING
 GRENADA, MISSISSIPPI

Figure 20a Unit 19 Survey Floor Plan, 64MSMS00085

Figure 20b

TAGA File Event Summary			
File: 64MSMS00085 Acquired on 04 May 2016 at 16:25:45			
Title: Unit 19 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.8	101	Start of the pre-entry ambient
B	3.8	136	End of the pre-entry ambient
C	9.1	324	Entering the unit
D	10.1	363	Start of the kitchen / dining area
E	11.2	399	End of the kitchen / dining area
F	11.4	408	Start of the living room
G	12.4	444	End of the living room
H	12.7	454	Start of bedroom two
I	13.7	490	End of bedroom two
J	13.9	498	Start of bathroom two
K	15.0	535	End of bathroom two
L	15.6	557	Start of bathroom one
M	16.6	593	End of bathroom one
N	16.9	605	Start of bedroom one
O	18.0	644	End of bedroom one
P	18.4	657	Start of the sub-slab port
Q	19.4	693	End of the sub-slab port
R	19.7	704	Start of bedroom three
S	20.7	741	End of bedroom three
T	21.4	763	Exiting the unit
U	22.4	800	Start of the post-exit ambient
V	23.4	837	End of the post-exit ambient
W	25.8	923	Start of 30 mL/min spike
X	26.9	960	End of 30 mL/min spike

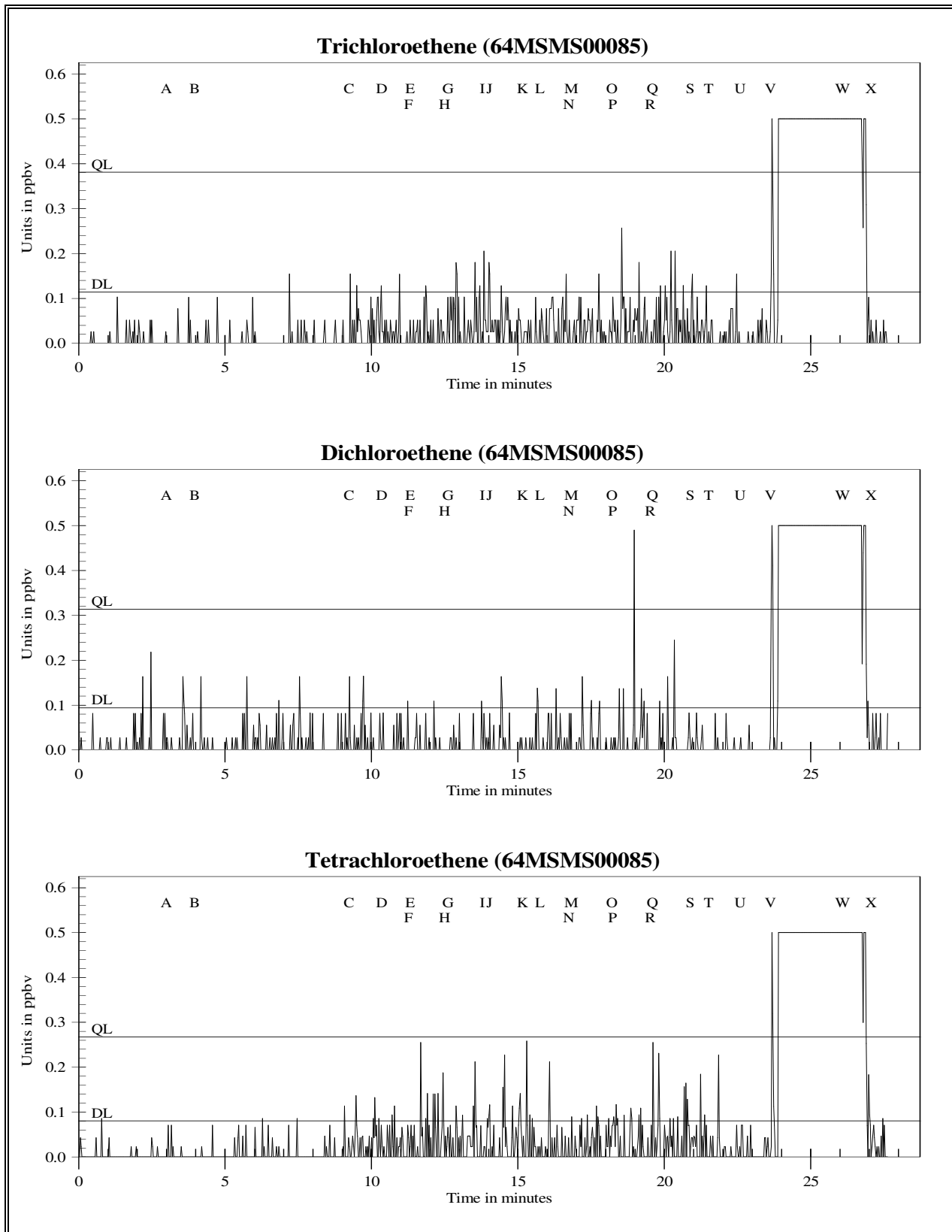


Figure 20c Unit 19 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

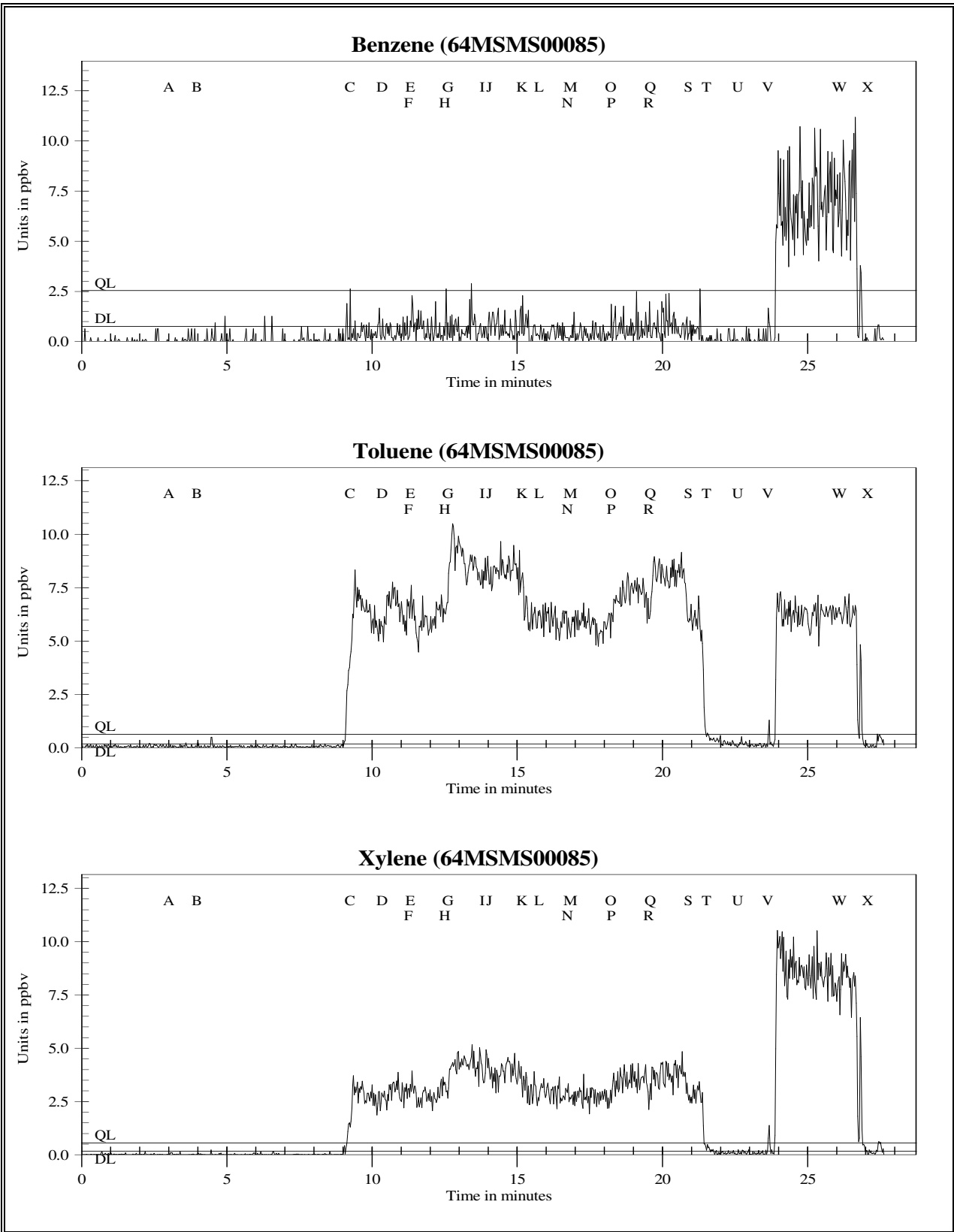


Figure 20d Unit 19 Survey in ppbv for Benzene, Toluene, and Xylenes

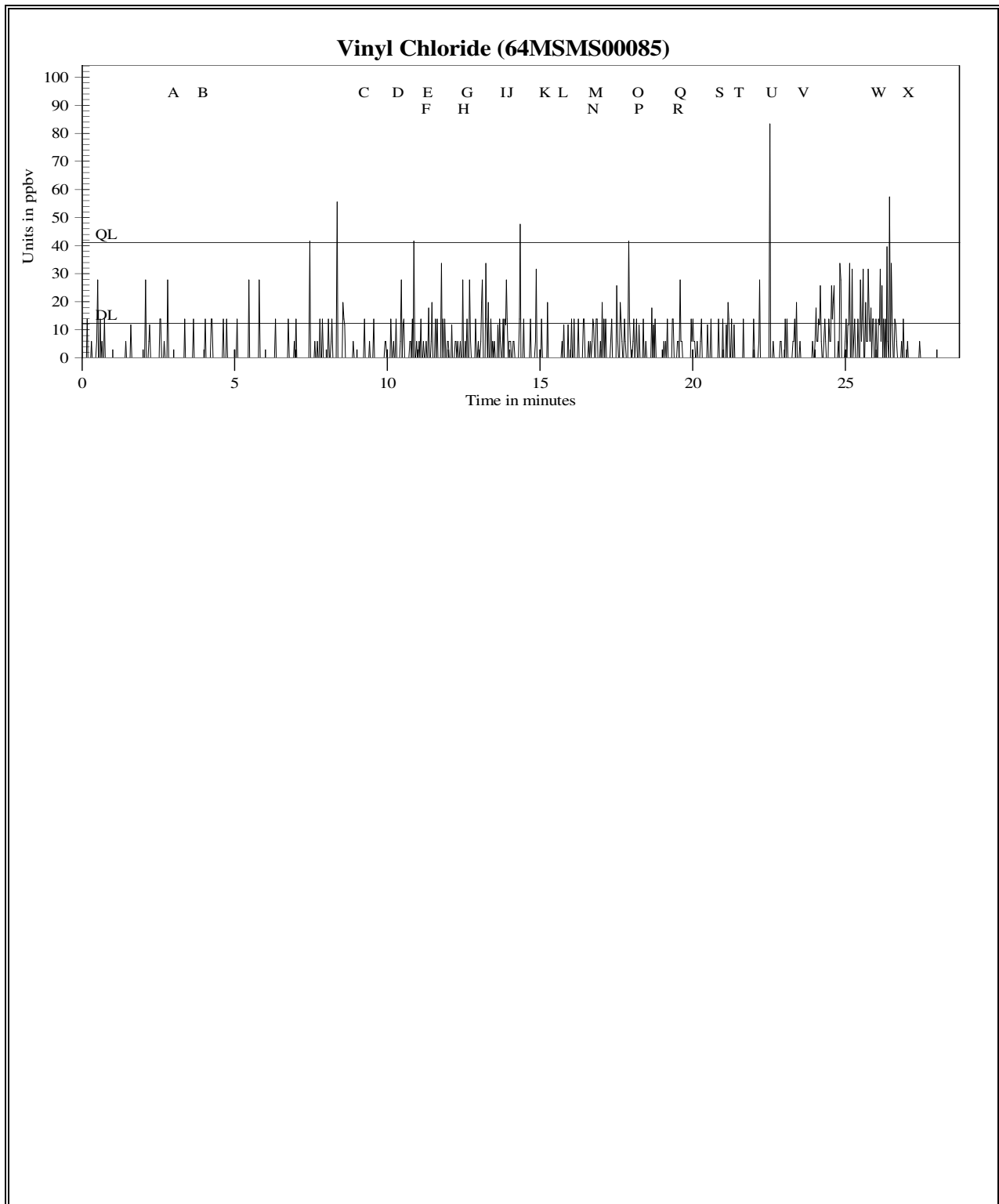


Figure 20e Unit 19 Survey in ppbv for Vinyl Chloride

Figure 20f

TAGA Target Compound Summary in ppbv for Unit 19 Survey File: 64MSMS00085 Acquired on 04 May 2016 at 16:25:45								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.11	0.094	0.080	0.76	0.19	0.17	12
Quantitation Limits - QL:		0.38	0.31	0.27	2.5	0.65	0.56	41
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	DL=0.19	DL=0.17	DL=12.
D - E	Kitchen / dining area	DL=0.11	DL=0.094	DL=0.080	DL=0.76	6.3	2.8	DL=12.
F - G	Living room	DL=0.11	DL=0.094	DL=0.080	DL=0.76	6.0	2.8	DL=12.
H - I	Bedroom two	DL=0.11	DL=0.094	DL=0.080	DL=0.76	8.9	4.3	DL=12.
J - K	Bathroom two	DL=0.11	DL=0.094	DL=0.080	DL=0.76	8.3	4.0	DL=12.
L - M	Bathroom one	DL=0.11	DL=0.094	DL=0.080	DL=0.76	6.0	2.9	DL=12.
N - O	Bedroom one	DL=0.11	DL=0.094	DL=0.080	DL=0.76	5.8	2.8	DL=12.
P - Q	Sub-slab port	DL=0.11	DL=0.094	DL=0.080	DL=0.76	7.3	3.5	DL=12.
R - S	Bedroom three	DL=0.11	DL=0.094	DL=0.080	0.84J	8.2	3.8	DL=12.
U - V	Post-exit ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	DL=0.19	DL=0.17	DL=12.
W - X	30 mL/min spike	5.7	5.9	4.8	6.3	5.6	7.2	DL=12.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

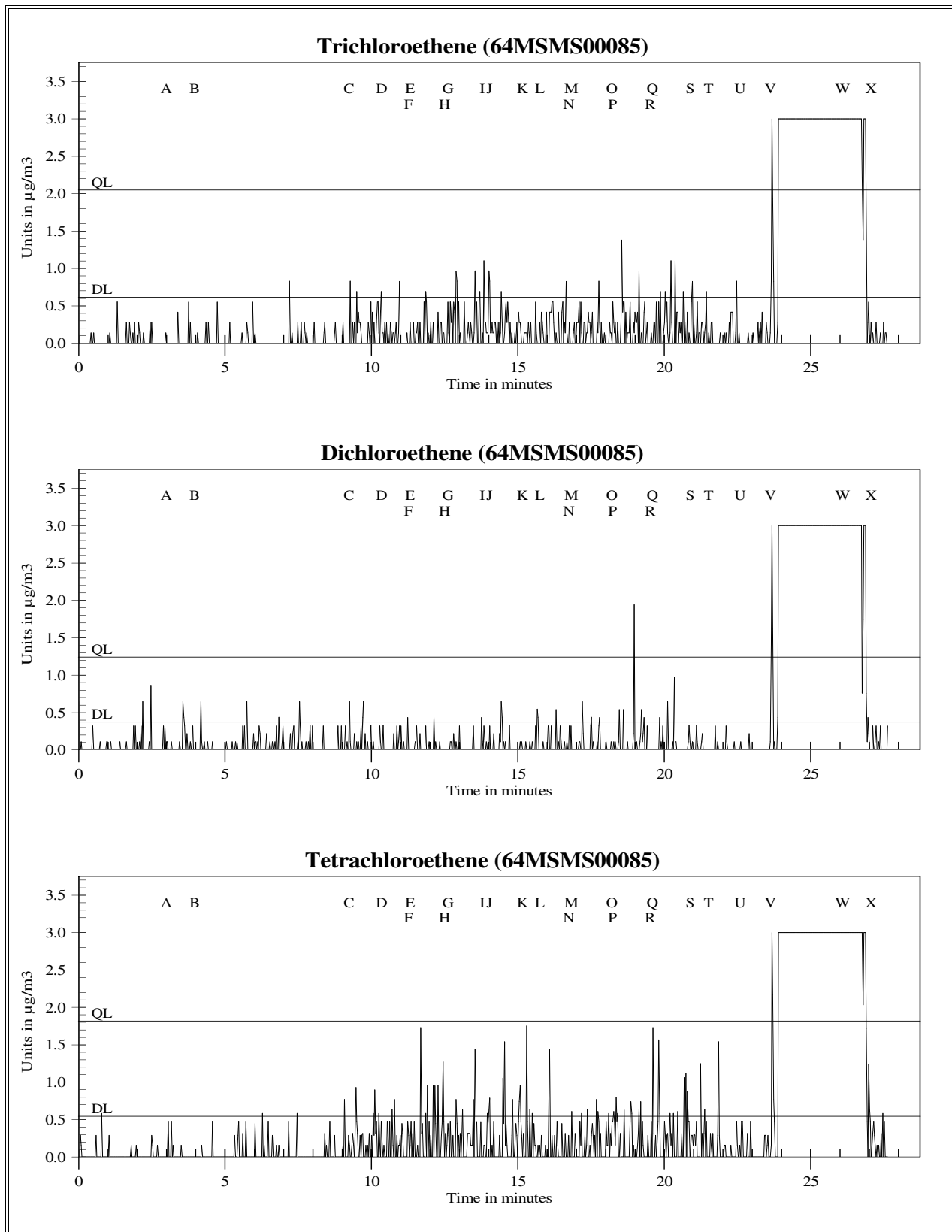


Figure 20g Unit 19 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

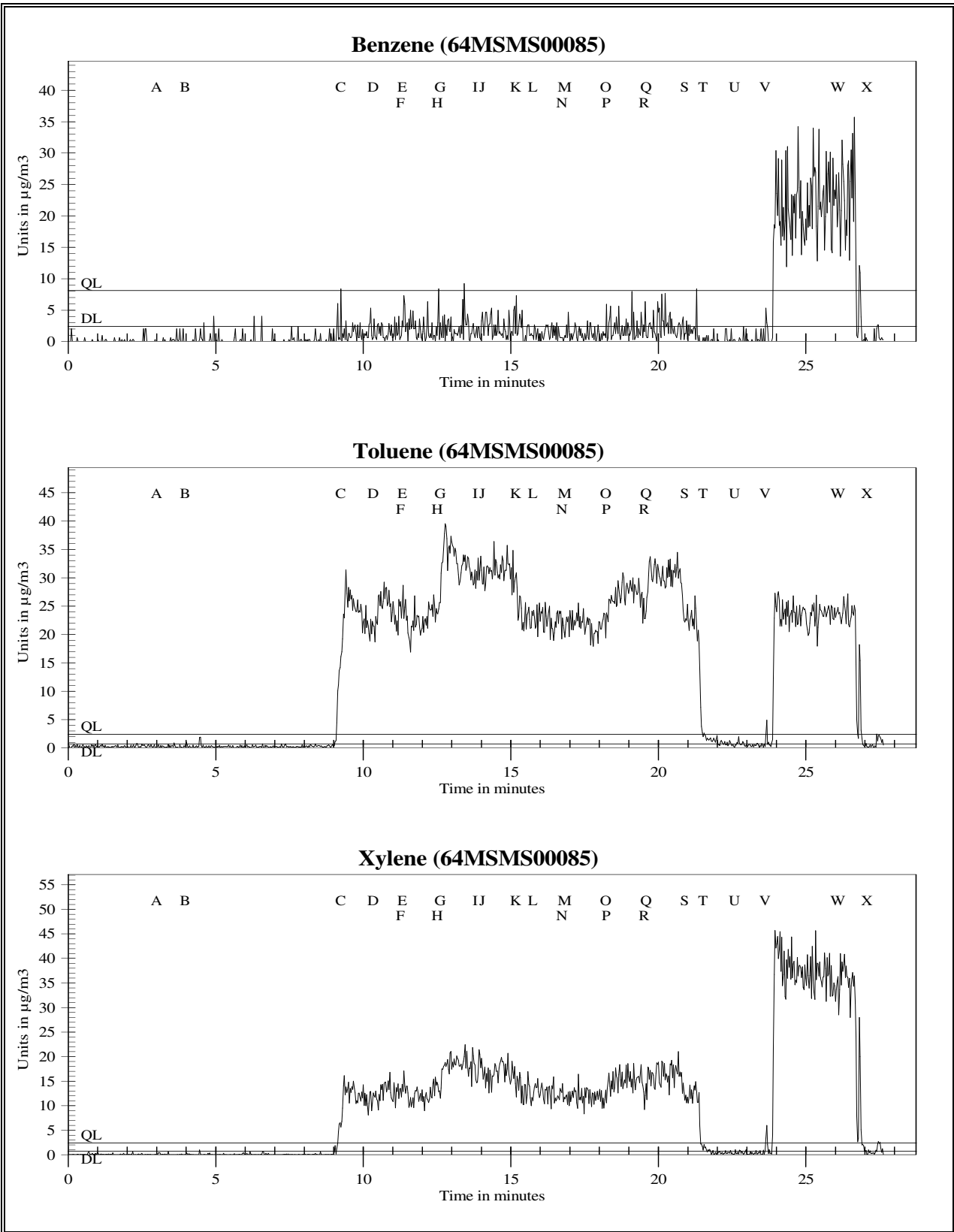


Figure 20h Unit 19 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

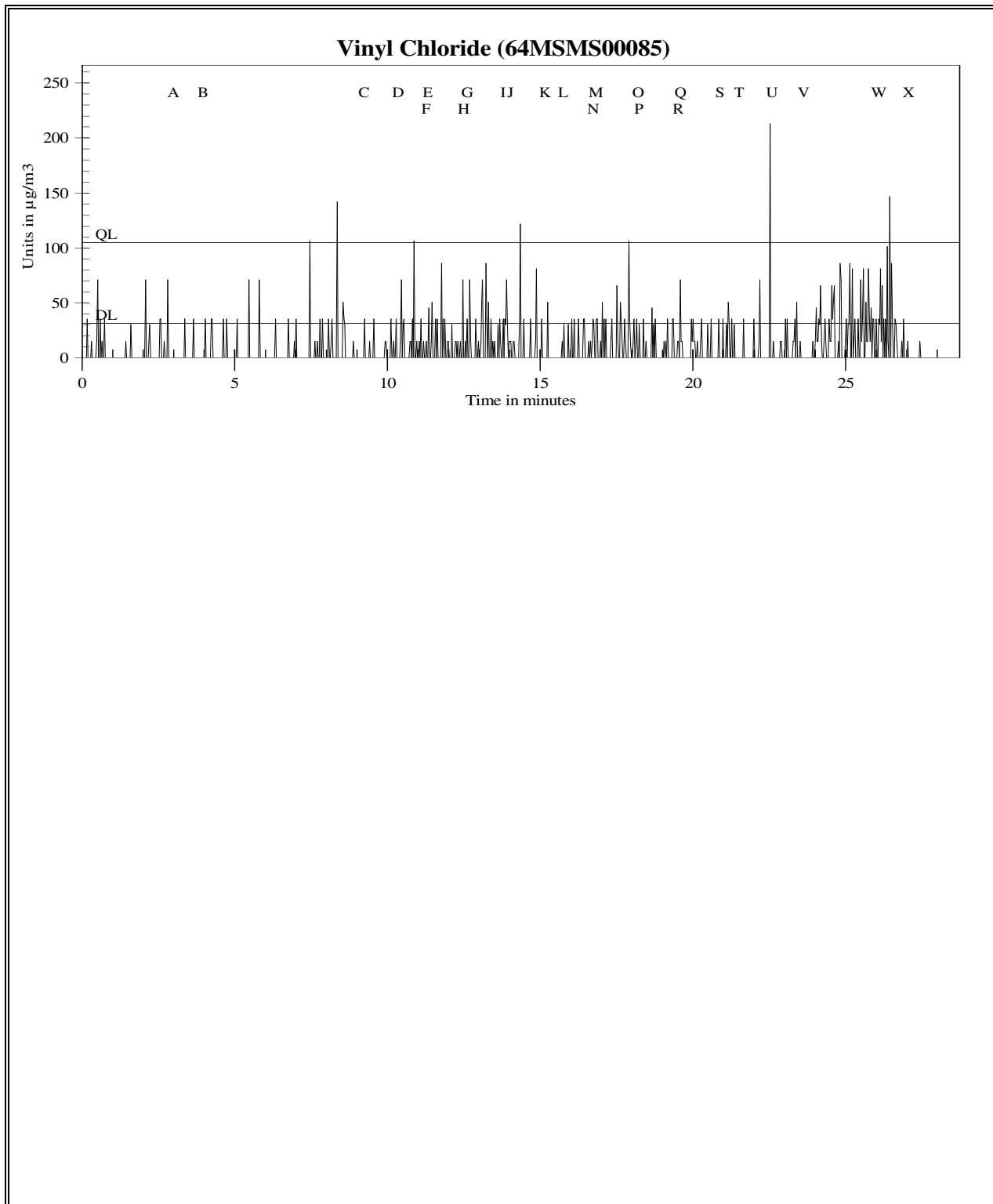


Figure 20i Unit 19 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 20j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 19 Survey File: 64MSMS00085 Acquired on 04 May 2016 at 16:25:45								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.61	0.37	0.54	2.4	0.73	0.73	32
Quantitation Limits - QL:		2.0	1.2	1.8	8.1	2.4	2.4	110
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	DL=0.73	DL=0.73	DL=32.
D - E	Kitchen / dining area	DL=0.61	DL=0.37	DL=0.54	DL=2.4	24	12	DL=32.
F - G	Living room	DL=0.61	DL=0.37	DL=0.54	DL=2.4	23	12	DL=32.
H - I	Bedroom two	DL=0.61	DL=0.37	DL=0.54	DL=2.4	34	19	DL=32.
J - K	Bathroom two	DL=0.61	DL=0.37	DL=0.54	DL=2.4	31	17	DL=32.
L - M	Bathroom one	DL=0.61	DL=0.37	DL=0.54	DL=2.4	23	13	DL=32.
N - O	Bedroom one	DL=0.61	DL=0.37	DL=0.54	DL=2.4	22	12	DL=32.
P - Q	Sub-slab port	DL=0.61	DL=0.37	DL=0.54	DL=2.4	27	15	DL=32.
R - S	Bedroom three	DL=0.61	DL=0.37	DL=0.54	2.7J	31	17	DL=32.
U - V	Post-exit ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	DL=0.73	DL=0.73	DL=32.
W - X	30 mL/min spike	31	23	33	20	21	31	DL=32.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

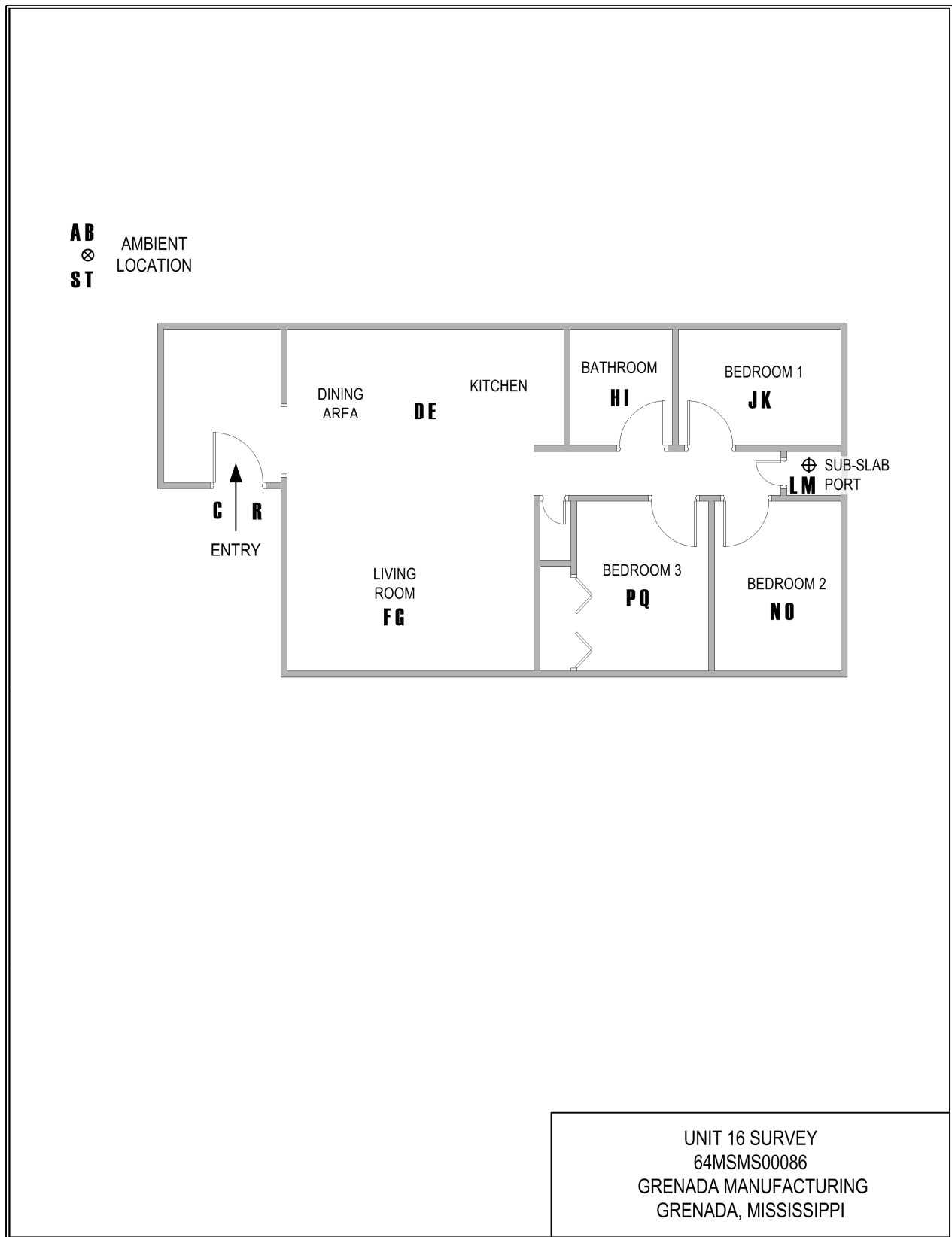


Figure 21a Unit 16 Survey Floor Plan, 64MSMS00086

Figure 21b

TAGA File Event Summary			
File: 64MSMS00086 Acquired on 04 May 2016 at 17:25:15			
Title: Unit 16 Survey			
Flag	Offset Time	Offset Sequence	Description
A	2.7	98	Start of the pre-entry ambient
B	3.7	134	End of the pre-entry ambient
C	5.8	208	Entering the unit
D	6.4	229	Start of the kitchen / dining area
E	7.4	265	End of the kitchen / dining area
F	7.6	273	Start of the living room
G	8.6	309	End of the living room
H	8.9	318	Start of the bathroom
I	10.3	368	End of the bathroom
J	10.8	387	Start of bedroom one
K	12.2	438	End of bedroom one
L	12.6	449	Start of the sub-slab port
M	13.6	486	End of the sub-slab port
N	13.8	494	Start of bedroom two
O	14.8	529	End of bedroom two
P	15.2	542	Start of bedroom three
Q	16.2	578	End of bedroom three
R	16.8	602	Exiting the unit
S	17.8	637	Start of the post-exit ambient
T	19.0	678	End of the post-exit ambient
U	22.1	790	Start of 30 mL/min spike
V	23.1	826	End of 30 mL/min spike

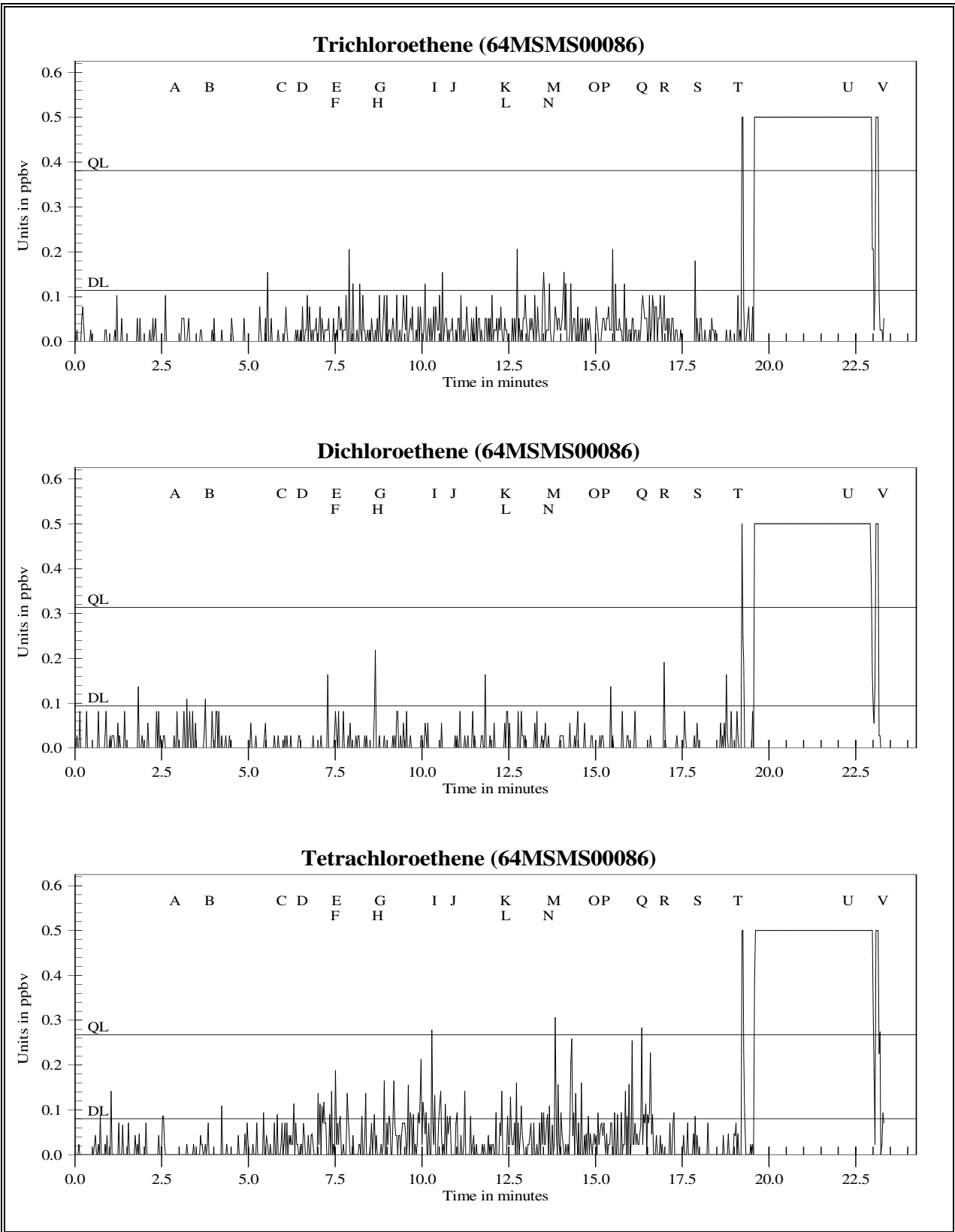


Figure 21c Unit 16 Survey in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

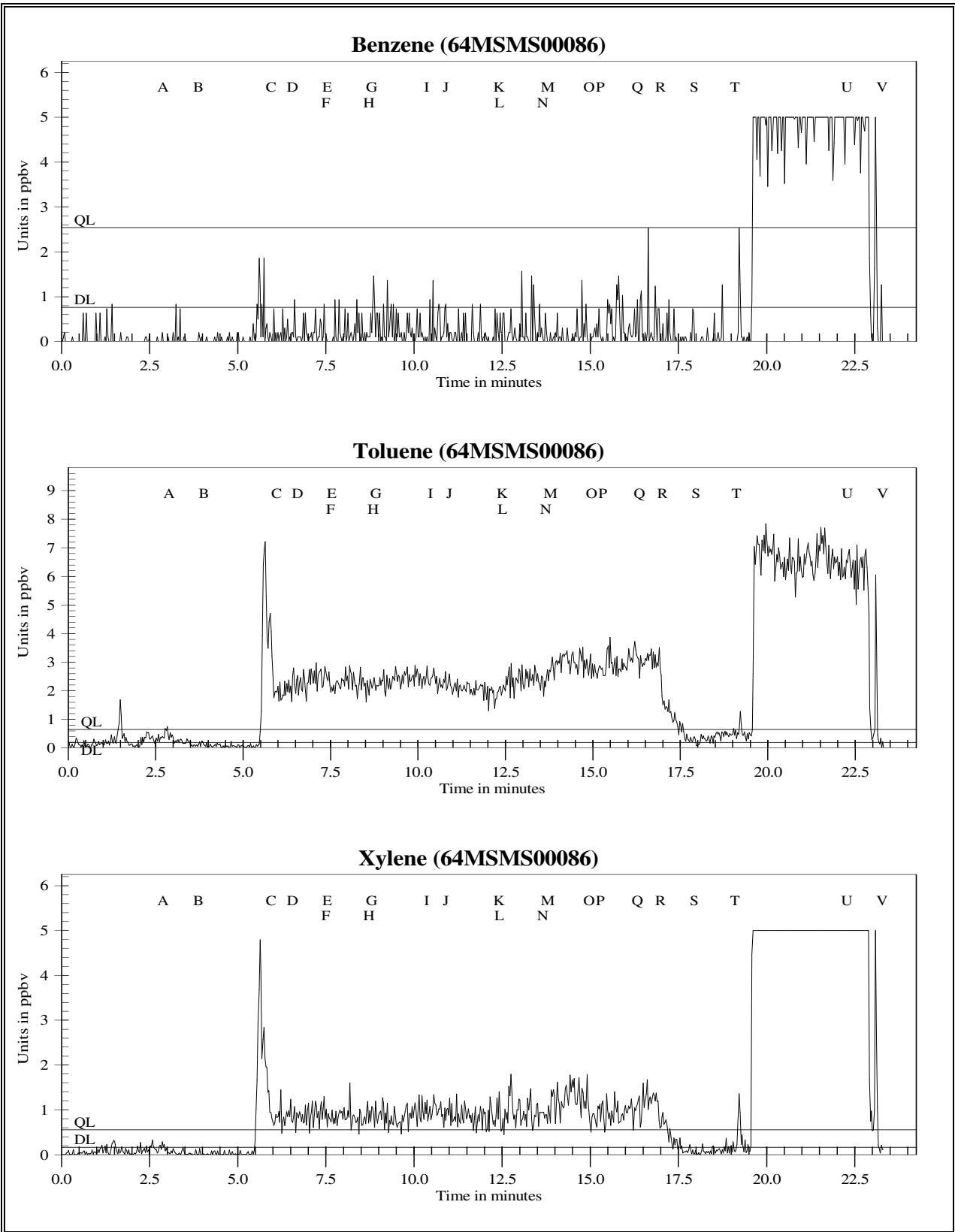


Figure 21d Unit 16 Survey in ppbv for Benzene, Toluene, and Xylenes

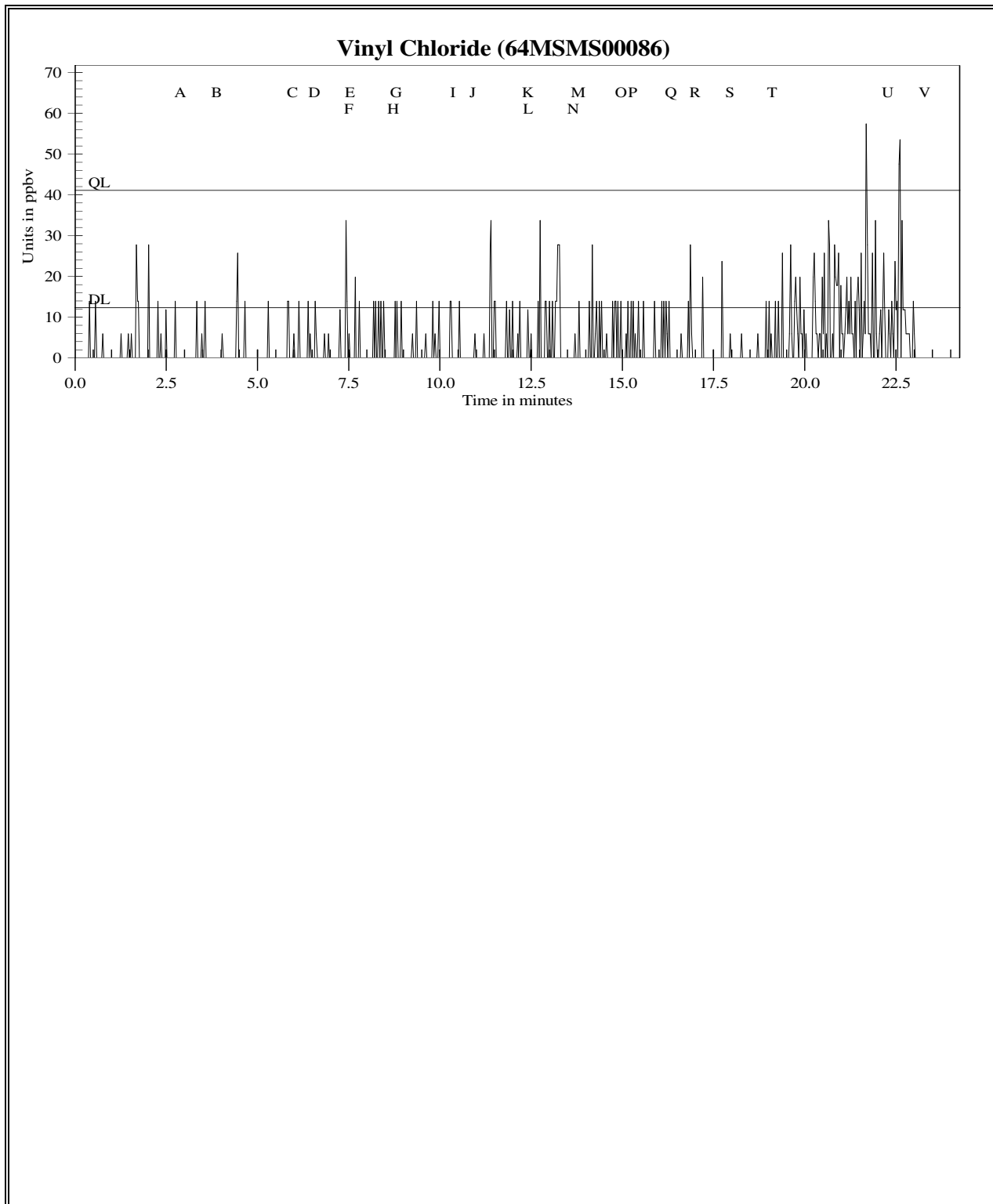


Figure 21e Unit 16 Survey in ppbv for Vinyl Chloride

Figure 21f

TAGA Target Compound Summary in ppbv for Unit 16 Survey File: 64MSMS00086 Acquired on 04 May 2016 at 17:25:15								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.11	0.094	0.080	0.76	0.19	0.17	12
Quantitation Limits - QL:		0.38	0.31	0.27	2.5	0.65	0.56	41
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	0.27J	DL=0.17	DL=12.
D - E	Kitchen / dining area	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.4	0.89	DL=12.
F - G	Living room	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.3	0.83	DL=12.
H - I	Bathroom	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.4	0.87	DL=12.
J - K	Bedroom one	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.0	0.86	DL=12.
L - M	Sub-slab port	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.4	0.96	DL=12.
N - O	Bedroom two	DL=0.11	DL=0.094	DL=0.080	DL=0.76	3.0	1.3	DL=12.
P - Q	Bedroom three	DL=0.11	DL=0.094	DL=0.080	DL=0.76	2.9	0.94	DL=12.
S - T	Post-exit ambient	DL=0.11	DL=0.094	DL=0.080	DL=0.76	0.37J	DL=0.17	DL=12.
U - V	30 mL/min spike	5.1	5.2	4.4	5.6	5.3	7.3	DL=12.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

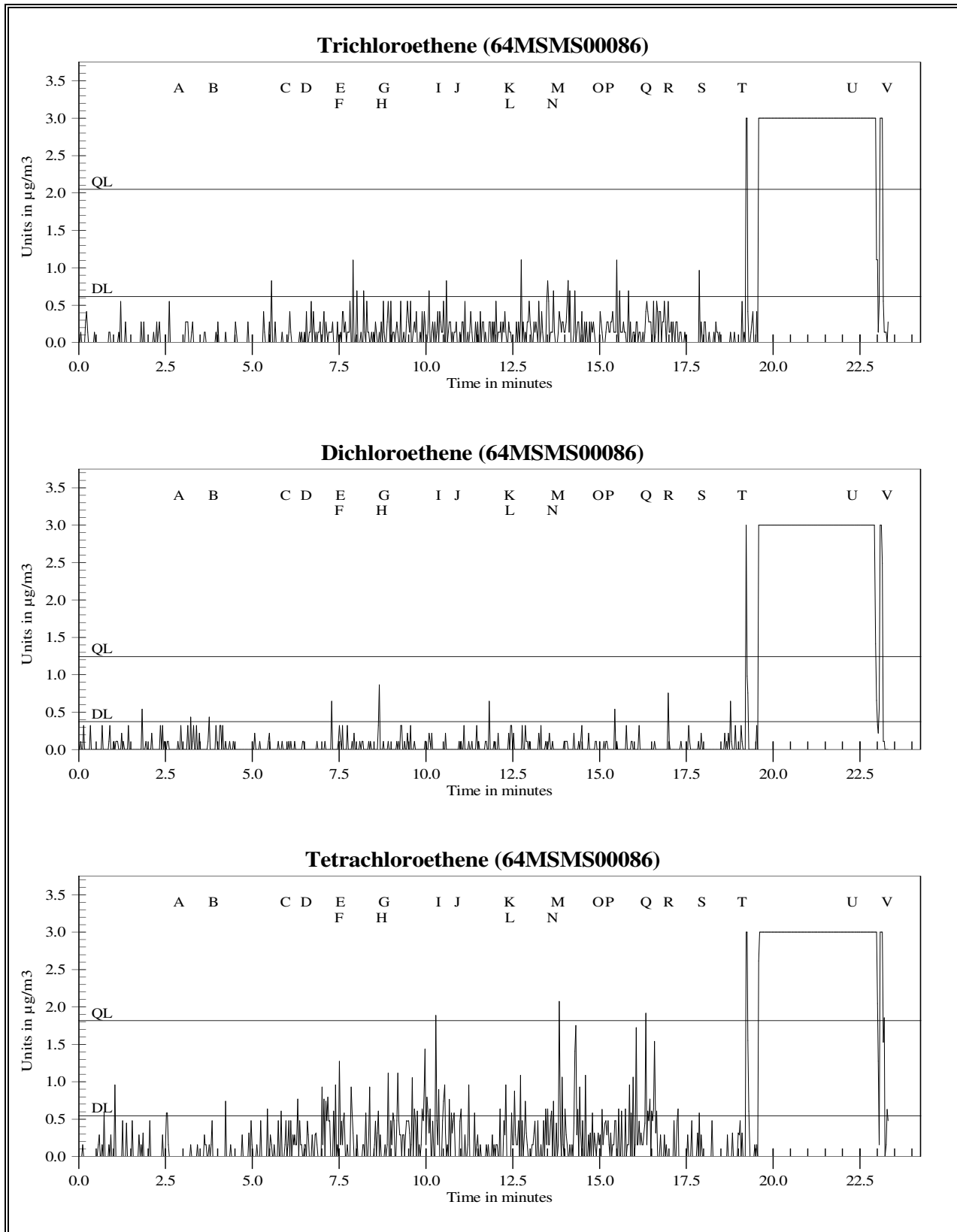


Figure 21g Unit 16 Survey in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

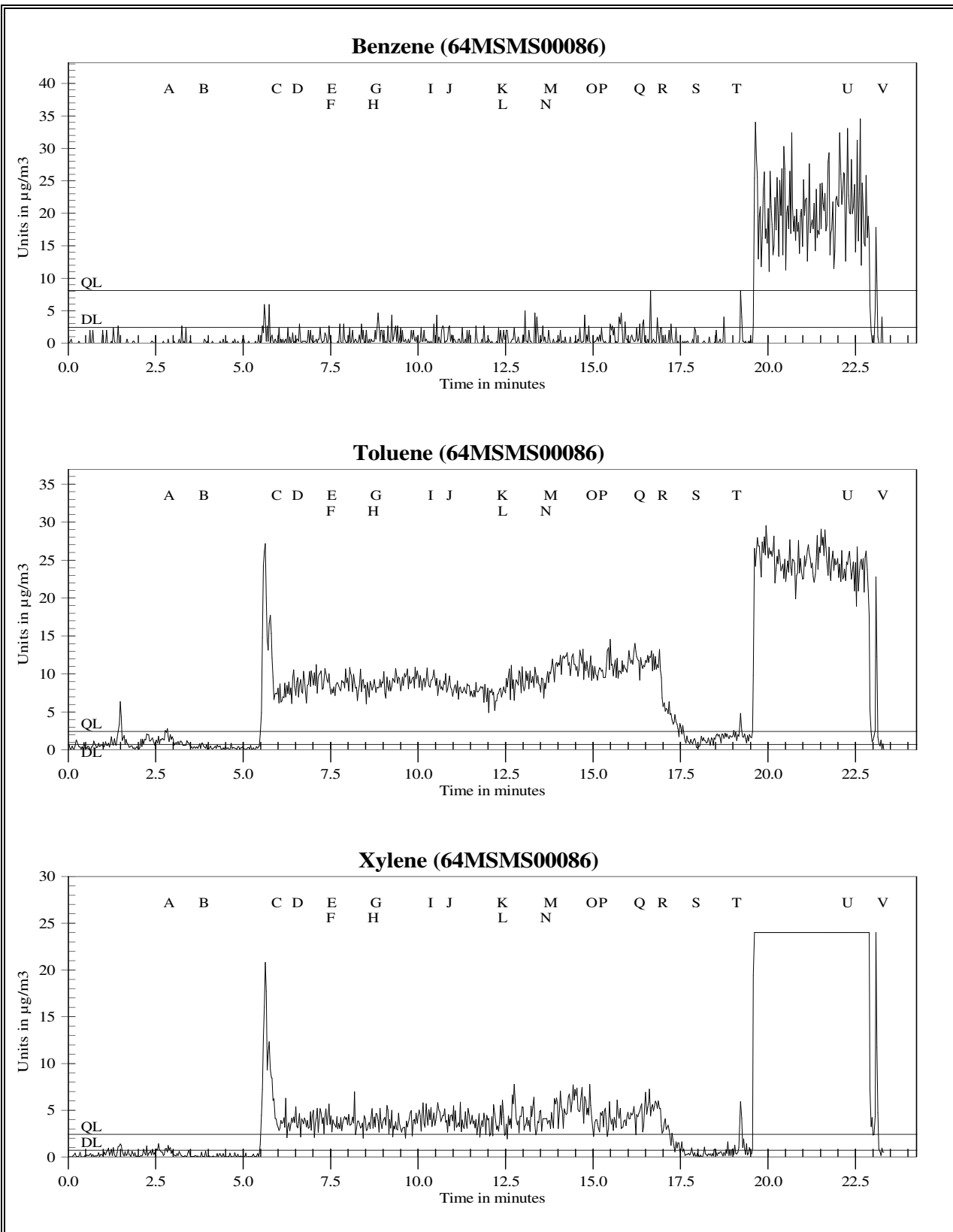


Figure 21h Unit 16 Survey in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

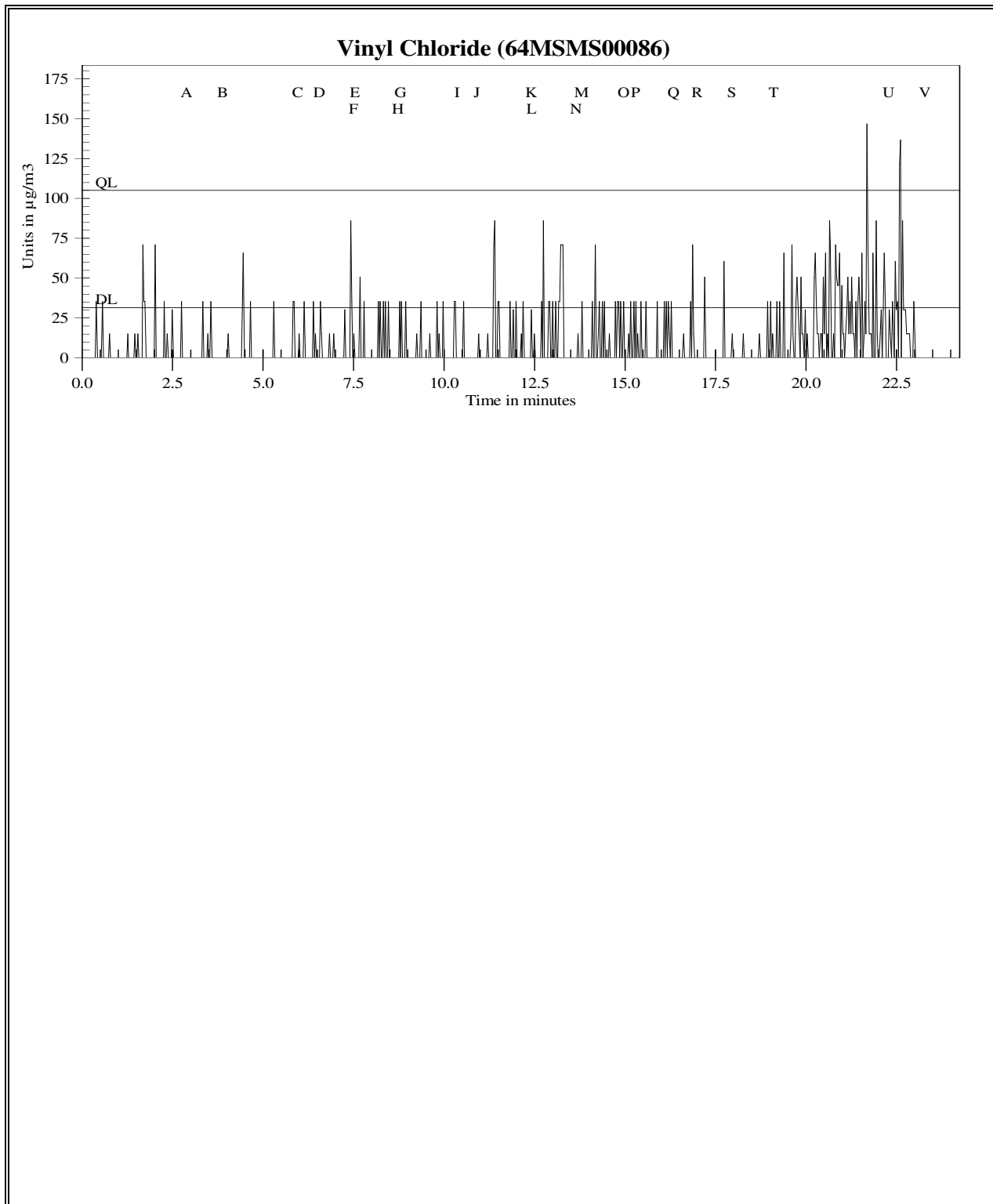


Figure 21i Unit 16 Survey in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 21j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 16 Survey File: 64MSMS00086 Acquired on 04 May 2016 at 17:25:15								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.61	0.37	0.54	2.4	0.73	0.73	32
Quantitation Limits - QL:		2.0	1.2	1.8	8.1	2.4	2.4	110
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	1.0J	DL=0.73	DL=32.
D - E	Kitchen / dining area	DL=0.61	DL=0.37	DL=0.54	DL=2.4	8.9	3.9	DL=32.
F - G	Living room	DL=0.61	DL=0.37	DL=0.54	DL=2.4	8.6	3.6	DL=32.
H - I	Bathroom	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.1	3.8	DL=32.
J - K	Bedroom one	DL=0.61	DL=0.37	DL=0.54	DL=2.4	7.7	3.7	DL=32.
L - M	Sub-slab port	DL=0.61	DL=0.37	DL=0.54	DL=2.4	9.0	4.2	DL=32.
N - O	Bedroom two	DL=0.61	DL=0.37	DL=0.54	DL=2.4	11	5.5	DL=32.
P - Q	Bedroom three	DL=0.61	DL=0.37	DL=0.54	DL=2.4	11	4.1	DL=32.
S - T	Post-exit ambient	DL=0.61	DL=0.37	DL=0.54	DL=2.4	1.4J	DL=0.73	DL=32.
U - V	30 mL/min spike	27	21	30	18	20	32	DL=32.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

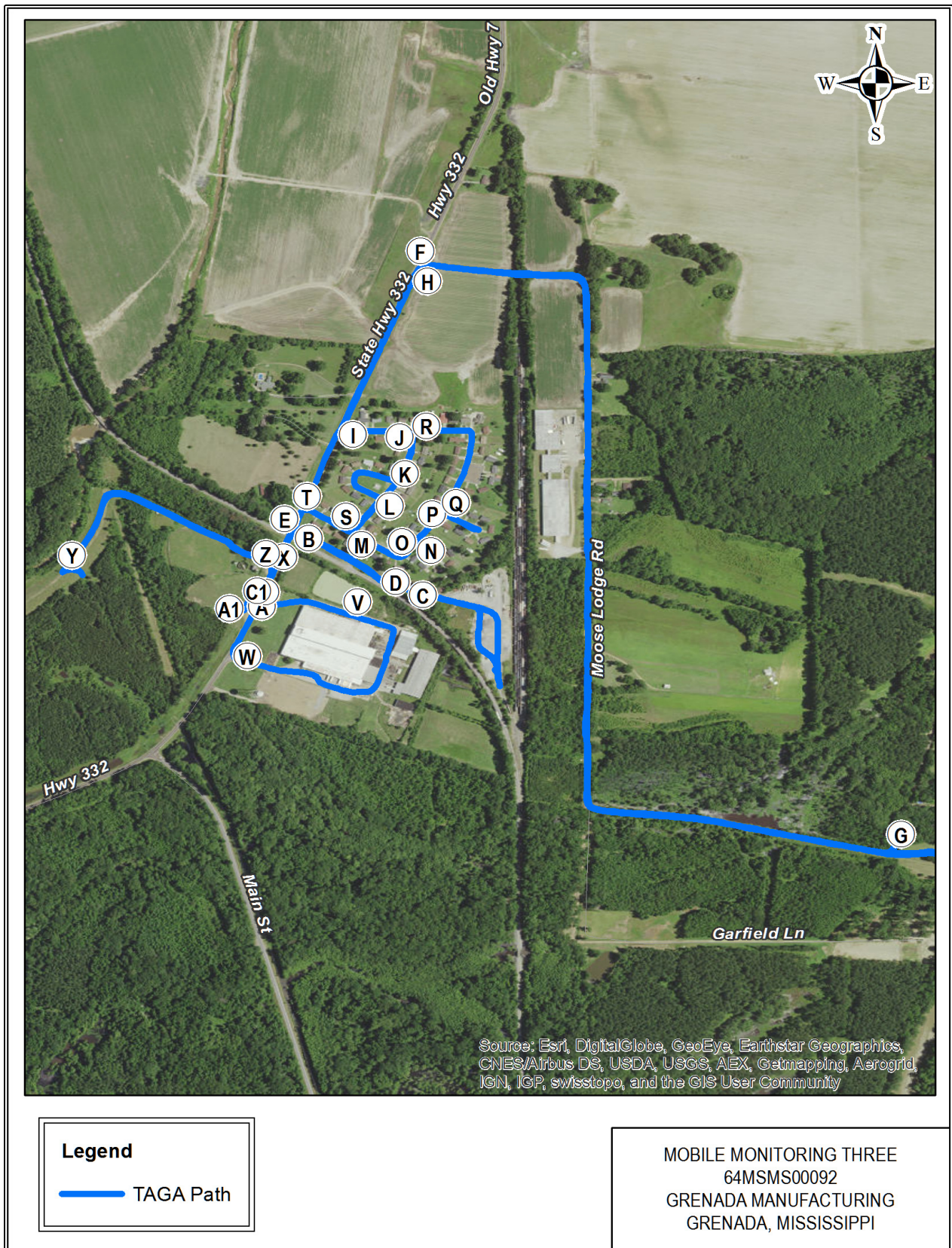


Figure 22a Mobile Monitoring Three Path, 64MSMS00092

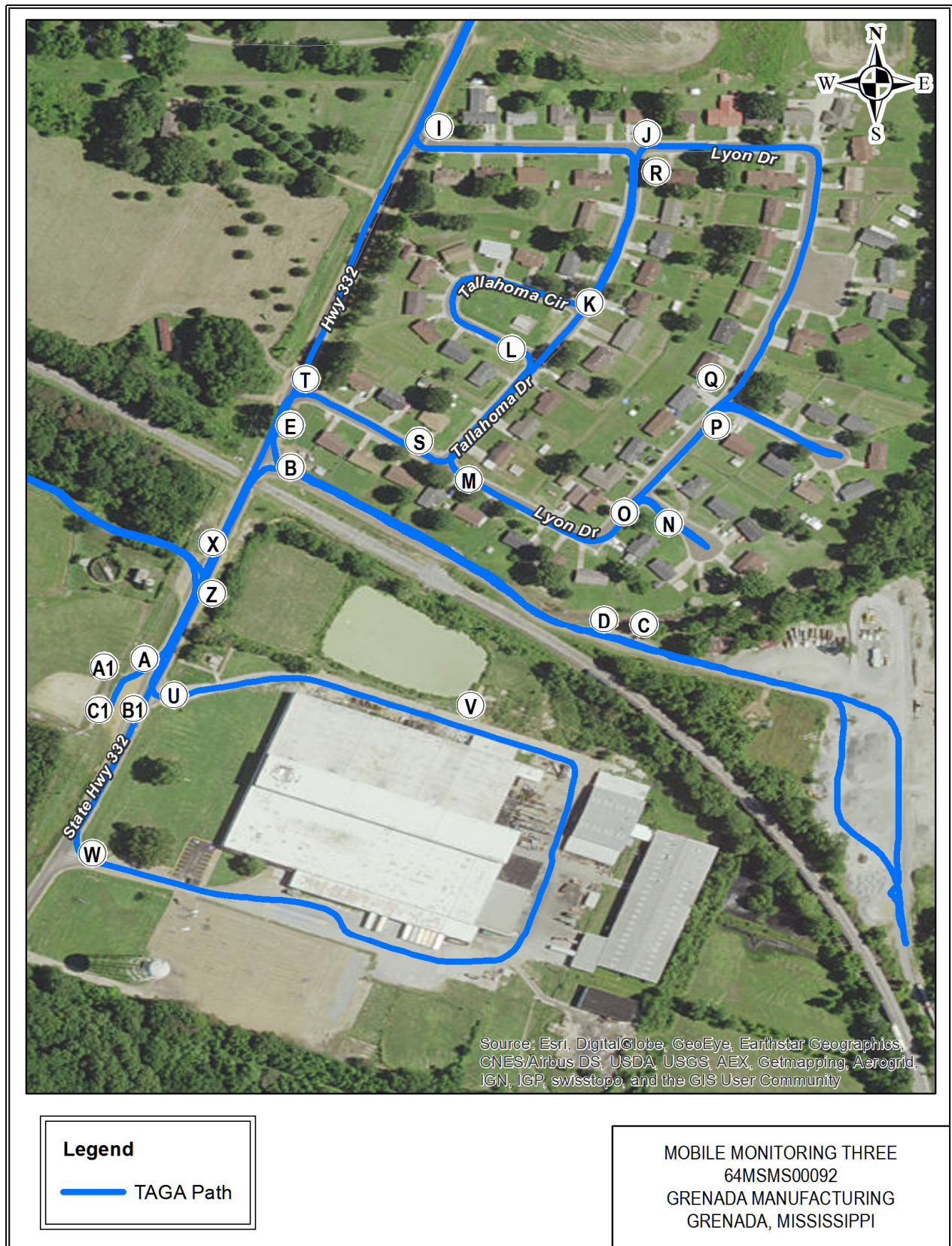


Figure 22b Mobile Monitoring Three Path -Zoomed, 64MSMS00092

Figure 22c

TAGA File Event Summary			
File: 64MSMS00092 Acquired on 05 May 2016 at 08:44:22			
Title: Mobile Monitoring Three			
Flag	Time	Sequence	Description
A	2.4	87	Starting mobile monitoring across from Grenada Manufacturing
B	3.2	114	Turning right to stone quarry
C	8.2	294	Entering the quarry
D	16.3	582	Exiting the quarry
E	21.4	763	Turning right onto Highway 332 / Old Highway 7
F	24.4	873	Turning right onto Moose Lodge Road
G	41.3	1474	Turning around at the Old Moose Lodge
H	64.3	2296	Turning left onto Highway 332 / Old Highway 7
I	65.9	2353	Turning left onto Lyon Drive (Eastern Heights Neighborhood)
J	66.9	2390	Turning right onto Tallahoma Drive
K	67.8	2422	Turning right onto Tallahoma Circle
L	69.0	2463	Turning right onto Tallahoma Drive
M	69.7	2488	Turning left onto Lyon Drive
N	70.8	2527	Turning right onto Rockwell Circle
O	72.6	2593	Turning right onto Lyon Drive
P	73.2	2615	Turning right onto Pittsburgh Circle
Q	75.1	2682	Turning right onto Lyon Drive
R	77.1	2753	Turning left onto Tallahoma Drive
S	78.4	2799	Turning right onto Lyon Drive
T	79.1	2825	Turning left onto Highway 332 / Old Highway 7
U	80.4	2869	Turning left into Grenada Manufacturing facility
V	82.7	2954	Passing east end of the pond
W	88.5	3160	Turning right onto Highway 332 / Old Highway 7
X	89.1	3180	Turning left onto access road
Y	96.0	3427	Making U-turn
Z	106.8	3814	Turning right onto Highway 332 / Old Highway 7
A1	107.7	3845	Stopping mobile monitoring at Ball park across from Grenada Manufacturing
B1	111.6	3984	Start of 30 mL/min spike
C1	112.7	4022	End of 30 mL/min spike

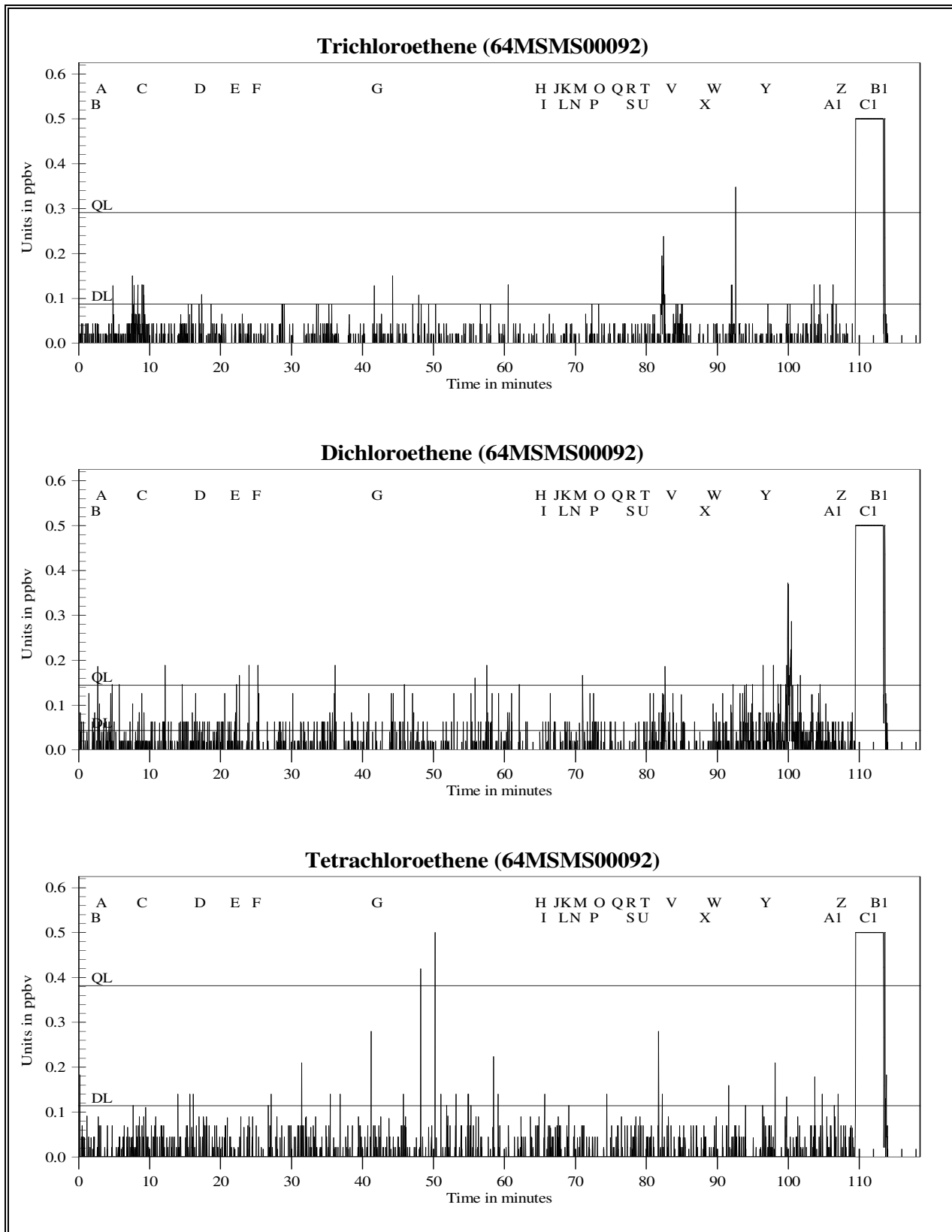


Figure 22d Mobile Monitoring Three in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

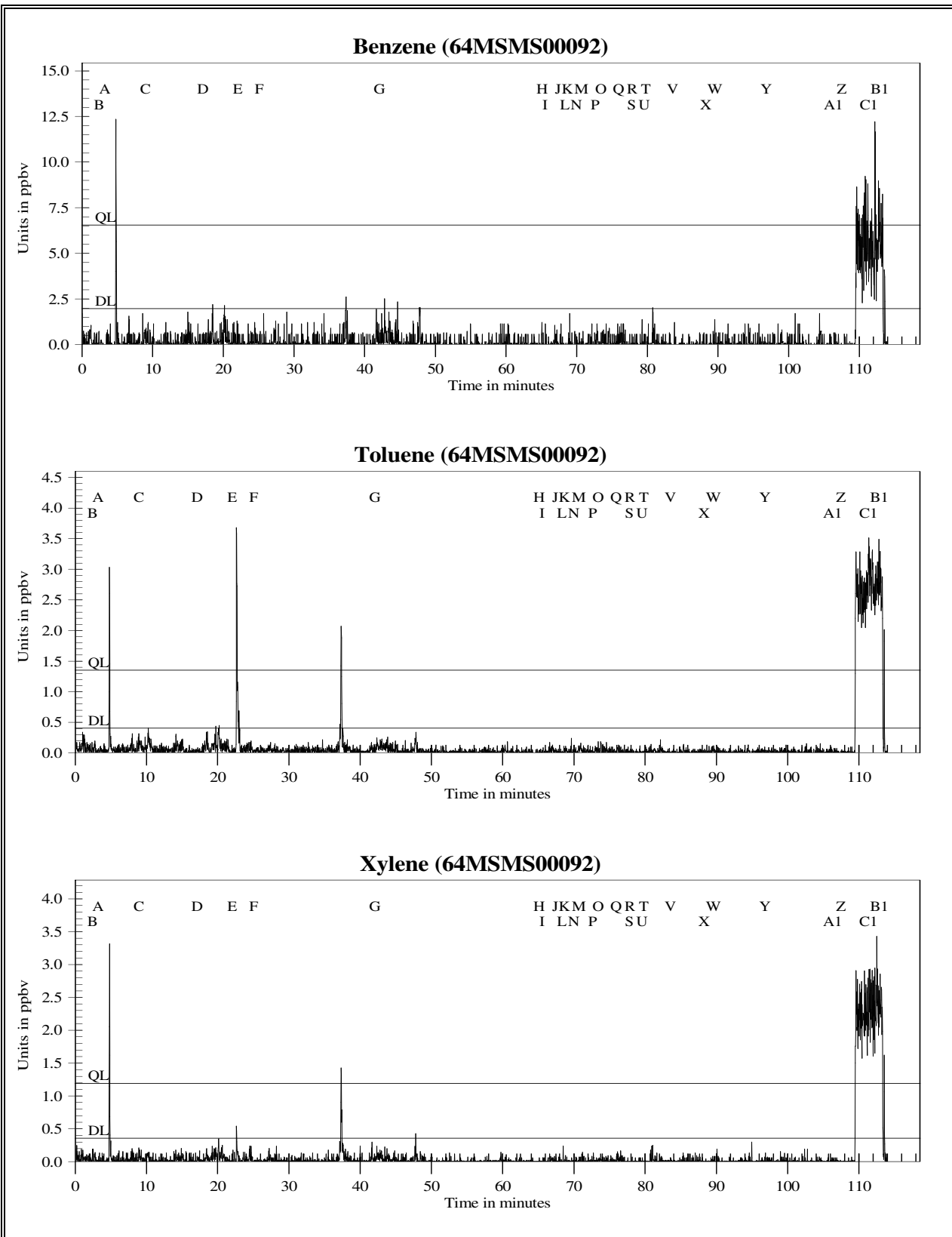


Figure 22e Mobile Monitoring Three in ppbv for Benzene, Toluene, and Xylenes

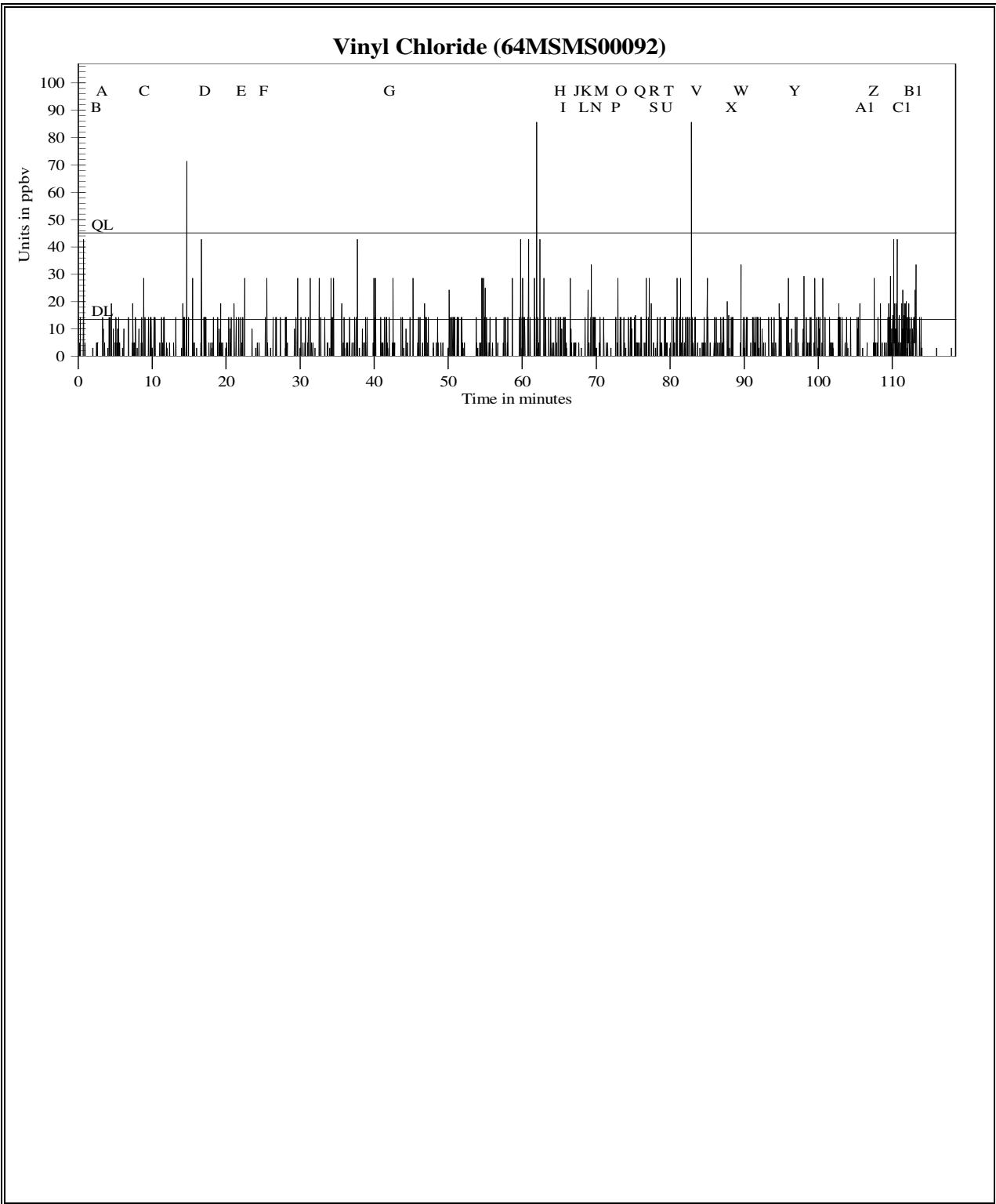


Figure 22f Mobile Monitoring Three in ppbv for Vinyl Chloride

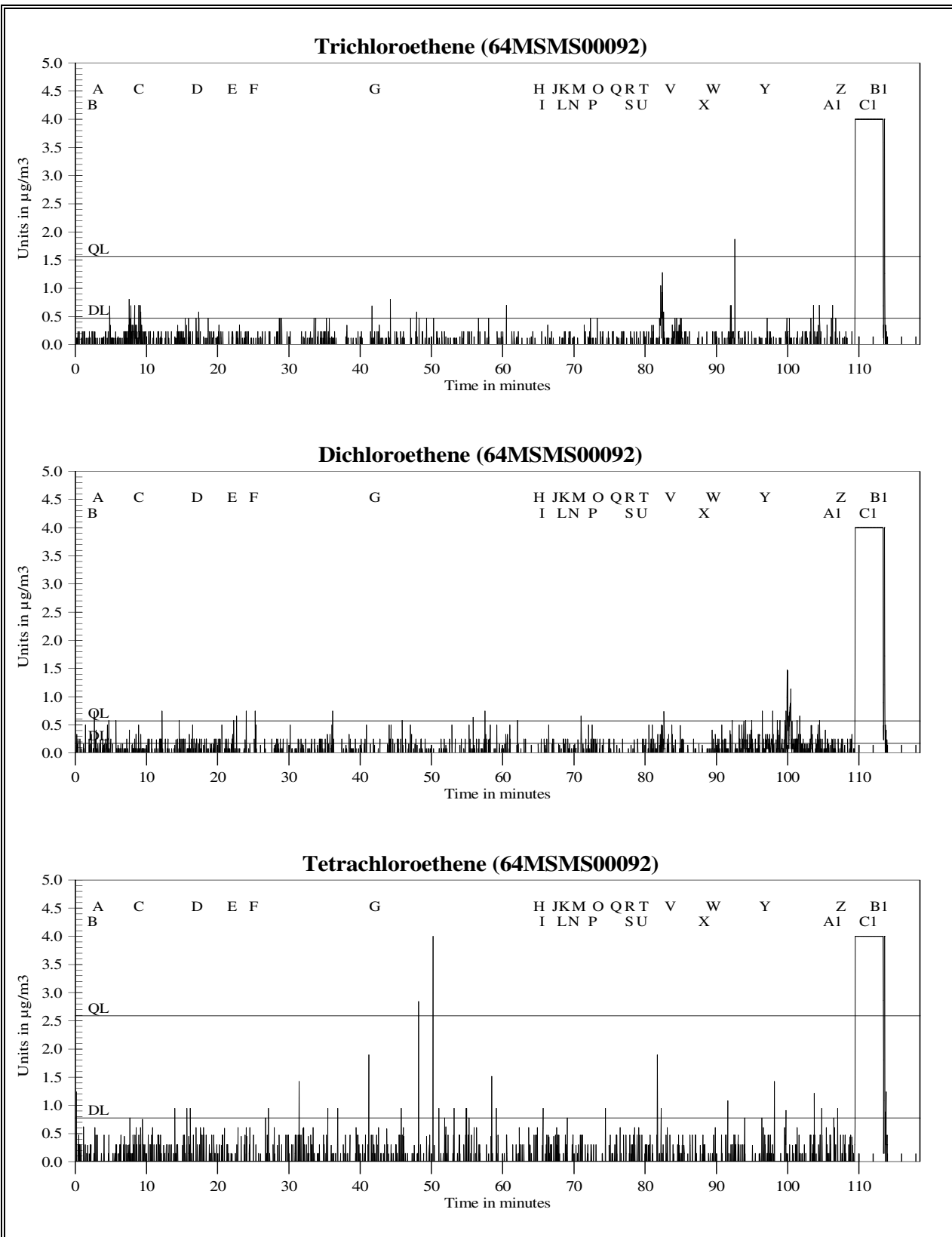


Figure 22g Mobile Monitoring Three in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

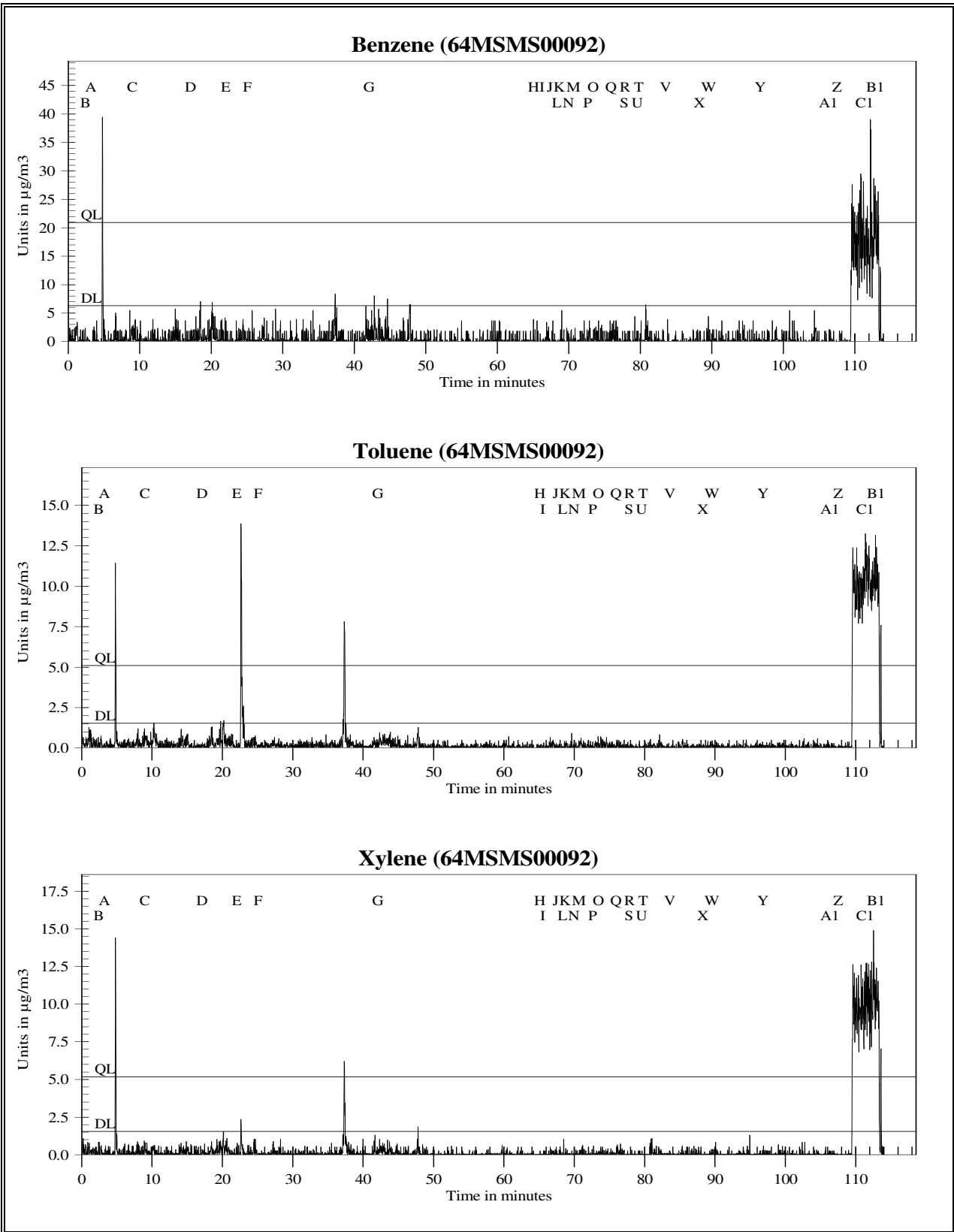


Figure 22h Mobile Monitoring Three in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

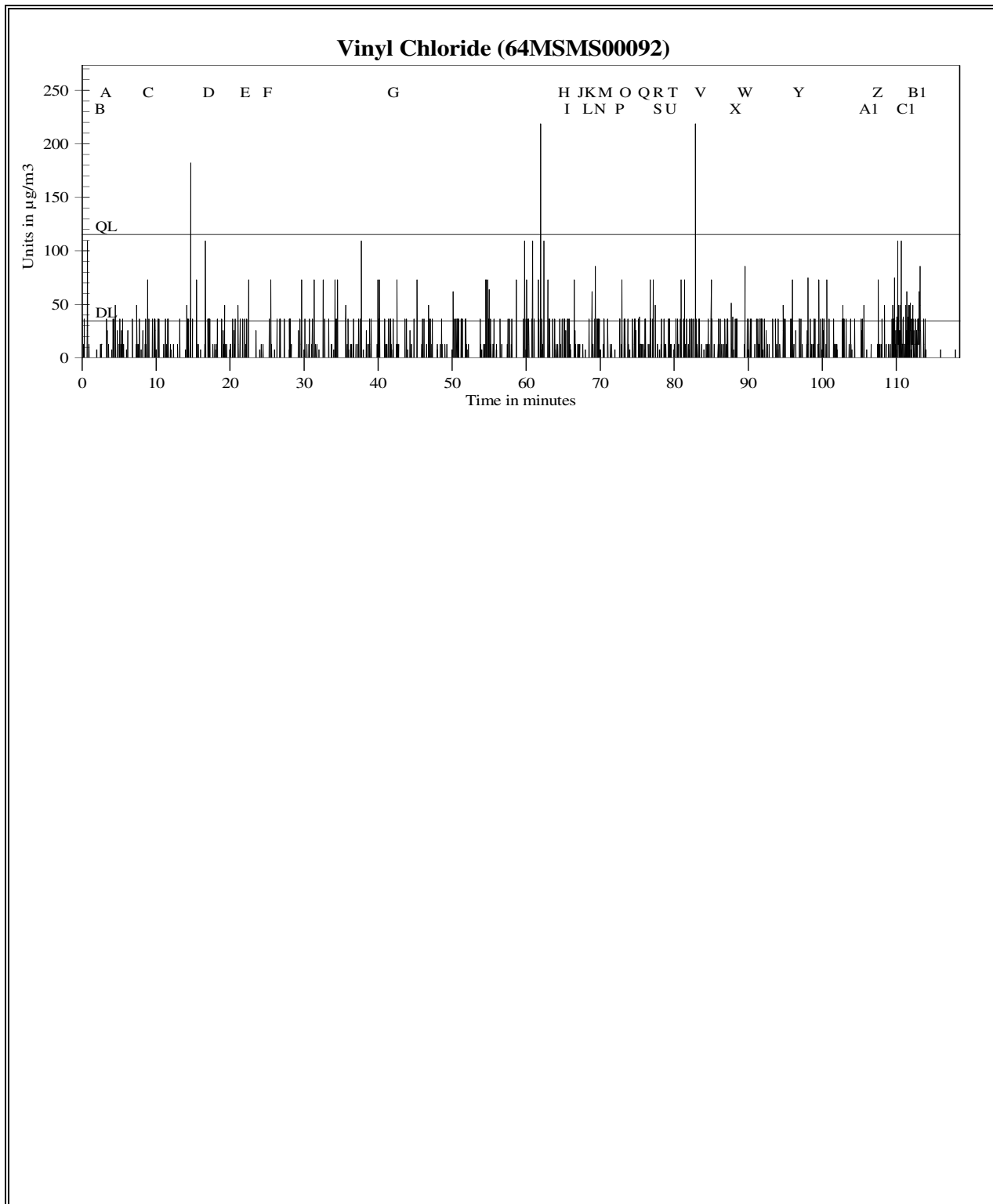


Figure 22i Mobile Monitoring Three in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

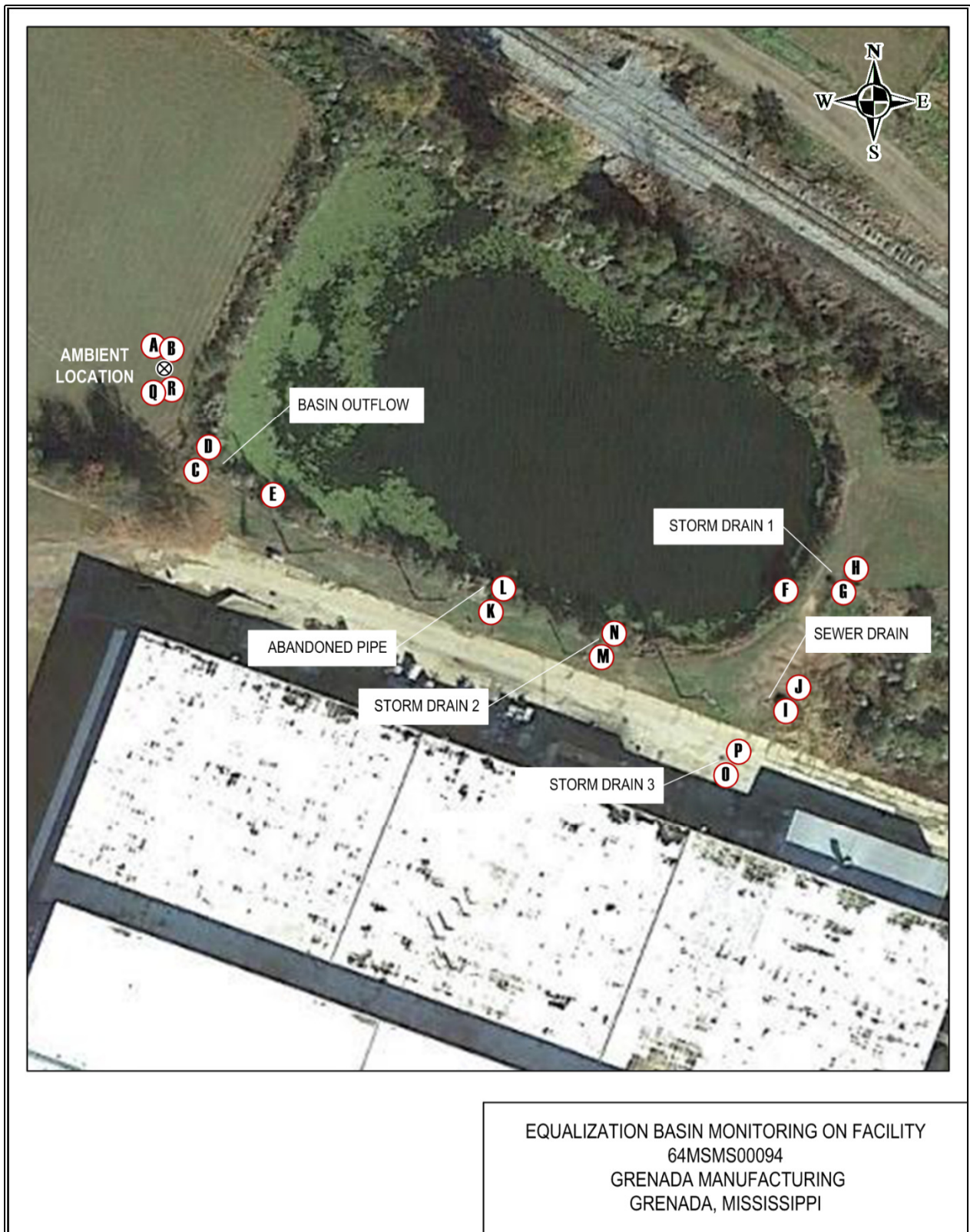


Figure 23a Equalization Basin Monitoring on Facility Area Map, 64MSMS00094

Figure 23b

TAGA File Event Summary			
File: 64MSMS00094 Acquired on 05 May 2016 at 12:33:02			
Title: Equalization Basin Monitoring on Facility			
Flag	Time	Sequence	Description
A	2.0	74	Start of the pre-run ambient
B	3.1	110	End of the pre-run ambient
C	5.6	201	Start of the equalization (EQ) basin outflow
D	6.8	243	End of the EQ basin outflow
E	7.3	263	Start of the west to east traverse of the EQ basin
F	17.8	636	End of the west to east traverse of the EQ basin
G	18.9	675	Start of storm drain one at east end of the EQ basin
H	20.4	730	End of storm drain one at east end of the EQ basin
I	20.6	736	Start of the sewer drain at east end of the EQ basin
J	21.2	758	End of the sewer drain at east end of the EQ basin
K	22.1	790	Start of abandoned pipe near the EQ basin
L	22.9	817	End of abandoned pipe near the EQ basin
M	24.5	875	Start of storm drain two at east end of the EQ basin
N	25.6	916	End of storm drain two at east end of the EQ basin
O	26.6	949	Start of storm drain three at east end of the EQ basin
P	27.4	979	End of storm drain three at east end of the EQ basin
Q	31.7	1134	Start of the post-run ambient
R	34.2	1220	End of the post-run ambient
S	37.2	1328	Start of 30 mL/min spike
T	38.7	1382	End of 30 mL/min spike

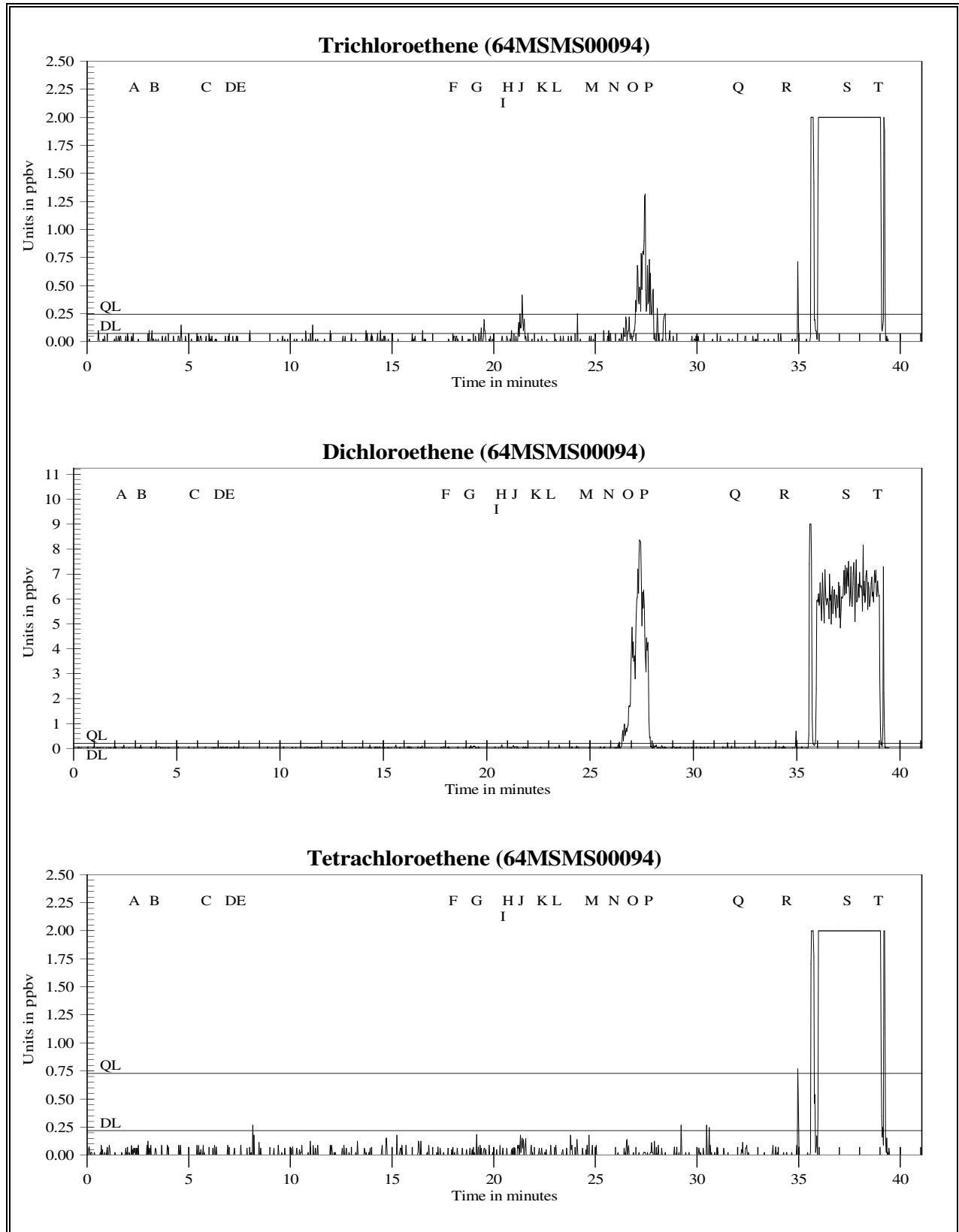


Figure 23c Equalization Basin Monitoring on Facility in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

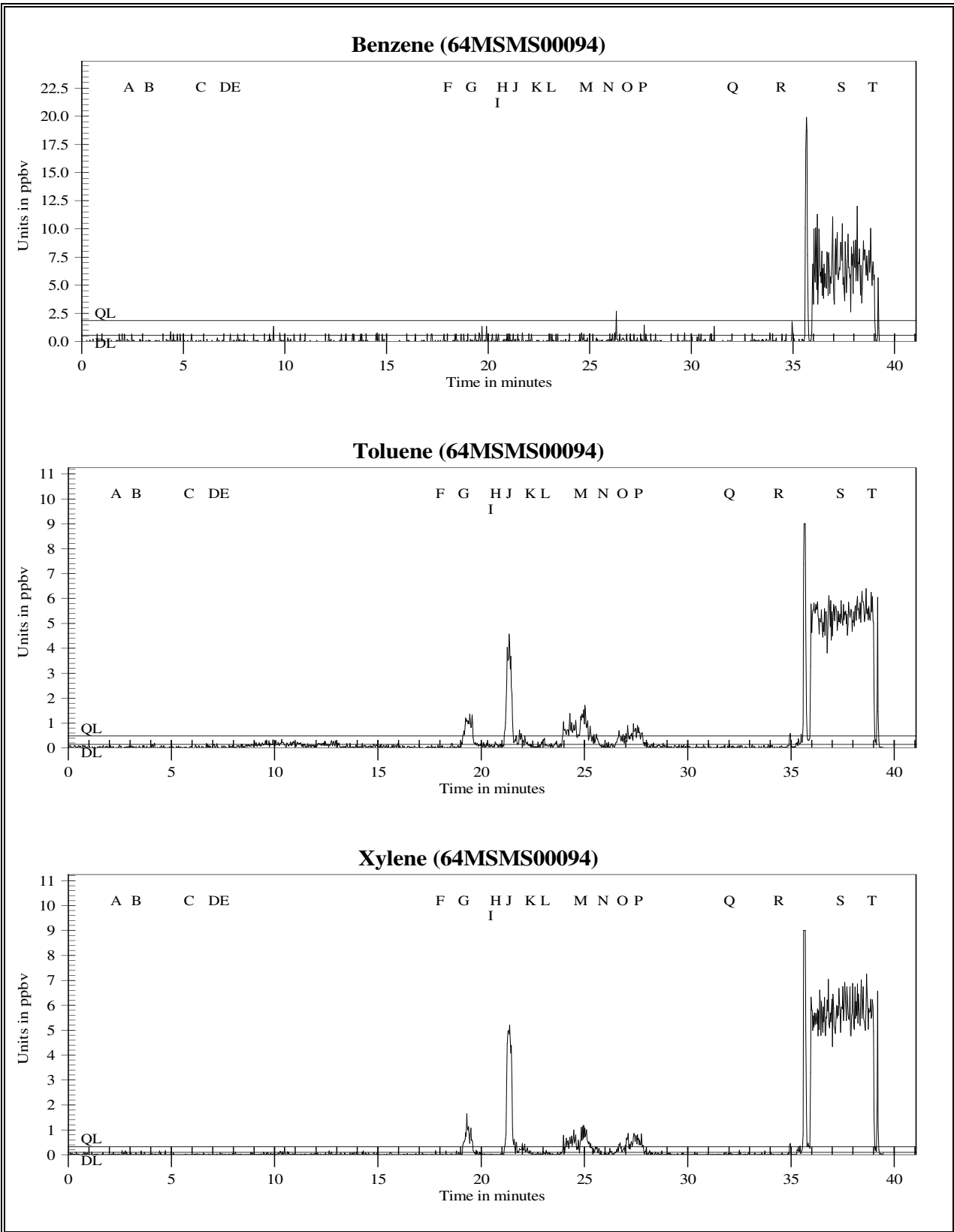


Figure 23d Equalization Basin Monitoring on Facility in ppbv for Benzene, Toluene, and Xylenes

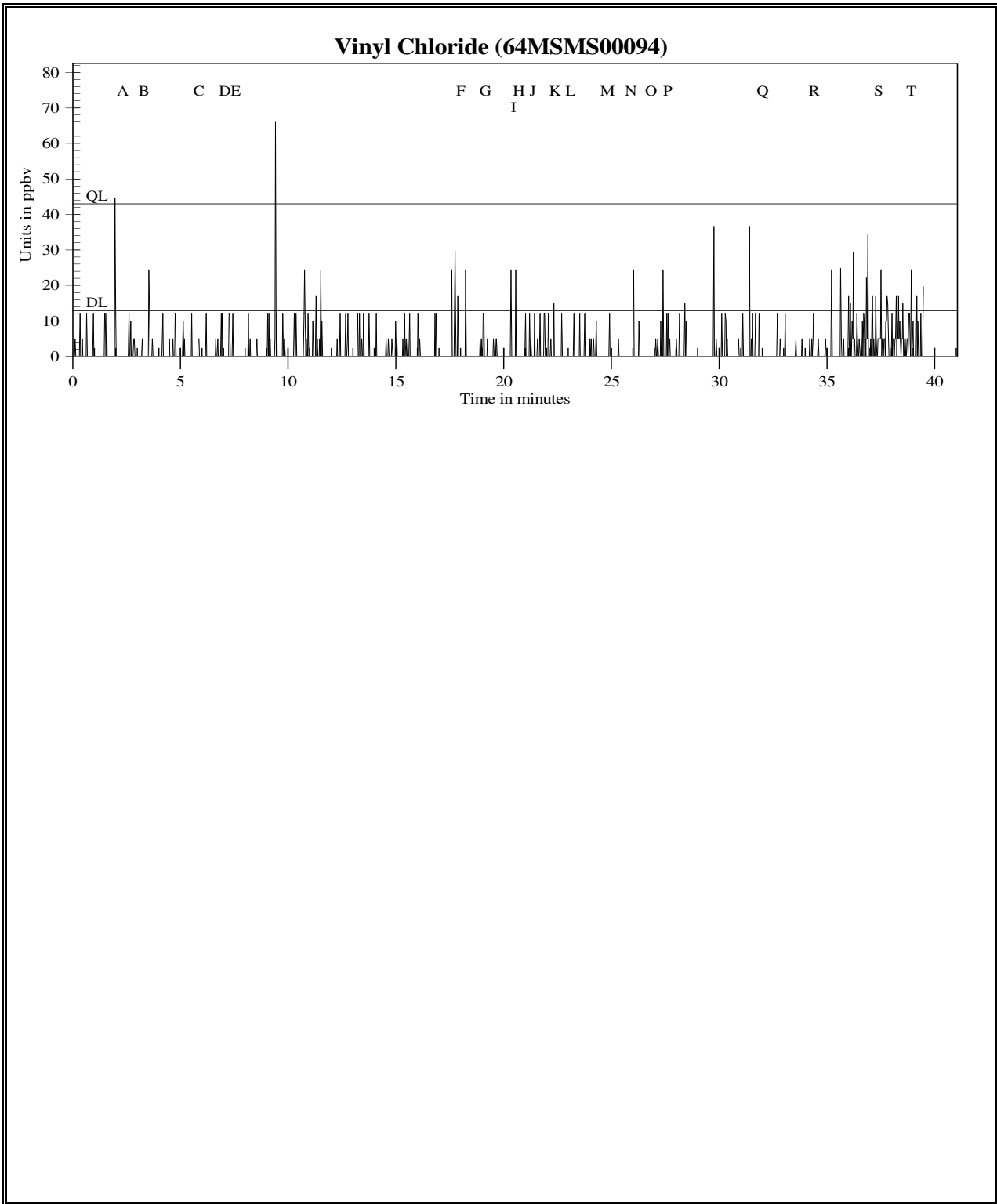


Figure 23e Equalization Basin Monitoring on Facility in ppbv for Vinyl Chloride

Figure 23f

TAGA Target Compound Summary in ppbv for Equalization Basin Monitoring on Facility File: 64MSMS00094 Acquired on 05 May 2016 at 12:33:02								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.073	0.062	0.22	0.56	0.15	0.095	13
Quantitation Limits - QL:		0.24	0.21	0.73	1.9	0.48	0.32	43
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
C - D	Equalization (EQ) basin outflow	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
E - F	West to east traverse of the EQ basin	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
G - H	Storm drain one at east end of the EQ basin	DL=0.073	DL=0.062	DL=0.22	DL=0.56	0.40J	0.27J	DL=13.
I - J	Sewer drain at east end of the EQ basin	DL=0.073	DL=0.062	DL=0.22	DL=0.56	0.26J	0.10J	DL=13.
K - L	Abandoned pipe near the EQ basin	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
M - N	Storm drain two at east end of the EQ basin	DL=0.073	DL=0.062	DL=0.22	DL=0.56	0.74	0.50	DL=13.
O - P	Storm drain three at east end of the EQ basin	0.32	3.1	DL=0.22	DL=0.56	0.46J	0.39	DL=13.
Q - R	Post-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
S - T	30 mL/min spike	4.8	6.5	4.1	6.7	5.4	5.9	DL=13.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

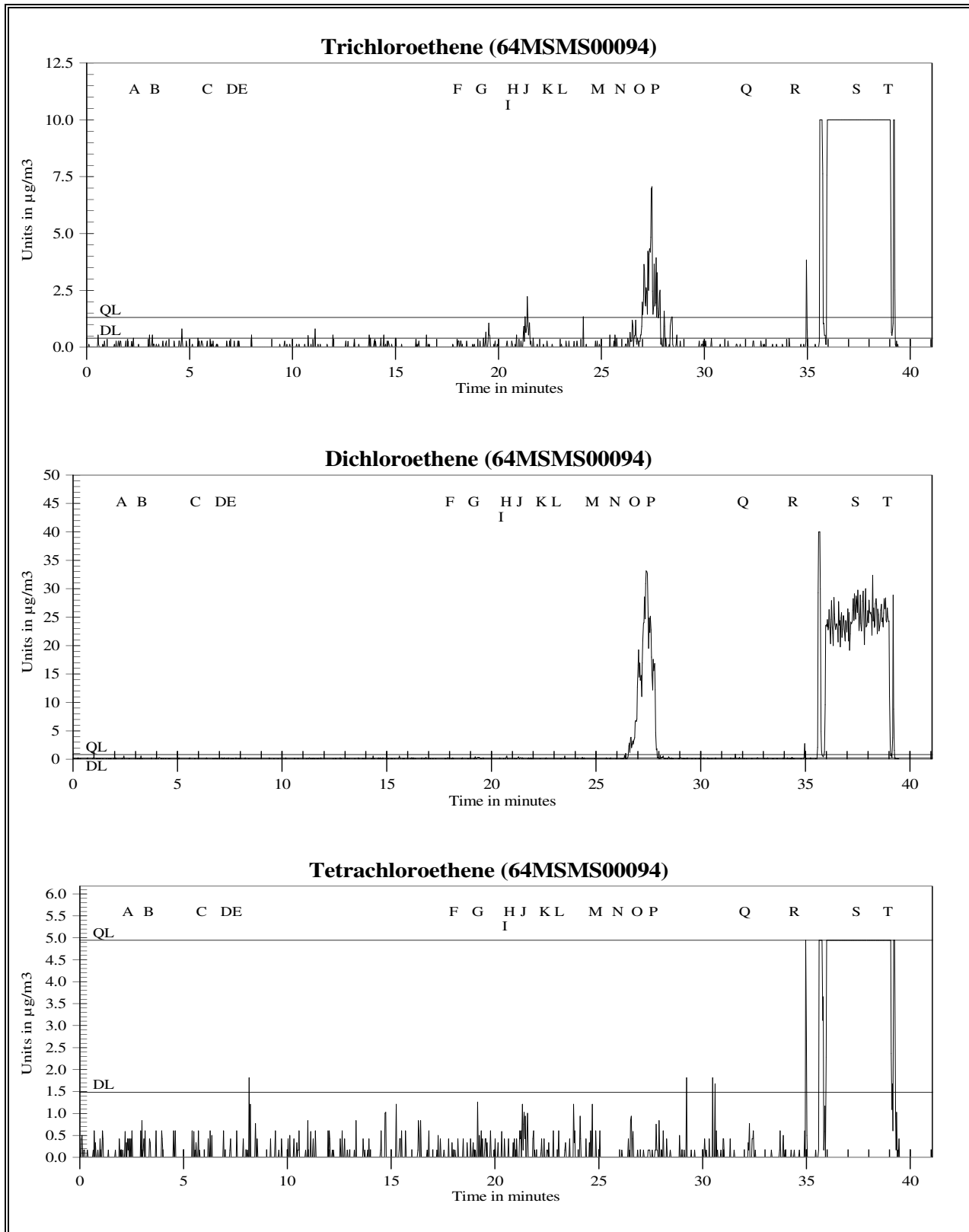


Figure 23g Equalization Basin Monitoring on Facility in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

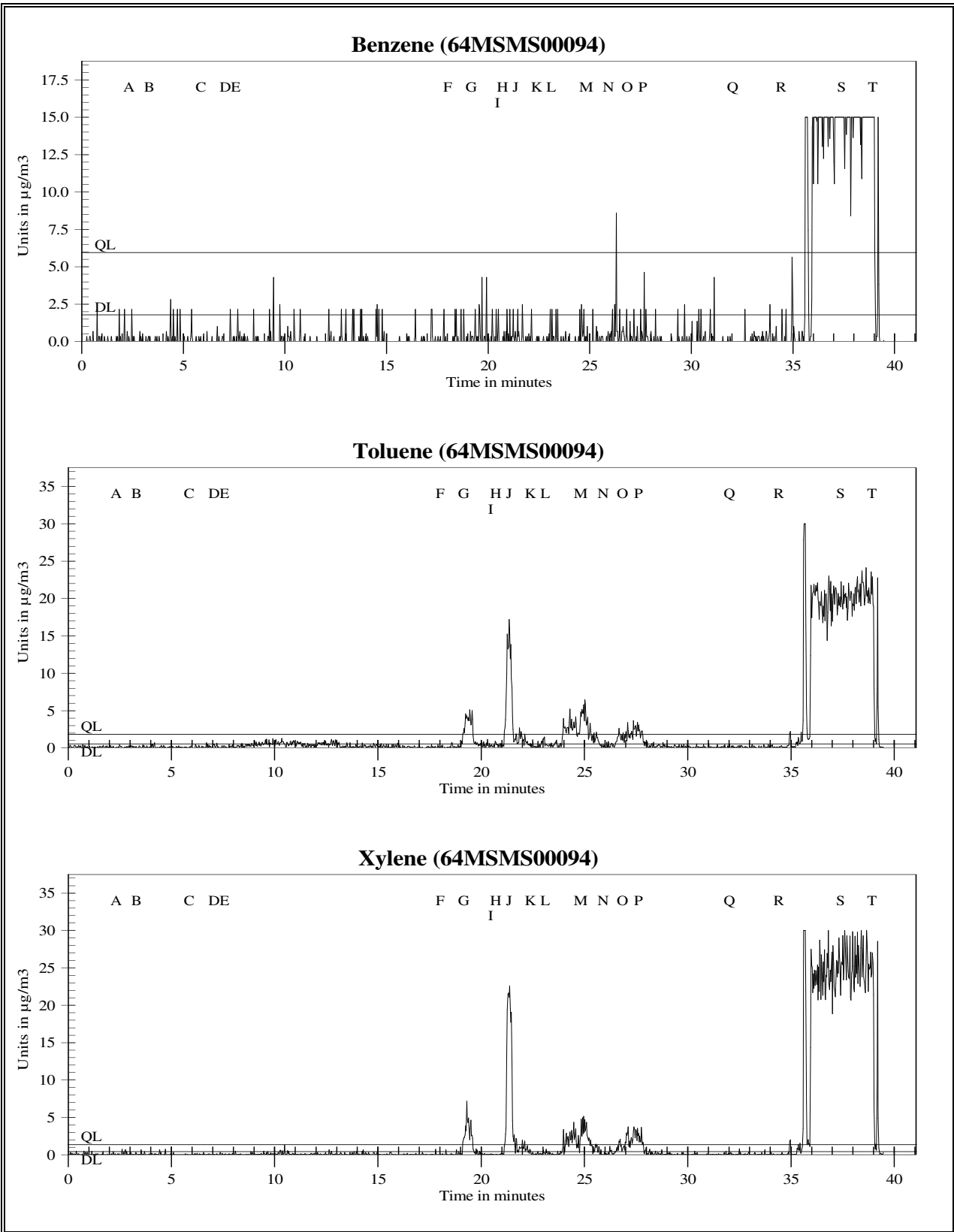


Figure 23h Equalization Basin Monitoring on Facility in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

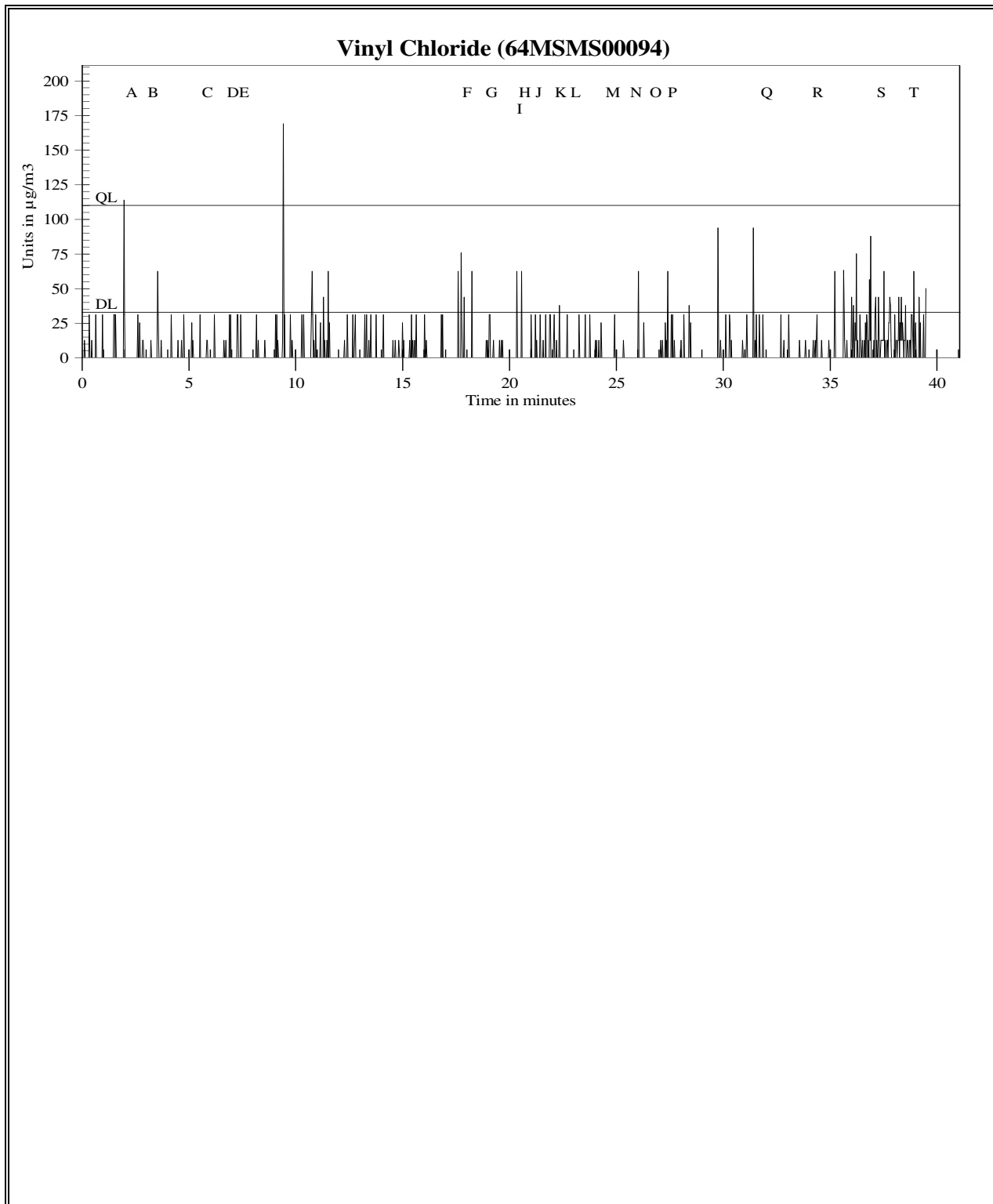


Figure 23i Equalization Basin Monitoring on Facility in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 23j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Equalization Basin Monitoring on Facility File: 64MSMS00094 Acquired on 05 May 2016 at 12:33:02								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.39	0.24	1.5	1.8	0.55	0.41	33
Quantitation Limits - QL:		1.3	0.81	4.9	6.0	1.8	1.4	110
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
C - D	Equalization (EQ) basin outflow	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
E - F	West to east traverse of the EQ basin	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
G - H	Storm drain one at east end of the EQ basin	DL=0.39	DL=0.24	DL=1.5	DL=1.8	1.5J	1.2J	DL=33.
I - J	Sewer drain at east end of the EQ basin	DL=0.39	DL=0.24	DL=1.5	DL=1.8	0.98J	0.45J	DL=33.
K - L	Abandoned pipe near the EQ basin	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
M - N	Storm drain two at east end of the EQ basin	DL=0.39	DL=0.24	DL=1.5	DL=1.8	2.8	2.2	DL=33.
O - P	Storm drain three at east end of the EQ basin	1.7	12	DL=1.5	DL=1.8	1.7J	1.7	DL=33.
Q - R	Post-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
S - T	30 mL/min spike	26	26	28	21	20	26	DL=33.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

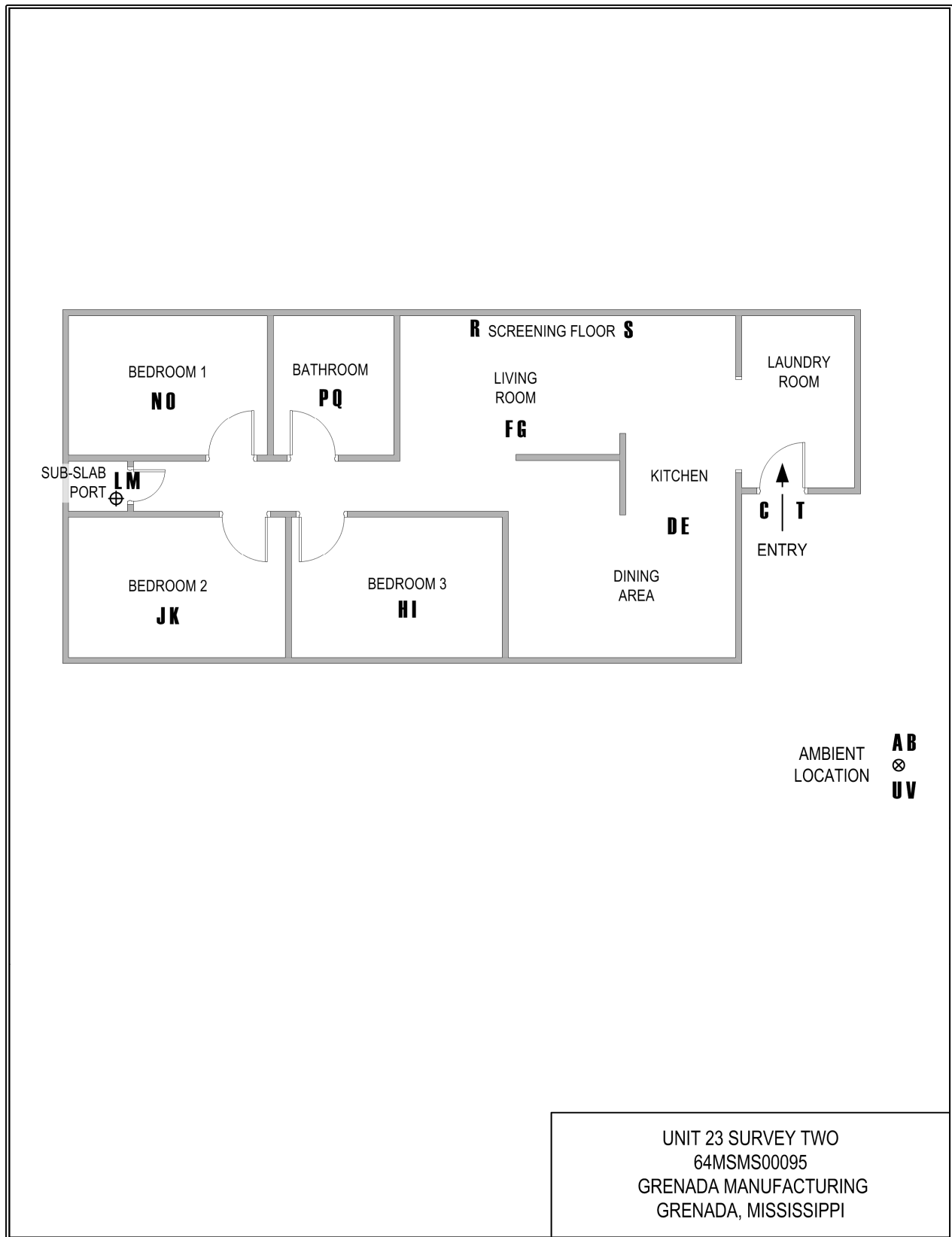


Figure 24a Unit 23 Survey Two Floor Plan, 64MS00095

Figure 24b

TAGA File Event Summary			
File: 64MSMS00095 Acquired on 05 May 2016 at 13:34:46			
Title: Unit 23 Survey Two			
Flag	Offset Time	Offset Sequence	Description
A	2.1	77	Start of the pre-entry ambient
B	3.3	118	End of the pre-entry ambient
C	5.7	203	Entering the unit
D	6.7	240	Start of the kitchen / dining area
E	7.7	275	End of the kitchen / dining area
F	8.0	285	Start of the living room
G	9.2	328	End of the living room
H	9.4	335	Start of bedroom three
I	10.4	371	End of bedroom three
J	10.7	382	Start of bedroom two
K	11.7	418	End of bedroom two
L	12.2	436	Start of the sub-slab port
M	13.2	472	End of the sub-slab port
N	13.6	488	Start of bedroom one
O	14.7	526	End of bedroom one
P	14.9	532	Start of the bathroom
Q	15.9	567	End of the bathroom
R	17.3	617	Start of the screening of floor
S	18.1	648	End of the screening of floor
T	18.7	668	Exiting the unit
U	19.2	686	Start of the post-exit ambient
V	20.6	737	End of the post-exit ambient
W	22.4	802	Start of 30 mL/min spike
X	23.5	838	End of 30 mL/min spike

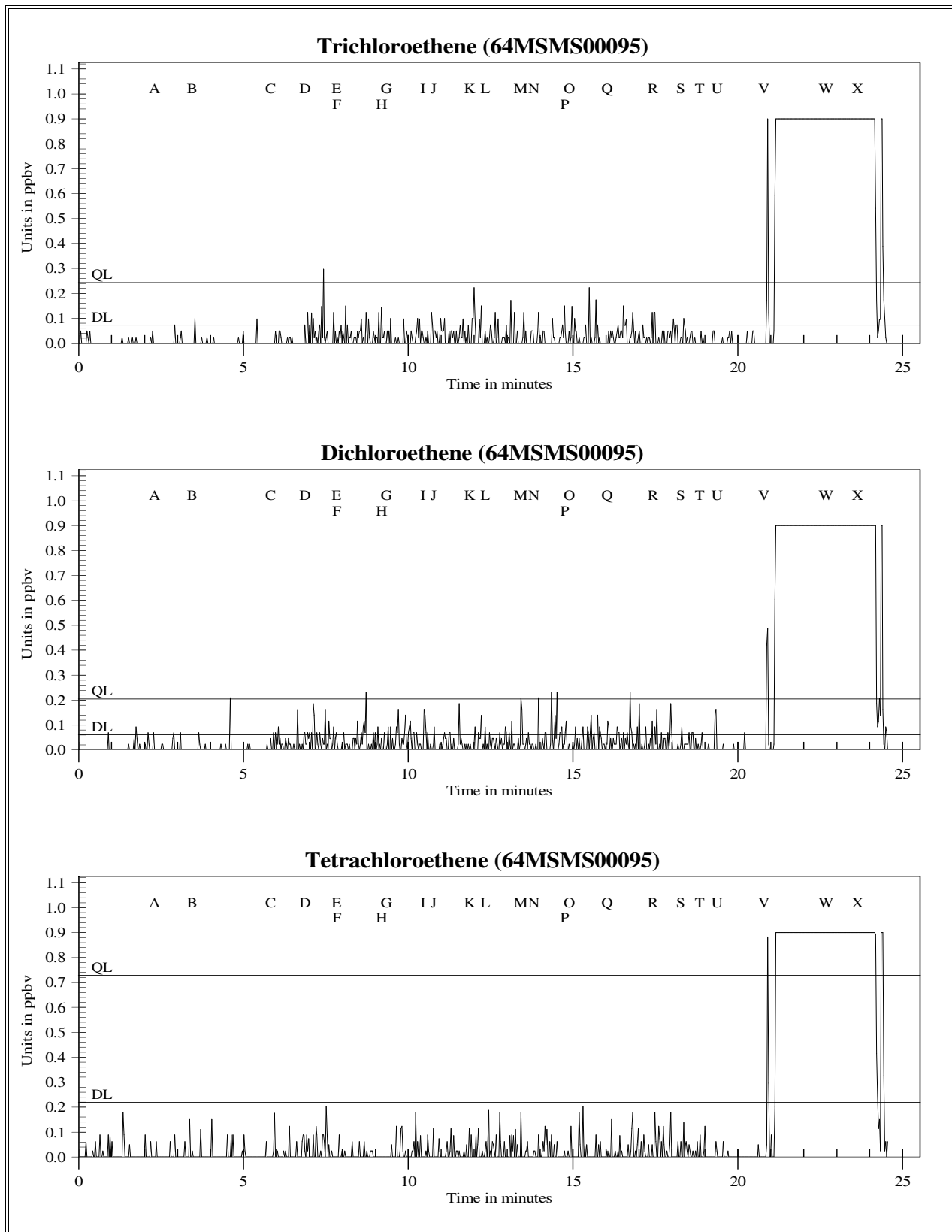


Figure 24c Unit 23 Survey Two in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

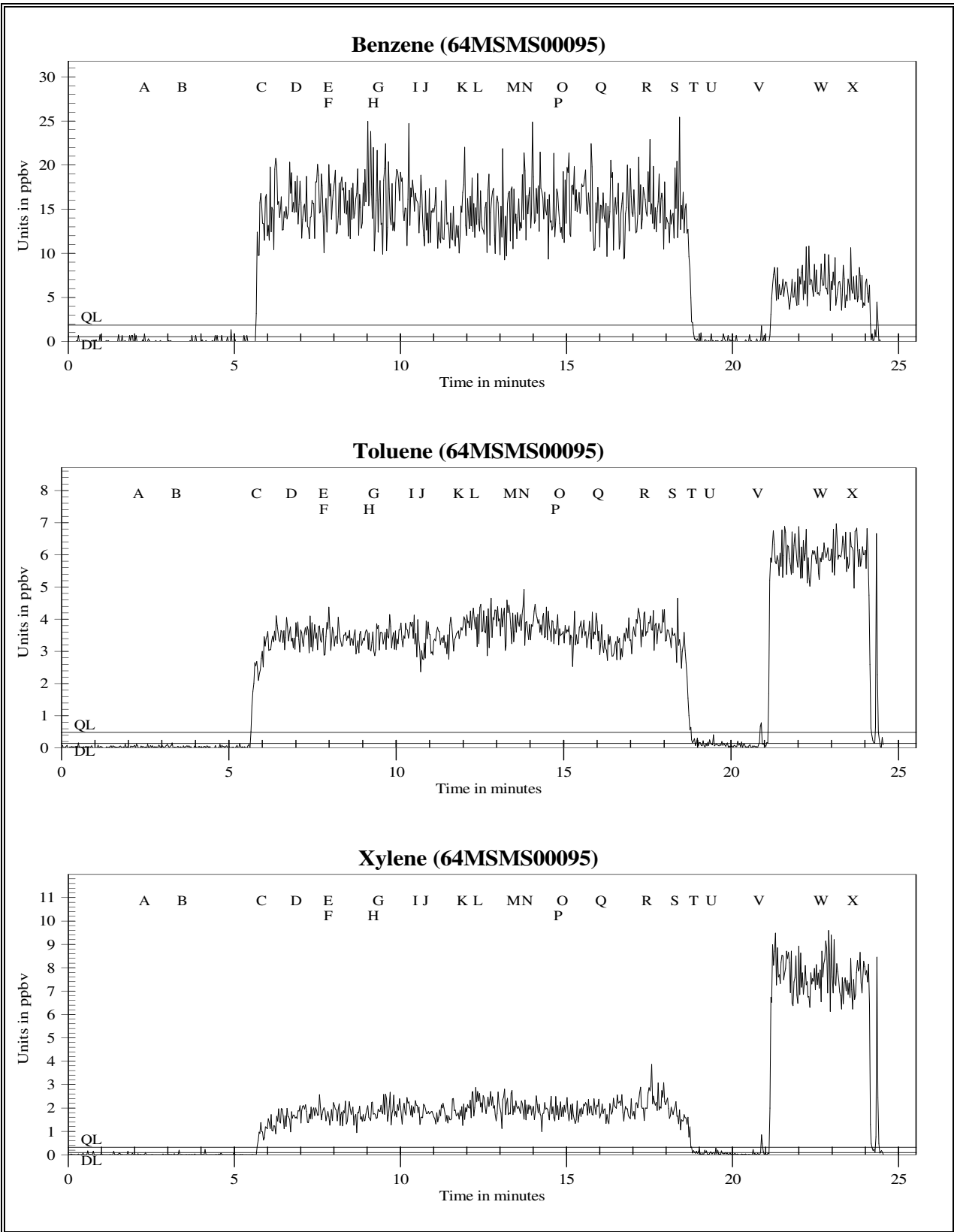


Figure 24d Unit 23 Survey Two in ppbv for Benzene, Toluene, and Xylenes

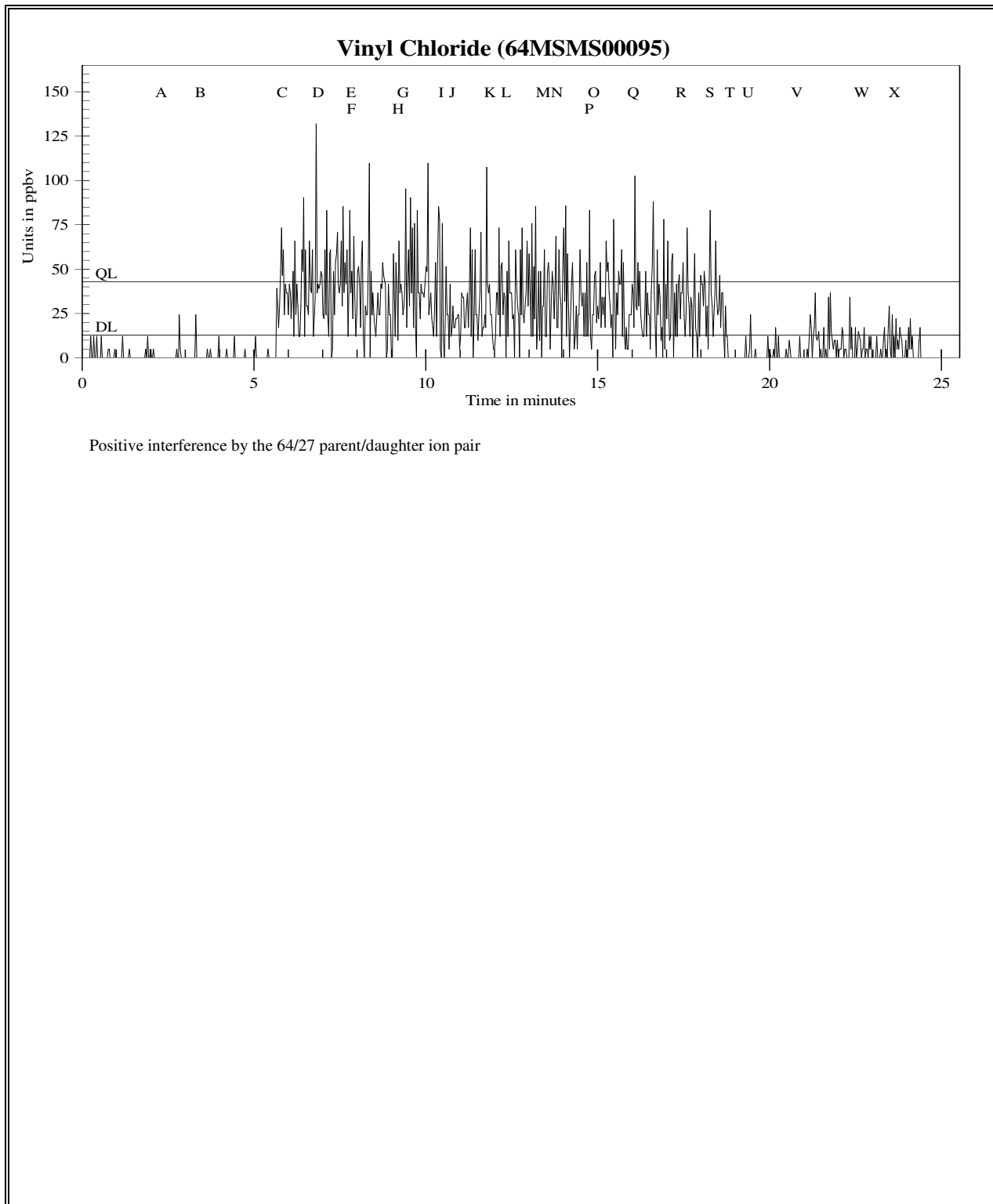


Figure 24e Unit 23 Survey Two in ppbv for Vinyl Chloride

Figure 24f

TAGA Target Compound Summary in ppbv for Unit 23 Survey Two File: 64MSMS00095 Acquired on 05 May 2016 at 13:34:46								
	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride	
Detection Limits - DL:	0.073	0.062	0.22	0.56	0.15	0.095	13	
Quantitation Limits - QL:	0.24	0.21	0.73	1.9	0.48	0.32	43	
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
D - E	Kitchen / dining area	DL=0.073	DL=0.062	DL=0.22	16	3.5	1.8	44I
F - G	Living room	DL=0.073	DL=0.062	DL=0.22	16	3.4	1.8	32.JI
H - I	Bedroom three	DL=0.073	DL=0.062	DL=0.22	16	3.5	2.0	43.JI
J - K	Bedroom two	DL=0.073	DL=0.062	DL=0.22	13	3.3	1.8	26.JI
L - M	Sub-slab port	DL=0.073	DL=0.062	DL=0.22	14	3.9	2.2	37.JI
N - O	Bedroom one	DL=0.073	DL=0.062	DL=0.22	16	3.9	1.9	33.JI
P - Q	Bathroom	DL=0.073	DL=0.062	DL=0.22	16	3.5	1.9	32.JI
R - S	Screening of floor	DL=0.073	DL=0.062	DL=0.22	15	3.7	2.3	31.JI
U - V	Post-exit ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
W - X	30 mL/min spike	5.0	5.9	4.1	6.4	6.0	7.7	DL=13.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

I = Positive interference by the 64/27 parent/daughter ion pair

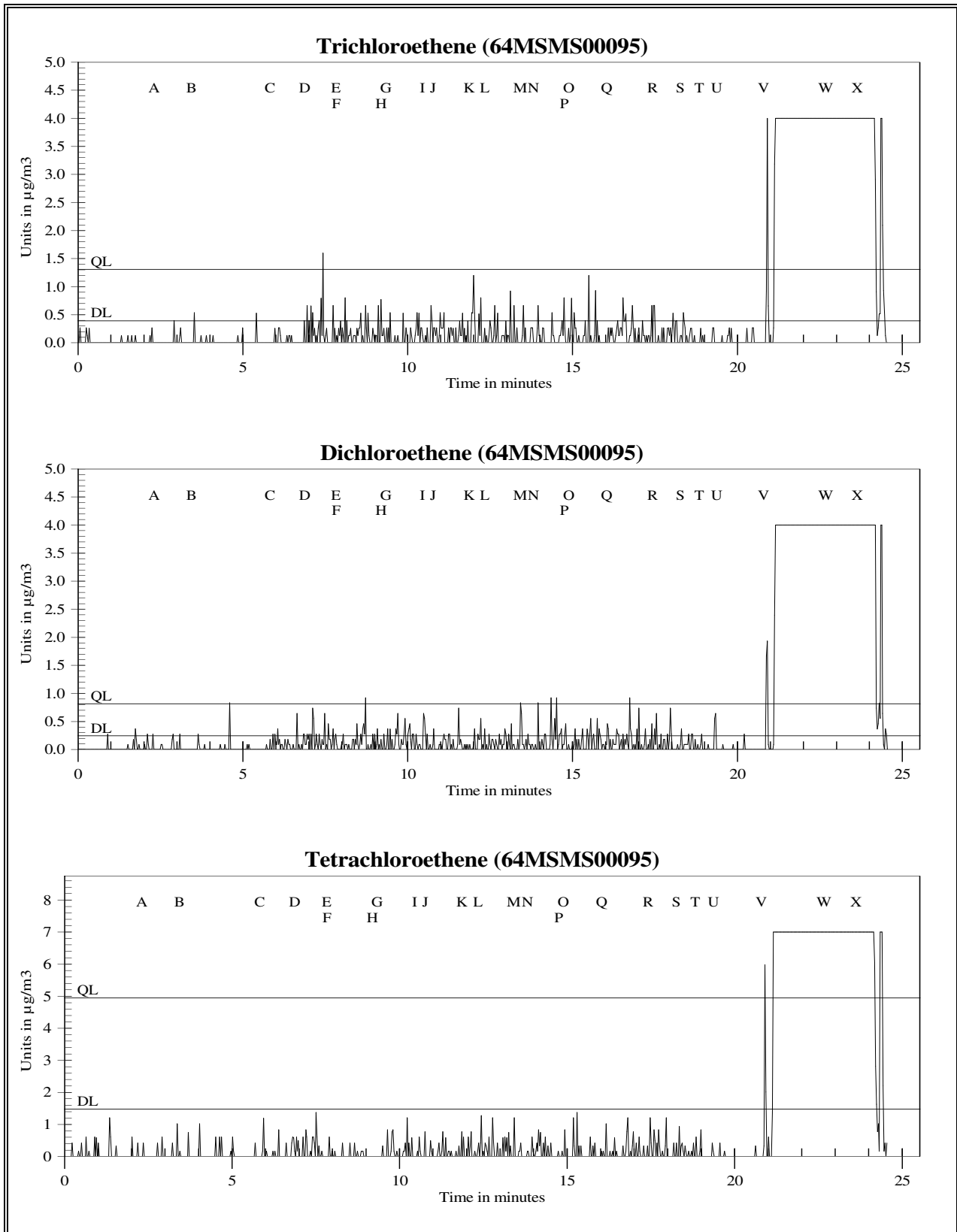


Figure 24g Unit 23 Survey Two in µg/m³ for Trichloroethene, Dichloroethene, and Tetrachloroethene

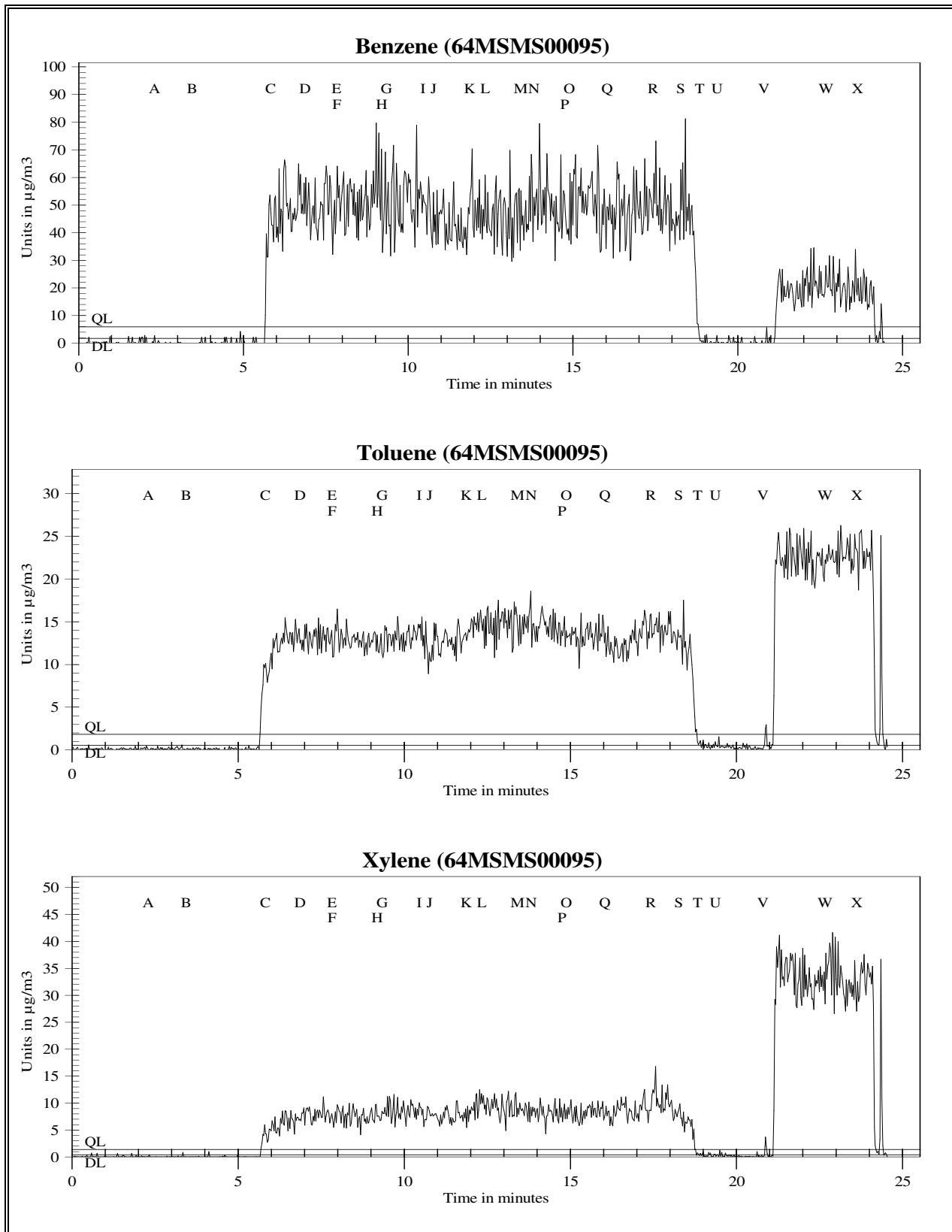


Figure 24h Unit 23 Survey Two in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

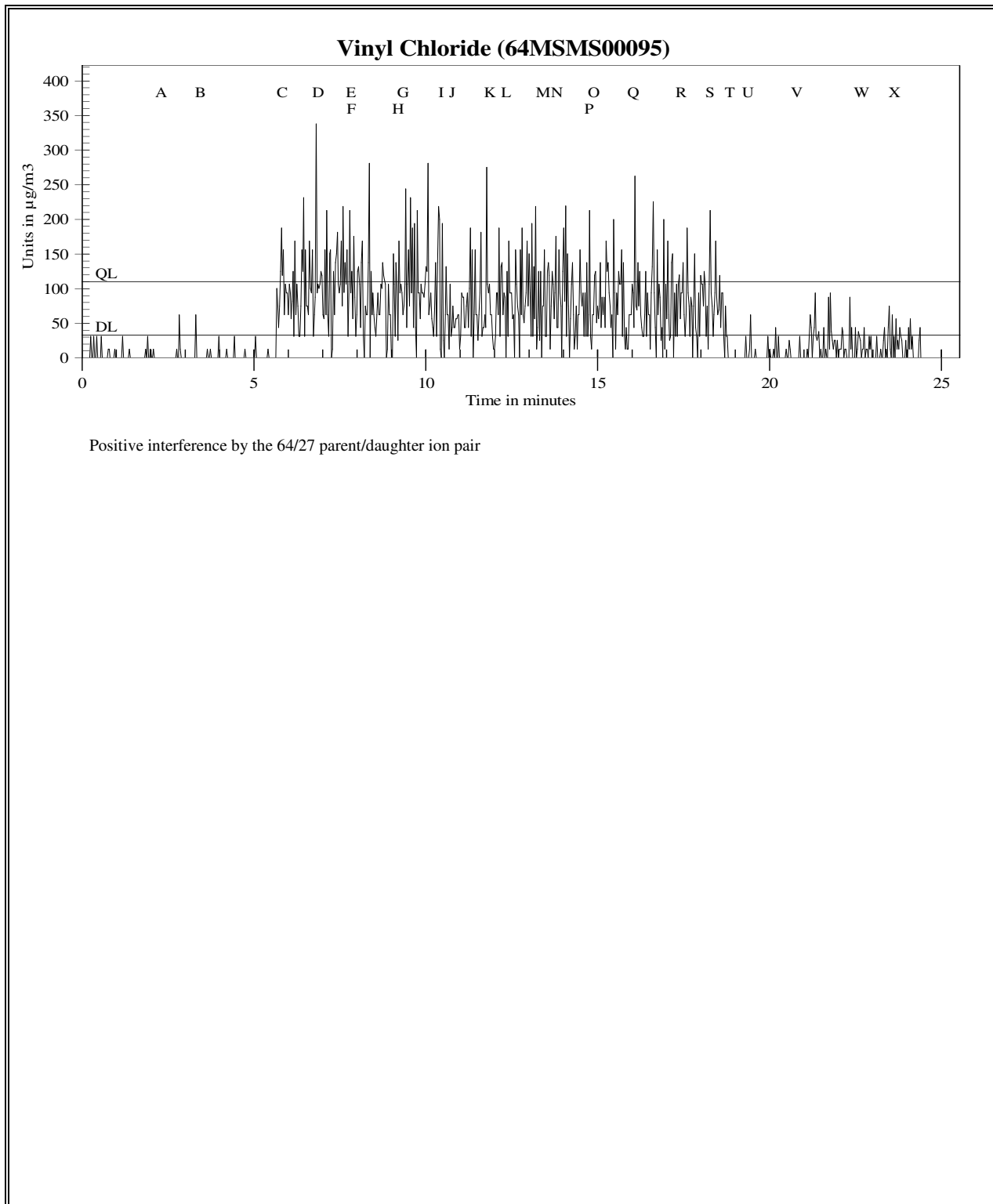


Figure 24i Unit 23 Survey Two in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 24j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 23 Survey Two File: 64MSMS00095 Acquired on 05 May 2016 at 13:34:46								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.39	0.24	1.5	1.8	0.55	0.41	33
Quantitation Limits - QL:		1.3	0.81	4.9	6.0	1.8	1.4	110
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
D - E	Kitchen / dining area	DL=0.39	DL=0.24	DL=1.5	50	13	7.7	110I
F - G	Living room	DL=0.39	DL=0.24	DL=1.5	52	13	7.6	82.JI
H - I	Bedroom three	DL=0.39	DL=0.24	DL=1.5	52	13	8.5	110JI
J - K	Bedroom two	DL=0.39	DL=0.24	DL=1.5	43	12	7.8	68.JI
L - M	Sub-slab port	DL=0.39	DL=0.24	DL=1.5	45	15	9.5	94.JI
N - O	Bedroom one	DL=0.39	DL=0.24	DL=1.5	50	15	8.3	84.JI
P - Q	Bathroom	DL=0.39	DL=0.24	DL=1.5	51	13	8.2	82.JI
R - S	Screening of floor	DL=0.39	DL=0.24	DL=1.5	49	14	10	80.JI
U - V	Post-exit ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
W - X	30 mL/min spike	27	23	28	20	23	33	DL=33.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

I = Positive interference by the 64/27 parent/daughter ion pair

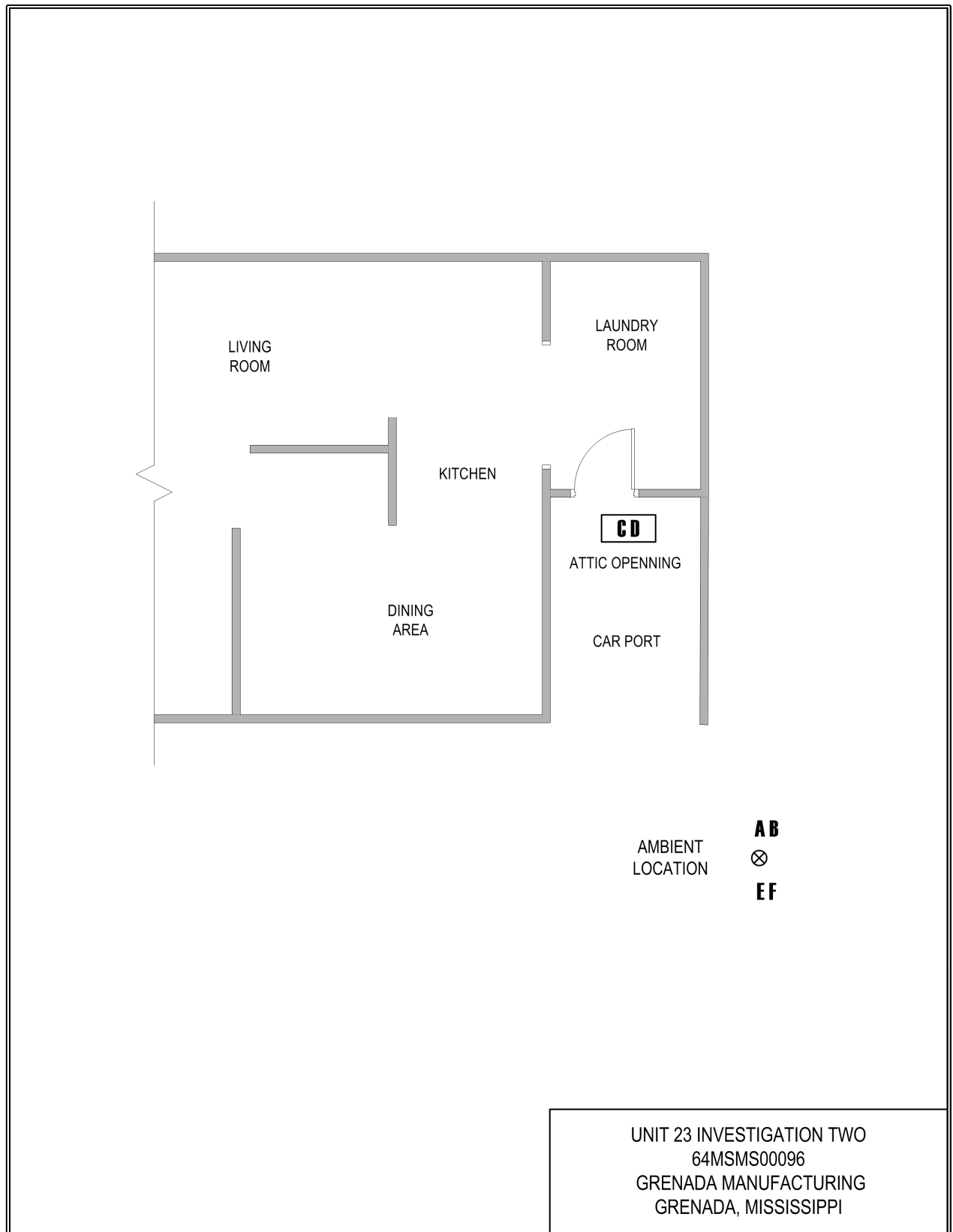


Figure 25a Unit 23 Investigation Two Floor Plan, 64MSMS00096

Figure 25b

TAGA File Event Summary File: 64MSMS00096 Acquired on 05 May 2016 at 14:00:59 Title: Unit 23 Investigation Two			
Flag	Offset Time	Offset Sequence	Description
A	2.5	91	Start of the pre-entry ambient
B	4.0	142	End of the pre-entry ambient
C	5.4	195	Start of the attic through car port roof
D	6.7	240	End of the attic through car port roof
E	7.9	283	Start of the post-exit ambient
F	8.9	320	End of the post-exit ambient
G	10.9	389	Start of 30 mL/min spike
H	12.3	439	End of 30 mL/min spike

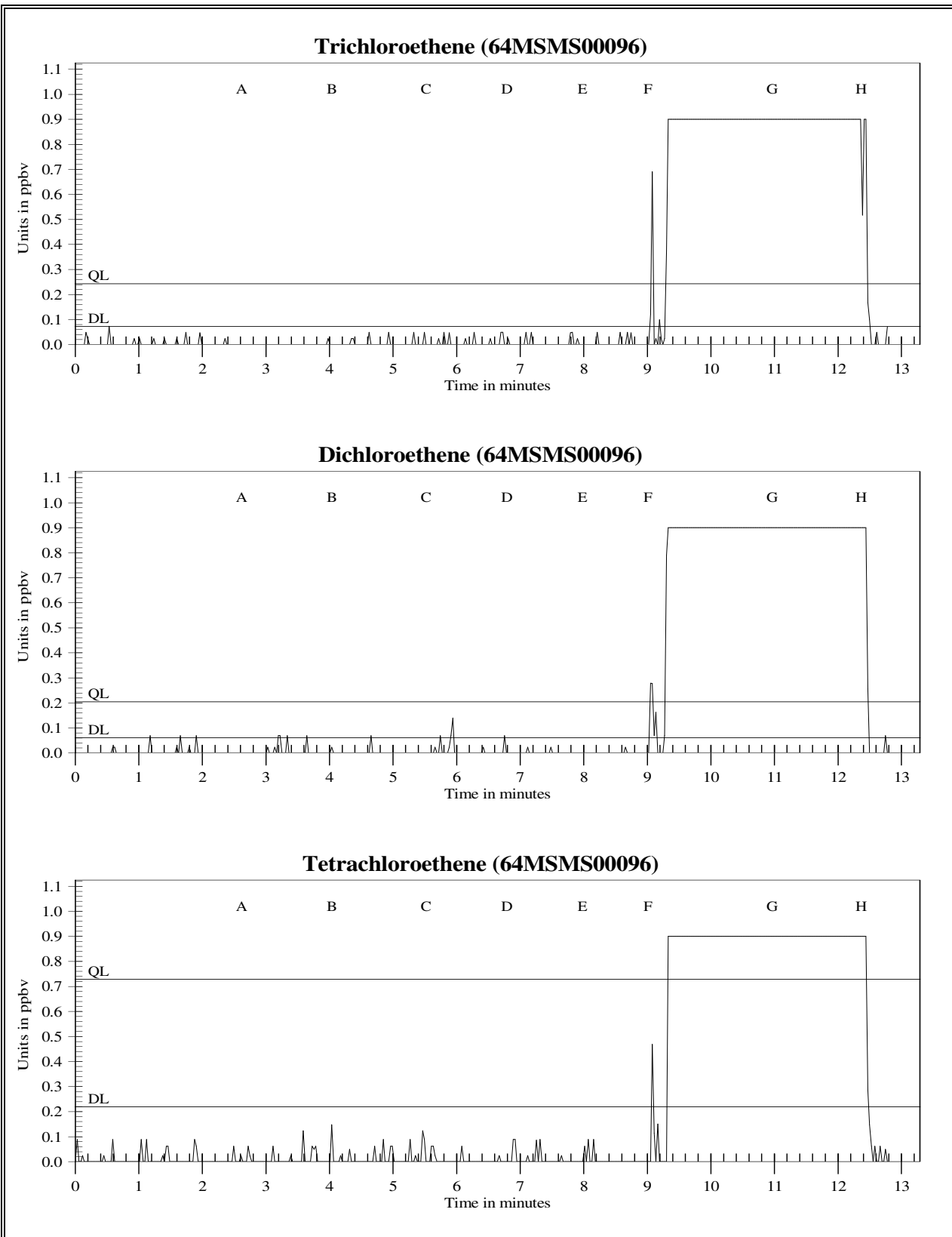


Figure 25c Unit 23 Investigation Two in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

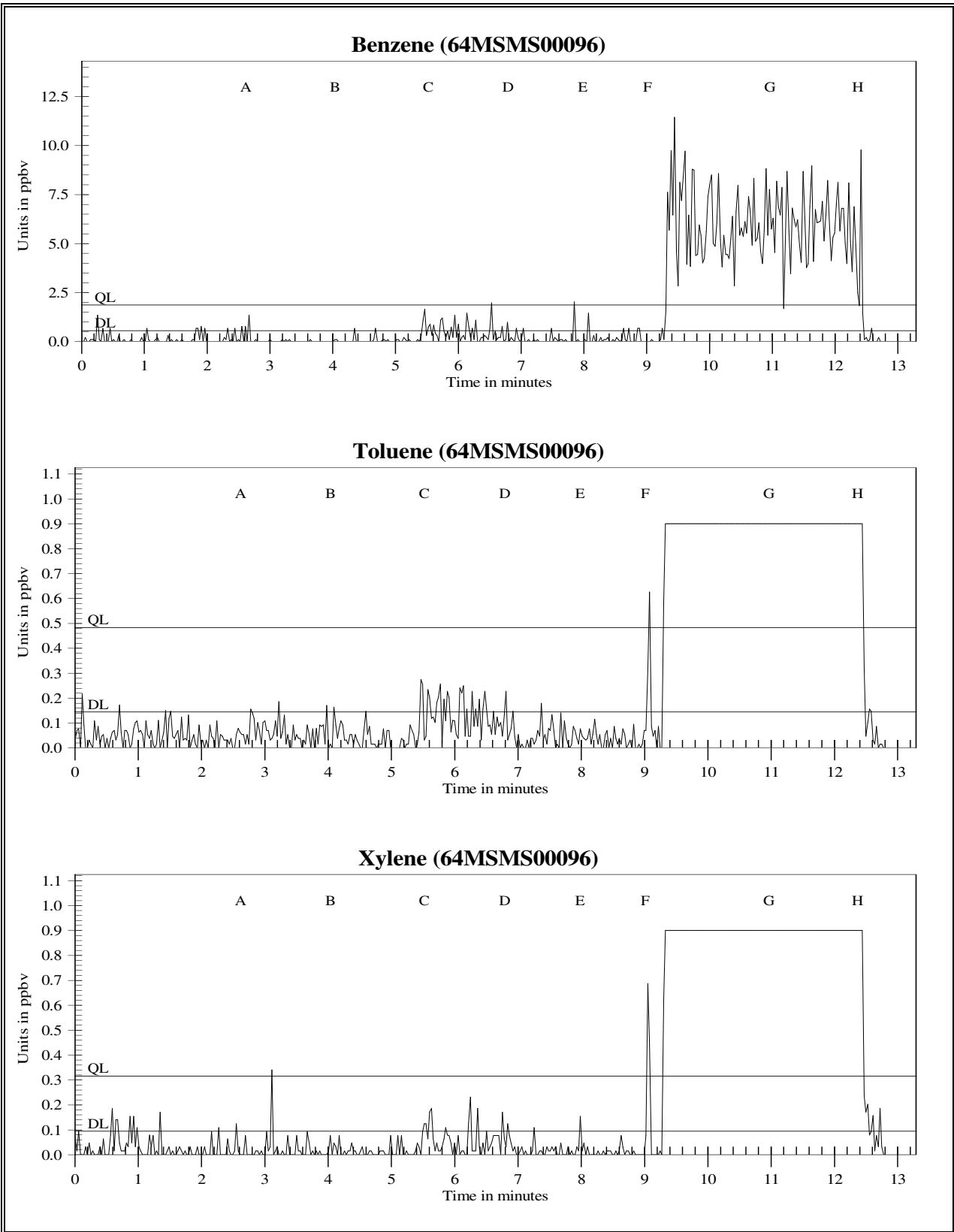


Figure 25d Unit 23 Investigation Two in ppbv for Benzene, Toluene, and Xylenes

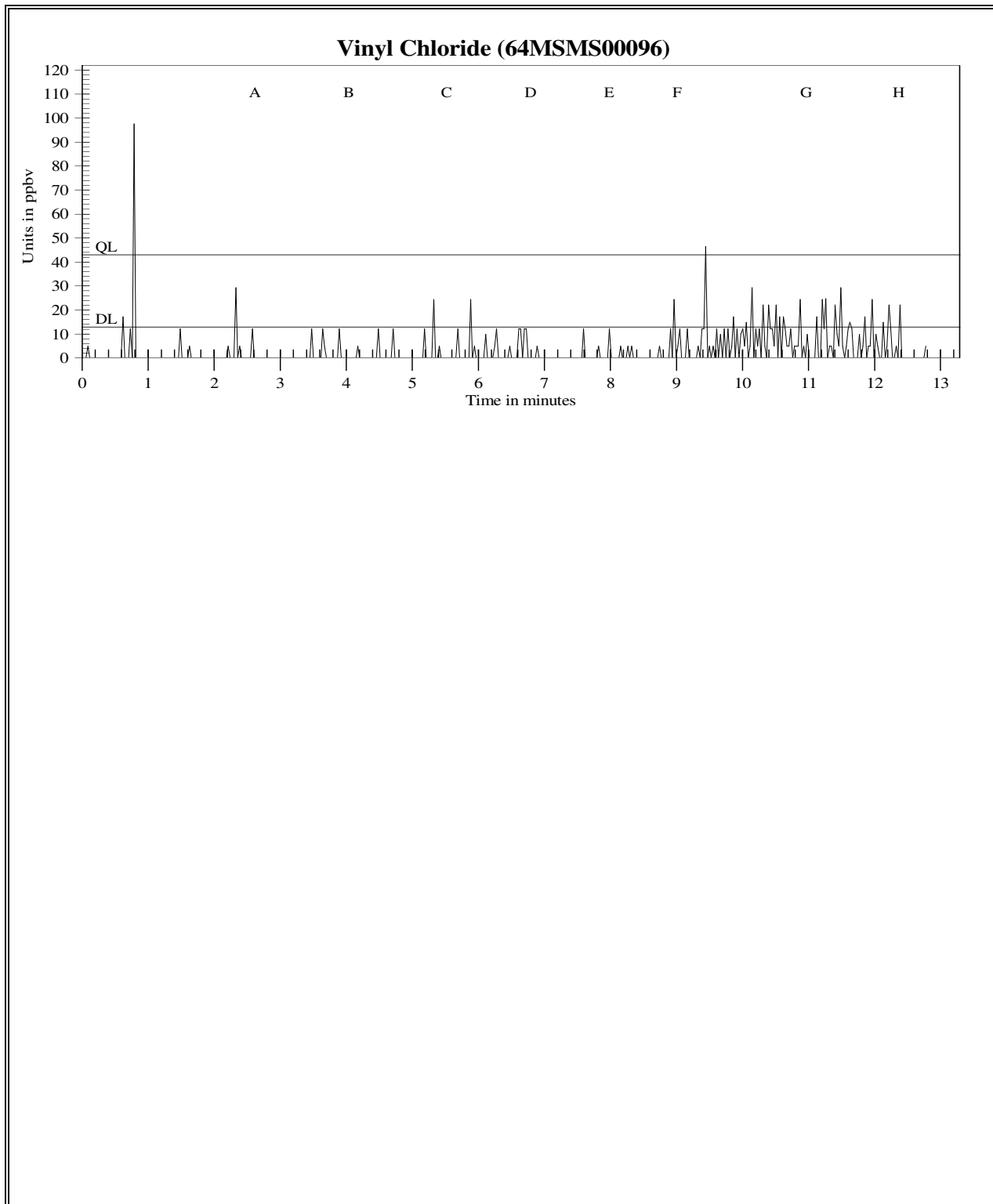


Figure 25e Unit 23 Investigation Two in ppbv for Vinyl Chloride

Figure 25f

TAGA Target Compound Summary in ppbv for Unit 23 Investigation Two File: 64MSMS00096 Acquired on 05 May 2016 at 14:00:59								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.073	0.062	0.22	0.56	0.15	0.095	13
Quantitation Limits - QL:		0.24	0.21	0.73	1.9	0.48	0.32	43
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
C - D	Attic through car port roof	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
E - F	Post-exit ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
G - H	30 mL/min spike	5.0	5.7	3.8	6.0	5.5	6.7	DL=13.

Concentrations are given in parts per billion by volume (ppbv)

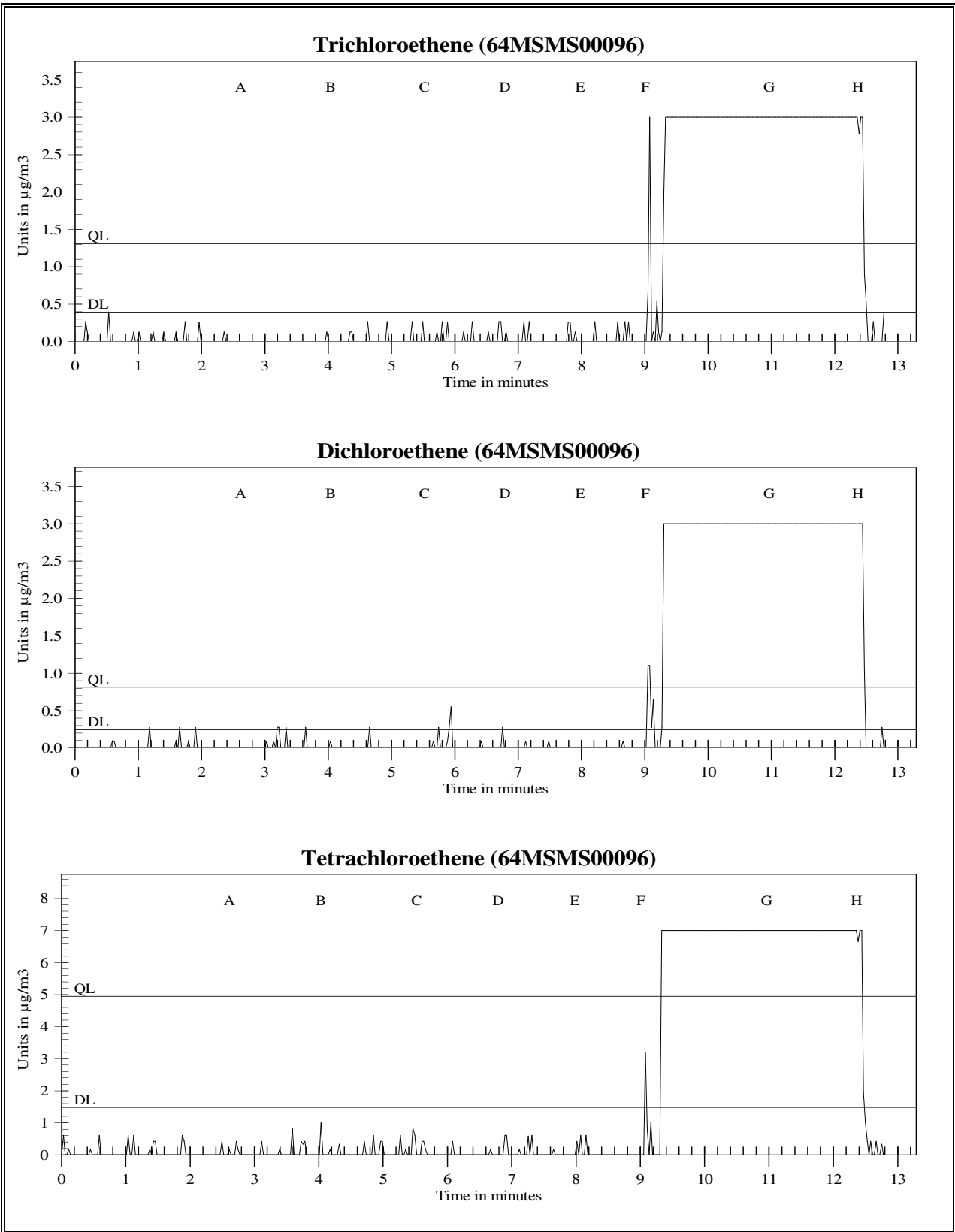


Figure 25g Unit 23 Investigation Two in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

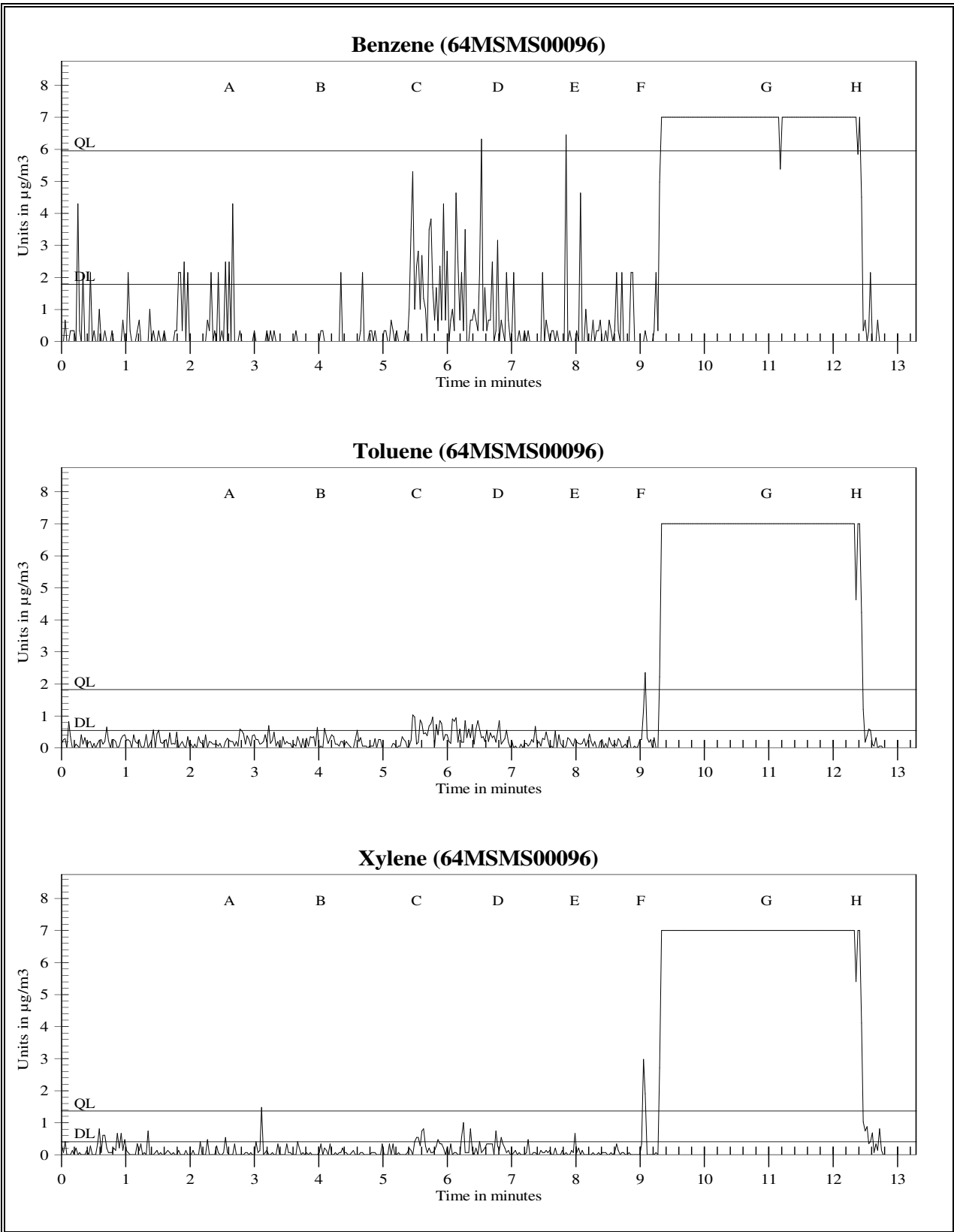


Figure 25h Unit 23 Investigation Two in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

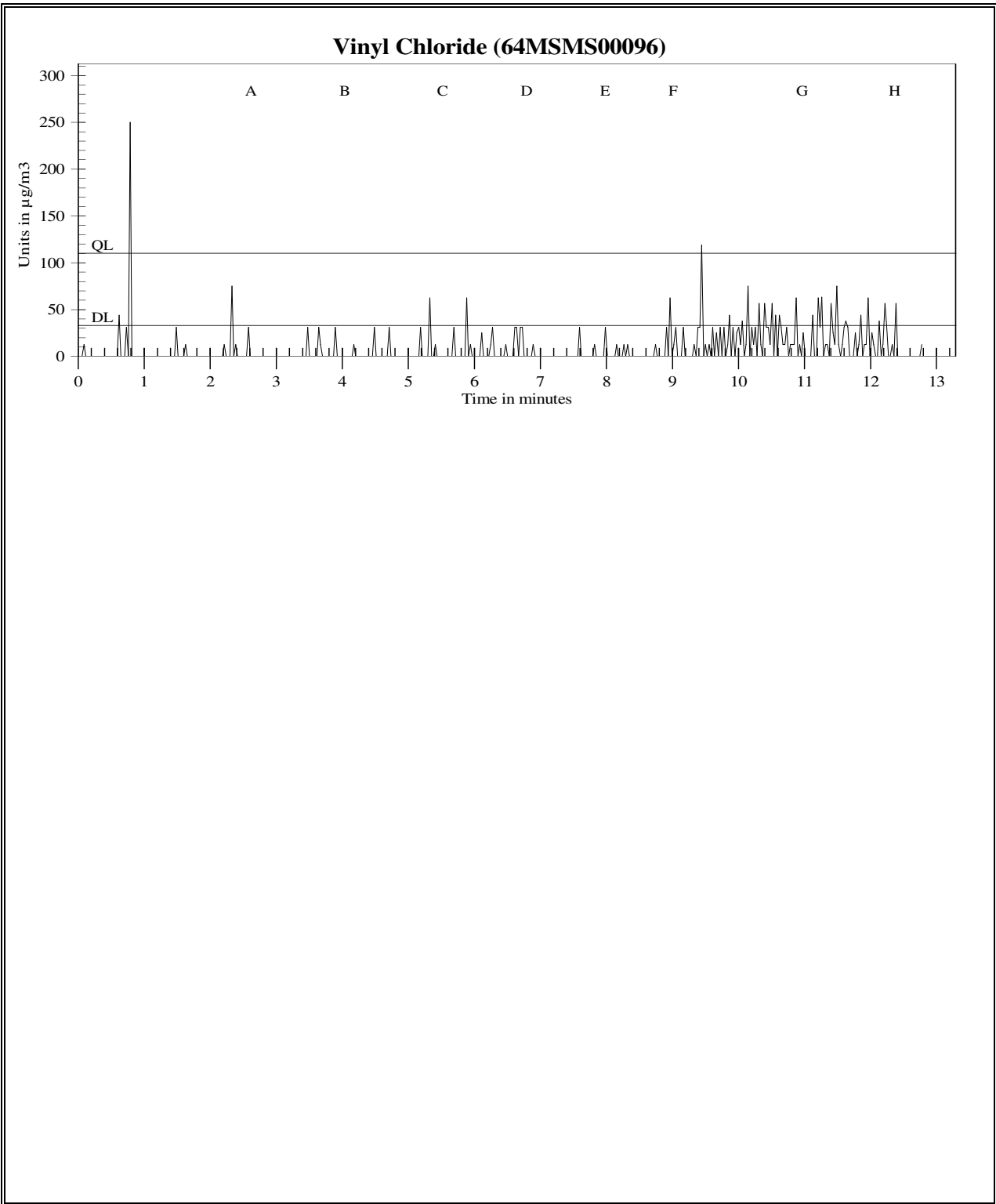


Figure 25i Unit 23 Investigation Two in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 25j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Unit 23 Investigation Two File: 64MSMS00096 Acquired on 05 May 2016 at 14:00:59								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.39	0.24	1.5	1.8	0.55	0.41	33
Quantitation Limits - QL:		1.3	0.81	4.9	6.0	1.8	1.4	110
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-entry ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
C - D	Attic through car port roof	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
E - F	Post-exit ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
G - H	30 mL/min spike	27	22	26	19	21	29	DL=33.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)



Figure 26a West End of Railroad Ditch by Quarry Road Investigation Area Map, 64MSMS00097

Figure 26b

TAGA File Event Summary			
File: 64MSMS00097 Acquired on 05 May 2016 at 14:43:41			
Title: West End of Railroad Ditch by Quarry Road Investigation			
Flag	Offset Time	Offset Sequence	Description
A	2.4	85	Start of the pre-run ambient
B	4.9	176	End of the pre-run ambient
C	5.9	211	Start of the west to east traverse of railroad ditch south of tracks
D	19.1	683	End of the west to east traverse of railroad ditch south of tracks
E	21.3	760	Start of the well purge water
F	21.9	782	End of the well purge water
G	24.5	876	Start of the post-run ambient
H	25.6	913	End of the post-run ambient
I	27.4	978	Start of 30 mL/min spike
J	28.4	1014	End of 30 mL/min spike

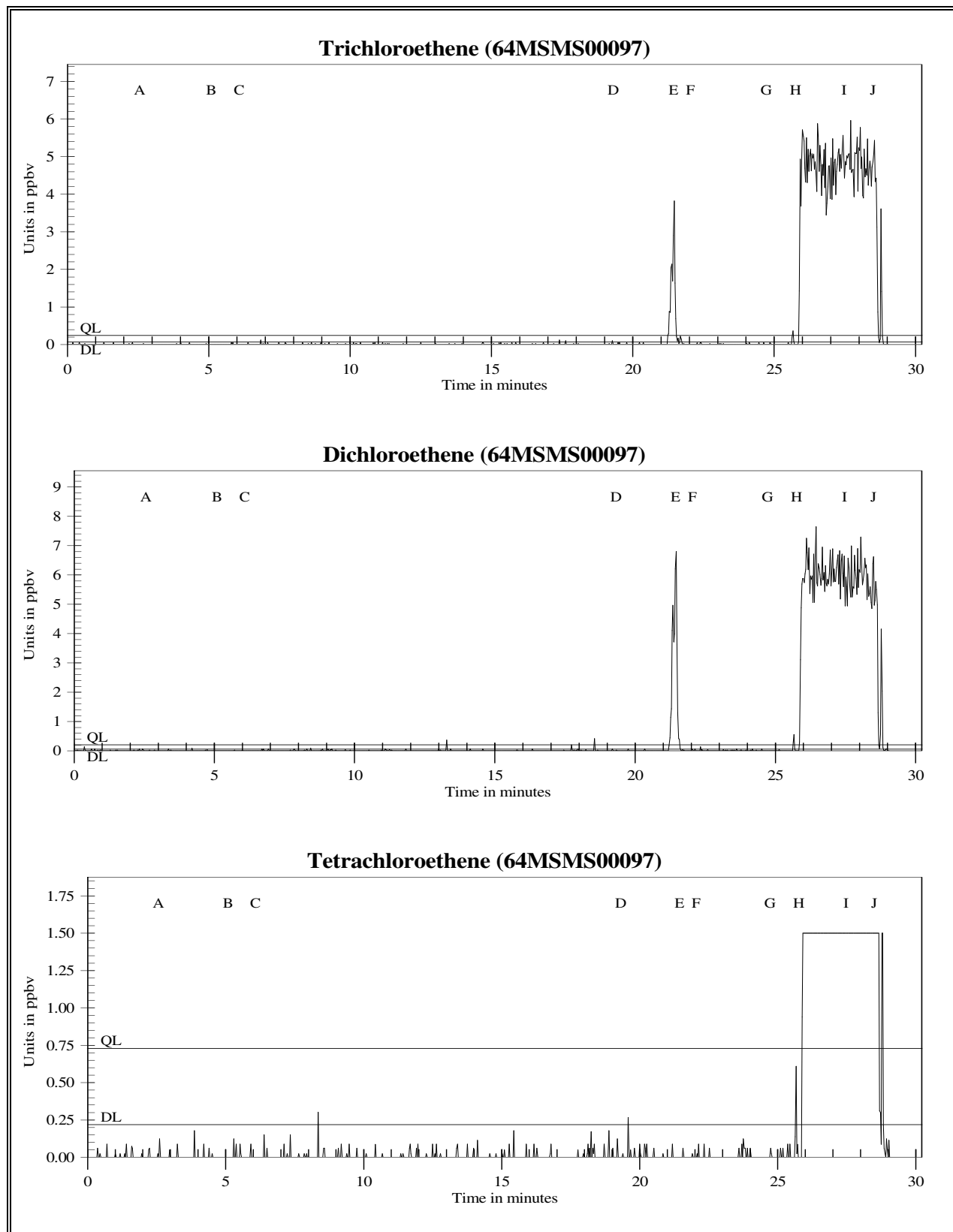


Figure 26c West End of Railroad Ditch by Quarry Road Investigation in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

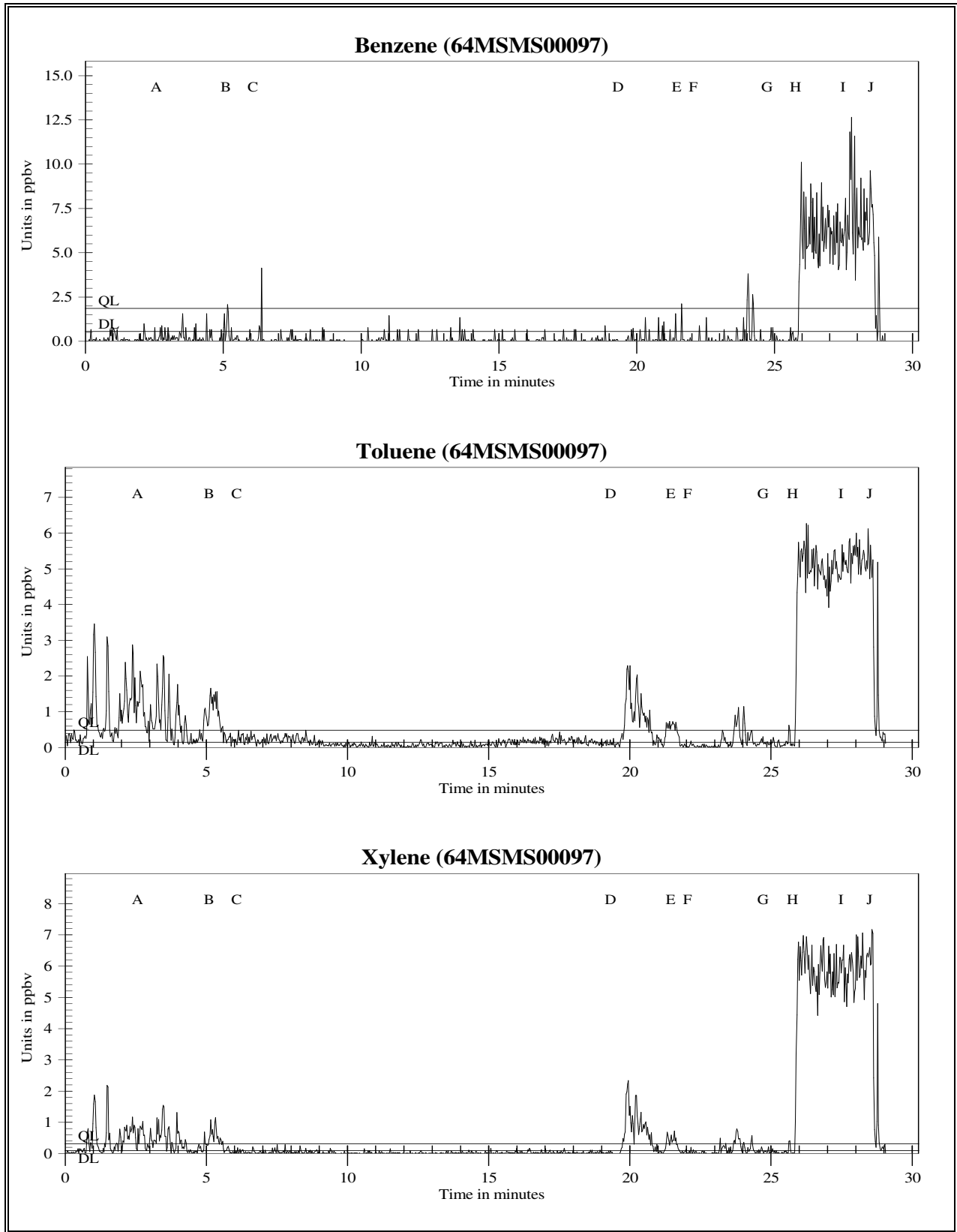


Figure 26d West End of Railroad Ditch by Quarry Road Investigation in ppbv for Benzene, Toluene, and Xylenes

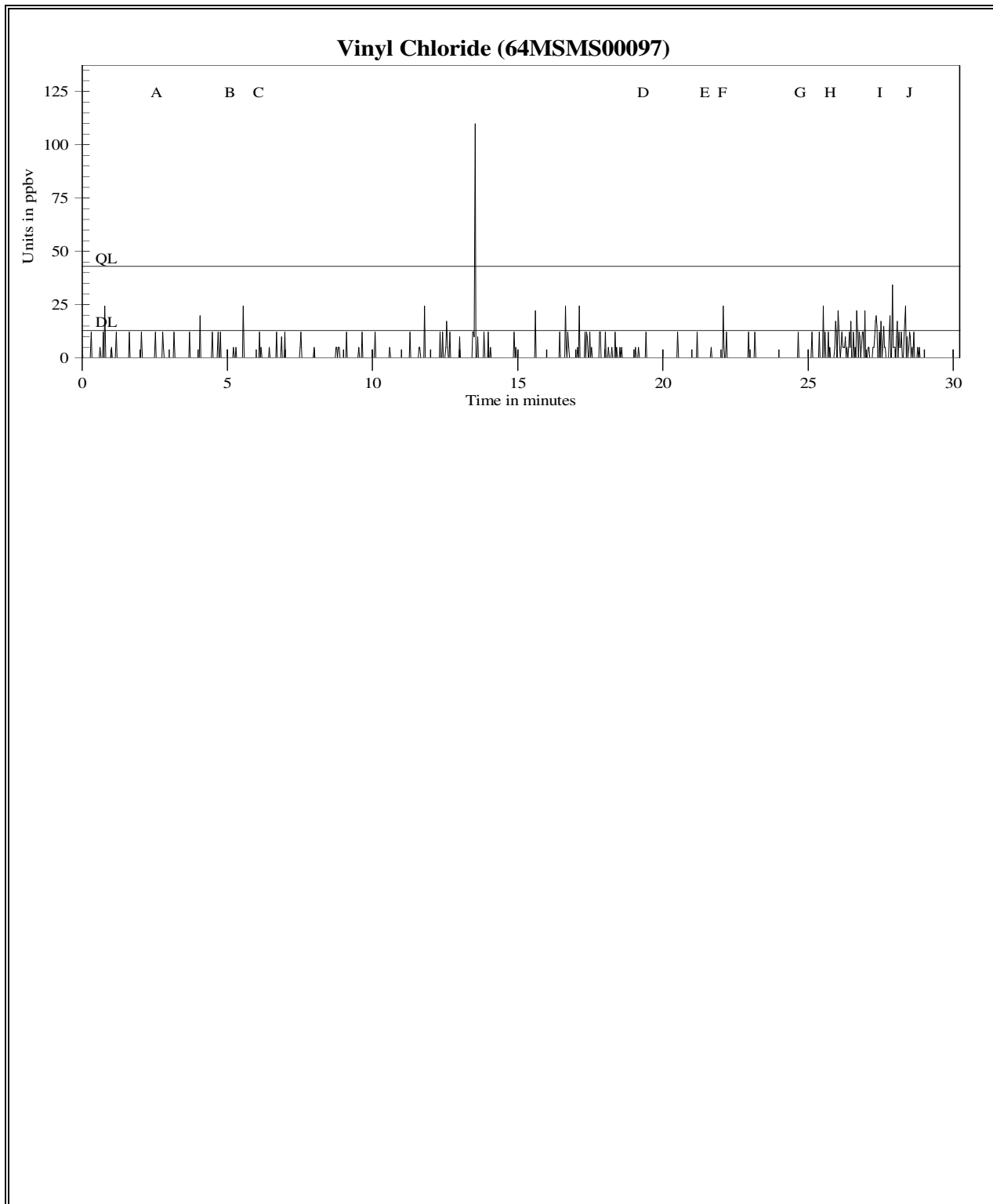


Figure 26e West End of Railroad Ditch by Quarry Road Investigation in ppbv for Vinyl Chloride

Figure 26f

TAGA Target Compound Summary in ppbv for West End of Railroad Ditch by Quarry Road Investigation File: 64MSMS00097 Acquired on 05 May 2016 at 14:43:41								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.073	0.062	0.22	0.56	0.15	0.095	13
Quantitation Limits - QL:		0.24	0.21	0.73	1.9	0.48	0.32	43
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	0.81	0.42	DL=13.
C - D	West to east traverse of railroad ditch south of tracks	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
E - F	Well purge water	0.78	1.7	DL=0.22	DL=0.56	0.45J	0.32	DL=13.
G - H	Post-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
I - J	30 mL/min spike	4.9	5.9	4.0	6.8	5.2	5.9	DL=13.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

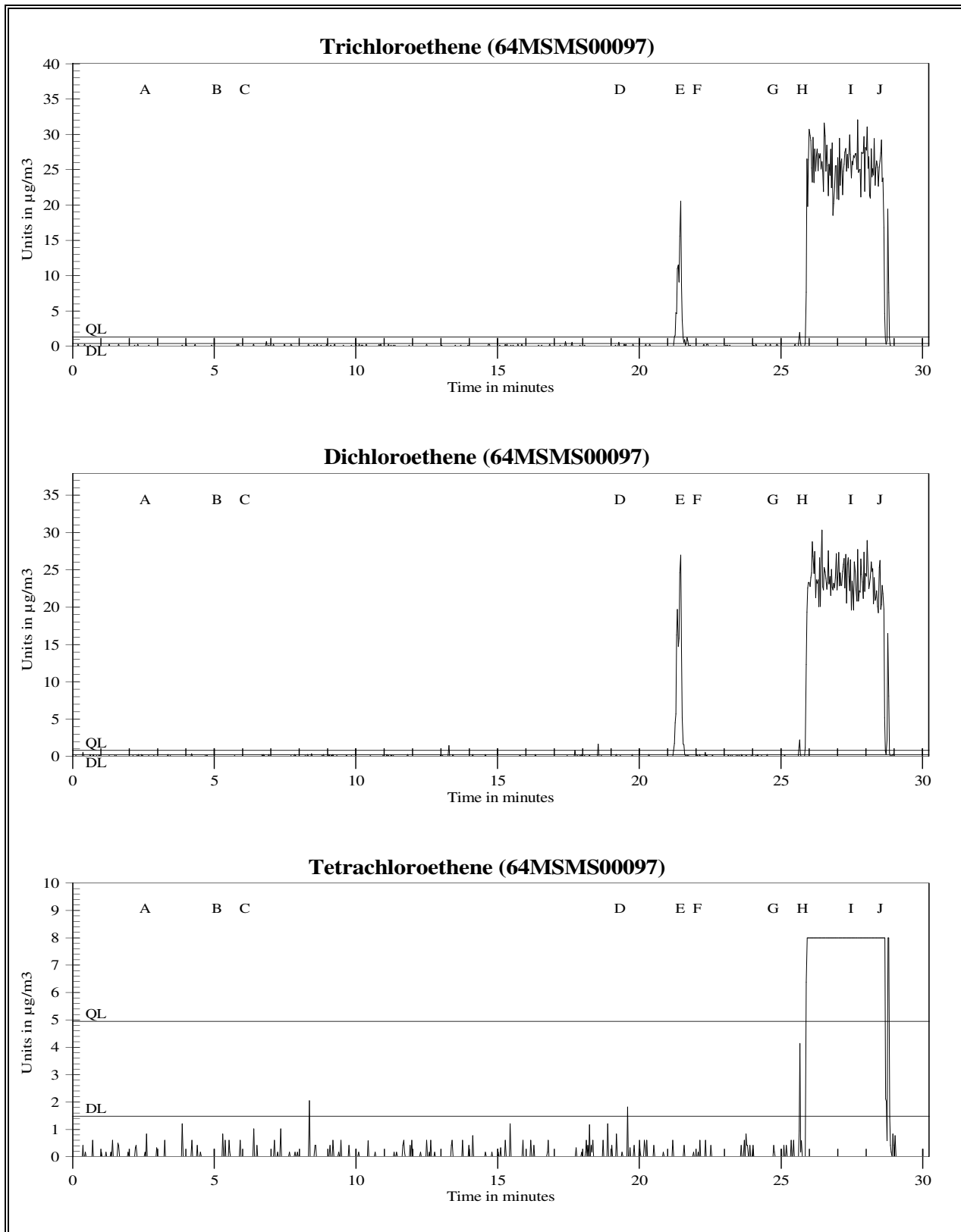


Figure 26g West End of Railroad Ditch by Quarry Road Investigation in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

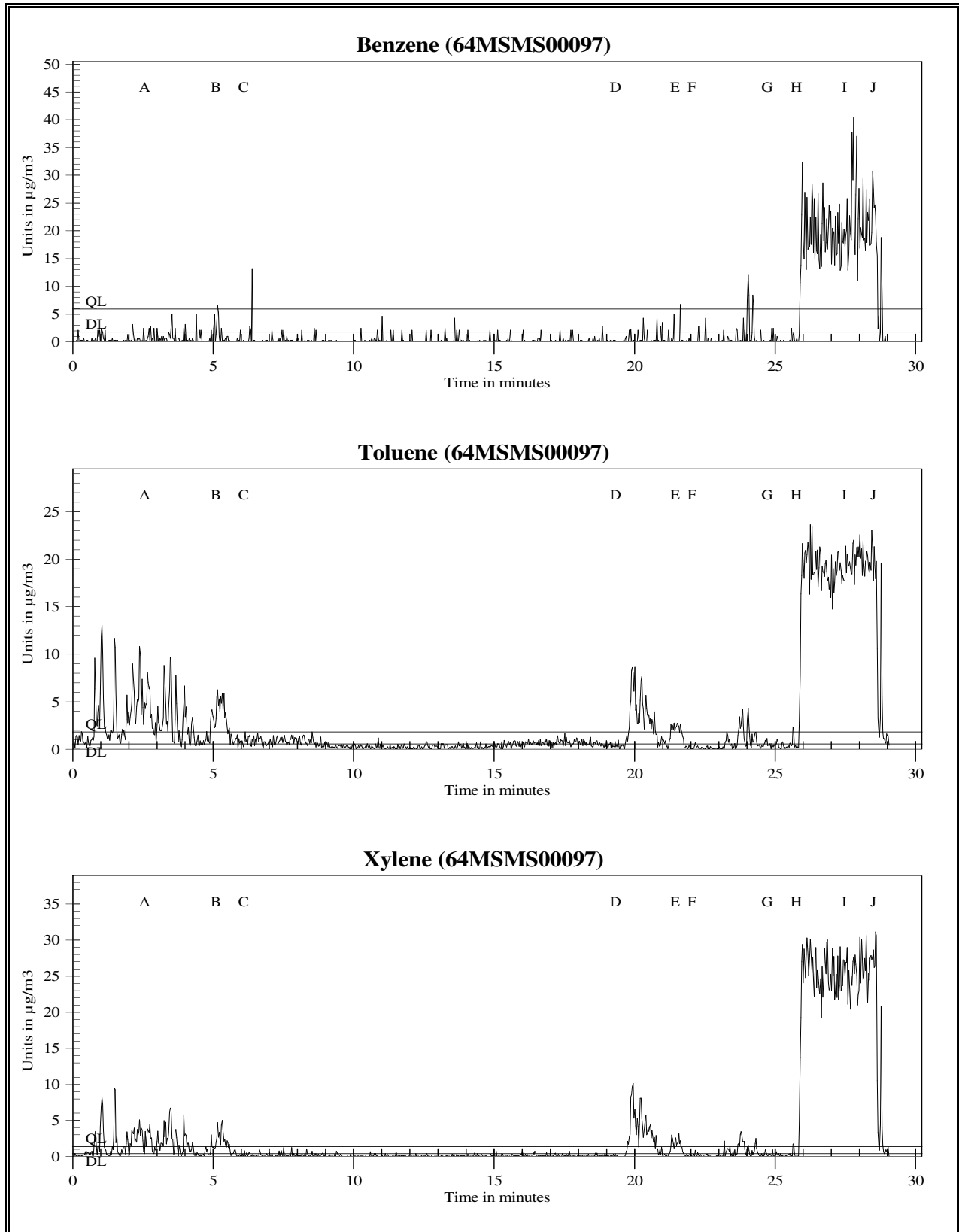


Figure 26h West End of Railroad Ditch by Quarry Road Investigation in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

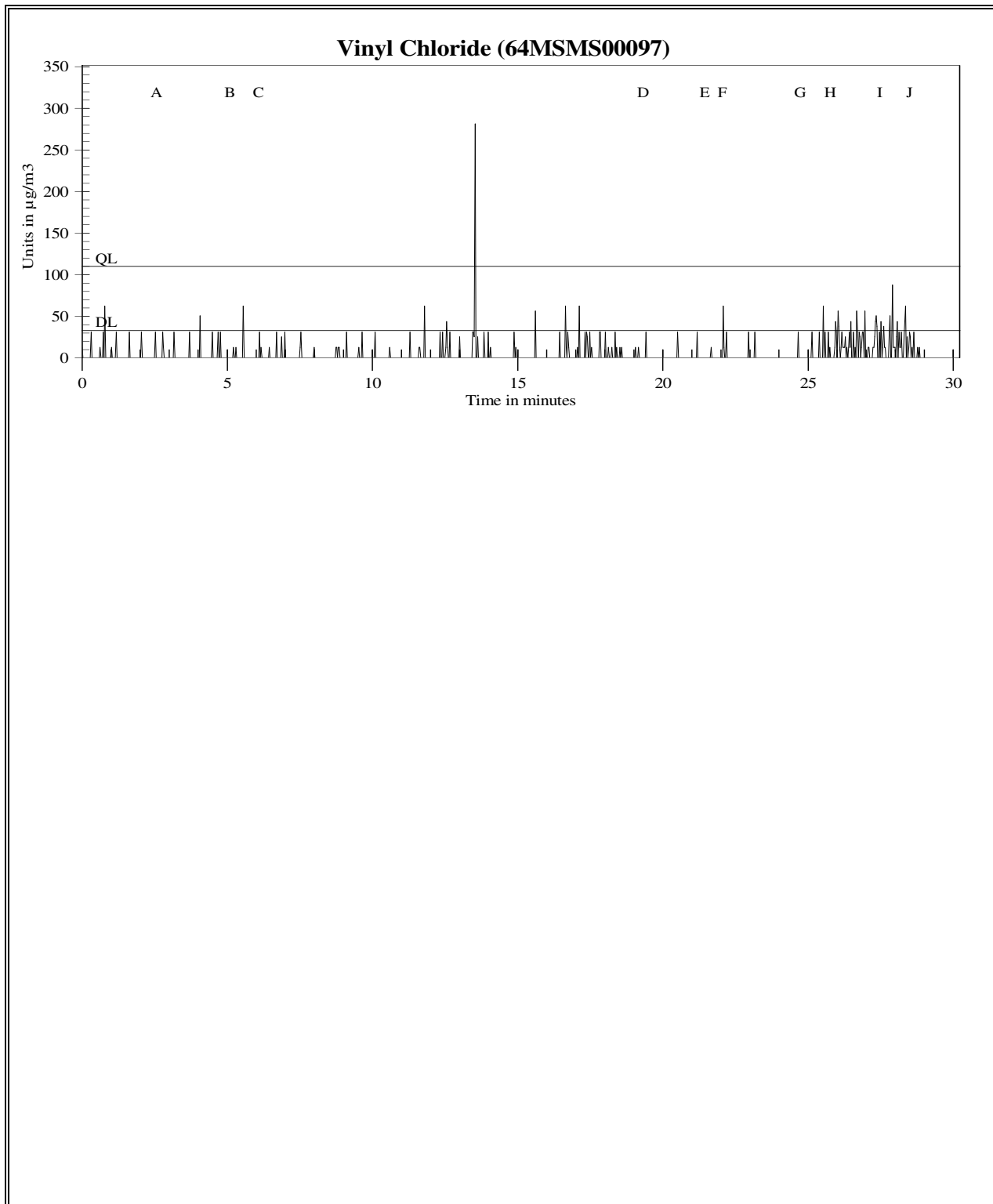


Figure 26i West End of Railroad Ditch by Quarry Road Investigation in µg/m³ for Vinyl Chloride

Figure 26j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for West End of Railroad Ditch by Quarry Road Investigation File: 64MSMS00097 Acquired on 05 May 2016 at 14:43:41								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.39	0.24	1.5	1.8	0.55	0.41	33
Quantitation Limits - QL:		1.3	0.81	4.9	6.0	1.8	1.4	110
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	3.0	1.8	DL=33.
C - D	West to east traverse of railroad ditch south of tracks	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
E - F	Well purge water	4.2	6.6	DL=1.5	DL=1.8	1.7J	1.4	DL=33.
G - H	Post-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
I - J	30 mL/min spike	26	24	27	22	20	26	DL=33.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

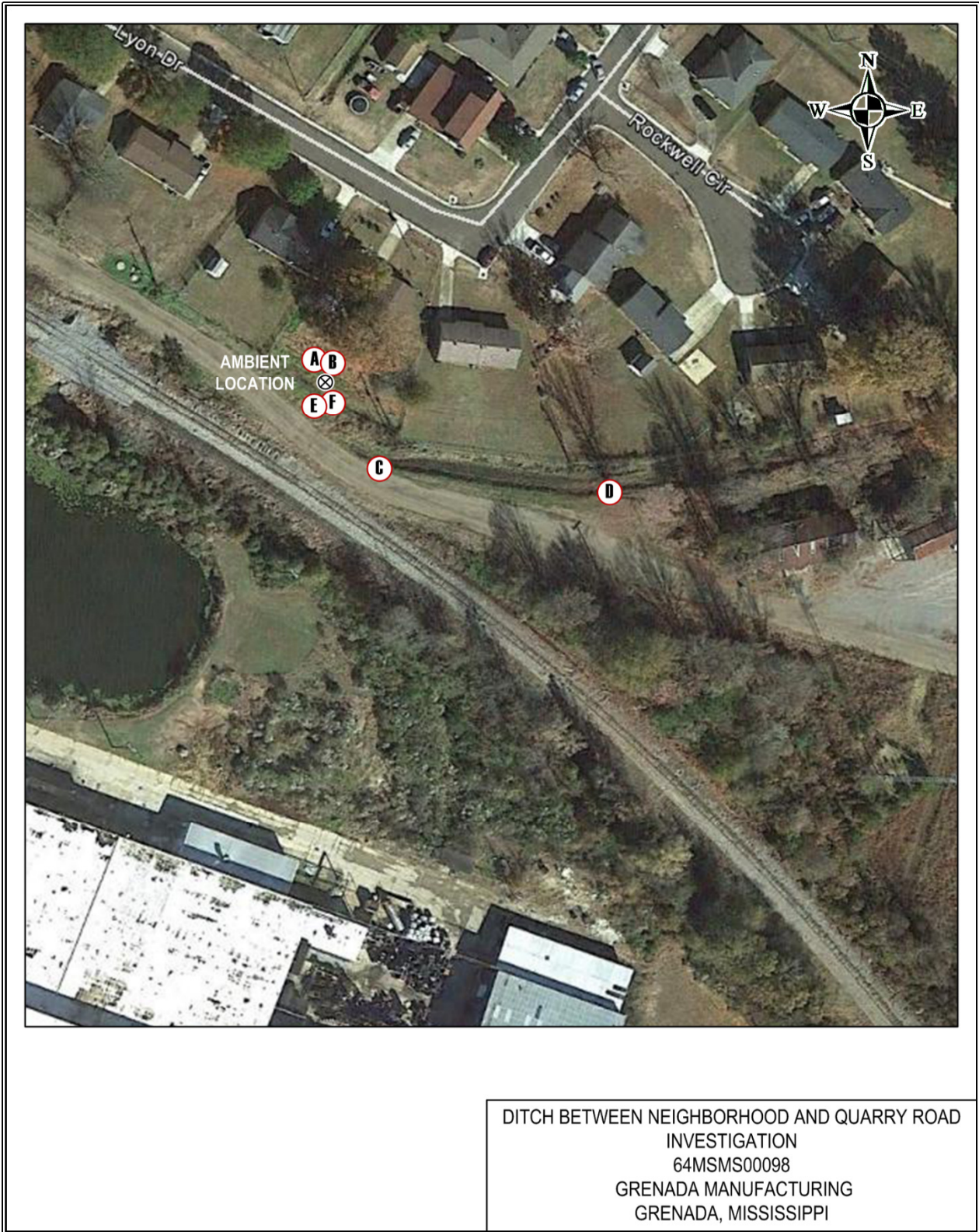


Figure 27a Ditch between Neighborhood and Quarry Road Investigation Area map, 64MSMS00098

Figure 27b

TAGA File Event Summary			
File: 64MSMS00098 Acquired on 05 May 2016 at 15:24:59			
Title: Ditch between Neighborhood and Quarry Road Investigation			
Flag	Offset Time	Offset Sequence	Description
A	2.0	73	Start of the pre-run ambient
B	3.0	109	End of the pre-run ambient
C	4.5	163	Start of the west to east traverse of draining ditch
D	12.3	440	End of the west to east traverse of draining ditch
E	13.1	468	Start of the post-run ambient
F	14.1	504	End of the post-run ambient
G	15.5	555	Start of 30 mL/min spike
H	16.5	591	End of 30 mL/min spike

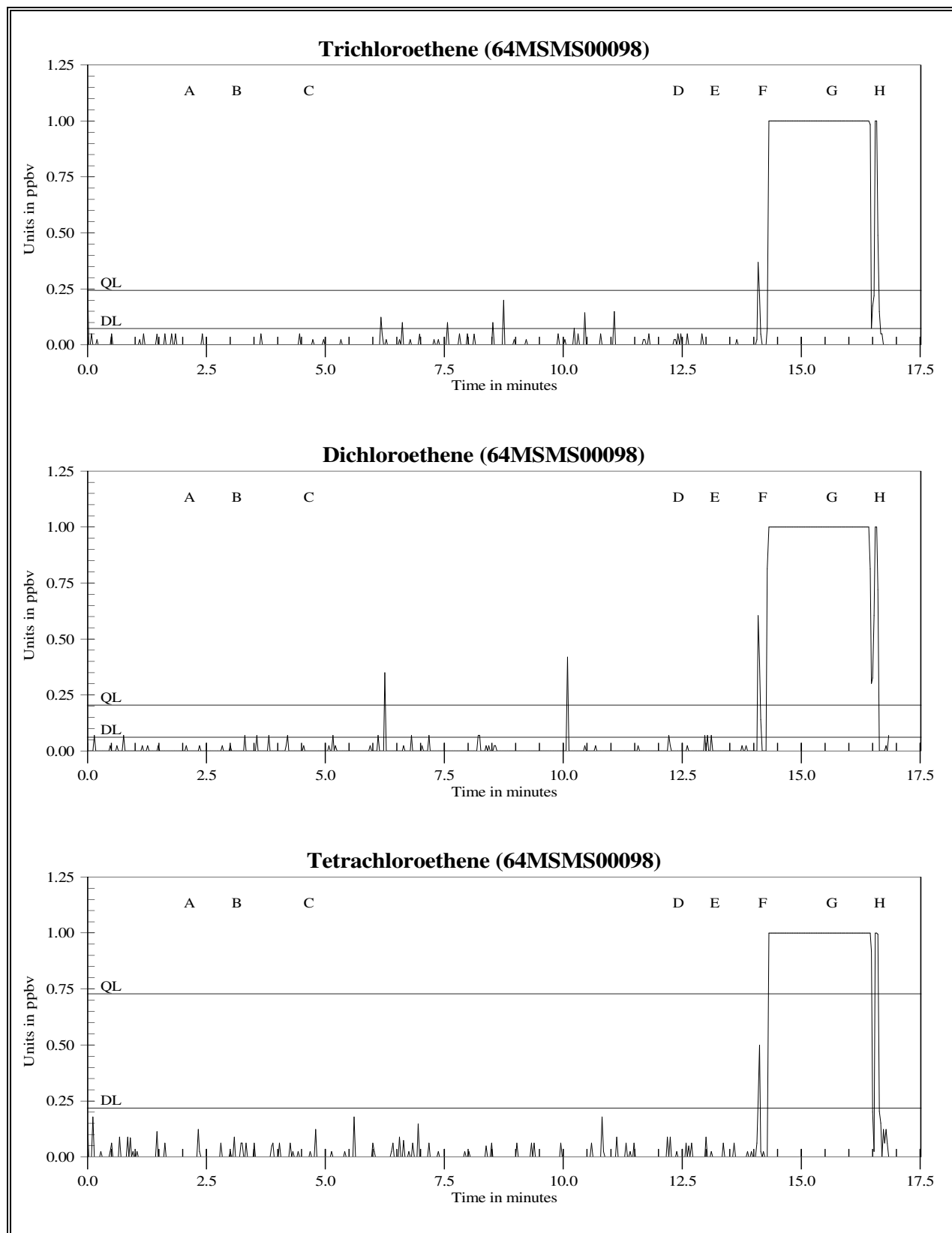


Figure 27c Ditch between Neighborhood and Quarry Road Investigation in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

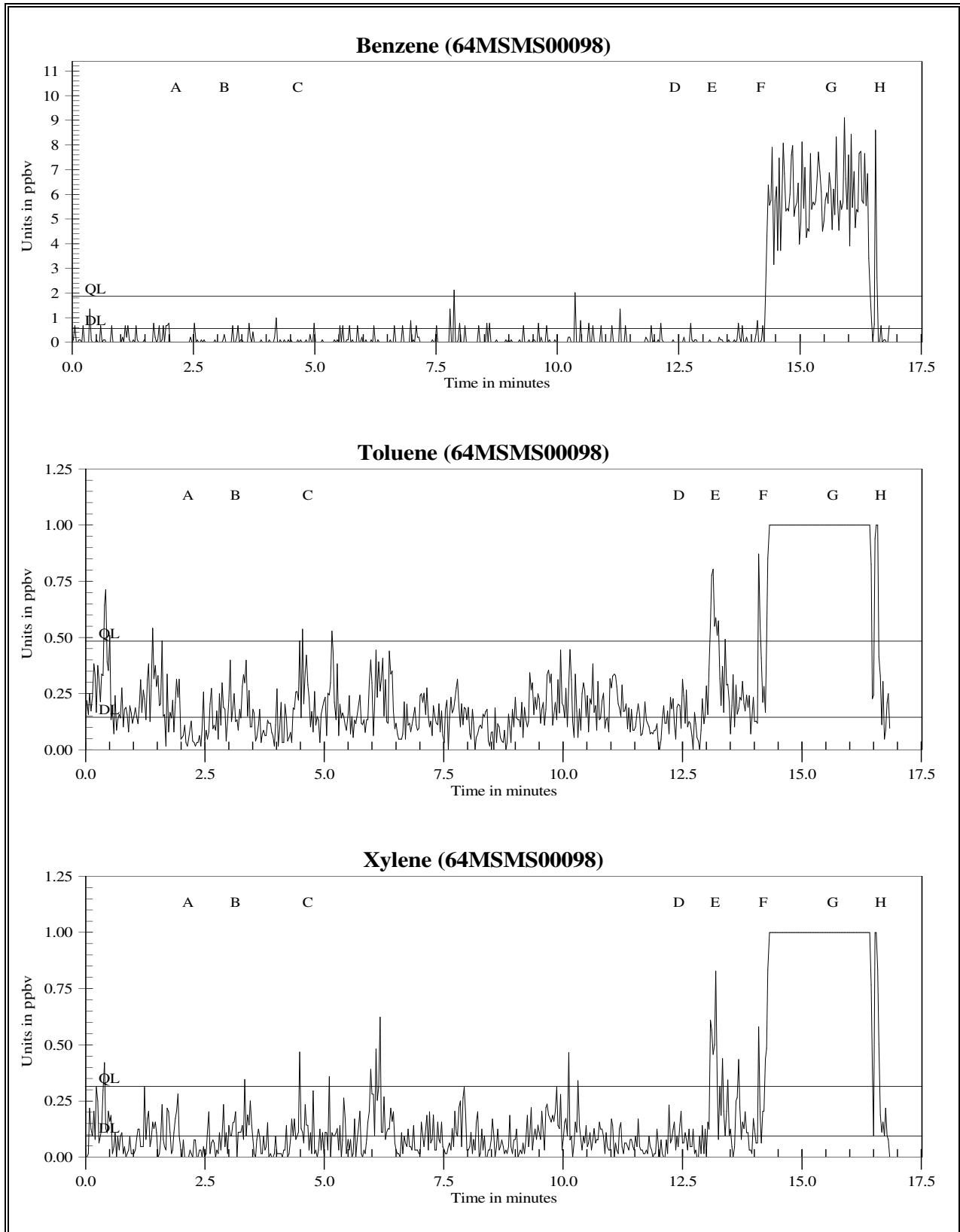


Figure 27d Ditch between Neighborhood and Quarry Road Investigation in ppbv for Benzene, Toluene, and Xylenes

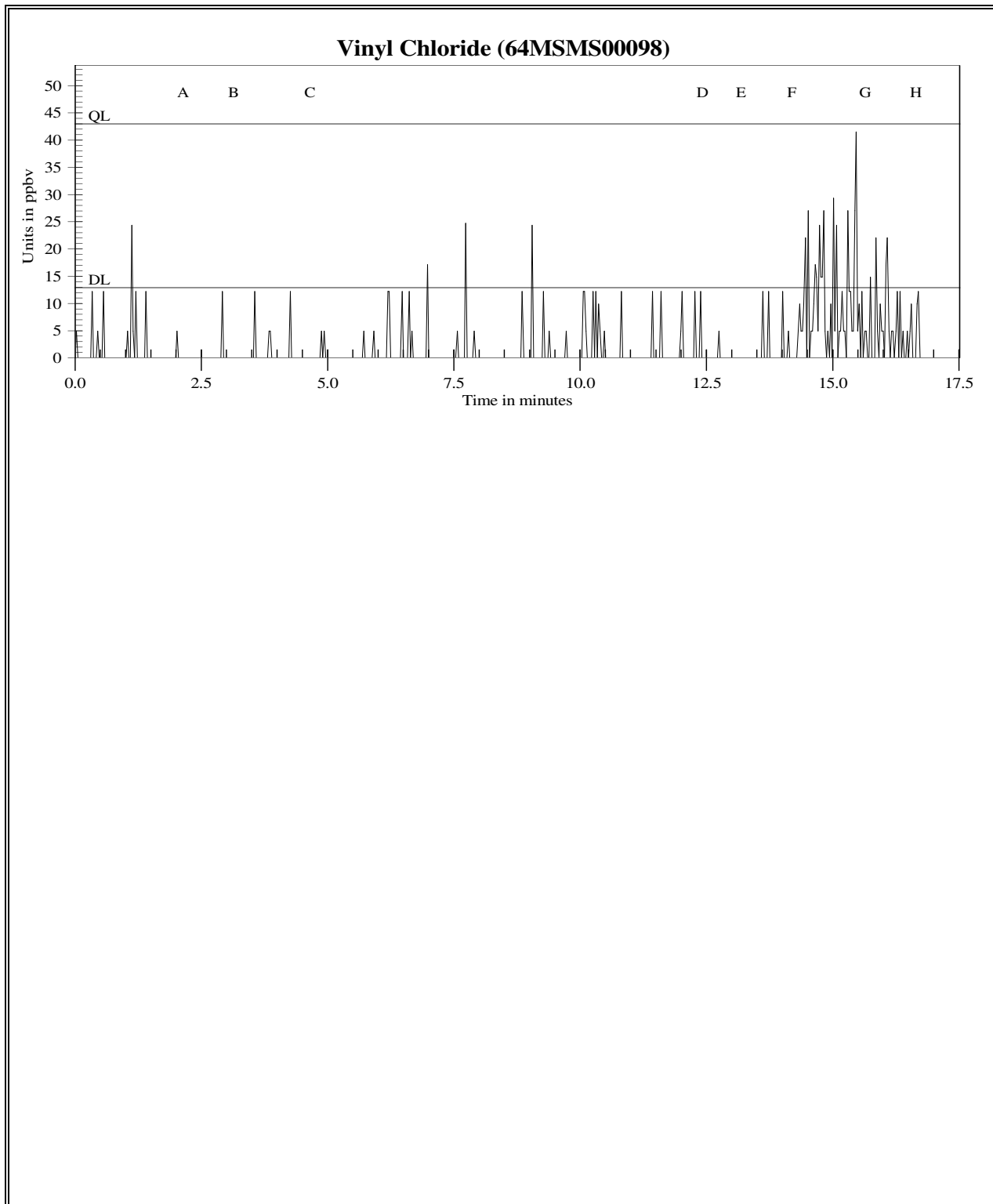


Figure 27e Ditch between Neighborhood and Quarry Road Investigation in ppbv for Vinyl Chloride

Figure 27f

TAGA Target Compound Summary in ppbv for Ditch between Neighborhood and Quarry Road Investigation File: 64MSMS00098 Acquired on 05 May 2016 at 15:24:59								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.073	0.062	0.22	0.56	0.15	0.095	13
Quantitation Limits - QL:		0.24	0.21	0.73	1.9	0.48	0.32	43
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
C - D	West to east traverse of draining ditch	DL=0.073	DL=0.062	DL=0.22	DL=0.56	0.17J	0.097J	DL=13.
E - F	Post-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	0.31J	0.23J	DL=13.
G - H	30 mL/min spike	4.1	5.2	3.3	5.5	4.5	5.1	DL=13.

Concentrations are given in parts per billion by volume (ppbv)

J = Concentration detected below the quantitation limit

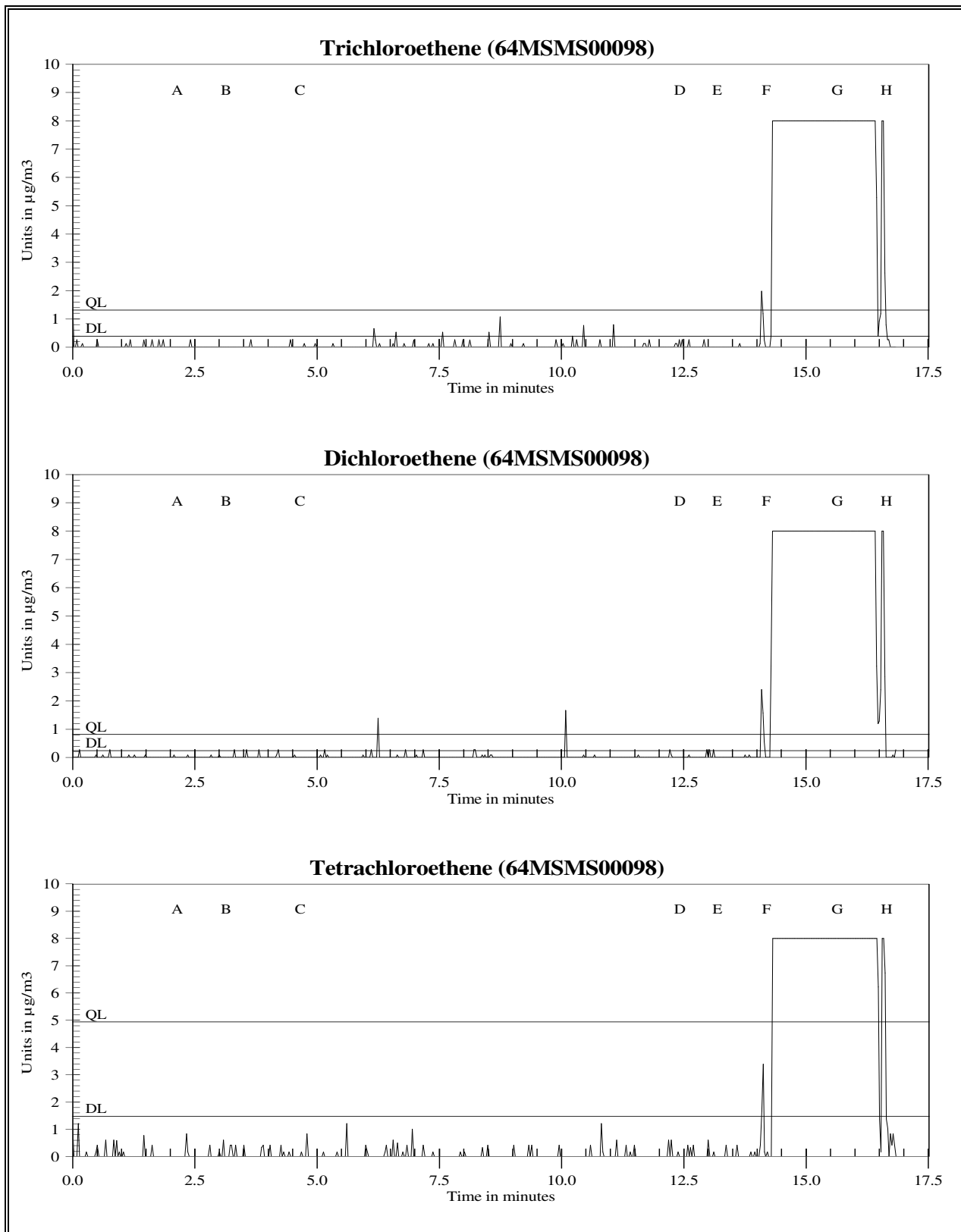


Figure 27g Ditch between Neighborhood and Quarry Road Investigation in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

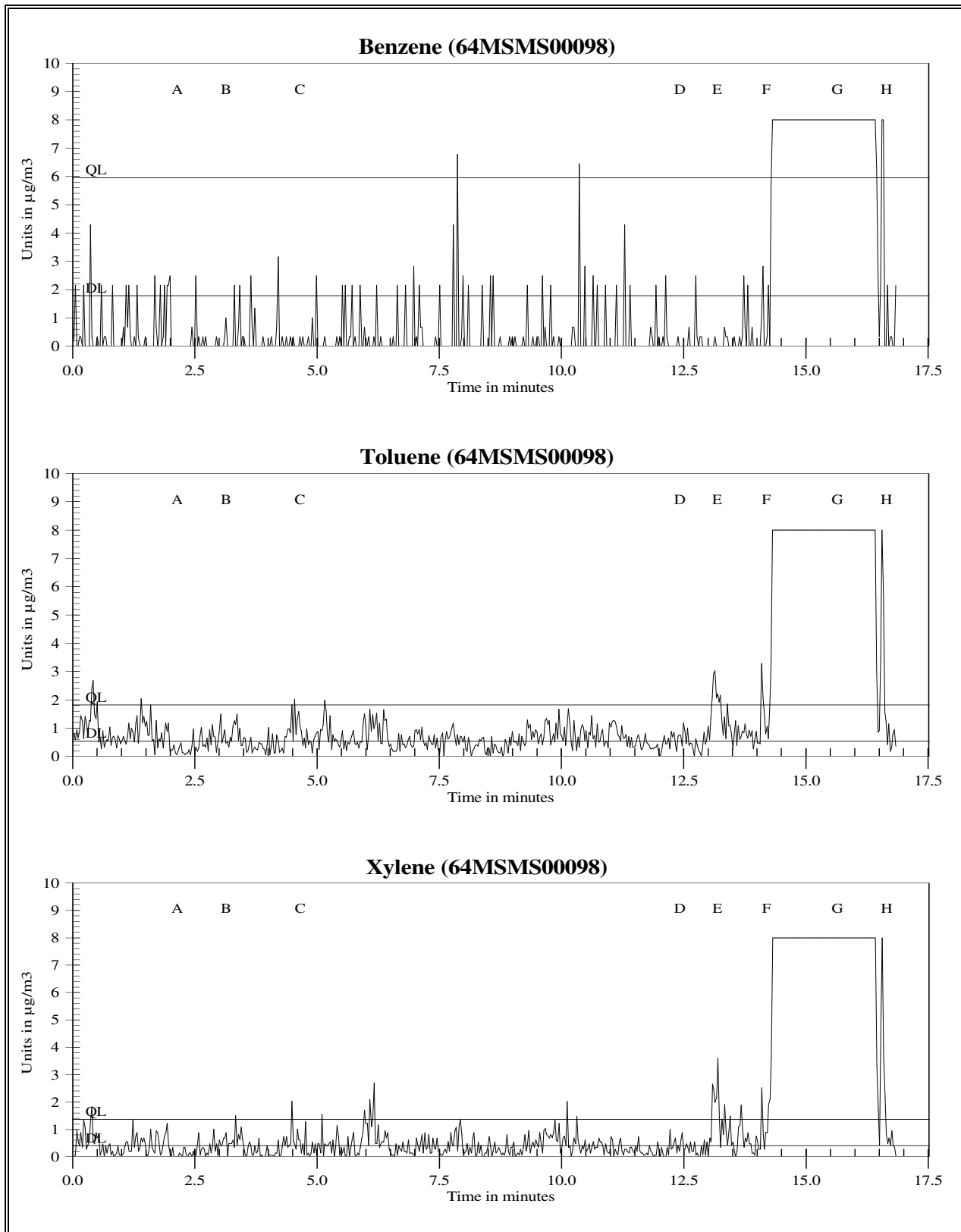


Figure 27h Ditch between Neighborhood and Quarry Road Investigation in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

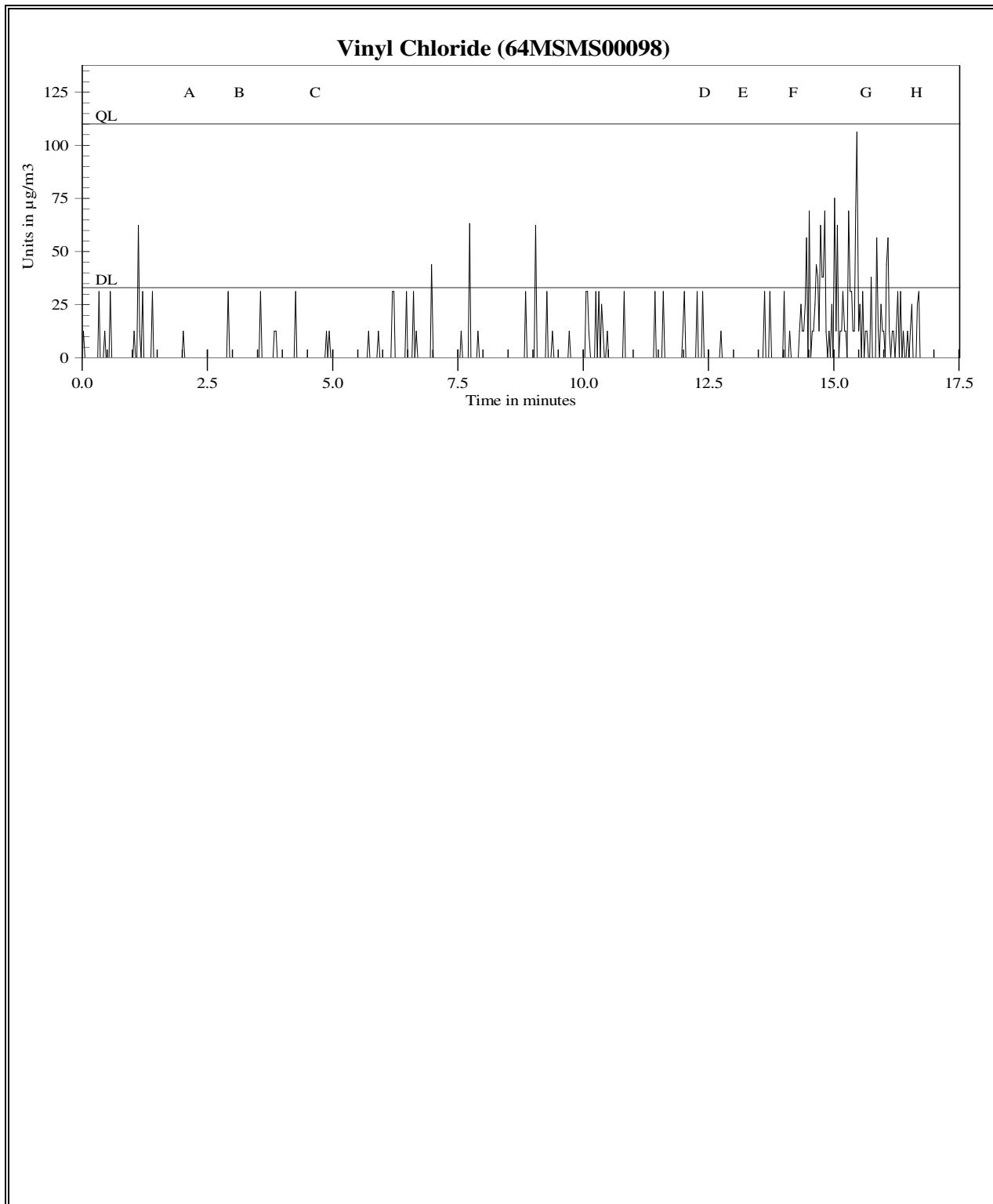


Figure 27i Ditch between Neighborhood and Quarry Road Investigation in µg/m³ for Vinyl Chloride

Figure 27j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Ditch between Neighborhood and Quarry Road Investigation File: 64MSMS00098 Acquired on 05 May 2016 at 15:24:59								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.39	0.24	1.5	1.8	0.55	0.41	33
Quantitation Limits - QL:		1.3	0.81	4.9	6.0	1.8	1.4	110
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
C - D	West to east traverse of draining ditch	DL=0.39	DL=0.24	DL=1.5	DL=1.8	0.65J	0.42J	DL=33.
E - F	Post-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	1.2J	1.0J	DL=33.
G - H	30 mL/min spike	22	20	22	18	17	22	DL=33.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

J = Concentration detected below the quantitation limit

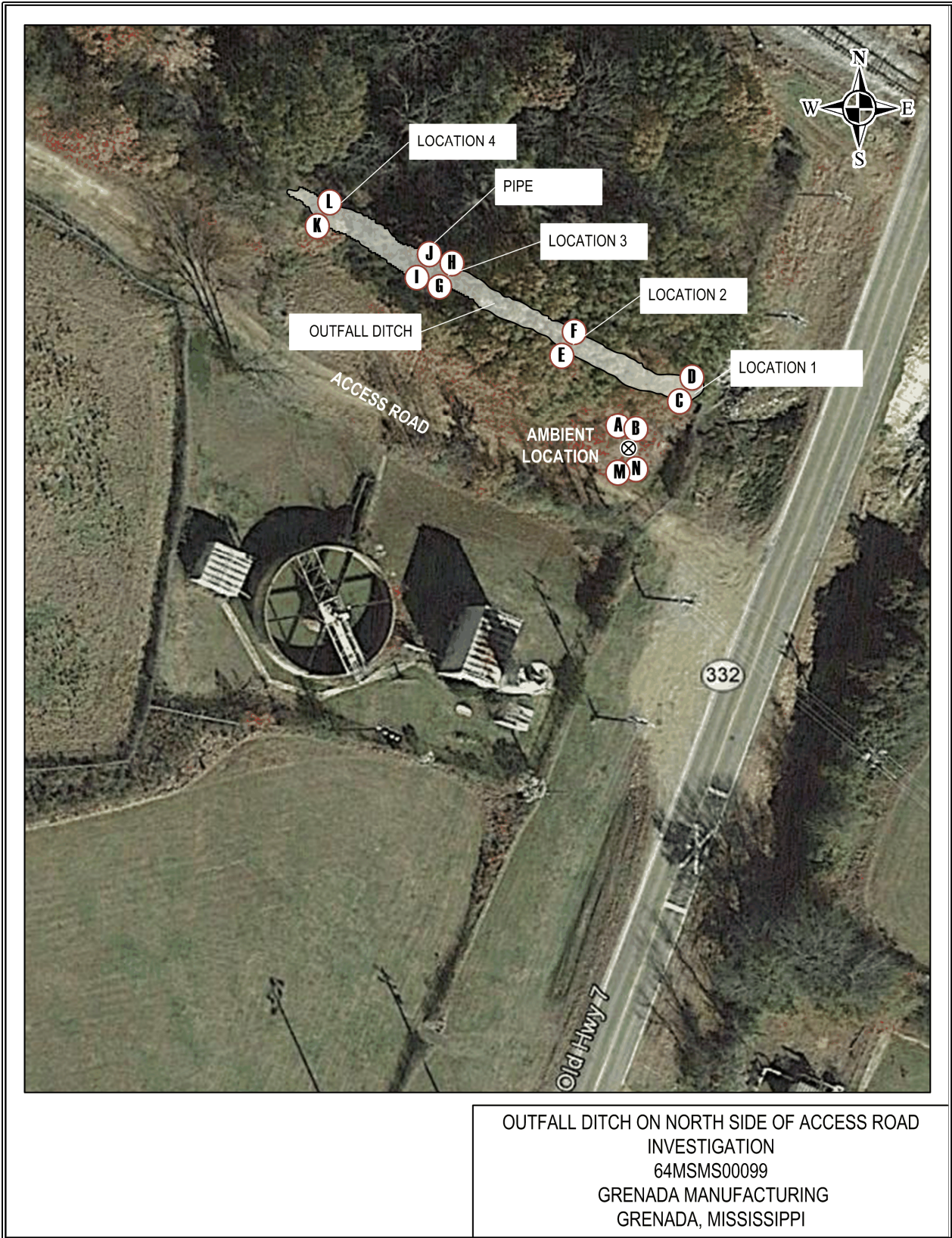


Figure 28a Outfall Ditch on North Side of Access Road Investigation Area Map, 64MSMS00099

Figure 28b

TAGA File Event Summary			
File: 64MSMS00099 Acquired on 05 May 2016 at 16:10:42			
Title: Outfall Ditch on North Side of Access Road Investigation			
Flag	Offset Time	Offset Sequence	Description
A	2.0	73	Start of the pre-run ambient
B	3.2	116	End of the pre-run ambient
C	17.0	608	Start of location one on outfall ditch
D	18.5	660	End of location one on outfall ditch
E	20.5	733	Start of location two on outfall ditch
F	21.3	761	End of location two on outfall ditch
G	23.0	821	Start of location three on outfall ditch
H	24.3	869	End of location three on outfall ditch
I	24.7	883	Start of pipe at location three on outfall ditch
J	25.7	920	End of pipe at location three on outfall ditch
K	27.6	985	Start of location four on outfall ditch
L	30.0	1073	End of location four on outfall ditch
M	31.8	1135	Start of the post-run ambient
N	32.8	1172	End of the post-run ambient
O	34.6	1237	Start of 30 mL/min spike
P	35.8	1277	End of 30 mL/min spike

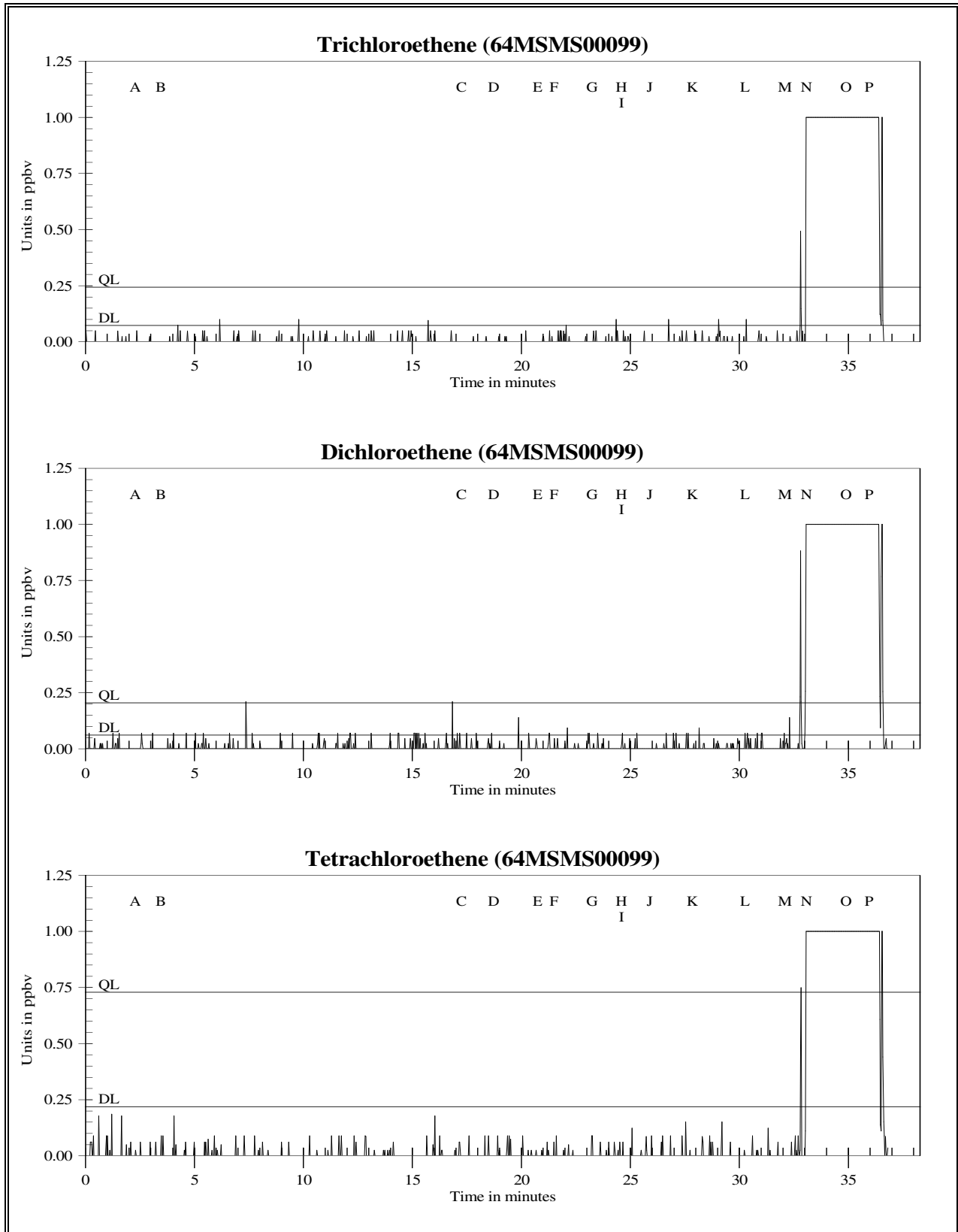


Figure 28c Outfall Ditch on North Side of Access Road Investigation in ppbv for Trichloroethene, Dichloroethene, and Tetrachloroethene

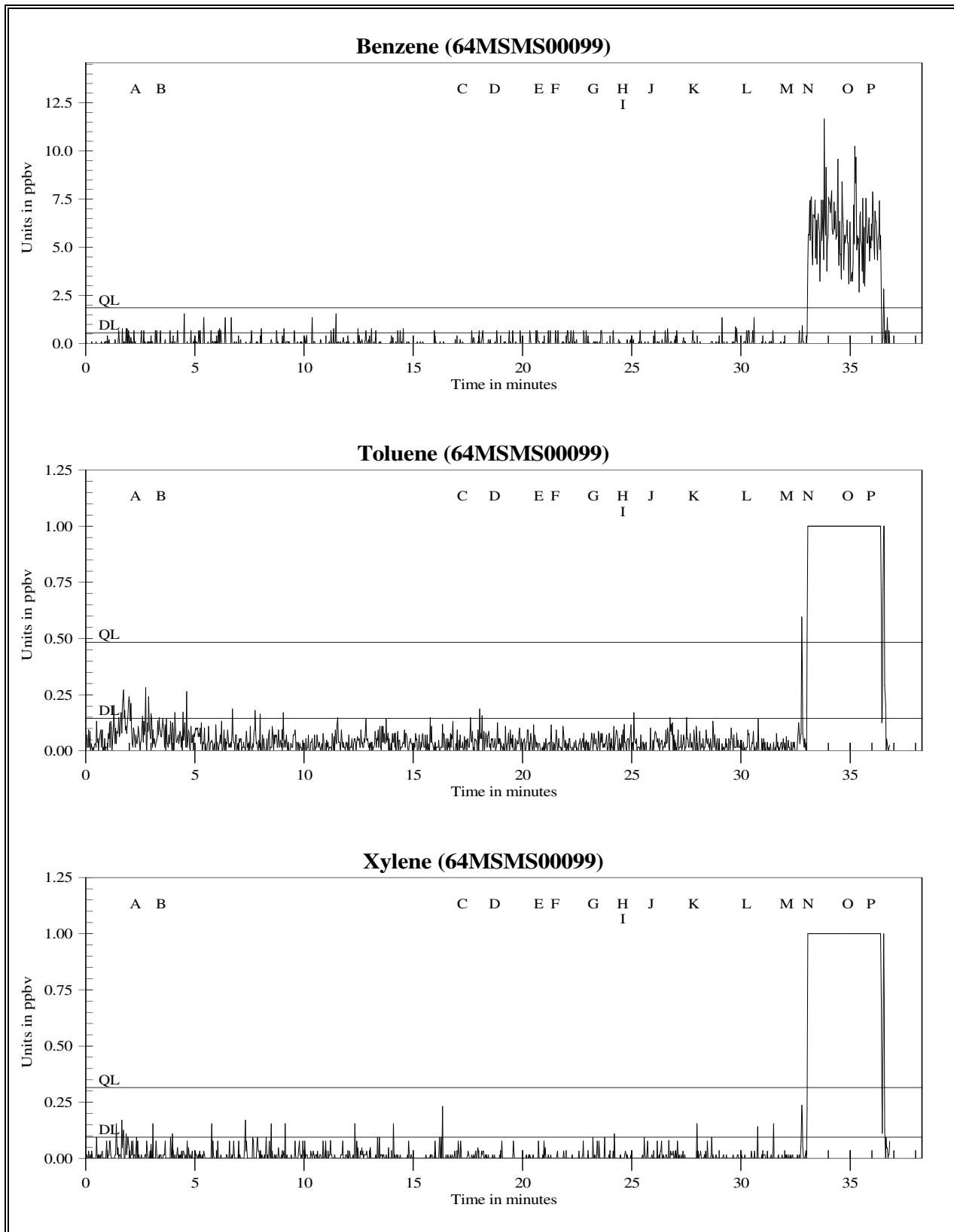


Figure 28d Outfall Ditch on North Side of Access Road Investigation in ppbv for Benzene, Toluene, and Xylenes

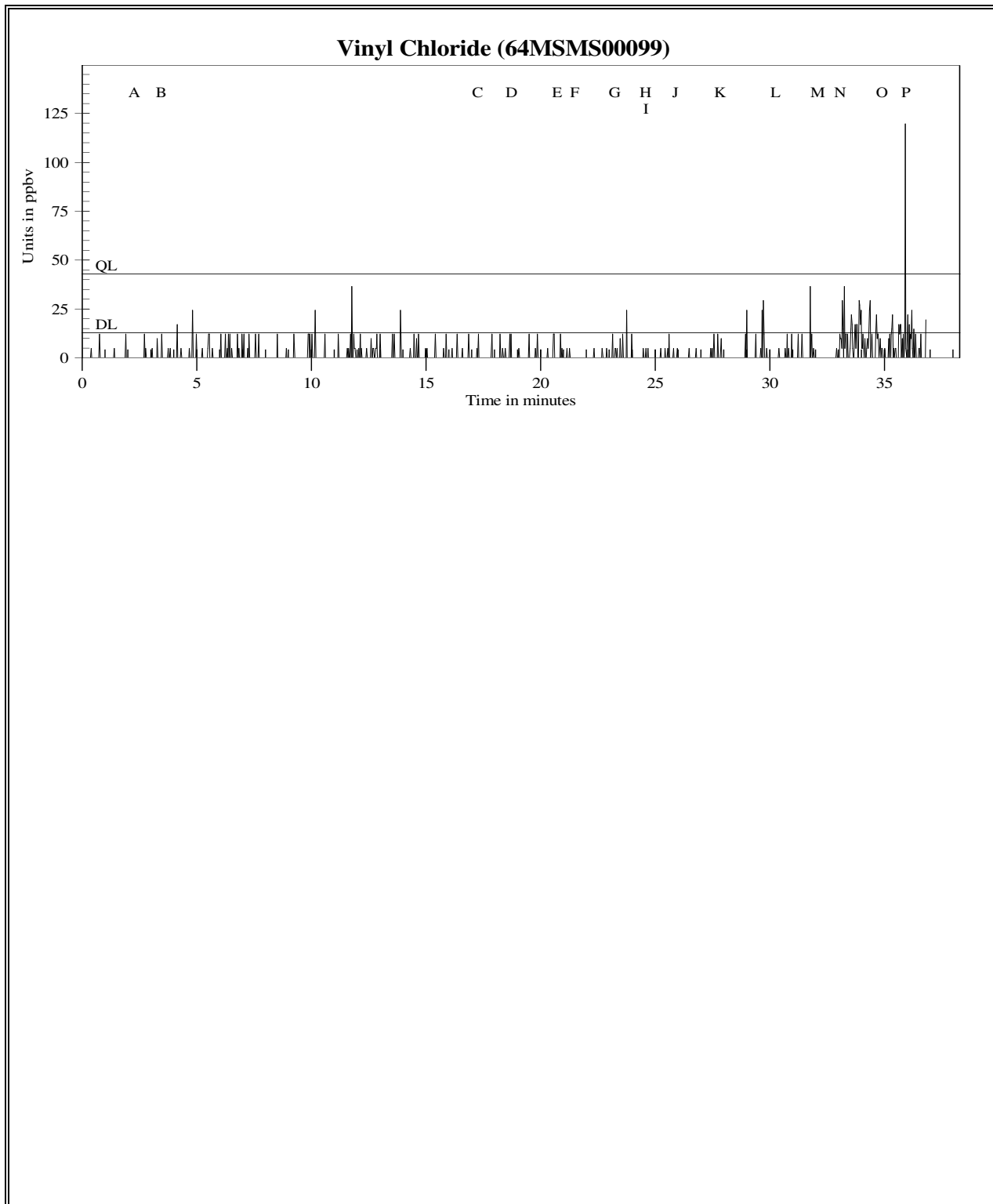


Figure 28e Outfall Ditch on North Side of Access Road Investigation in ppbv for Vinyl Chloride

Figure 28f

TAGA Target Compound Summary in ppbv for Outfall Ditch on North Side of Access Road Investigation File: 64MSMS00099 Acquired on 05 May 2016 at 16:10:42								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.073	0.062	0.22	0.56	0.15	0.095	13
Quantitation Limits - QL:		0.24	0.21	0.73	1.9	0.48	0.32	43
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
C - D	Location one on outfall ditch	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
E - F	Location two on outfall ditch	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
G - H	Location three on outfall ditch	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
I - J	Pipe at location three on outfall ditch	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
K - L	Location four on outfall ditch	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
M - N	Post-run ambient	DL=0.073	DL=0.062	DL=0.22	DL=0.56	DL=0.15	DL=0.095	DL=13.
O - P	30 mL/min spike	4.6	5.4	3.5	5.5	4.6	5.6	DL=13.

Concentrations are given in parts per billion by volume (ppbv)

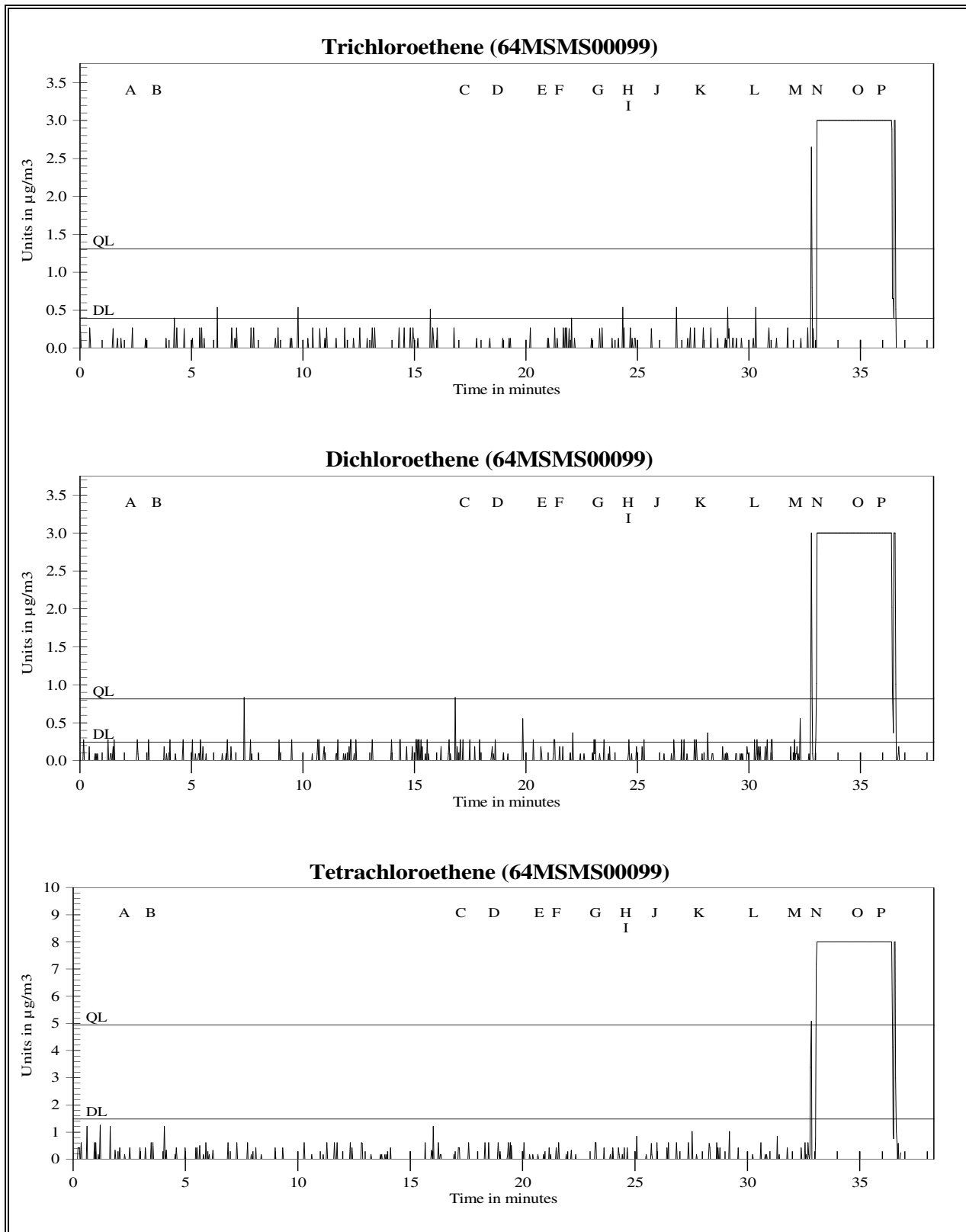


Figure 28g Outfall Ditch on North Side of Access Road Investigation in $\mu\text{g}/\text{m}^3$ for Trichloroethene, Dichloroethene, and Tetrachloroethene

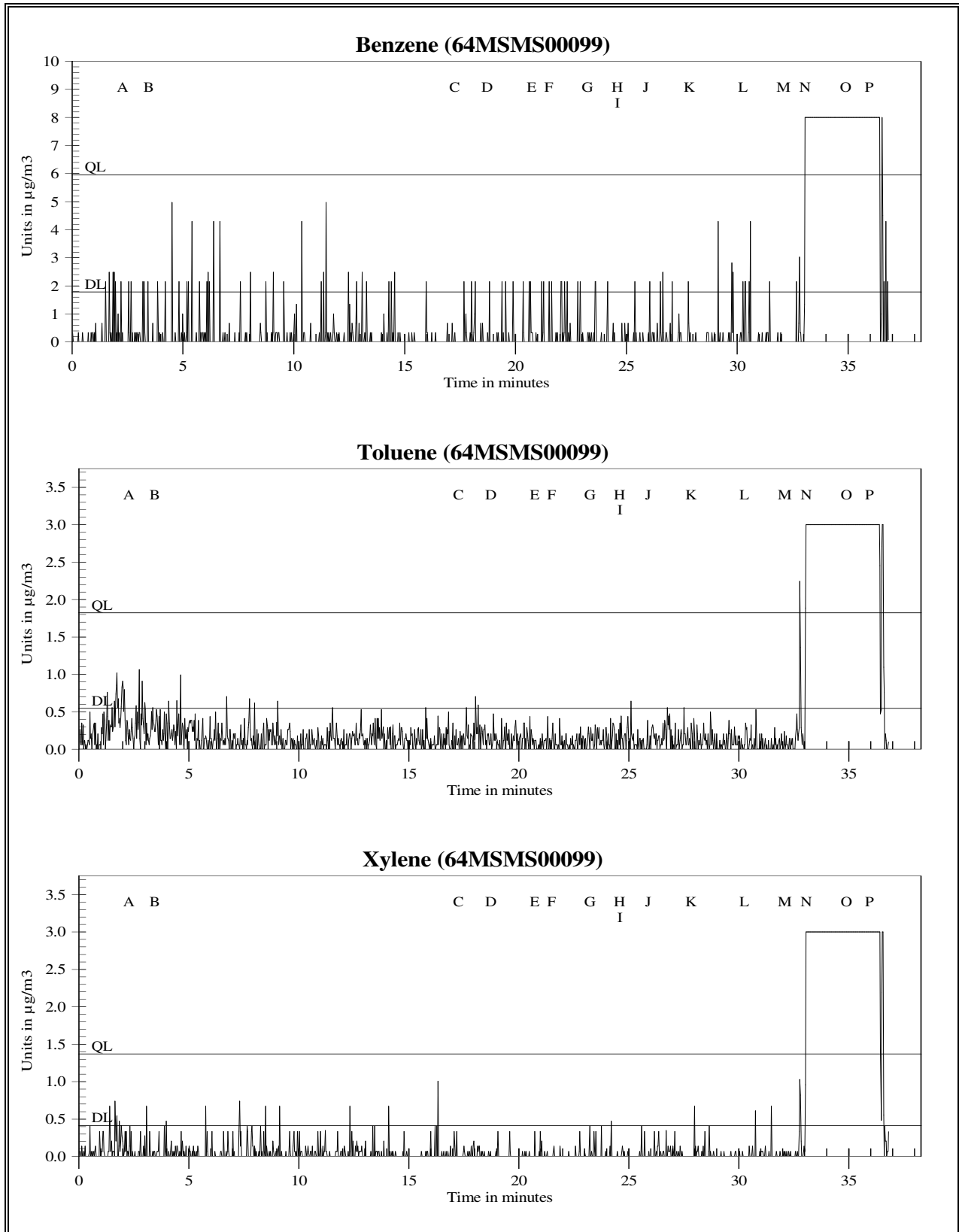


Figure 28h Outfall Ditch on North Side of Access Road Investigation in $\mu\text{g}/\text{m}^3$ for Benzene, Toluene, and Xylenes

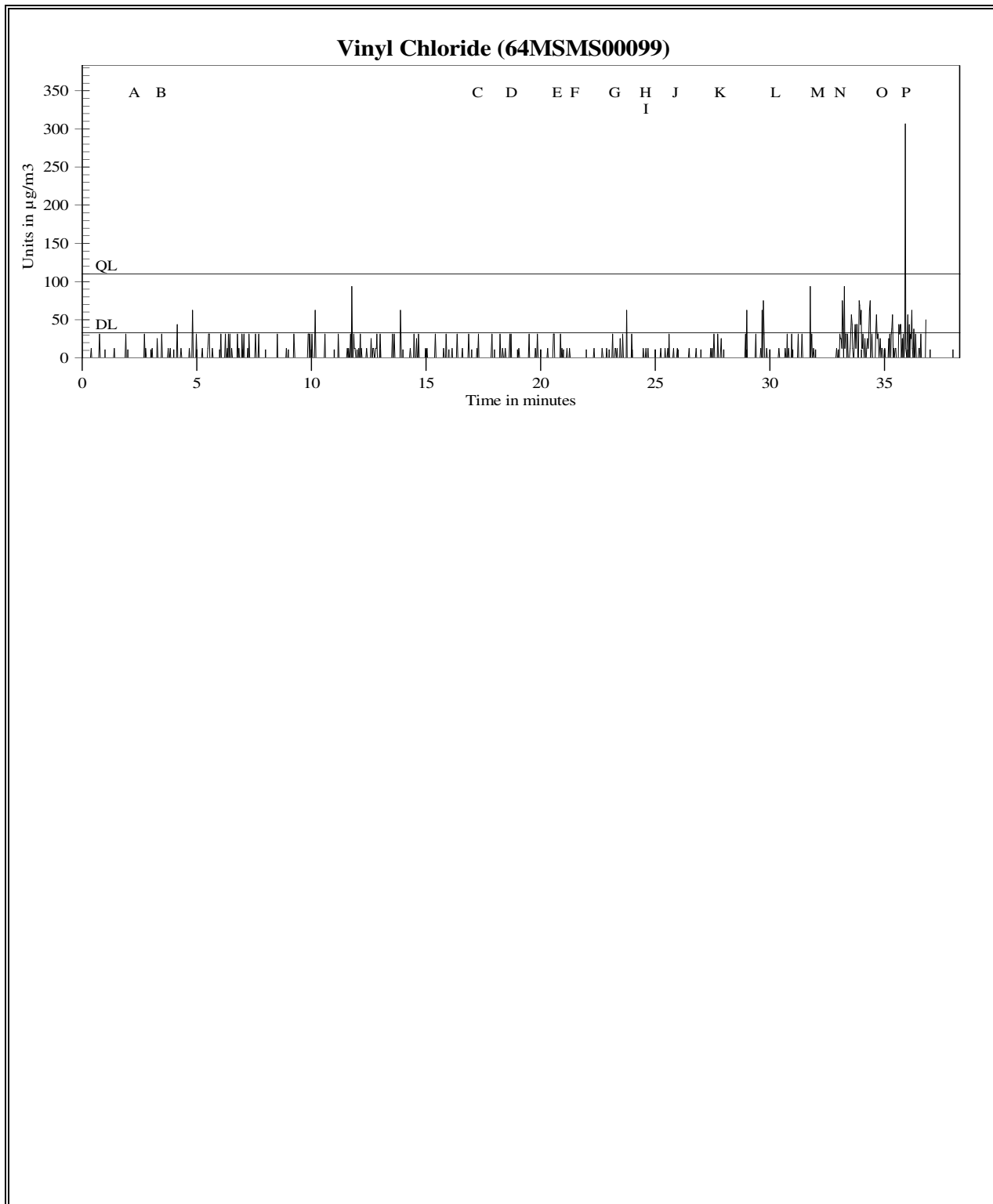


Figure 28i Outfall Ditch on North Side of Access Road Investigation in $\mu\text{g}/\text{m}^3$ for Vinyl Chloride

Figure 28j

TAGA Target Compound Summary in $\mu\text{g}/\text{m}^3$ for Outfall Ditch on North Side of Access Road Investigation File: 64MSMS00099 Acquired on 05 May 2016 at 16:10:42								
		Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
Detection Limits - DL:		0.39	0.24	1.5	1.8	0.55	0.41	33
Quantitation Limits - QL:		1.3	0.81	4.9	6.0	1.8	1.4	110
Flags	Description	Trichloroethene	Dichloroethene	Tetrachloroethene	Benzene	Toluene	Xylenes	Vinyl Chloride
A - B	Pre-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
C - D	Location one on outfall ditch	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
E - F	Location two on outfall ditch	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
G - H	Location three on outfall ditch	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
I - J	Pipe at location three on outfall ditch	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
K - L	Location four on outfall ditch	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
M - N	Post-run ambient	DL=0.39	DL=0.24	DL=1.5	DL=1.8	DL=0.55	DL=0.41	DL=33.
O - P	30 mL/min spike	25	21	23	18	17	24	DL=33.

Concentrations are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

APPENDIX A

Standard Gas Cylinder Certification

Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)

Final Analytical TAGA Report

August 2016

THE LINDE GROUP

Linde

SHIPPED TO: Lockheed Martin
4270 S Maryland Pkwy Ste 900
Las Vegas, NV 89119-7503

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	113514840	Cylinder Size:	152 (8" X 47.5")
Production#:	3026250	Cylinder #:	CC 113538
Certification Date:	Dec-08-2015	Cylinder Pressure:	850 psig
P.O.#:	Recent-Verbal	Cylinder Valve:	CGA 350 - Steel
Blend Type:	CERTIFIED	Cylinder Volume:	28.5 Liter
Material#:	14004551	Cylinder Material:	Aluminum
Traceability:	NIST by weight	Gas Volume:	1700 Liters
Expiration Date:	Dec-08-2016	Blend Tolerance:	5% Relative
Do NCT use under:	150 psig	Analytical Accuracy:	2% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Vinyl Chloride	75-01-4	20.0 ppm	19.8 ppm
1,1-Dichloroethene	75-35-4	20.0 ppm	20.2 ppm
Benzene	71-43-2	20.0 ppm	20.1 ppm
Trichloroethylene	79-01-6	20.0 ppm	19.7 ppm
Toluene	108-88-3	20.0 ppm	20.1 ppm
Tetrachloroethylene	127-18-4	20.0 ppm	20.0 ppm
p-xylene	106-42-3	10.0 ppm	10.2 ppm
m-xylene	108-38-3	10.0 ppm	10.2 ppm
o-xylene	95-47-5	10.0 ppm	10.4 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST:


 Lou Lorenzetti

DATE: Dec-08-2015

Linde Gas North America LLC

 (308) 329-9700 Main (808) 329-9740 Fax
 www.Lindeus.com

APPENDIX B

Compiled Meteorological Data

Grenada Manufacturing Site (a.k.a. Rockwell International Wheel and Trim)

Final Analytical TAGA Report

August 2016

**Local Climatological Data-Hourly Observations Table
Greenwood-Leflore Regional Airport, Greenwood, MS**

Elevation: 133 ft. above sea level

Latitude: 33.496

Longitude: -90.086

01 through 06 May 2016

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
1	53	67	63	87	5	180	29.72	
1	153	64	61	90	0	0	29.72	
1	253	65	61	87	3	130	29.73	
1	320	65	62	90	5	90	29.75	
1	353	67	63	87	0	0	29.75	
1	453	67	63	87	5	130	29.75	
1	553	67	63	87	5	150	29.75	
1	643	68	64	87	6	170	29.77	
1	653	69	64	84	6	160	29.78	
1	706	70	64	81	3	130	29.77	
1	753	70	65	84	3	190	29.8	
1	804	71	66	84	5	180	29.8	
1	841	74	66	76	0	0	29.78	
1	850	73	66	79	5	140	29.8	
1	853	73	66	79	3	120	29.8	
1	902	72	66	82	5	130	29.8	
1	937	73	67	82	6	150	29.8	
1	953	73	67	82	5	VR	29.8	
1	1013	74	67	79	6	180	29.8	
1	1036	73	67	82	10	170	29.83	
1	1053	73	66	79	15	170	29.83	
1	1153	73	66	79	8	160	29.81	
1	1253	78	68	71	13	200	29.8	
1	1353	79	67	67	11	180	29.78	
1	1453	80	66	62	7	140	29.77	
1	1553	81	68	65	9	170	29.78	
1	1653	80	68	67	10	150	29.78	
1	1753	78	67	69	8	140	29.77	
1	1853	75	67	76	6	120	29.77	
1	1953	73	67	82	5	160	29.78	
1	2053	72	67	84	0	0	29.8	
1	2153	71	67	87	6	110	29.8	
1	2253	70	67	90	3	150	29.83	
1	2325	68	65	90	0	0	29.81	
1	2353	68	66	93	3	140	29.81	

Wind direction is the direction from which the wind is blowing.

LST = Local standard time

F = Fahrenheit

% = Percent

MPH = Miles per hour

in. Hg = Inches of mercury

VR = Variable direction

**Local Climatological Data-Hourly Observations Table
Greenwood-Leflore Regional Airport, Greenwood, MS**

Elevation: 133 ft. above sea level

Latitude: 33.496

Longitude: -90.086

01 through 06 May 2016

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
2	53	68	66	93	5	170	29.81	
2	153	68	64	87	5	180	29.8	
2	233	67	64	90	7	170	29.8	
2	253	68	64	87	6	150	29.8	
2	329	68	64	87	6	160	29.78	
2	353	67	64	90	8	180	29.78	
2	453	67	63	87	5	170	29.78	
2	553	67	64	90	0	0	29.8	
2	653	68	64	87	8	210	29.8	
2	718	68	64	87	10	200	29.81	
2	731	68	64	87	9	210	29.81	
2	753	66	62	87	11	340	29.81	T
2	829	63	60	90	9	360	29.81	
2	844	63	59	87	13	360	29.83	
2	851	63	61	93	13	360	29.83	
2	853	63	60	90	11	360	29.83	T
2	929	66	61	84	7	10	29.86	
2	937	66	60	81	6	360	29.88	
2	953	65	60	84	0	0	29.88	
2	1053	66	61	84	6	20	29.83	
2	1140	68	62	81	0	0	29.85	
2	1153	69	62	79	6	220	29.86	
2	1253	67	61	81	0	0	29.88	
2	1308	66	60	81	6	270	29.85	
2	1325	66	60	81	3	280	29.83	
2	1341	66	60	81	5	300	29.83	
2	1353	67	61	81	8	310	29.83	T
2	1402	67	61	81	0	0	29.83	
2	1422	66	60	81	7	310	29.83	
2	1440	66	60	81	9	320	29.83	
2	1453	66	61	84	5	VR	29.81	T
2	1510	66	60	81	6	340	29.81	
2	1553	65	60	84	7	350	29.78	
2	1653	64	60	87	7	330	29.78	
2	1753	64	59	84	3	VR	29.83	
2	1806	64	59	84	5	320	29.83	

Wind direction is the direction from which the wind is blowing.

LST = Local standard time
 F = Fahrenheit
 % = Percent
 VR = Variable direction

MPH = Miles per hour
 in. Hg = Inches of mercury
 T = Trace precipitation

**Local Climatological Data-Hourly Observations Table
Greenwood-Leflore Regional Airport, Greenwood, MS**

Elevation: 133 ft. above sea level

Latitude: 33.496

Longitude: -90.086

01 through 06 May 2016

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
2	1834	64	59	84	0	0	29.83	
2	1853	64	59	84	0	0	29.83	
2	1917	64	59	84	0	0	29.84	
2	1938	64	60	87	0	0	29.84	
2	1953	64	60	87	3	30	29.84	
2	2024	64	60	87	0	0	29.85	
2	2051	63	61	93	0	0	29.86	
2	2053	63	60	90	0	0	29.86	
2	2153	63	59	87	0	0	29.86	
2	2223	63	60	90	0	0	29.85	
2	2249	63	61	93	0	0	29.85	
2	2253	64	60	87	0	0	29.85	
2	2353	63	60	90	0	0	29.84	
3	53	63	59	87	0	0	29.83	
3	153	61	59	93	0	0	29.81	
3	253	60	57	90	0	0	29.81	
3	353	58	56	93	3	320	29.83	
3	453	58	55	90	0	0	29.83	
3	553	58	55	90	3	330	29.84	
3	653	61	55	81	7	10	29.85	
3	753	63	55	75	7	20	29.88	
3	815	64	55	73	7	30	29.88	
3	853	66	55	68	6	40	29.88	
3	953	68	55	63	8	350	29.88	
3	1053	68	53	59	5	VR	29.86	
3	1153	72	52	50	9	330	29.85	
3	1253	70	51	51	6	340	29.83	
3	1353	71	50	48	10	350	29.83	
3	1453	68	50	53	8	340	29.81	
3	1553	68	48	49	7	350	29.81	
3	1653	68	47	47	10	340	29.81	
3	1753	65	48	54	8	350	29.83	
3	1853	61	47	60	3	330	29.83	
3	1953	58	48	70	3	330	29.83	
3	2053	54	48	80	0	0	29.84	
3	2153	53	49	86	0	0	29.84	
3	2253	53	49	86	0	0	29.83	

Wind direction is the direction from which the wind is blowing.

LST = Local standard time

F = Fahrenheit

% = Percent

MPH = Miles per hour

in. Hg = inches of mercury

VR = Variable direction

**Local Climatological Data-Hourly Observations Table
Greenwood-Leflore Regional Airport, Greenwood, MS**

Elevation: 133 ft. above sea level

Latitude: 33.496

Longitude: -90.086

01 through 06 May 2016

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
3	2353	52	49	90	0	0	29.84	
4	53	51	48	90	0	0	29.83	
4	153	51	48	90	0	0	29.83	
4	253	50	47	90	0	0	29.81	
4	353	49	47	93	0	0	29.8	
4	453	49	46	89	0	0	29.8	
4	553	51	49	93	0	0	29.8	
4	653	56	52	87	3	190	29.8	
4	753	63	53	70	5	240	29.8	
4	853	68	49	51	6	VR	29.8	
4	953	71	46	41	8	290	29.78	
4	1053	73	47	40	9	250	29.77	
4	1153	74	47	38	9	290	29.73	
4	1253	76	49	39	10	280	29.7	
4	1353	76	50	40	6	VR	29.69	
4	1453	77	48	36	11	300	29.67	
4	1553	76	48	37	10	280	29.65	
4	1653	77	49	37	8	290	29.64	
4	1753	74	50	43	3	VR	29.64	
4	1853	73	51	46	3	310	29.65	
4	1953	71	53	53	5	340	29.67	
4	2053	66	51	59	0	0	29.7	
4	2153	59	51	75	0	0	29.7	
4	2253	56	52	87	0	0	29.72	
4	2353	55	51	86	0	0	29.73	
5	53	56	50	80	3	10	29.73	
5	153	53	49	86	0	0	29.75	
5	253	51	47	86	0	0	29.75	
5	353	51	47	86	0	0	29.77	
5	453	50	46	86	0	0	29.78	
5	553	50	49	96	0	0	29.8	
5	653	57	50	78	0	0	29.83	
5	753	61	47	60	0	0	29.84	
5	853	66	46	49	7	230	29.84	
5	953	68	38	33	8	320	29.84	
5	1053	71	40	33	11	340	29.83	
5	1153	72	38	29	18	330	29.81	

Wind direction is the direction from which the wind is blowing.

LST = Local standard time

F = Fahrenheit

% = Percent

MPH = Miles per hour

in. Hg = inches of mercury

VR = Variable direction

**Local Climatological Data-Hourly Observations Table
Greenwood-Leflore Regional Airport, Greenwood, MS**

Elevation: 133 ft. above sea level

Latitude: 33.496

Longitude: -90.086

01 through 06 May 2016

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
5	1253	73	38	28	13	340	29.8	
5	1353	73	38	28	15	320	29.8	
5	1453	73	39	29	10	330	29.78	
5	1553	73	36	26	16	340	29.78	
5	1653	71	35	27	10	350	29.78	
5	1753	69	35	29	10	350	29.78	
5	1853	62	41	46	3	10	29.8	
5	1953	56	46	69	0	0	29.8	
5	2053	54	45	72	0	0	29.83	
5	2153	52	45	77	0	0	29.85	
5	2253	51	44	77	5	20	29.86	
5	2353	54	44	69	8	40	29.88	
6	53	51	44	77	0	0	29.88	
6	153	48	43	83	5	10	29.88	
6	253	47	44	89	0	0	29.89	
6	353	46	43	89	0	0	29.91	
6	453	46	43	89	3	50	29.91	
6	553	48	45	89	0	0	29.92	
6	653	55	45	69	3	10	29.96	
6	753	59	45	60	6	20	29.96	
6	853	64	46	52	3	VR	29.96	
6	953	68	46	45	5	360	29.96	
6	1053	70	46	42	6	VR	29.96	
6	1153	71	46	41		M	29.94	
6	1253	72	44	37	7	290	29.93	
6	1353	74	43	33	6	VR	29.91	
6	1453	74	43	33	8	10	29.89	
6	1553	75	43	32	8	360	29.88	
6	1653	74	44	34	6	350	29.86	
6	1753	72	44	37	5	VR	29.86	
6	1853	63	48	58	0	0	29.85	
6	1953	59	50	72	0	0	29.88	
6	2053	57	51	80	0	0	29.88	
6	2153	55	51	86	0	0	29.89	
6	2253	54	51	90	3	180	29.88	
6	2353	53	49	86	0	0	29.88	

Wind direction is the direction from which the wind is blowing.

LST = Local standard time
 F = Fahrenheit
 % = Percent
 M = Missing data

MPH = Miles per hour
 in. Hg = inches of mercury
 VR = Variable direction

APPENDIX C

TAGA Calibration Data 03 May 2016 to 05 May 2016

Grenada Manufacturing Site (a.k.a.) Rockwell International Wheel and Trim

Final Analytical TAGA Report

August 2016

TAGA FLOW CALIBRATION LOG

Work Assignment: 0-293

Date: 05/01/2016

Time	Reference Flow Meter	Sample Air Flow (SAF)		MKS Channel 3 Span _____	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
Dwyer Rotameter	Certificate of Calibration #		Calibration Date:		
Time	Reference Flow Meter	Channel 1 Standard Gas Flow Calibration		MKS Channel 1 Span <u>113</u>	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
1739	10	10.49	10.2	0.29	2.76
1742	40	40.05	40.2	-0.15	-0.375
	90	89.03	90.3	-1.27	-1.43
Gilibrator Flow Cell	S/N # <u>0704005-L</u>		Calibration Date: <u>EXP 01/27/2017</u>		
Time	Reference Flow Meter	Channel 2 Standard Gas Flow Calibration		MKS Channel 2 Span _____	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
Gilibrator Flow Cell	S/N #		Calibration Date:		
Notes:					

TAGA FLOW CALIBRATION LOG

Work Assignment: 0-293

Date: 05/03/16

Time	Reference Flow Meter	Sample Air Flow (SAF)		MKS Channel 3 Span <u>3500</u>	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
0530	190 _{SCFH}	190 _{SCFH}	1500 ^{ml/s}		
Dwyer Rotameter	Certificate of Calibration # <u>150WY00-0914</u>			Calibration Date: <u>EXP 05/27/16</u>	
Time	Reference Flow Meter	Channel 1 Standard Gas Flow Calibration		MKS Channel 1 Span _____	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
Gilibrator Flow Cell	S/N # _____			Calibration Date: _____	
Time	Reference Flow Meter	Channel 2 Standard Gas Flow Calibration		MKS Channel 2 Span _____	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
Gilibrator Flow Cell	S/N # _____			Calibration Date: _____	
Notes:					

TAGA FLOW CALIBRATION LOG

Work Assignment: 293

Date: 05/04/2016

Time	Reference Flow Meter	Sample Air Flow (SAF)		MKS Channel 3 Span <u>3500</u>	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
0534	190 _{SCFH}	190 _{SCFH}	1500 _{ML/S}		
Dwyer Rotameter	Certificate of Calibration # <u>150W400-0914</u>		Calibration Date: <u>EXP 05/27/16</u>		
Time	Reference Flow Meter	Channel 1 Standard Gas Flow Calibration		MKS Channel 1 Span _____	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
Gilibrator Flow Cell	S/N #		Calibration Date:		
Time	Reference Flow Meter	Channel 2 Standard Gas Flow Calibration		MKS Channel 2 Span _____	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
Gilibrator Flow Cell	S/N #		Calibration Date:		
Notes:					

TAGA FLOW CALIBRATION LOG

Work Assignment: 0.293

Date: 05/05/2016

Time	Reference Flow Meter	Sample Air Flow (SAF)		MKS Channel 3 Span _____	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
0550	190scfh	190scfh	1500 ^{mks}		
Dwyer Rotameter	Certificate of Calibration #	150WY00-0914		Calibration Date: <u>Exp 05/27/16</u>	
Time	Reference Flow Meter	Channel 1 Standard Gas Flow Calibration		MKS Channel 1 Span _____	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
Gilibrator Flow Cell	S/N #			Calibration Date:	
Time	Reference Flow Meter	Channel 2 Standard Gas Flow Calibration		MKS Channel 2 Span _____	
		Reference Meter Reading	MKS Meter Reading	Difference (Reference-MKS)	% Error $\frac{\text{Difference}}{\text{Reference}} \times 100$
Gilibrator Flow Cell	S/N #			Calibration Date:	
Notes:					

Method Information

Method Name: PCE/TCE/DCE/BTX/VC CALIBRATION
Last Modified: Tue, May 3, 2016, 5:08:21
Comment:

Command	Description	Time (sec)	Reps	Duration (min)	Total Time (hh:mm:ss)
Scan	Mode: Profile Thres : 0.1 x 10 E1 cps Pause: 0.1 sec Expt: MacHD3064:Instrument:expt:PCE+TCE+DCE+BTX+VC State: MacHD3064:Instrument:state:LPCI2016MAY03 PCE+TCE Q1 Cal: MacHD3064:Instrument:calibration:Q1 Calib LPCI 20121102 Q3 Cal: MacHD3064:Instrument:calibration:Q3 Calib LPCI 20121102	1.680	1607	45.000	00:45:00

Active Device Methods:

Device Type: LC Pump
Device Name: MKS 146 Single
ROM Version: ROM version cannot be checked.
Comment: ROM version cannot be checked.
Solvents: 1
Solvent name: Solvent A %
Timed events: 0
Device specific parameters: 2
Gradient: 1=Step, 2=Linear 1.0000
Gradient: 1=Step, 2=Linear
Gradient resolution (sec) 5.0000
Gradient resolution in seconds
Timed steps: 9

Min. Pressure : 0.0000
Max. Pressure : 100.0000

Step	T.Time (min)	Dura.(min)	Flow (µL/min)	Sol.1
0	-0.10	0.10	0.00	100.00
1	0.00	3.00	0.00	100.00
2	3.00	2.00	90.00	100.00
3	5.00	2.00	10.00	100.00
4	7.00	2.00	20.00	100.00
5	9.00	2.00	40.00	100.00
6	11.00	2.00	80.00	100.00
7	13.00	2.00	90.00	100.00
8	15.00	2.00	0.00	100.00

Experiment Information

Experiment Name: PCE+TCE+DCE+BTX+VC
Last Modified: Wed, Apr 27, 2016, 14:38:16
Scan Type: MRM
Scan Time: 00:01.680 secs
Peak Hopping : Disabled
Q2 Purge : Disabled
Comment: Cal. Gas Bottle Number 2

Mass Defect: 0 mmu/100amu
Pause Time: 5.000 msec

Mass Range Information

Mass Range 1		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
164.000	129.000	100.000
Mass Range 2		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	129.000	100.000
Mass Range 3		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	131.000	100.000
Mass Range 4		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
130.000	95.000	100.000
Mass Range 5		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	95.000	100.000
Mass Range 6		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	97.000	100.000
Mass Range 7		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
96.000	61.000	100.000
Mass Range 8		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
98.000	63.000	100.000
Mass Range 9		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	39.000	100.000
Mass Range 10		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	52.000	100.000
Mass Range 11		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	91.000	100.000
Mass Range 12		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	65.000	100.000
Mass Range 13		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	91.000	100.000
Mass Range 14		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	65.000	100.000
Mass Range 15		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
62.000	27.000	100.000

Param	Start	Stop
RO1	-7.500	-7.500

Mass Range 16

Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)	Param	Start	Stop
64.000	27.000	100.000	RO1	-7.500	-7.500

State File Information

Last Modified: Tue, May 3, 2016, 5:05:33

Analog Parameters

NC	0.000
TEM	80.000
OR	0.000
RNG	0.000
Q0	-5.200
IQ1	-6.000
ST	-13.000
RO1	-6.100
IQ2	-12.500
RO2	-35.000
IQ3	-40.200
RO3	-37.000
DF	-390.000
CEM	1700.000

On/Off Parameters

POL	Off
NEB	Off
CUR	4
CAD	7

Q1 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.050
75.000	0.060
100.000	0.065
120.000	0.070
180.000	0.100

Q3 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.042
60.000	0.043
100.000	0.045
150.000	0.045
180.000	0.047

Calibration File Information

Type: Q1 Calibration

Last Modified: Fri, Nov 2, 2012, 14:24:38

Mass	DAC
78.050	1466
106.080	2002
129.910	2459
165.870	3146

Calibration File Information

Type: Q3 Calibration

Last Modified: Fri, Nov 2, 2012, 14:40:02

Mass	DAC
30.000	551
78.050	1473
105.070	1992
165.870	3160

Method Information

Method Name: PCE/TCE/DCE/BTX/VC MONITORING
Last Modified: Tue, May 3, 2016, 5:08:47
Comment:

Command	Description	Time (sec)	Reps	Duration (min)	Total Time (hh:mm:ss)
Scan	Mode: Profile Thres : 0.1 x 10 E1 cps Pause: 0.1 sec Expt: MacHD3064:Instrument:expt:PCE+TCE+DCE+BTX+VC State: MacHD3064:Instrument:state:LPCI2016MAY03 PCE+TCE Q1 Cal: MacHD3064:Instrument:calibration:Q1 Calib LPCI 20121102 Q3 Cal: MacHD3064:Instrument:calibration:Q3 Calib LPCI 20121102	1.680	6428	180.000	03:00:00

Active Device Methods:

Experiment Information

Experiment Name: PCE+TCE+DCE+BTX+VC
Last Modified: Wed, Apr 27, 2016, 14:38:16
Scan Type: MRM
Scan Time: 00:01.680 secs
Peak Hopping : Disabled
Q2 Purge : Disabled
Comment: Cal. Gas Bottle Number 2

Mass Defect: 0 mmu/100amu
Pause Time: 5.000 msec

Mass Range Information

Mass Range 1		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
164.000	129.000	100.000
Mass Range 2		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	129.000	100.000
Mass Range 3		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	131.000	100.000
Mass Range 4		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
130.000	95.000	100.000
Mass Range 5		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	95.000	100.000
Mass Range 6		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	97.000	100.000
Mass Range 7		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
96.000	61.000	100.000
Mass Range 8		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
98.000	63.000	100.000
Mass Range 9		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	39.000	100.000
Mass Range 10		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	52.000	100.000
Mass Range 11		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	91.000	100.000
Mass Range 12		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	65.000	100.000
Mass Range 13		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	91.000	100.000
Mass Range 14		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	65.000	100.000
Mass Range 15		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
62.000	27.000	100.000

Param	Start	Stop
RO1	-7.500	-7.500

Mass Range 16

Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)	Param	Start	Stop
64.000	27.000	100.000	RO1	-7.500	-7.500

State File Information

Last Modified: Tue, May 3, 2016, 5:05:33

Analog Parameters

NC	0.000
TEM	80.000
OR	0.000
RNG	0.000
Q0	-5.200
IQ1	-6.000
ST	-13.000
RO1	-6.100
IQ2	-12.500
RO2	-35.000
IQ3	-40.200
RO3	-37.000
DF	-390.000
CEM	1700.000

On/Off Parameters

POL	Off
NEB	Off
CUR	4
CAD	7

Q1 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.050
75.000	0.060
100.000	0.065
120.000	0.070
180.000	0.100

Q3 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.042
60.000	0.043
100.000	0.045
150.000	0.045
180.000	0.047

Calibration File Information

Type: Q1 Calibration

Last Modified: Fri, Nov 2, 2012, 14:24:38

Mass	DAC
78.050	1466
106.080	2002
129.910	2459
165.870	3146

Calibration File Information

Type: Q3 Calibration

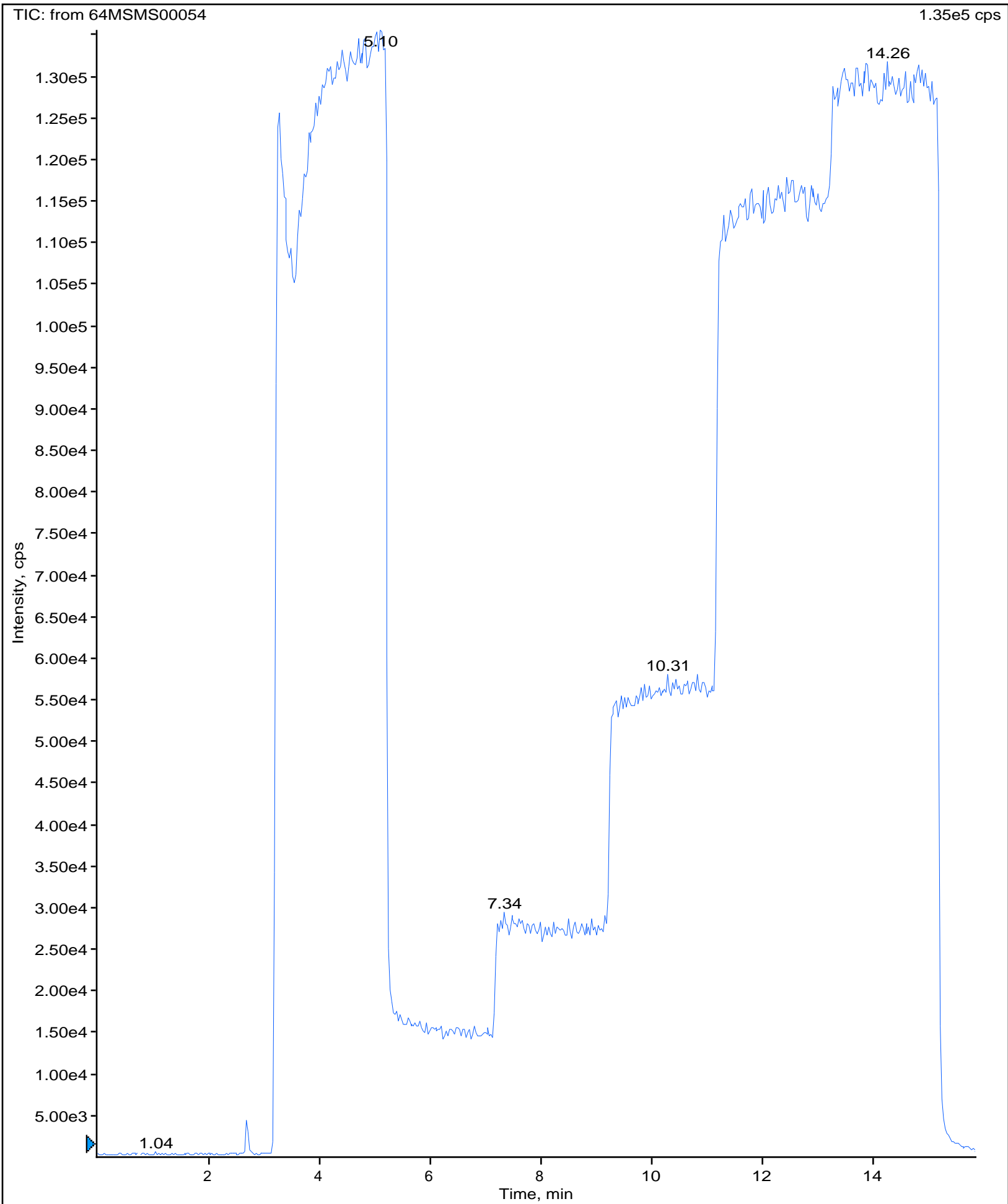
Last Modified: Fri, Nov 2, 2012, 14:40:02

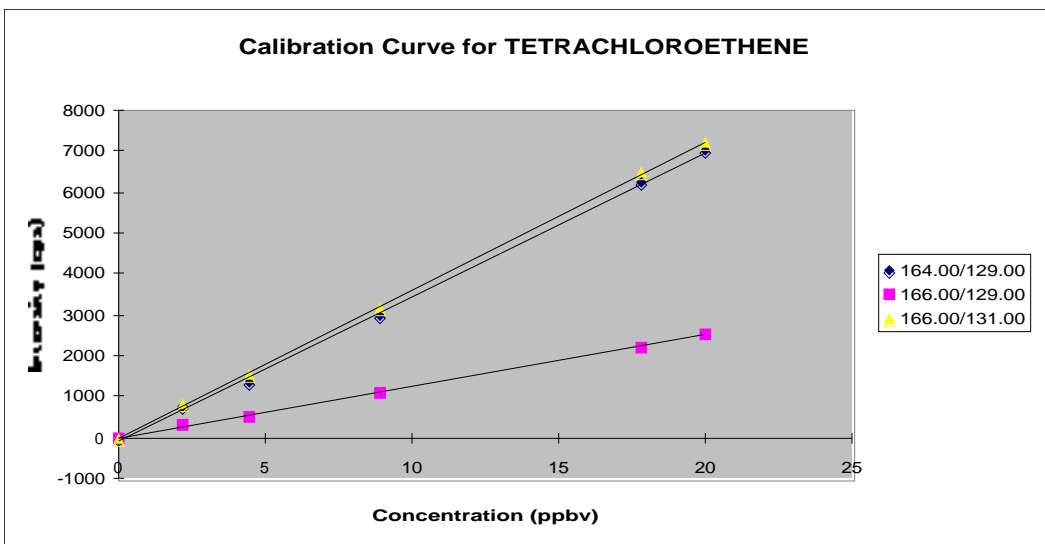
Mass	DAC
30.000	551
78.050	1473
105.070	1992
165.870	3160

5/3/16.5.34.02

Period 1, Expt. 1; Dwell: 100.0 ms; Pause: 5.0 ms

Acq. Time: Tue, May 3, 2016 at 5:34:02; Exp. Comment: Cal. Gas Bottle Number 2





Filename: 64MSMS00054 et al.

Compound na TETRACHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 5:52:29

Num. ions: 3

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.27	10.10	12.14	14.12

	Ion 1	Ion 2	Ion 3
Q1 Mass:	164	166	166
Q3 Mass:	129	129	131

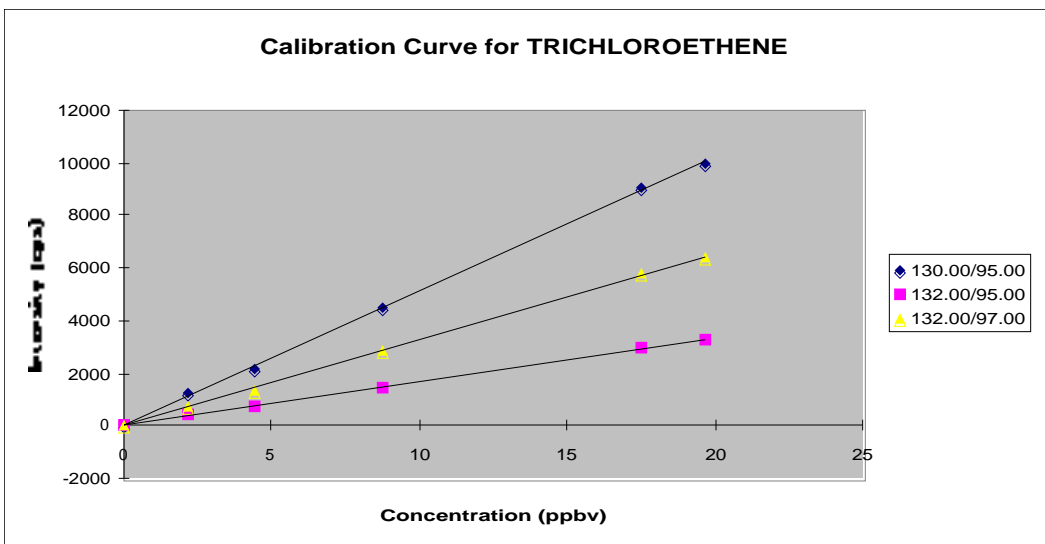
Slope: 353.649306 125.118891 363.009691

Intercept: -88.211524 -11.919484 -11.144483

Correlation: 0.99952071 0.99937868 0.99990958

Concentration 164.00/129.00 166.00/129.00 166.00/131.00

0	2.22222222	1.66666667	3.33333333
2.22	757.027027	301.081081	836.486486
4.44	1363.78378	520.27027	1541.62162
8.89	2949.16667	1058.05556	3196.94444
17.78	6265.13514	2183.51351	6487.2973
20	6993.51351	2536.48649	7226.75676



Filename: 64MSMS00054 et al.

Compound name: TRICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 5:53:13

Num. ions: 3

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.27	10.10	12.14	14.12

	Ion 1	Ion 2	Ion 3
Q1 Mass:	130	132	132
Q3 Mass:	95	95	97
Slope:	508.763827	166.046525	327.83193
Intercept:	37.8476756	-0.0100684	-5.3420573
Correlation:	0.99984527	0.99986996	0.99985246

Q1 Mass: 130 132 132

Q3 Mass: 95 95 97

Slope: 508.763827 166.046525 327.83193

Intercept: 37.8476756 -0.0100684 -5.3420573

Correlation: 0.99984527 0.99986996 0.99985246

Concentration 130.00/95.00 132.00/95.00 132.00/97.00

0 5.83333333 1.94444444 0.83333333

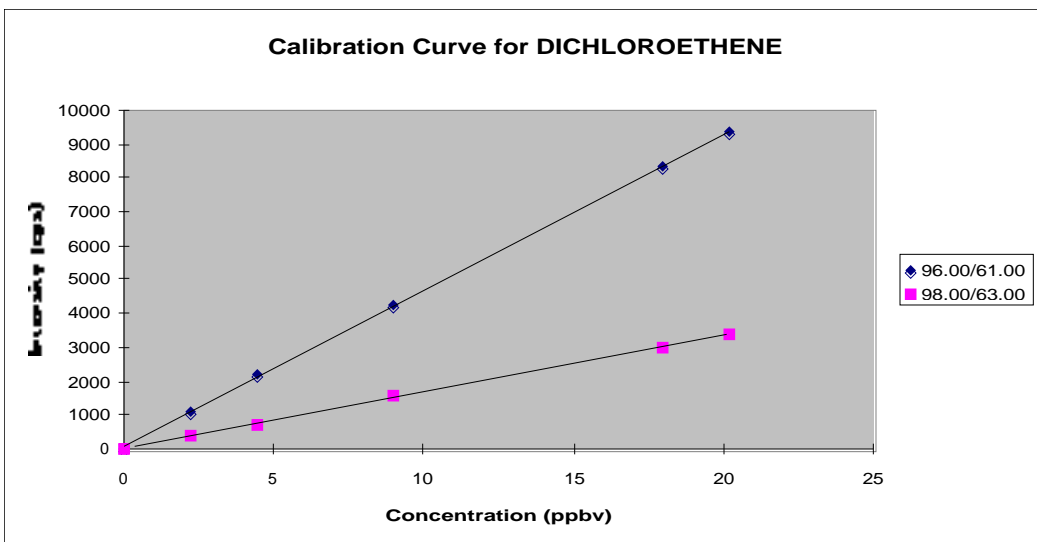
2.19 1222.7027 388.648649 765.405405

4.38 2200 712.162162 1359.18919

8.76 4513.05556 1426.94444 2861.94444

17.51 9040.54054 2933.51351 5779.18919

19.7 9975.40541 3260.81081 6425.67568



Filename: 64MSMS00054 et al.

Compound name: DICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 5:50:56

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.27	10.10	12.14	14.12

	Ion 1	Ion 2
Q1 Mass:	96	98
Q3 Mass:	61	63
Slope:	459.653162	166.686693
Intercept:	93.0644285	22.0424233
Correlation:	0.99987703	0.9998228

Q1 Mass: 96 98

Q3 Mass: 61 63

Slope: 459.653162 166.686693

Intercept: 93.0644285 22.0424233

Correlation: 0.99987703 0.9998228

Concentration 96.00/61.00 98.00/63.00

0 1.3888889 0.27777778

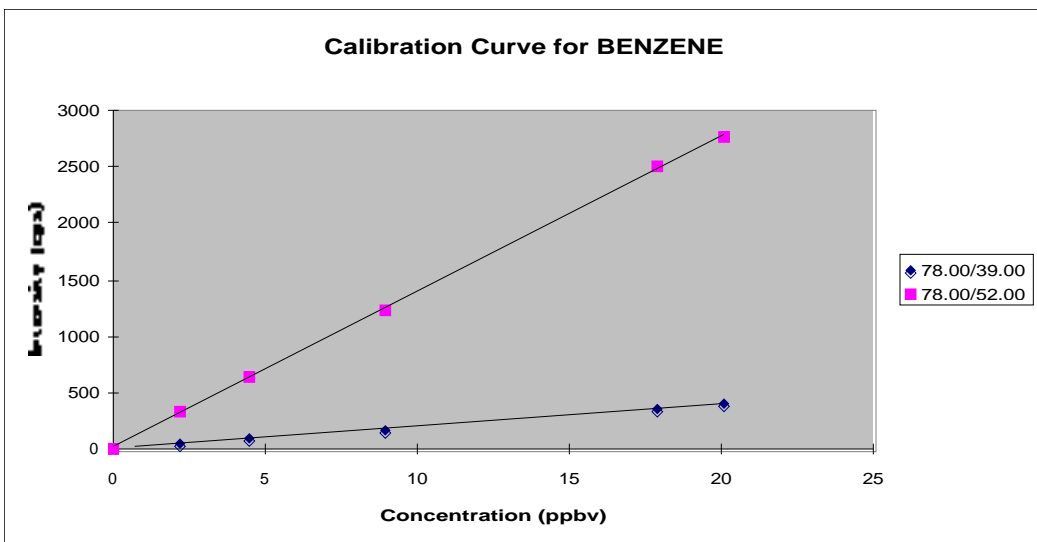
2.24 1128.37838 426.486486

4.49 2225.13514 741.351351

8.98 4285 1551.38889

17.96 8329.18919 3004.32432

20.2 9350.81081 3387.83784



Filename: 64MSMS00054 et al.

Compound na BENZENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 5:51:45

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.27	10.10	12.14	14.12

	Ion 1	Ion 2
Q1 Mass:	78	78
Q3 Mass:	39	52
Slope:	19.2817056	137.256312
Intercept:	7.69629286	19.6919577
Correlation:	0.9994525	0.99975351

Q1 Mass: 78 78

Q3 Mass: 39 52

Slope: 19.2817056 137.256312

Intercept: 7.69629286 19.6919577

Correlation: 0.9994525 0.99975351

Concentration 78.00/39.00 78.00/52.00

0 1.66666667 10.5555556

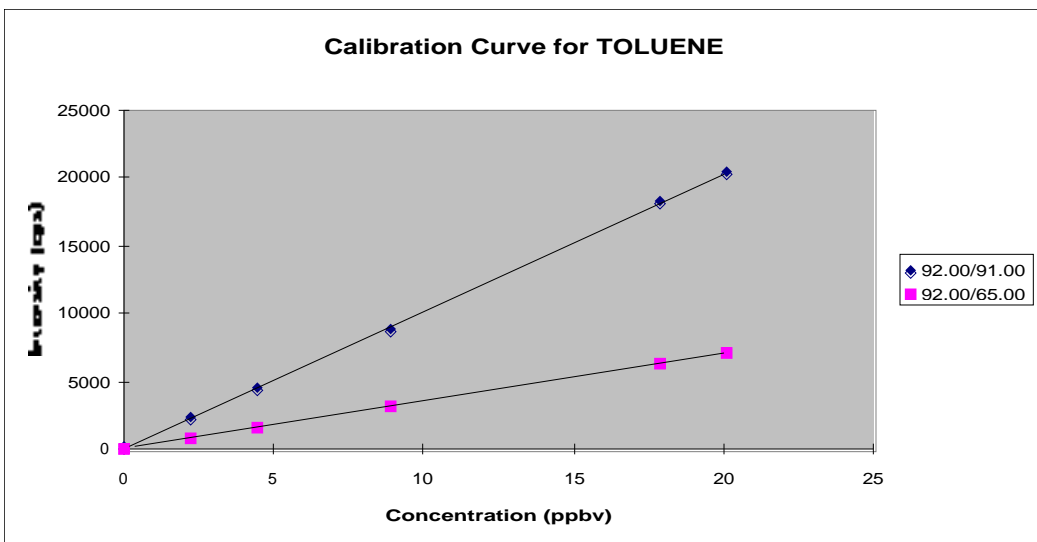
2.23 56.2162162 342.162162

4.47 97.027027 640.540541

8.93 176.388889 1217.77778

17.87 357.837838 2510.54054

20.1 390.540541 2753.51351



Filename: 64MSMS00054 et al.

Compound name: TOLUENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 5:54:02

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.27	10.10	12.14	14.12

	Ion 1	Ion 2
Q1 Mass:	92	91
Q3 Mass:	91	65
Slope:	1019.31628	350.458836
Intercept:	26.3777129	15.7897024
Correlation:	0.99982347	0.99979301

Q1 Mass: 92 91

Q3 Mass: 91 65

Slope: 1019.31628 350.458836

Intercept: 26.3777129 15.7897024

Correlation: 0.99982347 0.99979301

Concentration 92.00/91.00 92.00/65.00

0 117.777778 47.2222222

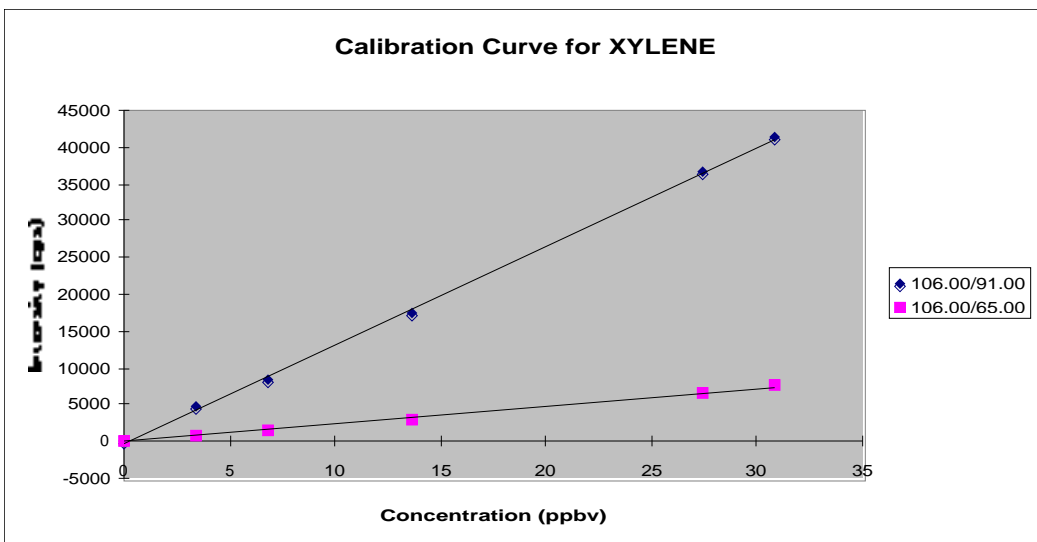
2.23 2454.32432 869.72973

4.47 4451.62162 1506.75676

8.93 8876.11111 3078.05556

17.87 1.84E+04 6281.89189

20.1 2.05E+04 7095.67568



Filename: 64MSMS00054 et al.

Compound na XYLENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 5:55:34

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.27	10.10	12.14	14.12

	Ion 1	Ion 2
Q1 Mass:	106	106
Q3 Mass:	91	65
Slope:	1347.4486	244.968731
Intercept:	-324.46945	-63.234917
Correlation:	0.99959902	0.9995122

Q1 Mass: 106 106

Q3 Mass: 91 65

Slope: 1347.4486 244.968731

Intercept: -324.46945 -63.234917

Correlation: 0.99959902 0.9995122

Concentration 106.00/91.00 106.00/65.00

0 78.6111111 14.1666667

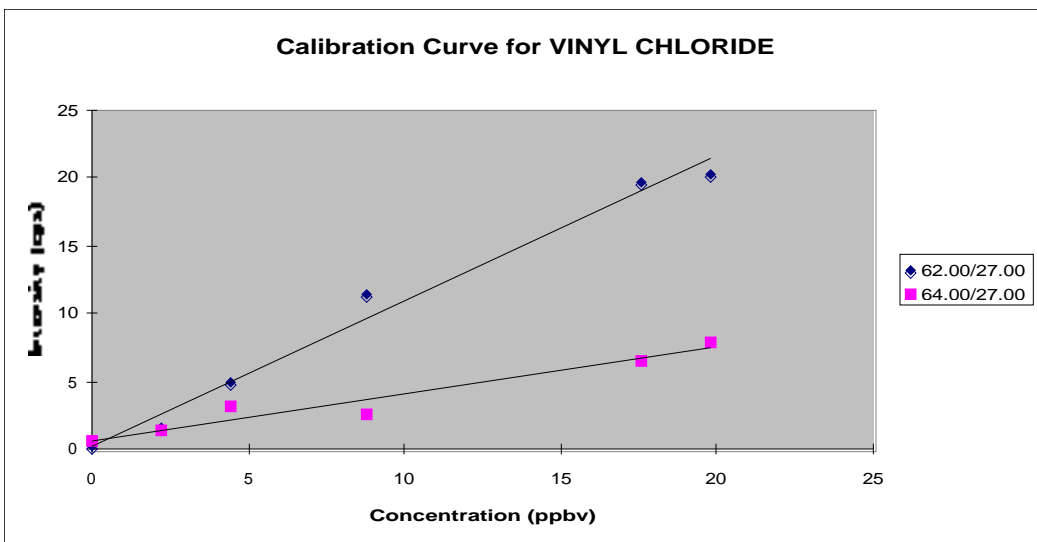
3.42 4710 856.486486

6.84 8369.18919 1517.56757

13.69 1.74E+04 3141.11111

27.38 3.67E+04 6701.89189

30.8 4.15E+04 7508.64865



Filename: 64MSMS00054 et al.

Compound name: VINYL CHLORIDE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 5:54:45

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.27	10.10	12.14	14.12

	Ion 1	Ion 2
Q1 Mass:	62	64
Q3 Mass:	27	27
Slope:	1.06860107	0.34008034
Intercept:	0.28850279	0.66970542
Correlation:	0.99269282	0.96669748

Q1 Mass: 62 64

Q3 Mass: 27 27

Slope: 1.06860107 0.34008034

Intercept: 0.28850279 0.66970542

Correlation: 0.99269282 0.96669748

Concentration 62.00/27.00 64.00/27.00

0 0.27777778 0.55555556

2.2 1.62162162 1.35135135

4.4 4.86486486 3.24324324

8.8 11.3888889 2.5

17.6 19.7297297 6.48648649

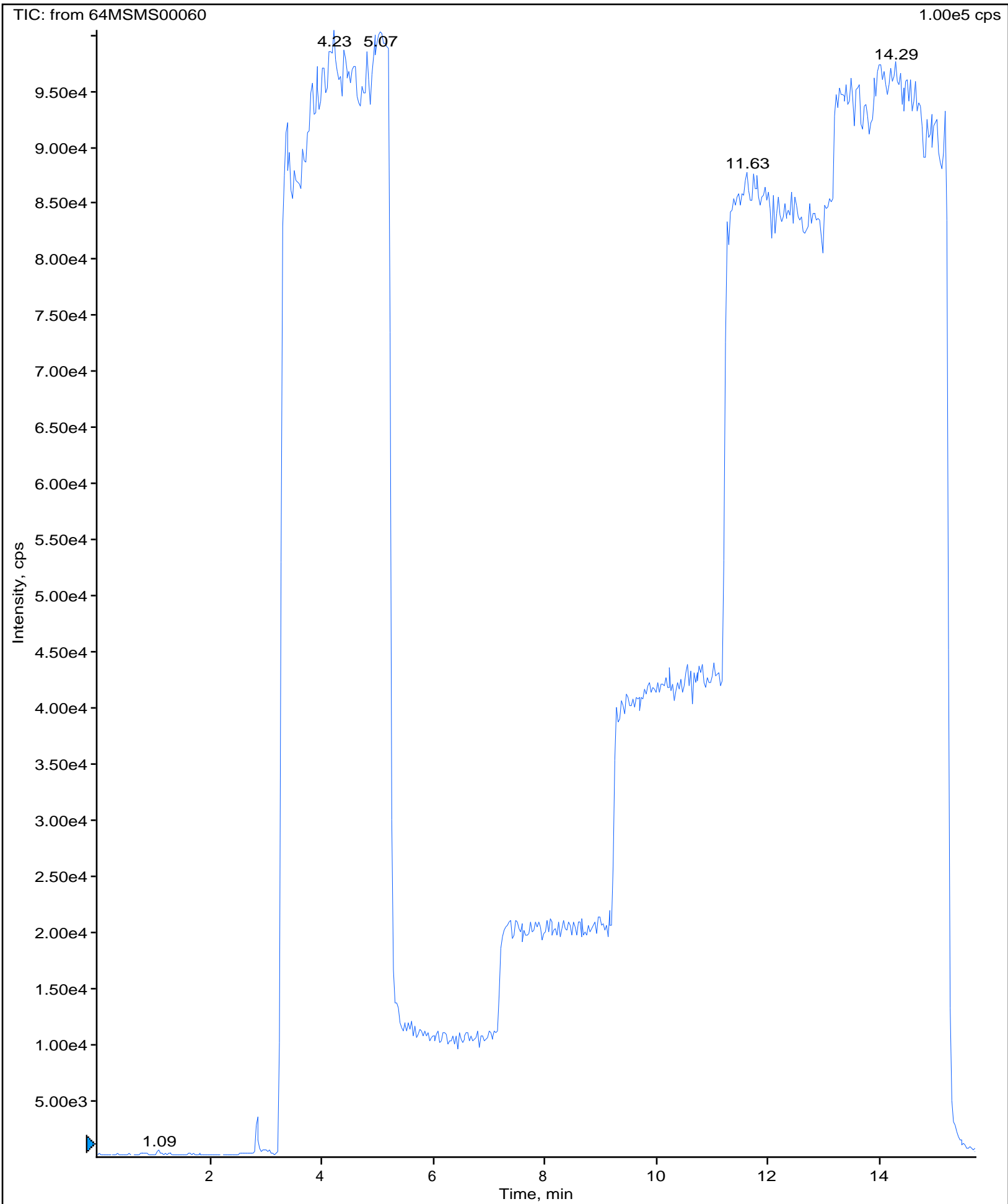
19.8 20.2702703 7.83783784

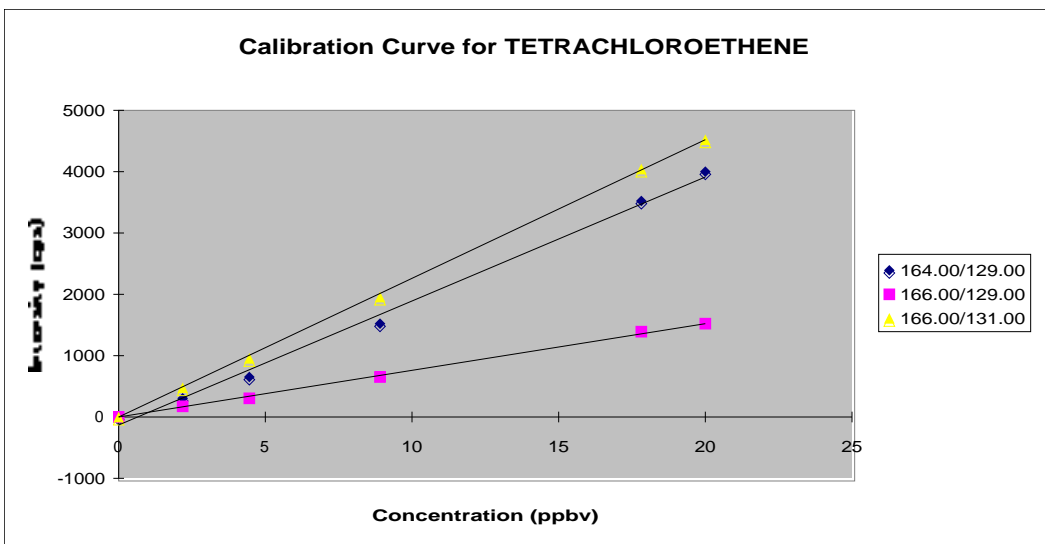
Report File Name 64MSMS00054 et al.
 Sample Name BOD Calibration - 20160503
 Date Tuesday, May 3, 2016 5:56:26
 Time Range 1.00 to 2.00 min
 Conc Units: ppbv
 Num Ions 16.00

Name	TETRACHLOR	TETRACHLOR	TETRACHLOR	TRICHLOROE	TRICHLOROE	TRICHLOROE	DICHLOROET	DICHLOROET	BENZENE	BENZENE	TOLUENE	TOLUENE	XYLENE	XYLENE	VINYL CHLOR	VINYL CHLORIDE
Q1 Mass	164.00	166.00	166.00	130.00	132.00	132.00	96.00	98.00	78.00	78.00	92.00	92.00	106.00	106.00	62.00	64.00
Q3 Mass	129.00	129.00	131.00	95.00	95.00	97.00	61.00	63.00	39.00	52.00	91.00	65.00	91.00	65.00	27.00	27.00
Slope	353.65	125.12	363.01	508.76	166.05	327.83	459.65	166.69	19.28	137.26	1019.32	350.46	1347.45	244.97	1.07	0.34
Intercept	-88.21	-11.92	-11.14	37.85	-0.01	-5.34	93.06	22.04	7.70	19.69	26.38	15.79	-324.47	-63.23	0.29	0.67
Intensity	2.22	1.67	3.33	5.83	1.94	0.83	1.39	0.28	1.67	10.56	117.78	47.22	78.61	14.17	0.28	0.56
Int SD	5.91	3.78	4.78	9.37	5.77	3.68	4.24	1.67	3.78	11.70	45.36	21.99	29.29	13.81	1.67	2.32
Concentratio	0.26	0.11	0.04	-0.06	0.01	0.02	-0.20	-0.13	-0.31	-0.07	0.09	0.09	0.30	0.32	-0.01	-0.34
Conc SD	0.02	0.03	0.01	0.02	0.03	0.01	0.01	0.01	0.20	0.09	0.04	0.06	0.02	0.06	1.56	6.83
Compound C	0.13			-0.01			-0.17		-0.19		0.09		0.31		-0.17	
Compound SI	0.01			0.01			0.01		0.10		0.04		0.03		2.97	
Det. Limit	0.05	0.09	0.04	0.06	0.10	0.03	0.03	0.03	0.59	0.26	0.13	0.19	0.07	0.17	4.68	20.49
Compound D	0.06			0.06			0.03		0.42		0.16		0.12		12.59	

Period 1, Expt. 1; Dwell: 100.0 ms; Pause: 5.0 ms

Acq. Time: Tue, May 3, 2016 at 13:16:50; Exp. Comment: Cal. Gas Bottle Number 2





Filename: 64MSMS00060 et al.

Compound na TETRACHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 13:35:34

Num. ions: 3

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.26	10.14	12.21	14.10

	Ion 1	Ion 2	Ion 3
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Q1 Mass: 164 166 166

Q3 Mass: 129 129 131

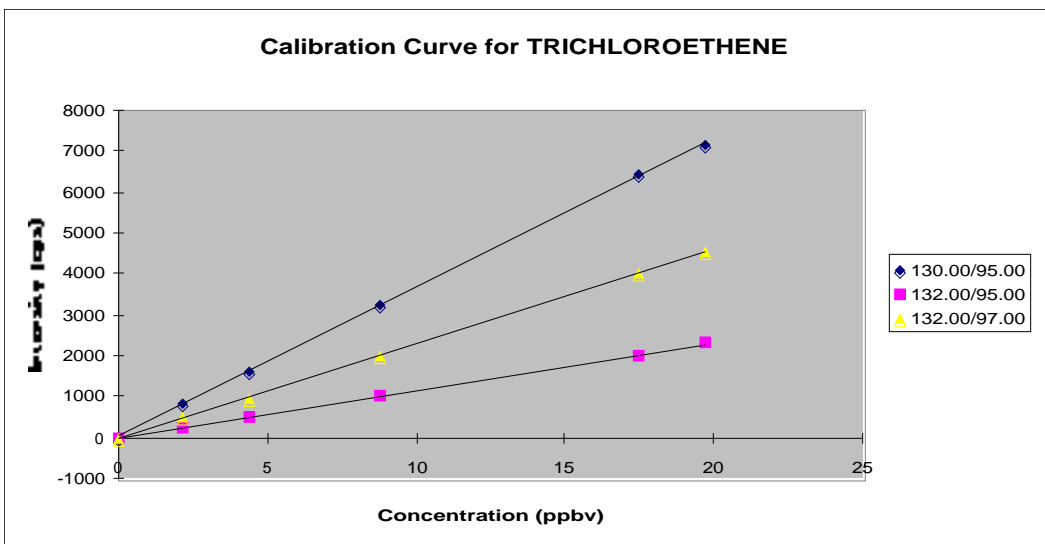
Slope: 203.14875 77.3116078 227.123361

Intercept: -142.4018 -17.079999 -19.407551

Correlation: 0.99800799 0.99952663 0.99987115

Concentration 164.00/129.00 166.00/129.00 166.00/131.00

0	1.94444444	0.27777778	3.61111111
2.22	322.432432	161.081081	500
4.44	658.108108	301.891892	972.432432
8.89	1517.56757	657.297297	1950.54054
17.78	3500.27027	1383.78378	4052.16216
20	3979.18919	1516.21622	4517.2973



Filename: 64MSMS00060 et al.

Compound name: TRICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 13:36:11

Num. ions: 3

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.26	10.14	12.21	14.10

	Ion 1	Ion 2	Ion 3
Q1 Mass:	130	132	132
Q3 Mass:	95	95	97
Slope:	364.761795	116.928193	231.184385
Intercept:	22.1312796	-11.412475	-21.200144
Correlation:	0.99991714	0.99993134	0.99985147

Q1 Mass: 130 132 132

Q3 Mass: 95 95 97

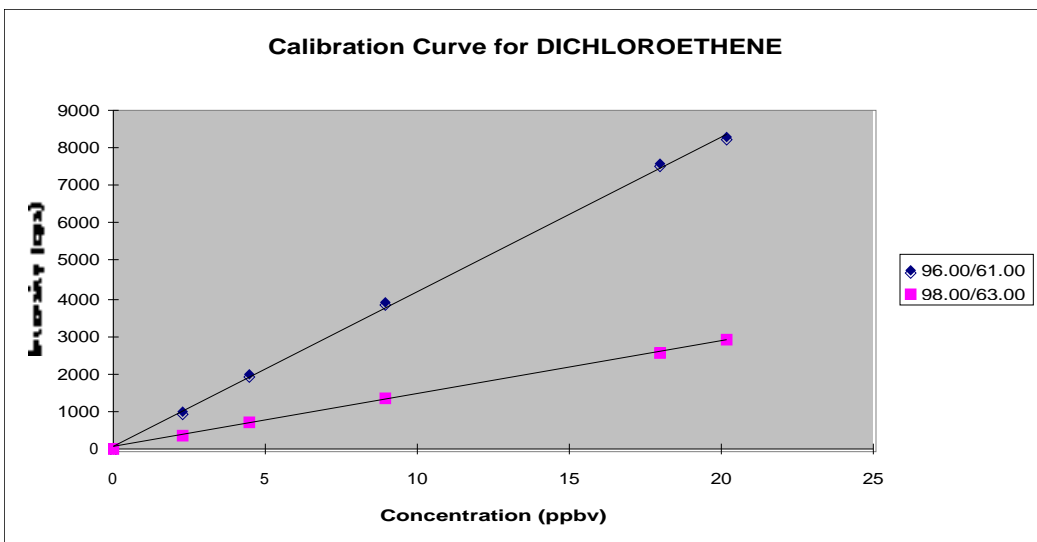
Slope: 364.761795 116.928193 231.184385

Intercept: 22.1312796 -11.412475 -21.200144

Correlation: 0.99991714 0.99993134 0.99985147

Concentration 130.00/95.00 132.00/95.00 132.00/97.00

0	2.77777778	2.5	1.38888889
2.19	835.135135	247.297297	519.459459
4.38	1590.81081	485.945946	937.567568
8.76	3262.43243	1005.40541	1981.08108
17.51	6447.83784	2030.54054	4039.72973
19.7	7158.37838	2303.24324	4540



Filename: 64MSMS00060 et al.

Compound na DICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 13:33:20

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.26	10.14	12.21	14.10

	Ion 1	Ion 2
Q1 Mass:	96	98
Q3 Mass:	61	63
Slope:	410.223784	141.71546
Intercept:	99.0888388	37.7239558
Correlation:	0.99961737	0.99965326

Q1 Mass: 96 98

Q3 Mass: 61 63

Slope: 410.223784 141.71546

Intercept: 99.0888388 37.7239558

Correlation: 0.99961737 0.99965326

Concentration 96.00/61.00 98.00/63.00

0 1.6666667 0.5555556

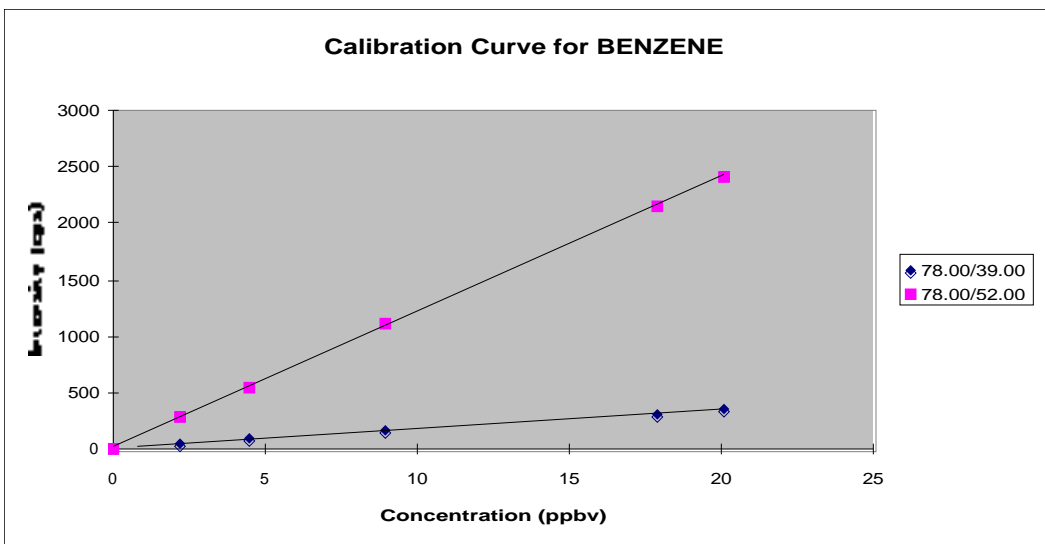
2.24 1005.40541 359.72973

4.49 2002.43243 678.108108

8.98 3875.67568 1365.13514

17.96 7550.54054 2578.37838

20.2 8257.56757 2878.64865



Filename: 64MSMS00060 et al.

Compound na BENZENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 13:34:51

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.26	10.14	12.21	14.10

	Ion 1	Ion 2
Q1 Mass:	78	78
Q3 Mass:	39	52
Slope:	17.1118201	119.83665
Intercept:	5.6579304	15.1349372
Correlation:	0.99957763	0.99990888

Q1 Mass: 78 78

Q3 Mass: 39 52

Slope: 17.1118201 119.83665

Intercept: 5.6579304 15.1349372

Correlation: 0.99957763 0.99990888

Concentration 78.00/39.00 78.00/52.00

0 2.2222222 10

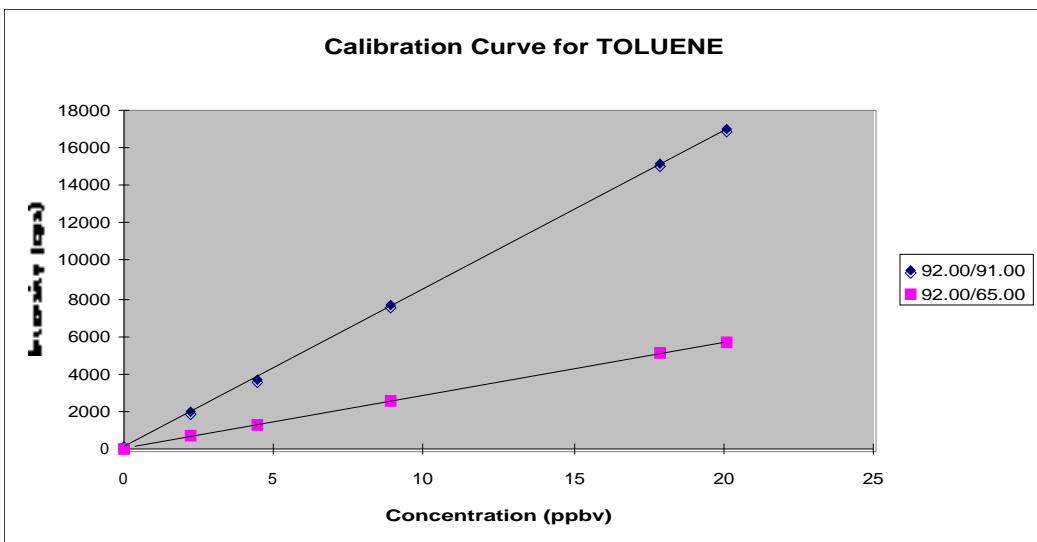
2.23 42.4324324 271.891892

4.47 83.2432432 550.810811

8.93 164.864865 1111.62162

17.87 313.783784 2154.86486

20.1 344.594595 2414.86486



Filename: 64MSMS00060 et al.

Compound name: TOLUENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 13:37:00

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.26	10.14	12.21	14.10

	Ion 1	Ion 2
Q1 Mass:	92	92
Q3 Mass:	91	65
Slope:	840.040998	280.171438
Intercept:	84.8016706	23.6904581
Correlation:	0.9999528	0.99995382

Q1 Mass: 92 92

Q3 Mass: 91 65

Slope: 840.040998 280.171438

Intercept: 84.8016706 23.6904581

Correlation: 0.9999528 0.99995382

Concentration 92.00/91.00 92.00/65.00

0 75.2777778 25.2777778

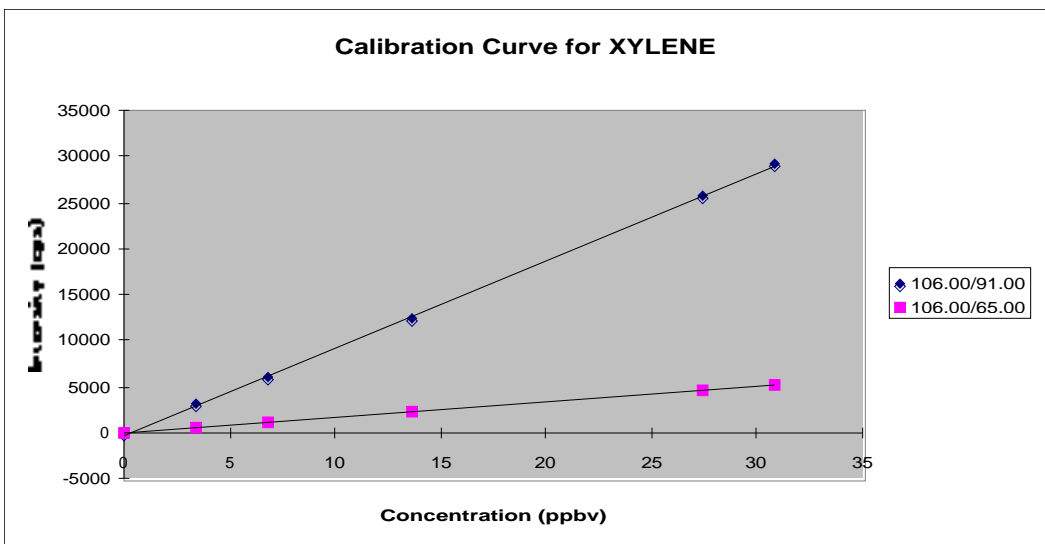
2.23 2009.72973 655.135135

4.47 3729.45946 1250.54054

8.93 7674.86486 2542.16216

17.87 1.51E+04 5058.64865

20.1 1.69E+04 5627.56757



Filename: 64MSMS00060 et al.

Compound na XYLENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 13:38:26

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.26	10.14	12.21	14.10

	Ion 1	Ion 2
Q1 Mass:	106	106
Q3 Mass:	91	65
Slope:	949.668643	167.468423
Intercept:	-252.11117	-15.26525
Correlation:	0.9997619	0.99988561

Q1 Mass: 106 106

Q3 Mass: 91 65

Slope: 949.668643 167.468423

Intercept: -252.11117 -15.26525

Correlation: 0.9997619 0.99988561

Concentration 106.00/91.00 106.00/65.00

0 63.8888889 15.8333333

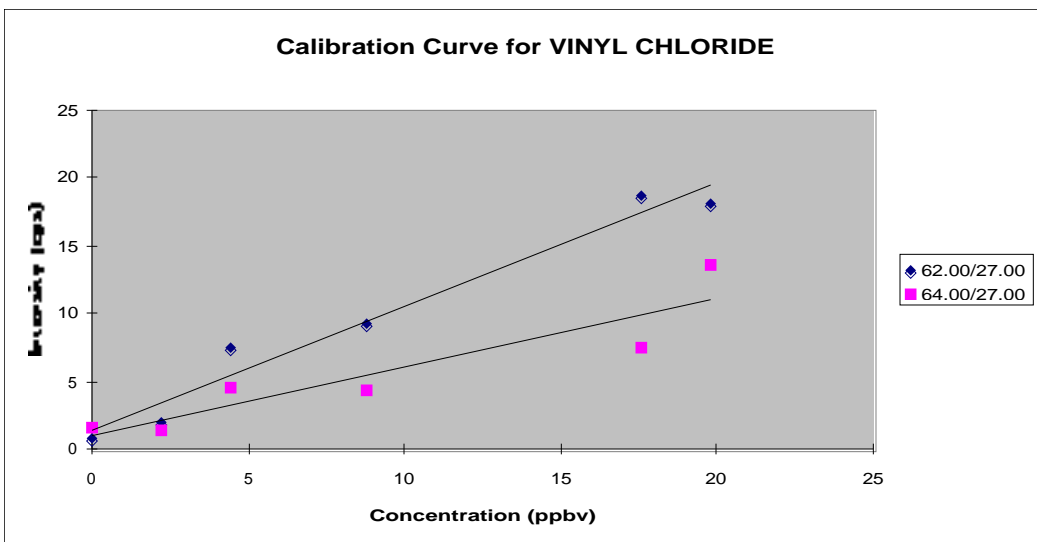
3.42 3088.91892 571.621622

6.84 5981.62162 1110.81081

13.69 1.24E+04 2221.35135

27.38 2.57E+04 4592.97297

30.8 2.92E+04 5150



Filename: 64MSMS00060 et al.

Compound na VINYL CHLORIDE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 13:37:43

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.34	8.26	10.14	12.21	14.10

	Ion 1	Ion 2
Q1 Mass:	62	64
Q3 Mass:	27	27
Slope:	0.91552592	0.50602551
Intercept:	1.31649507	1.04997855
Correlation:	0.98192994	0.91954459

Q1 Mass: 62 64

Q3 Mass: 27 27

Slope: 0.91552592 0.50602551

Intercept: 1.31649507 1.04997855

Correlation: 0.98192994 0.91954459

Concentration 62.00/27.00 64.00/27.00

0 0.83333333 1.66666667

2.2 1.89189189 1.35135135

4.4 7.56756757 4.59459459

8.8 9.18918919 4.32432432

17.6 18.6486486 7.56756757

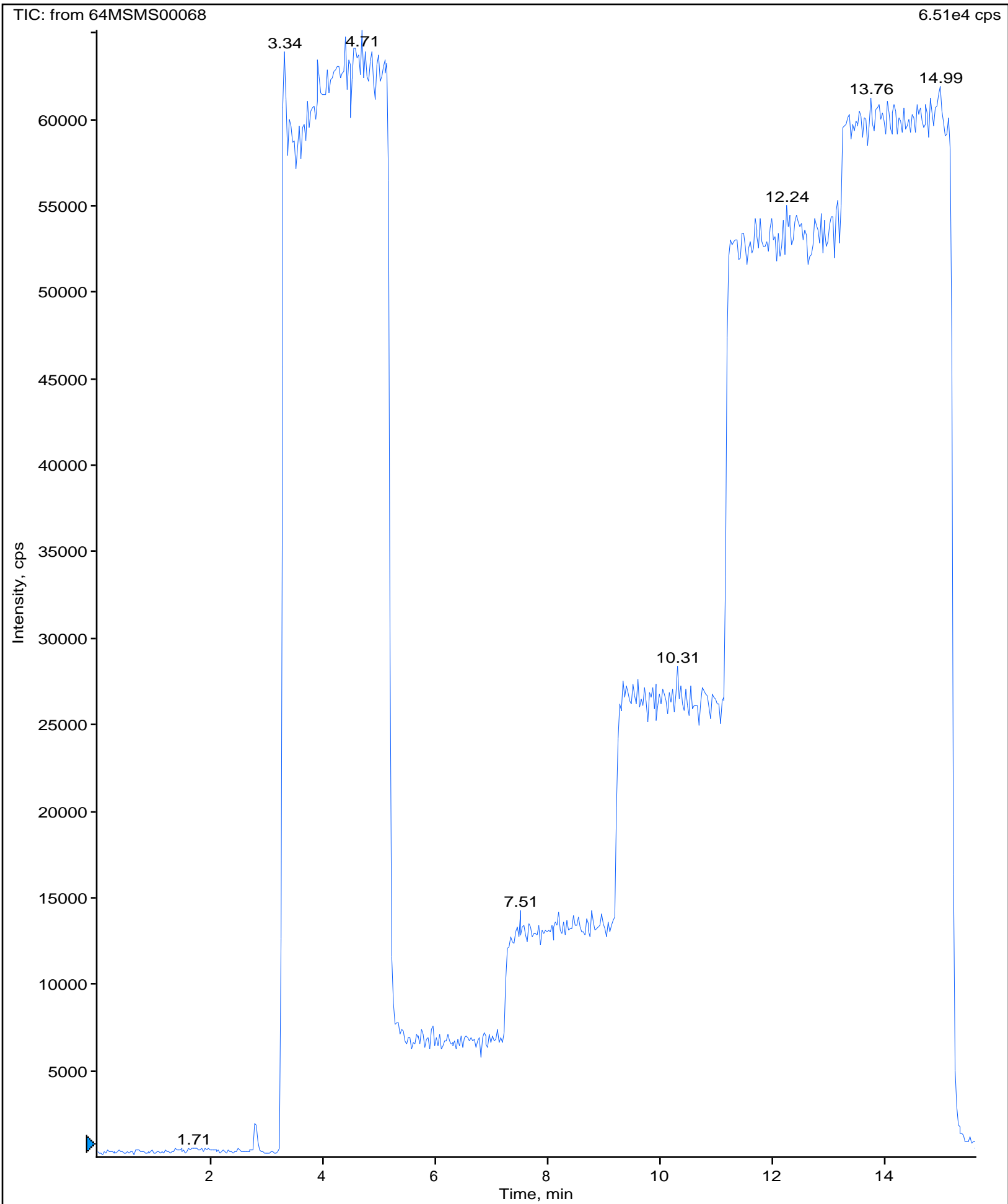
19.8 18.1081081 13.5135135

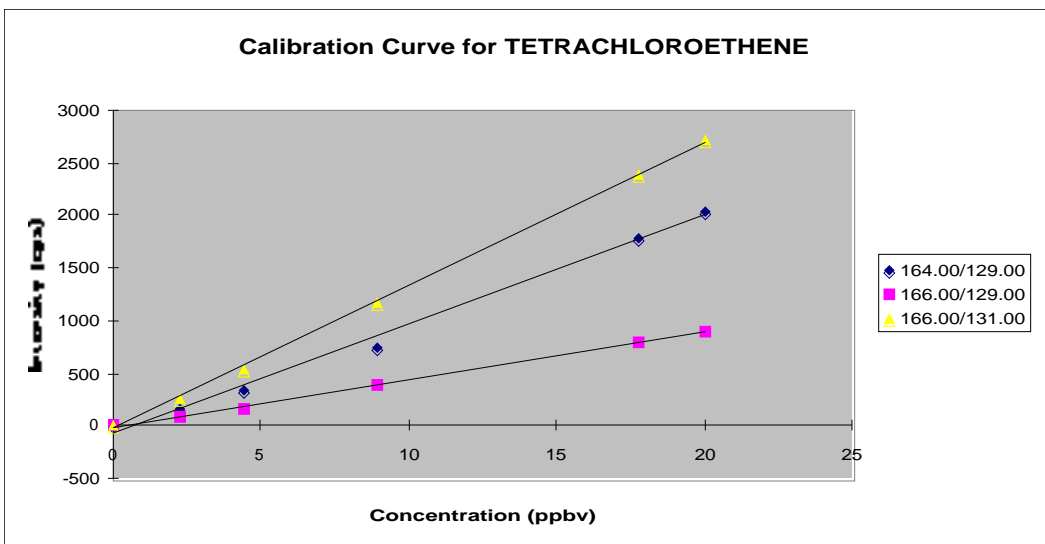
Report File Name 64MSMS00060 et al.
 Sample Name MOD Calibration - 20160503
 Date Tuesday, May 3, 2016 13:39:31
 Time Range 1.00 to 2.00 min
 Conc Units: ppbv
 Num Ions 16.00

Name	TETRACHLOR	TETRACHLOR	TETRACHLOR	TRICHLOROE'	TRICHLOROE'	TRICHLOROE'	DICHLOROET	DICHLOROET	BENZENE	BENZENE	TOLUENE	TOLUENE	XYLENE	XYLENE	VINYL CHLOR	VINYL CHLORIDE
Q1 Mass	164.00	166.00	166.00	130.00	132.00	132.00	96.00	98.00	78.00	78.00	92.00	92.00	106.00	106.00	62.00	64.00
Q3 Mass	129.00	129.00	131.00	95.00	95.00	97.00	61.00	63.00	39.00	52.00	91.00	65.00	91.00	65.00	27.00	27.00
Slope	203.15	77.31	227.12	364.76	116.93	231.18	410.22	141.72	17.11	119.84	840.04	280.17	949.67	167.47	0.92	0.51
Intercept	-142.40	-17.08	-19.41	22.13	-11.41	-21.20	99.09	37.72	5.66	15.13	84.80	23.69	-252.11	-15.27	1.32	1.05
Intensity	1.94	0.28	3.61	2.78	2.50	1.39	1.67	0.56	2.22	10.00	75.28	25.28	63.89	15.83	0.83	1.67
Int SD	4.67	1.67	7.98	5.66	5.54	4.24	5.07	2.32	5.40	13.09	34.68	20.07	37.21	16.10	3.68	5.61
Concentratio	0.71	0.22	0.10	-0.05	0.12	0.10	-0.24	-0.26	-0.20	-0.04	-0.01	0.01	0.33	0.19	-0.53	1.22
Conc SD	0.02	0.02	0.04	0.02	0.05	0.02	0.01	0.02	0.32	0.11	0.04	0.07	0.04	0.10	4.02	11.08
Compound C	0.35			0.05			-0.25		-0.12		0.00		0.26		0.35	
Compound SI	0.02			0.02			0.01		0.15		0.04		0.05		5.34	
Det. Limit	0.07	0.06	0.11	0.05	0.14	0.06	0.04	0.05	0.95	0.33	0.12	0.21	0.12	0.29	12.07	33.24
Compound D	0.08			0.08			0.04		0.64		0.17		0.20		22.65	

Period 1, Expt. 1; Dwell: 100.0 ms; Pause: 5.0 ms

Acq. Time: Tue, May 3, 2016 at 18:35:28; Exp. Comment: Cal. Gas Bottle Number 2





Filename: 64MSMS00068 et al.

Compound na TETRACHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 18:59:06

Num. ions: 3

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.32	8.20	10.18	12.16	14.24

	Ion 1	Ion 2	Ion 3
Q1 Mass:	164	166	166
Q3 Mass:	129	129	131
Slope:	104.065846	45.8253052	136.531536
Intercept:	-80.331036	-22.806083	-30.335854
Correlation:	0.99739553	0.99935053	0.99980233

Q1 Mass: 164 166 166

Q3 Mass: 129 129 131

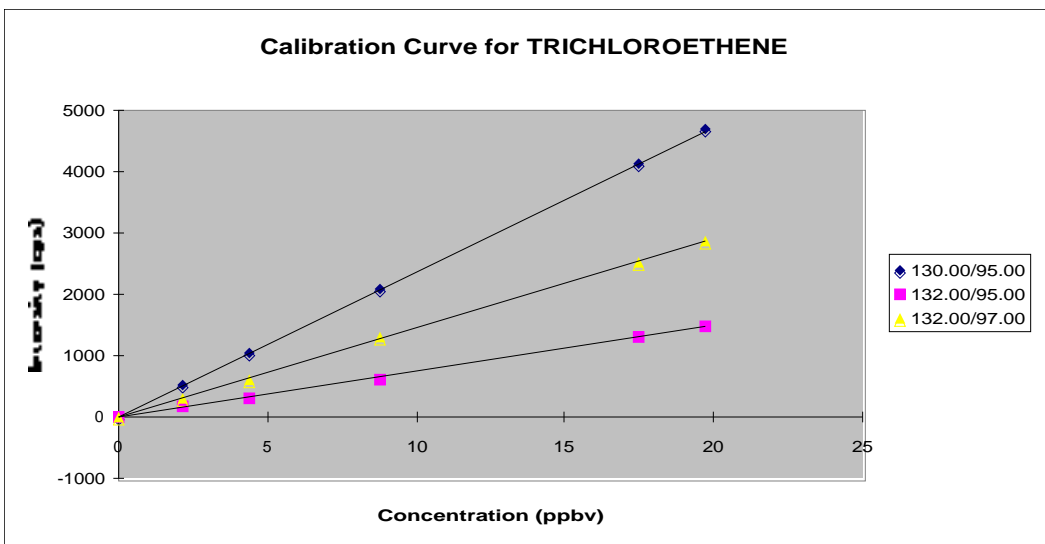
Slope: 104.065846 45.8253052 136.531536

Intercept: -80.331036 -22.806083 -30.335854

Correlation: 0.99739553 0.99935053 0.99980233

Concentration 164.00/129.00 166.00/129.00 166.00/131.00

0	0.27777778	0	0.83333333
2.22	161.081081	71.8918919	261.351351
4.44	330.27027	164.324324	550.540541
8.89	753.783784	376.486486	1184.59459
17.78	1776.75676	797.837838	2379.45946
20	2045.67568	896.486486	2722.43243



Filename: 64MSMS00068 et al.

Compound na TRICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 19:00:46

Num. ions: 3

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.32	8.20	10.18	12.16	14.24

	Ion 1	Ion 2	Ion 3
Q1 Mass:	130	132	132
Q3 Mass:	95	95	97
Slope:	236.929043	74.7865167	145.502562
Intercept:	3.04410138	-11.410878	-7.3156322
Correlation:	0.99994594	0.99974033	0.99994855

Q1 Mass: 130 132 132

Q3 Mass: 95 95 97

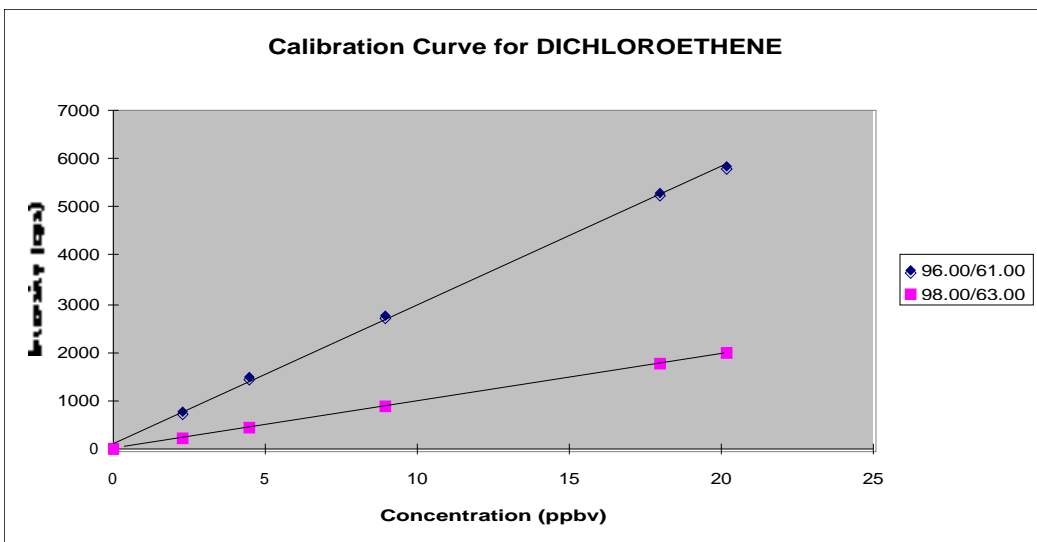
Slope: 236.929043 74.7865167 145.502562

Intercept: 3.04410138 -11.410878 -7.3156322

Correlation: 0.99994594 0.99974033 0.99994855

Concentration 130.00/95.00 132.00/95.00 132.00/97.00

0	1.11111111	0.27777778	0
2.19	526.486486	161.351351	310.810811
4.38	1044.32432	303.243243	610.27027
8.76	2076.48649	628.108108	1283.51351
17.51	4118.10811	1289.45946	2535.67568
19.7	4700	1478.37838	2860.54054



Filename: 64MSMS00068 et al.

Compound na DICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 18:51:42

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.32	8.20	10.18	12.16	14.24

	Ion 1	Ion 2
Q1 Mass:	96	98
Q3 Mass:	61	63
Slope:	286.818376	97.9499343
Intercept:	113.993161	12.6937106
Correlation:	0.99950577	0.99985225

Q1 Mass: 96 98

Q3 Mass: 61 63

Slope: 286.818376 97.9499343

Intercept: 113.993161 12.6937106

Correlation: 0.99950577 0.99985225

Concentration 96.00/61.00 98.00/63.00

0 0 0.83333333

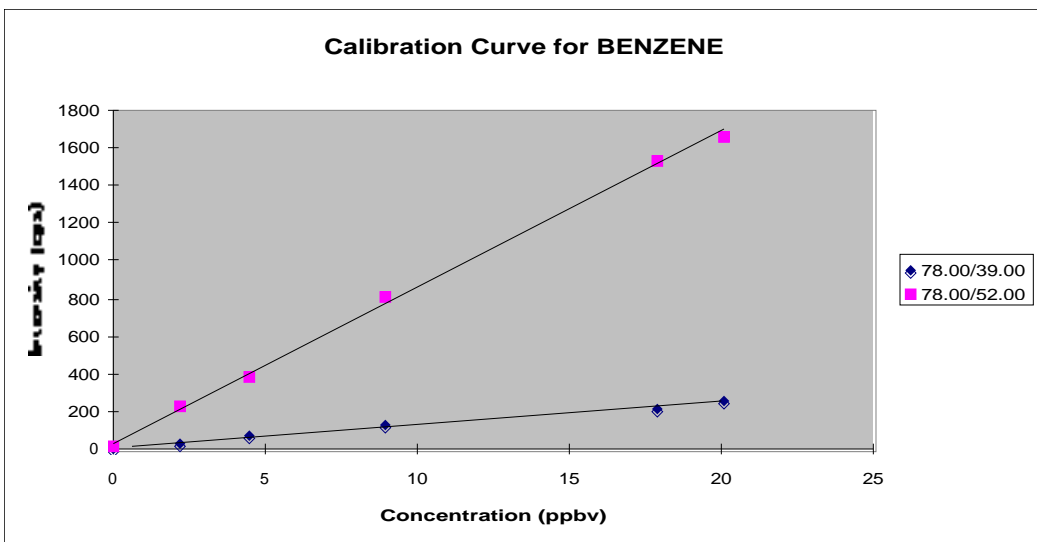
2.24 788.108108 229.72973

4.49 1473.51351 460

8.98 2735.67568 903.783784

17.96 5305.94595 1787.56757

20.2 5831.62162 1970.81081



Filename: 64MSMS00068 et al.

Compound na BENZENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 18:54:16

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.32	8.20	10.18	12.16	14.24

	Ion 1	Ion 2
Q1 Mass:	78	78
Q3 Mass:	39	52
Slope:	12.1084337	82.8564261
Intercept:	6.92516963	30.7355968
Correlation:	0.99815168	0.99916237

Q1 Mass: 78 78

Q3 Mass: 39 52

Slope: 12.1084337 82.8564261

Intercept: 6.92516963 30.7355968

Correlation: 0.99815168 0.99916237

Concentration 78.00/39.00 78.00/52.00

0 0.83333333 14.1666667

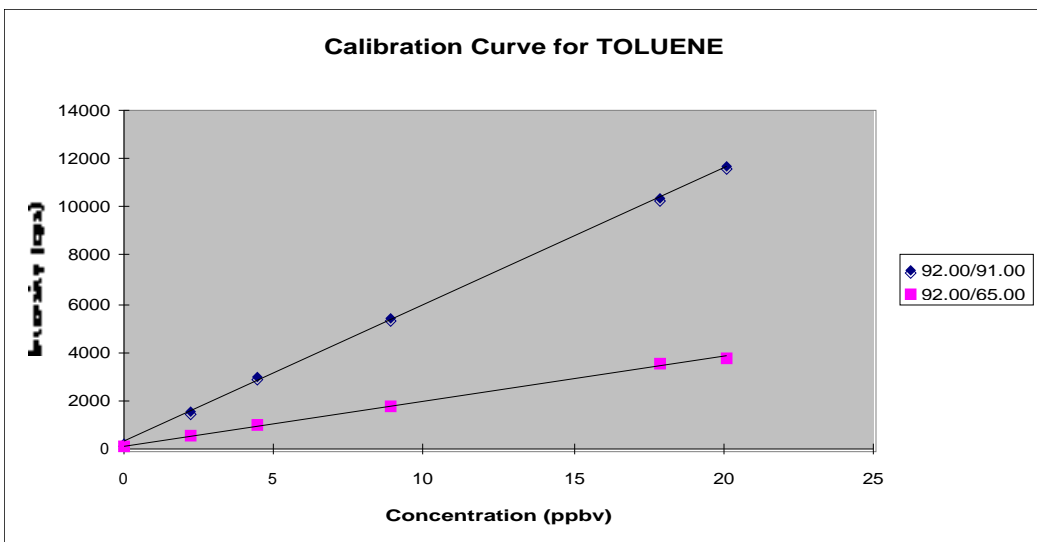
2.23 30 224.054054

4.47 69.1891892 379.189189

8.93 121.891892 813.783784

17.87 218.378378 1529.72973

20.1 250.27027 1664.59459



Filename: 64MSMS00068 et al.

Compound name: TOLUENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 19:02:03

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.32	8.20	10.18	12.16	14.24

	Ion 1	Ion 2
Q1 Mass:	92	92
Q3 Mass:	91	65
Slope:	566.727552	185.972985
Intercept:	281.144032	111.332777
Correlation:	0.99988982	0.99957811

Q1 Mass: 92 92

Q3 Mass: 91 65

Slope: 566.727552 185.972985

Intercept: 281.144032 111.332777

Correlation: 0.99988982 0.99957811

Concentration 92.00/91.00 92.00/65.00

0 188.055556 67.5

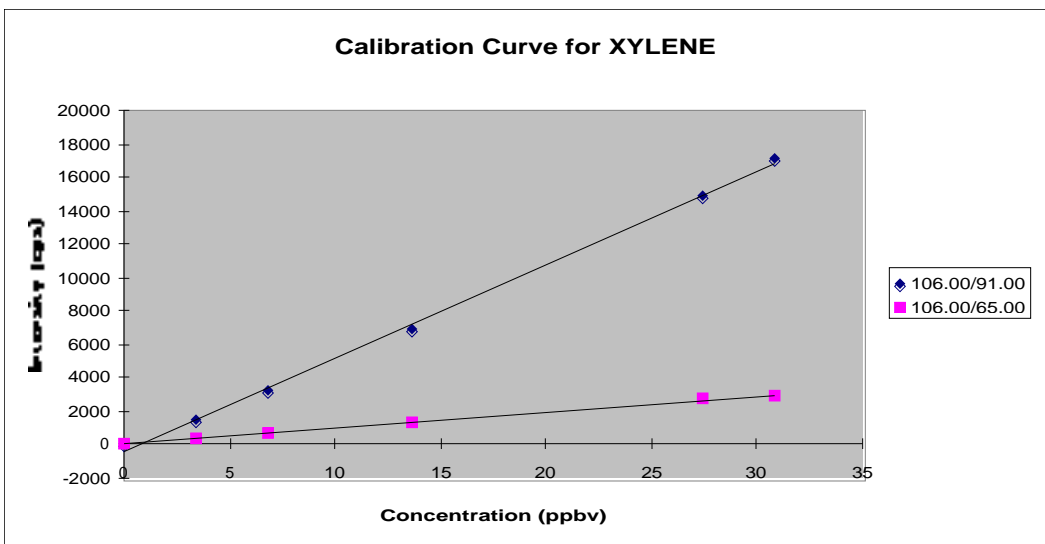
2.23 1524.86486 509.189189

4.47 2922.16216 993.513514

8.93 5395.67568 1798.91892

17.87 1.04E+04 3473.78378

20.1 1.16E+04 3793.24324



Filename: 64MSMS00068 et al.

Compound na XYLENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 19:03:22

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.32	8.20	10.18	12.16	14.24

	Ion 1	Ion 2
Q1 Mass:	106	106
Q3 Mass:	91	65
Slope:	559.530492	97.8913269
Intercept:	-353.21531	0.74910531
Correlation:	0.99921081	0.99987557

Q1 Mass: 106 106

Q3 Mass: 91 65

Slope: 559.530492 97.8913269

Intercept: -353.21531 0.74910531

Correlation: 0.99921081 0.99987557

Concentration 106.00/91.00 106.00/65.00

0 63.0555556 9.44444444

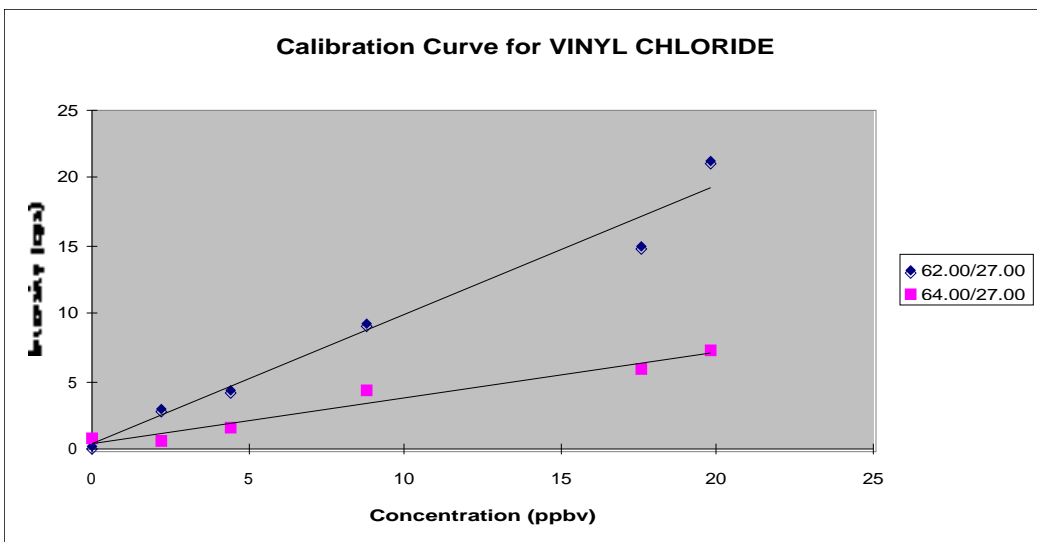
3.42 1518.91892 342.972973

6.84 3225.67568 648.918919

13.69 6980.81081 1337.2973

27.38 1.49E+04 2711.08108

30.8 1.71E+04 2994.59459



Filename: 64MSMS00068 et al.

Compound name: VINYL CHLORIDE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Tuesday, May 3, 2016 19:02:42

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.32	8.20	10.18	12.16	14.24

	Ion 1	Ion 2
Q1 Mass:	62	64
Q3 Mass:	27	27
Slope:	0.95803596	0.33813034
Intercept:	0.39936365	0.4516302
Correlation:	0.98411851	0.97860925

Q1 Mass: 62 64

Q3 Mass: 27 27

Slope: 0.95803596 0.33813034

Intercept: 0.39936365 0.4516302

Correlation: 0.98411851 0.97860925

Concentration 62.00/27.00 64.00/27.00

0 0.27777778 0.83333333

2.2 2.97297297 0.54054054

4.4 4.32432432 1.62162162

8.8 9.18918919 4.32432432

17.6 14.8648649 5.94594595

19.8 21.3513514 7.2972973

Report File Name 64MSMS00068 et al.
 Sample Name EOD Calibration - 20160503
 Date Tuesday, May 3, 2016 19:04:39
 Time Range 1.00 to 2.00 min
 Conc Units: ppbv
 Num Ions 16.00

Name	TETRACHLOR	TETRACHLOR	TETRACHLOR	TRICHLOROE'	TRICHLOROE'	TRICHLOROE'	DICHLOROET	DICHLOROET	BENZENE	BENZENE	TOLUENE	TOLUENE	XYLENE	XYLENE	VINYL CHLOR	VINYL CHLORIDE
Q1 Mass	164.00	166.00	166.00	130.00	132.00	132.00	96.00	98.00	78.00	78.00	92.00	92.00	106.00	106.00	62.00	64.00
Q3 Mass	129.00	129.00	131.00	95.00	95.00	97.00	61.00	63.00	39.00	52.00	91.00	65.00	91.00	65.00	27.00	27.00
Slope	104.07	45.83	136.53	236.93	74.79	145.50	286.82	97.95	12.11	82.86	566.73	185.97	559.53	97.89	0.96	0.34
Intercept	-80.33	-22.81	-30.34	3.04	-11.41	-7.32	113.99	12.69	6.93	30.74	281.14	111.33	-353.22	0.75	0.40	0.45
Intensity	0.28	0.00	0.83	1.11	0.28	0.00	0.00	0.83	0.83	14.17	188.06	67.50	63.06	9.44	0.28	0.83
Int SD	1.67	0.00	3.68	3.19	1.67	0.00	0.00	2.80	2.80	12.96	53.12	40.80	38.46	9.84	1.67	3.68
Concentratio	0.77	0.50	0.23	-0.01	0.16	0.05	-0.40	-0.12	-0.50	-0.20	-0.16	-0.24	0.74	0.09	-0.13	1.13
Conc SD	0.02	0.00	0.03	0.01	0.02	0.00	0.00	0.03	0.23	0.16	0.09	0.22	0.07	0.10	1.74	10.90
Compound C	0.50			0.07			-0.26		-0.35		-0.20		0.42		0.50	
Compound SI	0.01			0.01			0.01		0.14		0.11		0.06		4.47	
Det. Limit	0.05	0.00	0.08	0.04	0.07	0.00	0.00	0.09	0.69	0.47	0.28	0.66	0.21	0.30	5.22	32.69
Compound D	0.04			0.04			0.04		0.58		0.47		0.25		18.95	

Method Information

Method Name: PCE/TCE/DCE/BTX/VC CALIBRATION
Last Modified: Wed, May 4, 2016, 5:37:23
Comment:

Command	Description	Time (sec)	Reps	Duration (min)	Total Time (hh:mm:ss)
Scan	Mode: Profile Thres : 0.1 x 10 E1 cps Pause: 0.1 sec Expt: MacHD3064:Instrument:expt:PCE+TCE+DCE+BTX+VC State: MacHD3064:Instrument:state:LPCI2016MAY04 PCE+TCE Q1 Cal: MacHD3064:Instrument:calibration:Q1 Calib LPCI 20121102 Q3 Cal: MacHD3064:Instrument:calibration:Q3 Calib LPCI 20121102	1.680	1607	45.000	00:45:00

Active Device Methods:

Device Type: LC Pump
Device Name: MKS 146 Single
ROM Version: ROM version cannot be checked.
Comment: ROM version cannot be checked.
Solvents: 1
Solvent name: Solvent A %
Timed events: 0
Device specific parameters: 2
Gradient: 1=Step, 2=Linear 1.0000
Gradient: 1=Step, 2=Linear
Gradient resolution (sec) 5.0000
Gradient resolution in seconds
Timed steps: 9

Min. Pressure : 0.0000
Max. Pressure : 100.0000

Step	T.Time (min)	Dura.(min)	Flow (µL/min)	Sol.1
0	-0.10	0.10	0.00	100.00
1	0.00	3.00	0.00	100.00
2	3.00	2.00	90.00	100.00
3	5.00	2.00	10.00	100.00
4	7.00	2.00	20.00	100.00
5	9.00	2.00	40.00	100.00
6	11.00	2.00	80.00	100.00
7	13.00	2.00	90.00	100.00
8	15.00	2.00	0.00	100.00

Experiment Information

Experiment Name: PCE+TCE+DCE+BTX+VC
Last Modified: Wed, Apr 27, 2016, 14:38:16
Scan Type: MRM
Scan Time: 00:01.680 secs
Peak Hopping : Disabled
Q2 Purge : Disabled
Comment: Cal. Gas Bottle Number 2

Mass Defect: 0 mmu/100amu
Pause Time: 5.000 msec

Mass Range Information

Mass Range 1		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
164.000	129.000	100.000
Mass Range 2		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	129.000	100.000
Mass Range 3		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	131.000	100.000
Mass Range 4		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
130.000	95.000	100.000
Mass Range 5		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	95.000	100.000
Mass Range 6		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	97.000	100.000
Mass Range 7		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
96.000	61.000	100.000
Mass Range 8		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
98.000	63.000	100.000
Mass Range 9		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	39.000	100.000
Mass Range 10		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	52.000	100.000
Mass Range 11		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	91.000	100.000
Mass Range 12		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	65.000	100.000
Mass Range 13		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	91.000	100.000
Mass Range 14		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	65.000	100.000
Mass Range 15		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
62.000	27.000	100.000

Param	Start	Stop
RO1	-7.500	-7.500

Mass Range 16

Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)	Param	Start	Stop
64.000	27.000	100.000	RO1	-7.500	-7.500

State File Information

Last Modified: Wed, May 4, 2016, 5:21:25

Analog Parameters

NC	0.000
TEM	80.000
OR	0.000
RNG	0.000
Q0	-5.200
IQ1	-6.000
ST	-13.000
RO1	-6.100
IQ2	-12.500
RO2	-35.000
IQ3	-40.200
RO3	-37.000
DF	-390.000
CEM	1700.000

On/Off Parameters

POL	Off
NEB	Off
CUR	4
CAD	7

Q1 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.050
75.000	0.056
100.000	0.065
120.000	0.065
180.000	0.087

Q3 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.042
60.000	0.043
100.000	0.045
150.000	0.045
180.000	0.047

Calibration File Information

Type: Q1 Calibration

Last Modified: Fri, Nov 2, 2012, 14:24:38

Mass	DAC
78.050	1466
106.080	2002
129.910	2459
165.870	3146

Calibration File Information

Type: Q3 Calibration

Last Modified: Fri, Nov 2, 2012, 14:40:02

Mass	DAC
30.000	551
78.050	1473
105.070	1992
165.870	3160

Method Information

Method Name: PCE/TCE/DCE/BTX/VC MONITORING
Last Modified: Wed, May 4, 2016, 5:37:48
Comment:

Command	Description	Time (sec)	Reps	Duration (min)	Total Time (hh:mm:ss)
Scan	Mode: Profile Thres : 0.1 x 10 E1 cps Pause: 0.1 sec Expt: MacHD3064:Instrument:expt:PCE+TCE+DCE+BTX+VC State: MacHD3064:Instrument:state:LPCI2016MAY04 PCE+TCE Q1 Cal: MacHD3064:Instrument:calibration:Q1 Calib LPCI 20121102 Q3 Cal: MacHD3064:Instrument:calibration:Q3 Calib LPCI 20121102	1.680	6428	180.000	03:00:00

Active Device Methods:

Experiment Information

Experiment Name: PCE+TCE+DCE+BTX+VC
Last Modified: Wed, Apr 27, 2016, 14:38:16
Scan Type: MRM
Scan Time: 00:01.680 secs
Peak Hopping : Disabled
Q2 Purge : Disabled
Comment: Cal. Gas Bottle Number 2

Mass Defect: 0 mmu/100amu
Pause Time: 5.000 msec

Mass Range Information

Mass Range 1		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
164.000	129.000	100.000
Mass Range 2		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	129.000	100.000
Mass Range 3		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	131.000	100.000
Mass Range 4		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
130.000	95.000	100.000
Mass Range 5		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	95.000	100.000
Mass Range 6		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	97.000	100.000
Mass Range 7		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
96.000	61.000	100.000
Mass Range 8		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
98.000	63.000	100.000
Mass Range 9		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	39.000	100.000
Mass Range 10		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	52.000	100.000
Mass Range 11		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	91.000	100.000
Mass Range 12		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	65.000	100.000
Mass Range 13		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	91.000	100.000
Mass Range 14		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	65.000	100.000
Mass Range 15		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
62.000	27.000	100.000

Param	Start	Stop
RO1	-7.500	-7.500

Mass Range 16

Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)	Param	Start	Stop
64.000	27.000	100.000	RO1	-7.500	-7.500

State File Information

Last Modified: Wed, May 4, 2016, 5:21:25

Analog Parameters

NC	0.000
TEM	80.000
OR	0.000
RNG	0.000
Q0	-5.200
IQ1	-6.000
ST	-13.000
RO1	-6.100
IQ2	-12.500
RO2	-35.000
IQ3	-40.200
RO3	-37.000
DF	-390.000
CEM	1700.000

On/Off Parameters

POL	Off
NEB	Off
CUR	4
CAD	7

Q1 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.050
75.000	0.056
100.000	0.065
120.000	0.065
180.000	0.087

Q3 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.042
60.000	0.043
100.000	0.045
150.000	0.045
180.000	0.047

Calibration File Information

Type: Q1 Calibration

Last Modified: Fri, Nov 2, 2012, 14:24:38

Mass	DAC
78.050	1466
106.080	2002
129.910	2459
165.870	3146

Calibration File Information

Type: Q3 Calibration

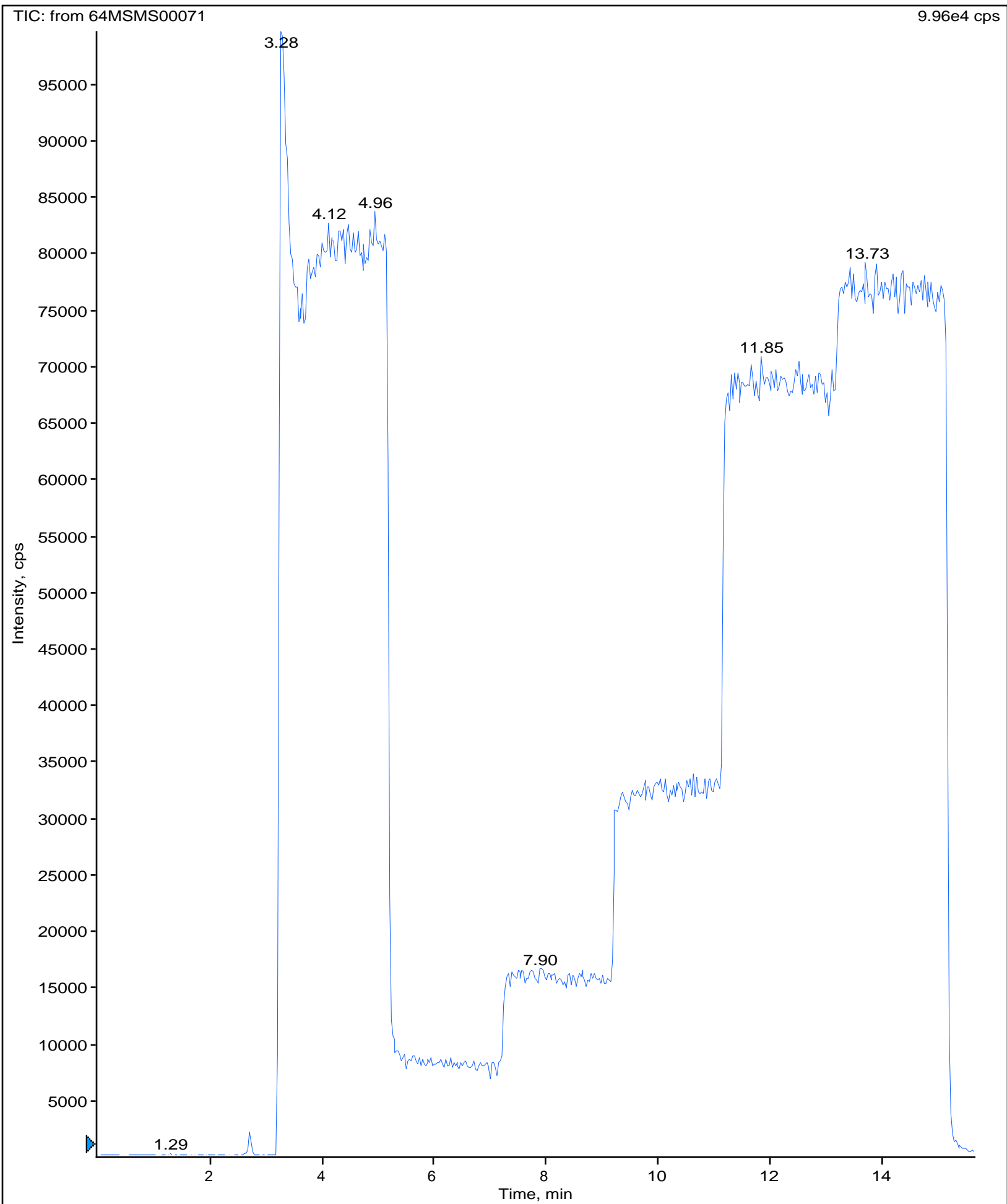
Last Modified: Fri, Nov 2, 2012, 14:40:02

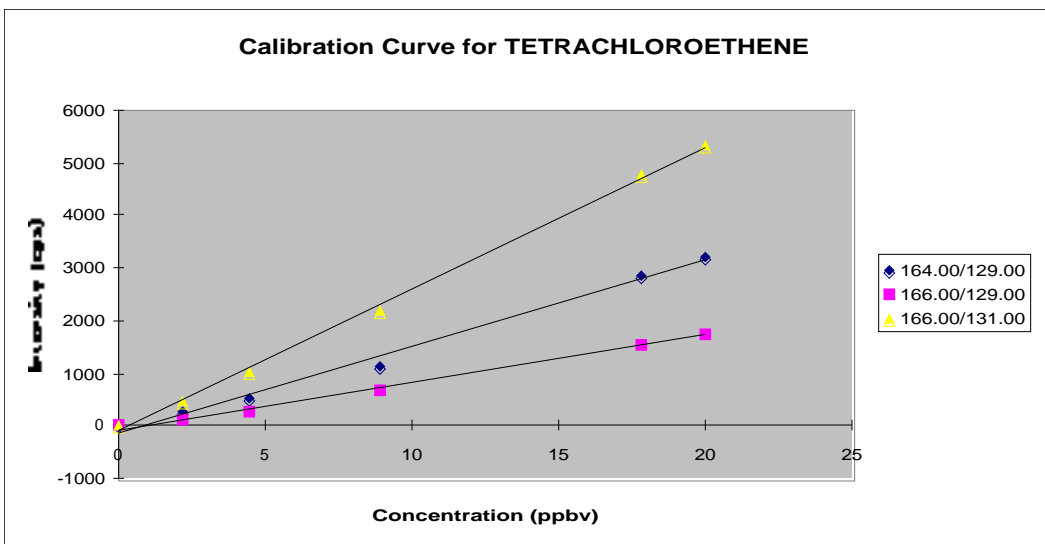
Mass	DAC
30.000	551
78.050	1473
105.070	1992
165.870	3160

5/4/16.5.49.06

Period 1, Expt. 1; Dwell: 100.0 ms; Pause: 5.0 ms

Acq. Time: Wed, May 4, 2016 at 5:49:06; Exp. Comment: Cal. Gas Bottle Number 2





Filename: 64MSMS00071 et al.

Compound na TETRACHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 6:07:44

Num. ions: 3

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.18	10.08	12.17	14.10

	Ion 1	Ion 2	Ion 3
Q1 Mass:	164	166	166
Q3 Mass:	129	129	131
Slope:	165.306403	90.1440654	270.875032
Intercept:	-142.61047	-73.657929	-107.7014
Correlation:	0.9957842	0.99754838	0.9994023

Q1 Mass: 164 166 166

Q3 Mass: 129 129 131

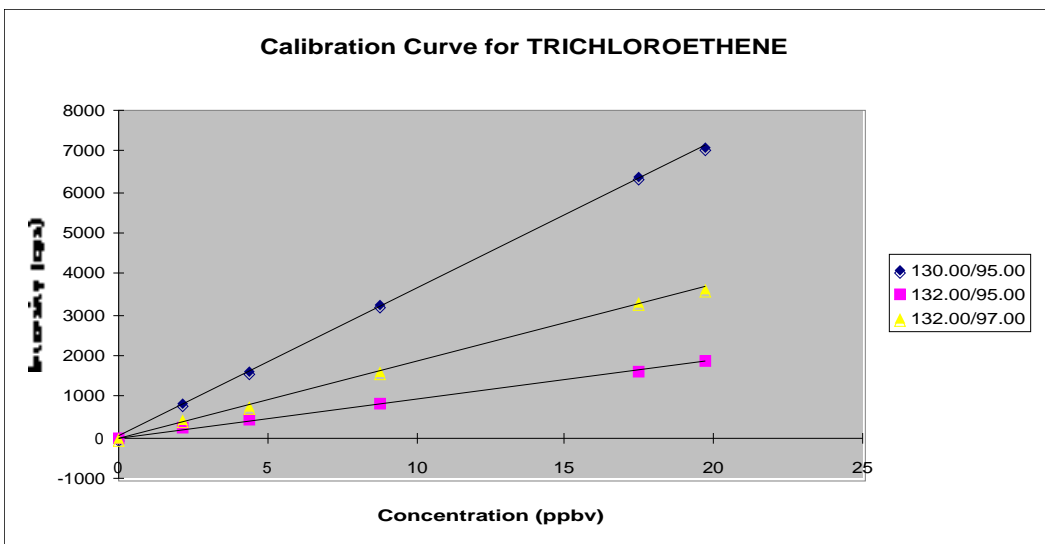
Slope: 165.306403 90.1440654 270.875032

Intercept: -142.61047 -73.657929 -107.7014

Correlation: 0.9957842 0.99754838 0.9994023

Concentration 164.00/129.00 166.00/129.00 166.00/131.00

0	0.83333333	0.83333333	0.27777778
2.22	261.891892	121.351351	494.054054
4.44	504.324324	286.756757	1019.18919
8.89	1117.56757	652.702703	2200.81081
17.78	2861.62162	1553.51351	4761.89189
20	3213.88889	1750.27778	5323.33333



Filename: 64MSMS00071 et al.

Compound na TRICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 6:08:23

Num. ions: 3

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.18	10.08	12.17	14.10

	Ion 1	Ion 2	Ion 3
Q1 Mass:	130	132	132
Q3 Mass:	95	95	97
Slope:	360.455162	93.7886181	186.974988
Intercept:	26.2857168	1.0429023	-17.952074
Correlation:	0.99991123	0.9999039	0.99989244

Q1 Mass: 130 132 132

Q3 Mass: 95 95 97

Slope: 360.455162 93.7886181 186.974988

Intercept: 26.2857168 1.0429023 -17.952074

Correlation: 0.99991123 0.9999039 0.99989244

Concentration 130.00/95.00 132.00/95.00 132.00/97.00

0 1.11111111 0.83333333 0

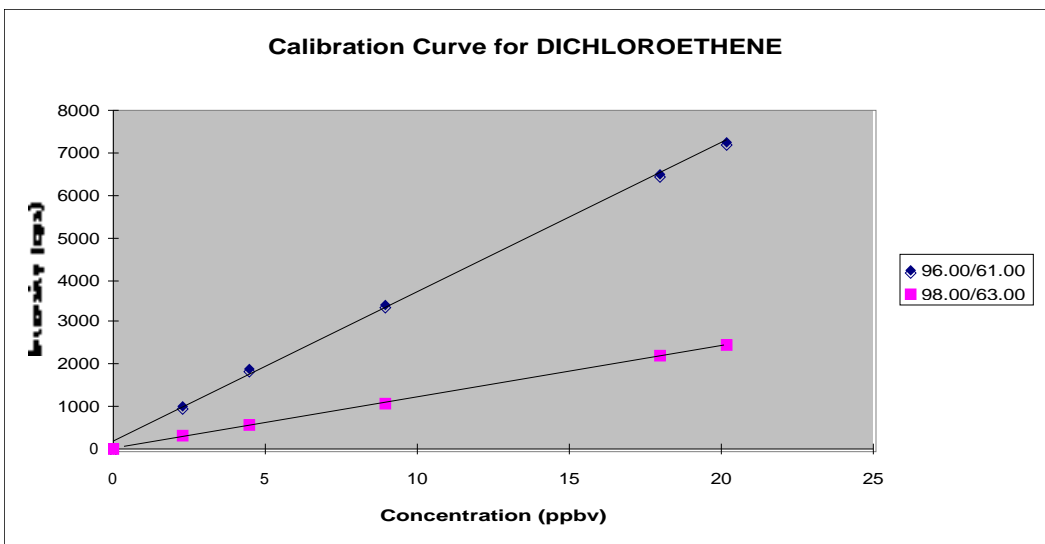
2.19 823.513514 214.864865 406.756757

4.38 1590.81081 407.297297 777.297297

8.76 3228.10811 818.918919 1591.62162

17.51 6380.54054 1628.10811 3280

19.7 7071.94444 1863.88889 3660.27778



Filename: 64MSMS00071 et al.

Compound name: DICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 6:06:17

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.18	10.08	12.17	14.10

	Ion 1	Ion 2
Q1 Mass:	96	98
Q3 Mass:	61	63
Slope:	352.323899	120.224065
Intercept:	168.679307	16.8895673
Correlation:	0.99935973	0.99994982

Q1 Mass: 96 98

Q3 Mass: 61 63

Slope: 352.323899 120.224065

Intercept: 168.679307 16.8895673

Correlation: 0.99935973 0.99994982

Concentration 96.00/61.00 98.00/63.00

0 1.66666667 0

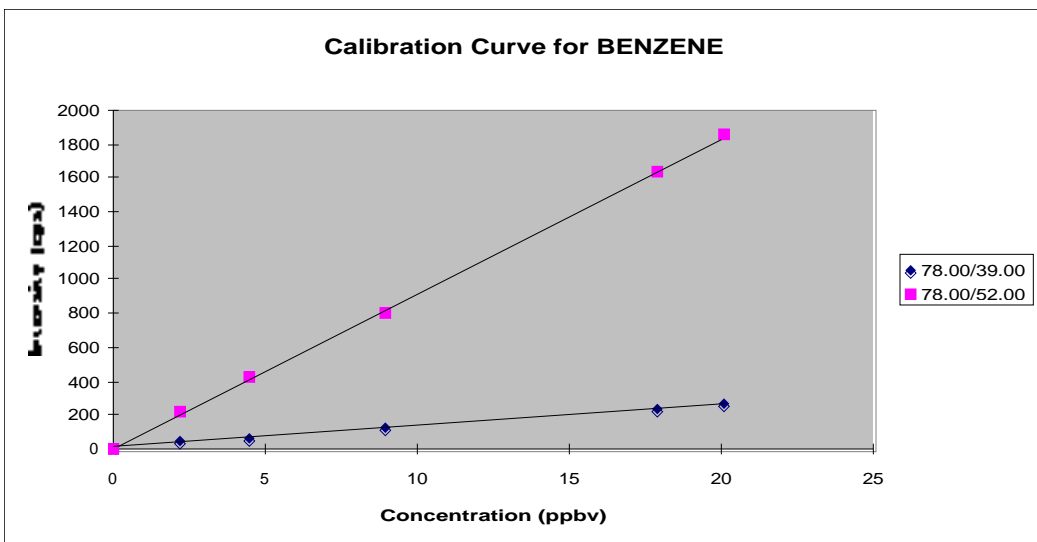
2.24 981.351351 293.783784

4.49 1884.86486 567.297297

8.98 3408.64865 1099.45946

17.96 6491.62162 2178.37838

20.2 7223.61111 2438.88889



Filename: 64MSMS00071 et al.

Compound na BENZENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 6:07:04

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.18	10.08	12.17	14.10

	Ion 1	Ion 2
Q1 Mass:	78	78
Q3 Mass:	39	52
Slope:	12.8290616	91.8205731
Intercept:	10.3674403	4.59357134
Correlation:	0.99842638	0.99989423

Q1 Mass: 78 78

Q3 Mass: 39 52

Slope: 12.8290616 91.8205731

Intercept: 10.3674403 4.59357134

Correlation: 0.99842638 0.99989423

Concentration 78.00/39.00 78.00/52.00

0 0.55555556 6.11111111

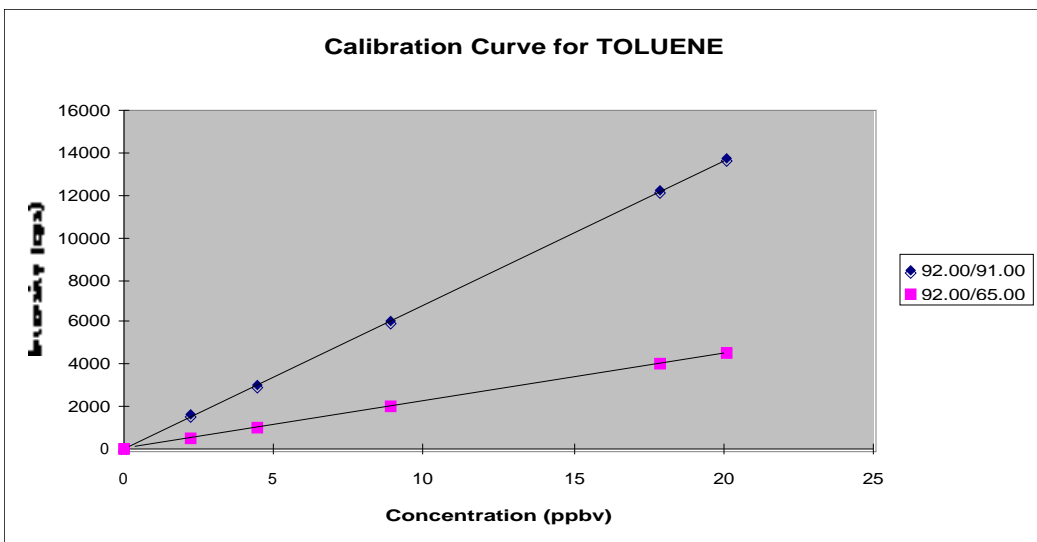
2.23 44.0540541 214.864865

4.47 70.5405405 421.351351

8.93 130.27027 805.405405

17.87 240.810811 1639.18919

20.1 263.611111 1862.22222



Filename: 64MSMS00071 et al.

Compound na TOLUENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 6:09:04

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.18	10.08	12.17	14.10

	Ion 1	Ion 2
Q1 Mass:	92	92
Q3 Mass:	91	65
Slope:	678.265175	222.971645
Intercept:	58.7440185	23.6630172
Correlation:	0.99996258	0.99990725

Q1 Mass: 92 92

Q3 Mass: 91 65

Slope: 678.265175 222.971645

Intercept: 58.7440185 23.6630172

Correlation: 0.99996258 0.99990725

Concentration 92.00/91.00 92.00/65.00

0 48.3333333 13.8888889

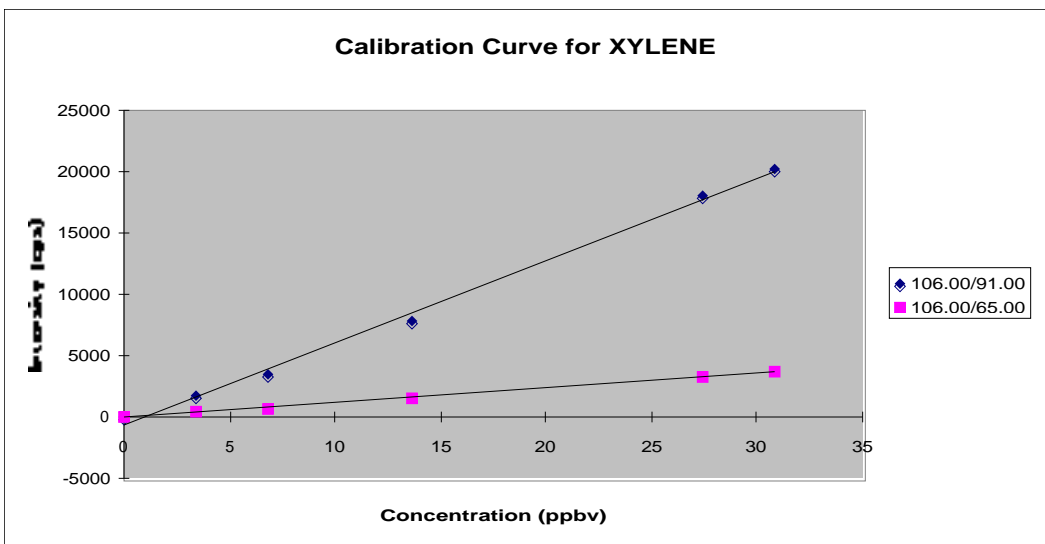
2.23 1637.02703 547.297297

4.47 3072.16216 1034.86486

8.93 6045.67568 1969.18919

17.87 1.22E+04 4011.35135

20.1 1.37E+04 4516.66667



Filename: 64MSMS00071 et al.

Compound na XYLENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 6:10:40

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.18	10.08	12.17	14.10

	Ion 1	Ion 2
Q1 Mass:	106	106
Q3 Mass:	91	65
Slope:	672.889873	120.119659
Intercept:	-646.94834	-28.517213
Correlation:	0.99826171	0.99981815

Q1 Mass: 106 106

Q3 Mass: 91 65

Slope: 672.889873 120.119659

Intercept: -646.94834 -28.517213

Correlation: 0.99826171 0.99981815

Concentration 106.00/91.00 106.00/65.00

0 19.1666667 2.77777778

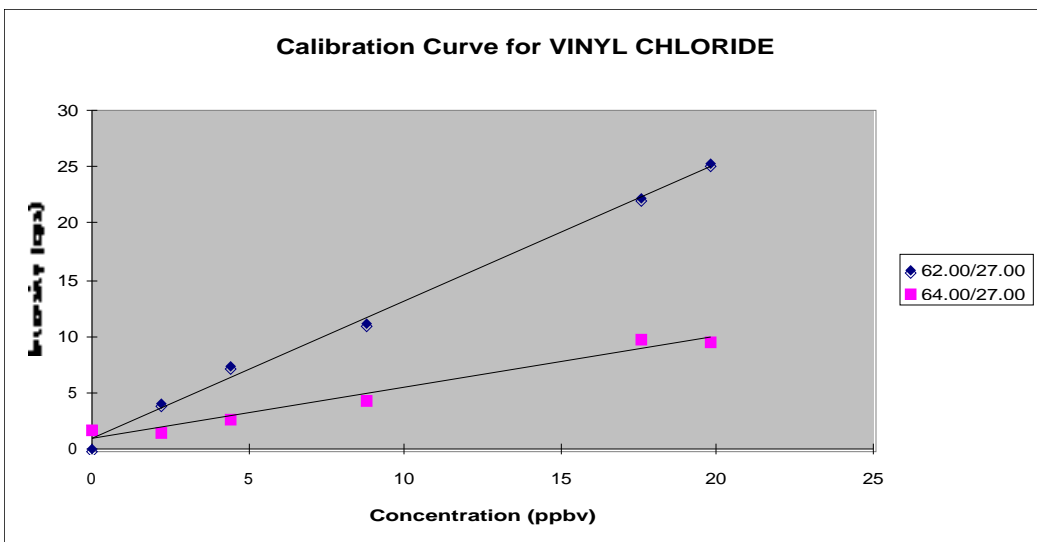
3.42 1733.78378 400.27027

6.84 3487.83784 759.189189

13.69 7841.62162 1576.75676

27.38 1.80E+04 3268.10811

30.8 2.03E+04 3687.22222



Filename: 64MSMS00071 et al.

Compound name: VINYL CHLORIDE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 6:09:52

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.18	10.08	12.17	14.10

	Ion 1	Ion 2
Q1 Mass:	62	64
Q3 Mass:	27	27
Slope:	1.22260247	0.45464295
Intercept:	0.88649364	0.86901187
Correlation:	0.99755186	0.98499646

Q1 Mass: 62 64

Q3 Mass: 27 27

Slope: 1.22260247 0.45464295

Intercept: 0.88649364 0.86901187

Correlation: 0.99755186 0.98499646

Concentration 62.00/27.00 64.00/27.00

0 0 1.66666667

2.2 4.05405405 1.35135135

4.4 7.2972973 2.7027027

8.8 11.0810811 4.32432432

17.6 22.1621622 9.72972973

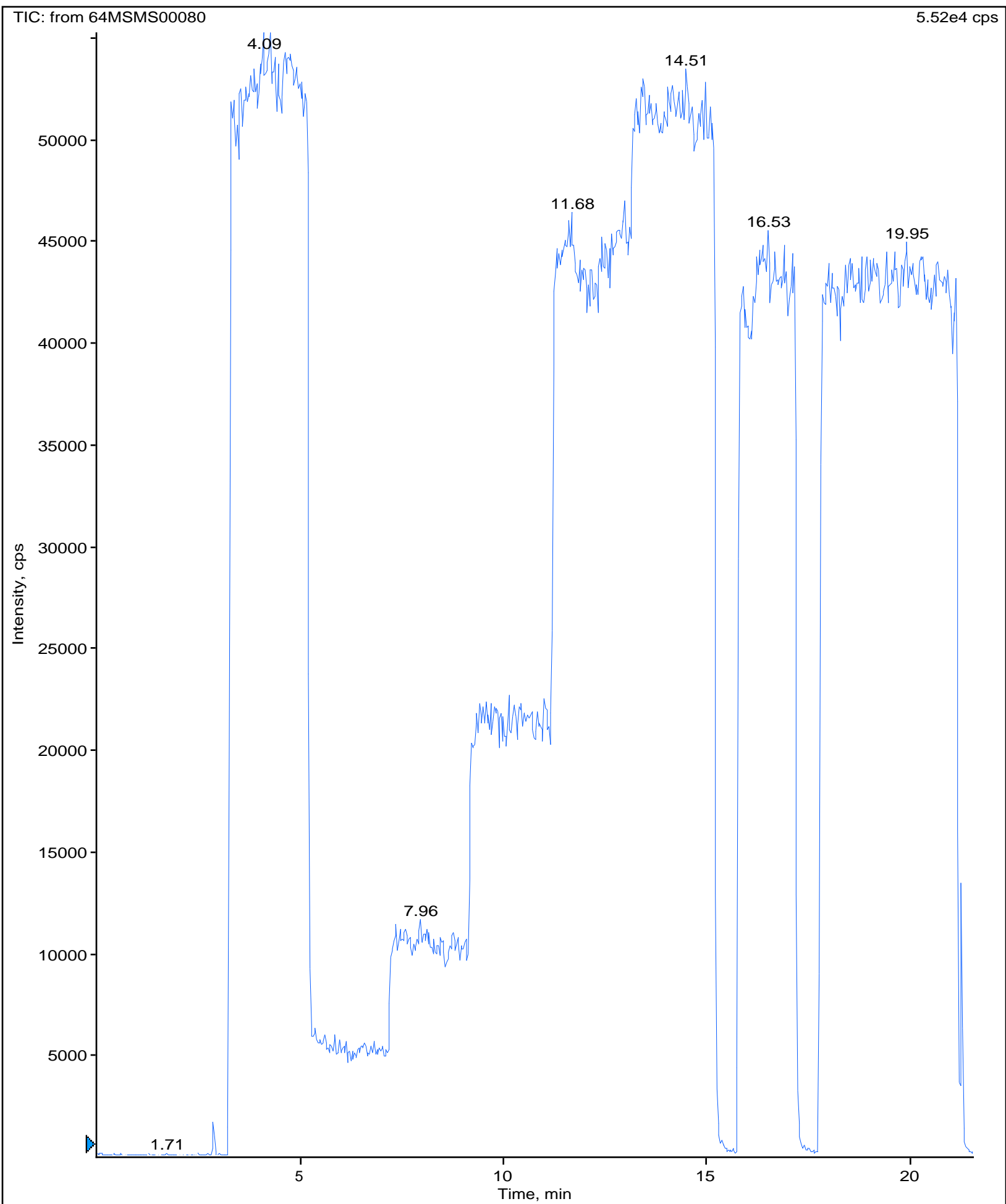
19.8 25.2777778 9.44444444

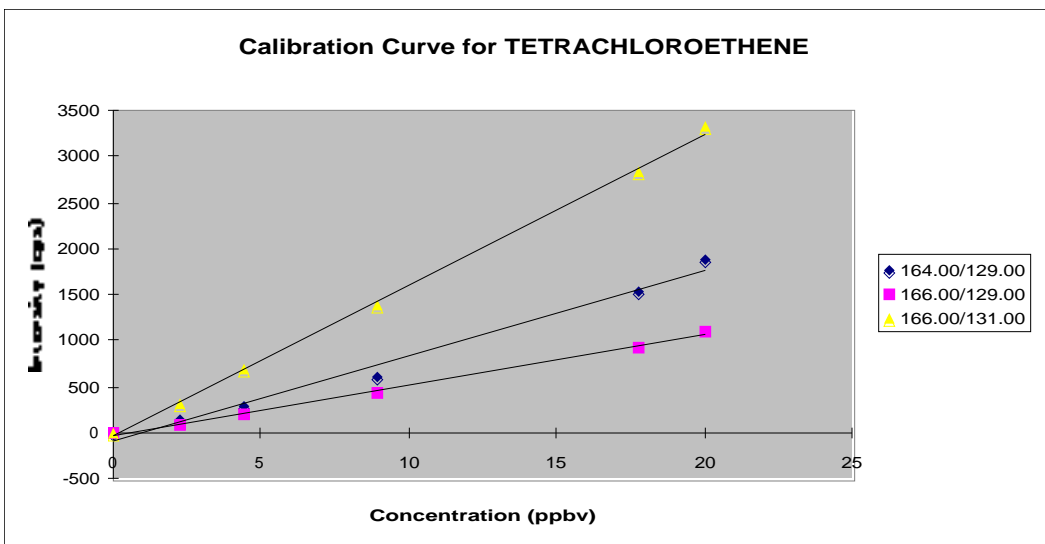
Report File Name 64MSMS00071 et al.
 Sample Name BOD Calibration - 20160504
 Date Wednesday, May 4, 2016 6:11:34
 Time Range 1.00 to 2.00 min
 Conc Units: ppbv
 Num Ions 16.00

Name	TETRACHLOR	TETRACHLOR	TETRACHLOR	TRICHLOROE	TRICHLOROE	TRICHLOROE	DICHLOROET	DICHLOROET	BENZENE	BENZENE	TOLUENE	TOLUENE	XYLENE	XYLENE	VINYL CHLOR	VINYL CHLORIDE
Q1 Mass	164.00	166.00	166.00	130.00	132.00	132.00	96.00	98.00	78.00	78.00	92.00	92.00	106.00	106.00	62.00	64.00
Q3 Mass	129.00	129.00	131.00	95.00	95.00	97.00	61.00	63.00	39.00	52.00	91.00	65.00	91.00	65.00	27.00	27.00
Slope	165.31	90.14	270.88	360.46	93.79	186.97	352.32	120.22	12.83	91.82	678.27	222.97	672.89	120.12	1.22	0.45
Intercept	-142.61	-73.66	-107.70	26.29	1.04	-17.95	168.68	16.89	10.37	4.59	58.74	23.66	-646.95	-28.52	0.89	0.87
Intensity	0.83	0.83	0.28	1.11	0.83	0.00	1.67	0.00	0.56	6.11	48.33	13.89	19.17	2.78	0.00	1.67
Int SD	2.80	2.80	1.67	3.98	2.80	0.00	5.07	0.00	2.32	8.71	30.57	12.71	16.45	5.13	0.00	5.07
Concentratio	0.87	0.83	0.40	-0.07	0.00	0.10	-0.47	-0.14	-0.76	0.02	-0.02	-0.04	0.99	0.26	-0.73	1.75
Conc SD	0.02	0.03	0.01	0.01	0.03	0.00	0.01	0.00	0.18	0.09	0.05	0.06	0.02	0.04	0.00	11.15
Compound C	0.70			0.01			-0.31		-0.37		-0.03		0.63		0.51	
Compound SI	0.01			0.01			0.01		0.10		0.04		0.02		3.94	
Det. Limit	0.05	0.09	0.02	0.03	0.09	0.00	0.04	0.00	0.54	0.28	0.14	0.17	0.07	0.13	0.00	33.46
Compound D	0.05			0.04			0.02		0.41		0.15		0.10		16.73	

Period 1, Expt. 1; Dwell: 100.0 ms; Pause: 5.0 ms

Acq. Time: Wed, May 4, 2016 at 14:31:33; Exp. Comment: Cal. Gas Bottle Number 2





Filename: 64MSMS00080 et al.

Compound na TETRACHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 14:55:31

Num. ions: 3

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.25	8.09	10.11	19.43	13.98

	Ion 1	Ion 2	Ion 3
Q1 Mass:	164	166	166
Q3 Mass:	129	129	131
Slope:	93.5773314	54.4979298	164.62158
Intercept:	-96.239757	-33.212082	-43.845857
Correlation:	0.9942623	0.9980283	0.99933962

Q1 Mass: 164 166 166

Q3 Mass: 129 129 131

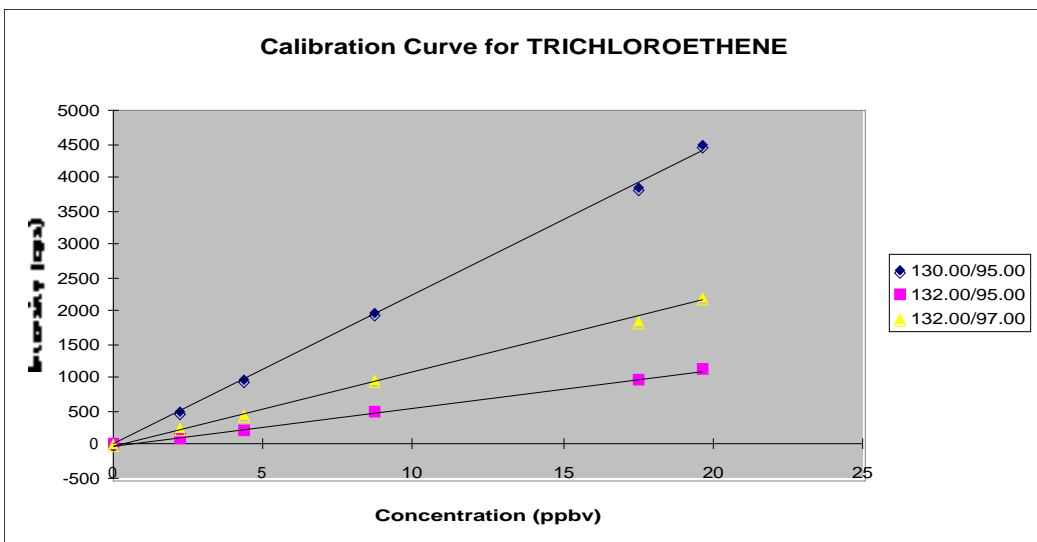
Slope: 93.5773314 54.4979298 164.62158

Intercept: -96.239757 -33.212082 -43.845857

Correlation: 0.9942623 0.9980283 0.99933962

Concentration 164.00/129.00 166.00/129.00 166.00/131.00

0	0.27777778	0	1.11111111
2.22	123.243243	86.2162162	313.513514
4.44	272.222222	182.777778	678.055556
8.89	614.864865	435.675676	1375.40541
17.78	1538.10811	909.189189	2827.56757
20	1864.32432	1093.24324	3320.54054



Filename: 64MSMS00080 et al.

Compound name: TRICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 14:56:11

Num. ions: 3

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.25	8.09	10.11	19.43	13.98

	Ion 1	Ion 2	Ion 3
Q1 Mass:	130	132	132
Q3 Mass:	95	95	97
Slope:	223.850314	56.8705527	110.128264
Intercept:	4.42577971	-8.3167938	-2.0204084
Correlation:	0.99976629	0.99978415	0.99930307

Q1 Mass: 130 132 132

Q3 Mass: 95 95 97

Slope: 223.850314 56.8705527 110.128264

Intercept: 4.42577971 -8.3167938 -2.0204084

Correlation: 0.99976629 0.99978415 0.99930307

Concentration 130.00/95.00 132.00/95.00 132.00/97.00

0 4.72222222 2.77777778 1.11111111

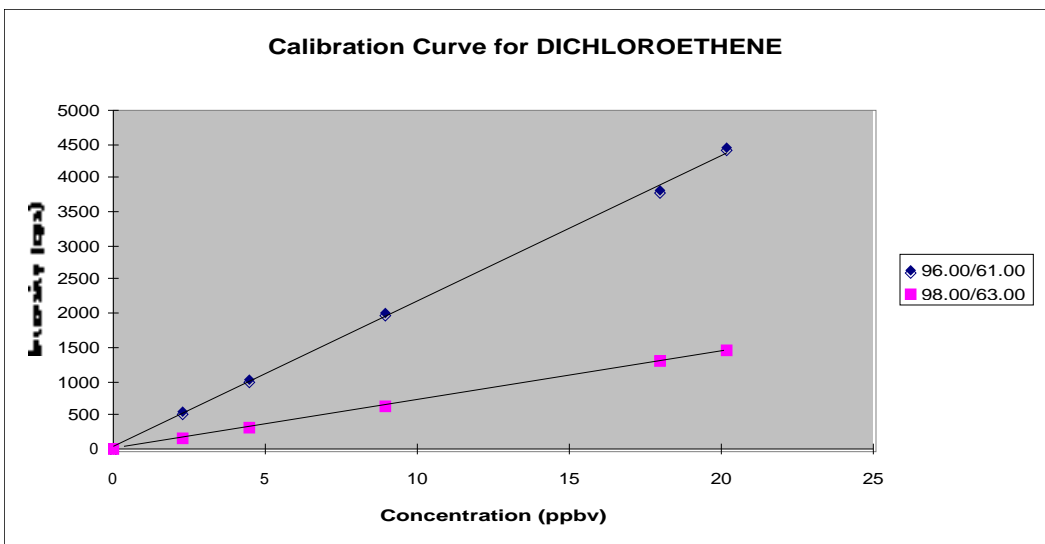
2.19 505.945946 113.513514 249.72973

4.38 978.333333 236.111111 467.5

8.76 1969.18919 482.702703 969.189189

17.51 3857.83784 977.837838 1871.08108

19.7 4471.62162 1125.13514 2215.40541



Filename: 64MSMS00080 et al.

Compound na DICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 14:54:01

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.25	8.09	10.11	19.43	13.98

	Ion 1	Ion 2
Q1 Mass:	96	98
Q3 Mass:	61	63
Slope:	214.613332	72.0766579
Intercept:	44.8904774	3.18955801
Correlation:	0.99948471	0.99987125

Q1 Mass: 96 98

Q3 Mass: 61 63

Slope: 214.613332 72.0766579

Intercept: 44.8904774 3.18955801

Correlation: 0.99948471 0.99987125

Concentration 96.00/61.00 98.00/63.00

0 0.55555556 0.27777778

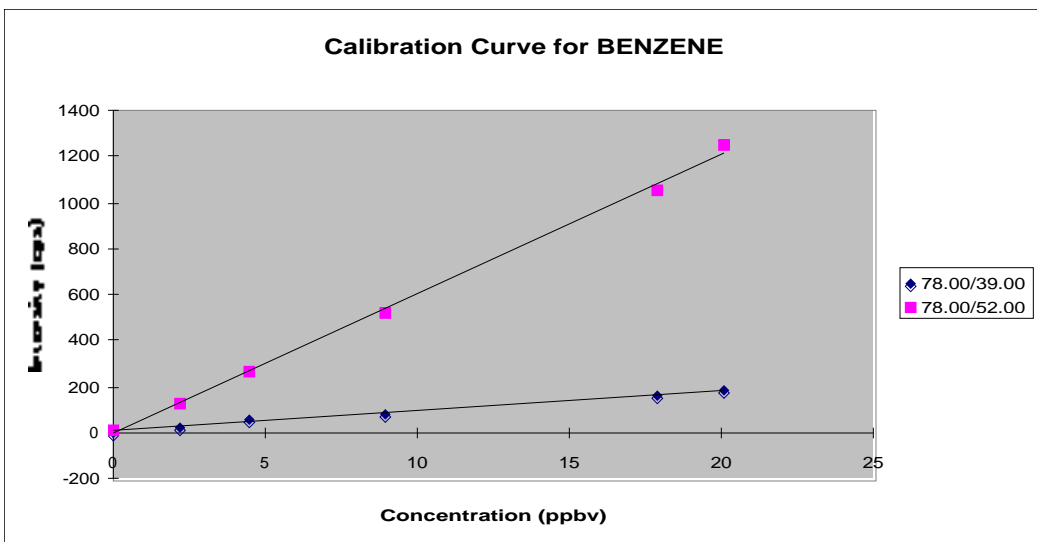
2.24 543.513514 171.621622

4.49 1040.27778 330.277778

8.98 1997.56757 642.162162

17.96 3805.40541 1285.13514

20.2 4443.24324 1472.43243



Filename: 64MSMS00080 et al.

Compound na BENZENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 14:54:50

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.25	8.09	10.11	19.43	13.98

	Ion 1	Ion 2
Q1 Mass:	78	78
Q3 Mass:	39	52
Slope:	8.9143223	60.8899295
Intercept:	3.49351558	-7.3334205
Correlation:	0.99699981	0.99897728

Q1 Mass: 78 78

Q3 Mass: 39 52

Slope: 8.9143223 60.8899295

Intercept: 3.49351558 -7.3334205

Correlation: 0.99699981 0.99897728

Concentration 78.00/39.00 78.00/52.00

0 1.3888889 3.0555556

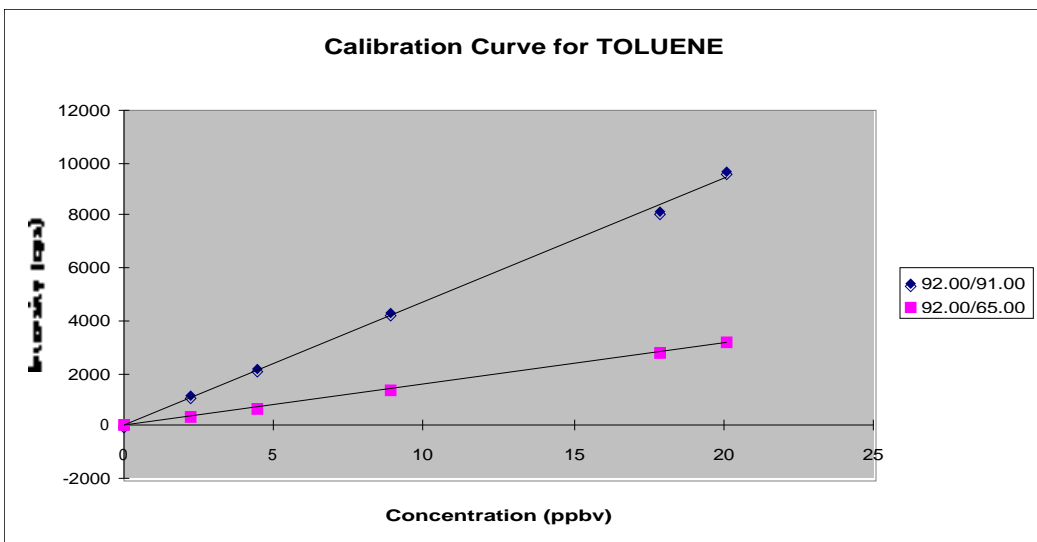
2.23 19.1891892 130

4.47 53.055556 265.833333

8.93 81.0810811 520.27027

17.87 157.297297 1048.64865

20.1 186.756757 1251.89189



Filename: 64MSMS00080 et al.

Compound na TOLUENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 14:56:49

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.25	8.09	10.11	19.43	13.98

	Ion 1	Ion 2
Q1 Mass:	92	92
Q3 Mass:	91	65
Slope:	468.524288	156.670468
Intercept:	55.2020435	-0.2201441
Correlation:	0.99917879	0.99938768

Q1 Mass: 92 92

Q3 Mass: 91 65

Slope: 468.524288 156.670468

Intercept: 55.2020435 -0.2201441

Correlation: 0.99917879 0.99938768

Concentration 92.00/91.00 92.00/65.00

0 35 6.66666667

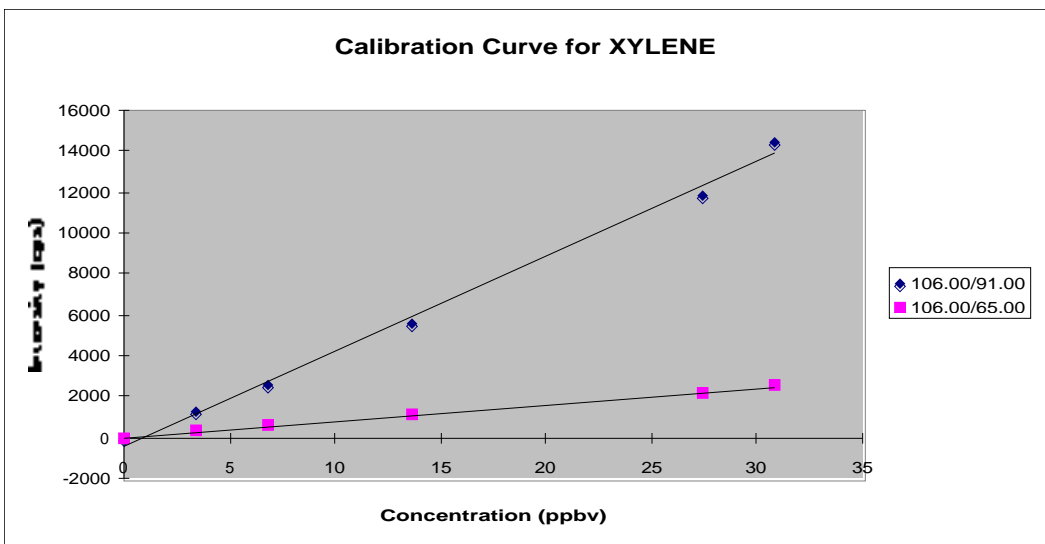
2.23 1113.78378 365.675676

4.47 2177.22222 683.333333

8.93 4269.18919 1398.10811

17.87 8154.59459 2726.21622

20.1 9694.32432 3216.21622



Filename: 64MSMS00080 et al.

Compound na XYLENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 14:58:16

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.25	8.09	10.11	19.43	13.98

	Ion 1	Ion 2
Q1 Mass:	106	106
Q3 Mass:	91	65
Slope:	463.065588	80.4221459
Intercept:	-391.22251	9.34254685
Correlation:	0.99744691	0.9986802

Q1 Mass: 106 106

Q3 Mass: 91 65

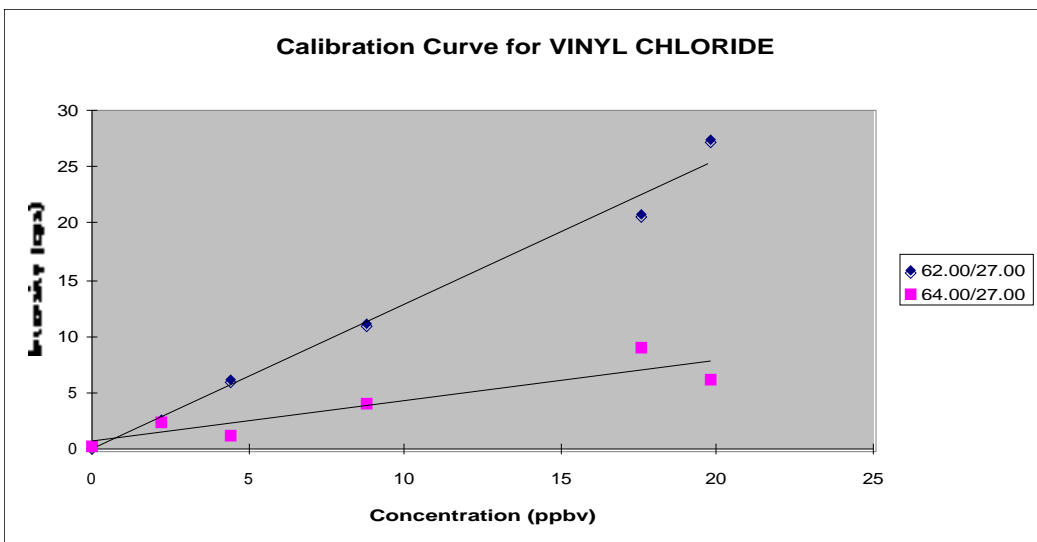
Slope: 463.065588 80.4221459

Intercept: -391.22251 9.34254685

Correlation: 0.99744691 0.9986802

Concentration 106.00/91.00 106.00/65.00

0	12.2222222	2.5
3.42	1208.64865	292.162162
6.84	2564.72222	569.166667
13.69	5580.54054	1114.59459
27.38	1.18E+04	2121.08108
30.8	1.45E+04	2561.62162



Filename: 64MSMS00080 et al.

Compound name: VINYL CHLORIDE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 14:57:29

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.25	8.09	10.11	19.43	13.98

	Ion 1	Ion 2
Q1 Mass:	62	64
Q3 Mass:	27	27
Slope:	1.28758629	0.36445536
Intercept:	0.0493708	0.62787788
Correlation:	0.99381185	0.91624873

Q1 Mass: 62 64

Q3 Mass: 27 27

Slope: 1.28758629 0.36445536

Intercept: 0.0493708 0.62787788

Correlation: 0.99381185 0.91624873

Concentration 62.00/27.00 64.00/27.00

0 0.27777778 0.27777778

2.2 2.7027027 2.43243243

4.4 6.11111111 1.11111111

8.8 11.0810811 4.05405405

17.6 20.8108108 8.91891892

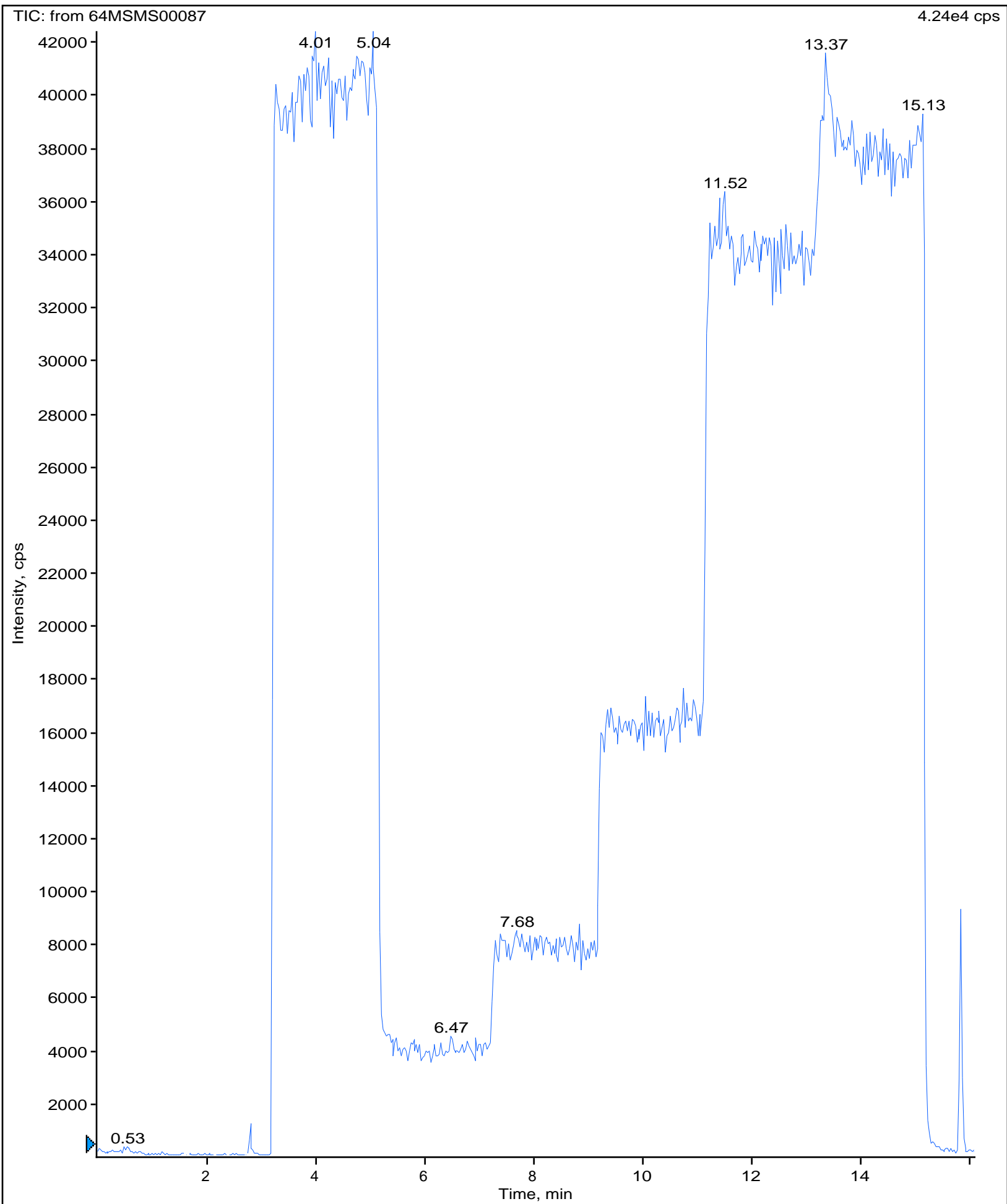
19.8 27.2972973 6.21621622

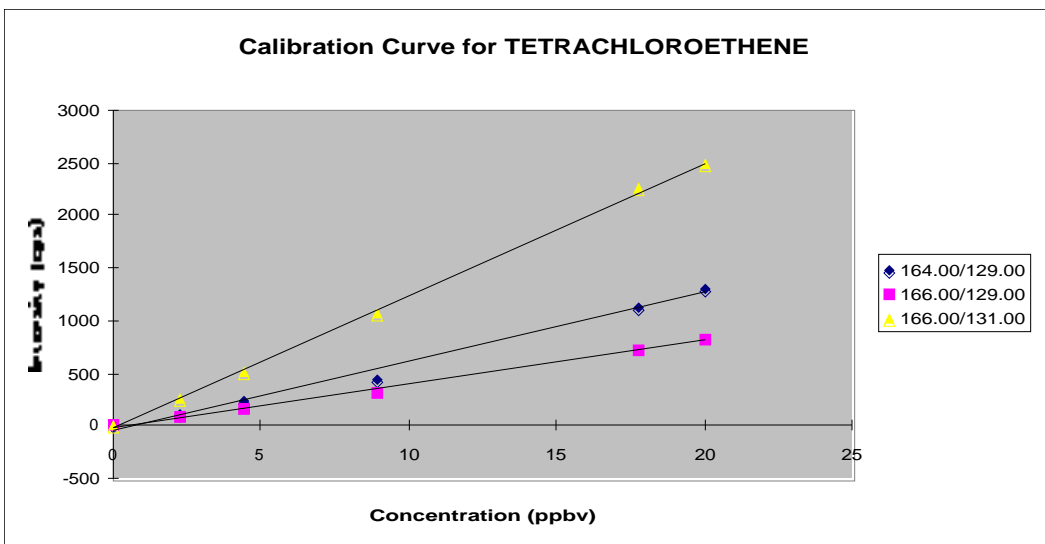
Report File Name 64MSMS00080 et al.
 Sample Name MOD Calibration - 20160504
 Date Wednesday, May 4, 2016 14:59:16
 Time Range 1.00 to 2.00 min
 Conc Units: ppbv
 Num Ions 16.00

Name	TETRACHLOR	TETRACHLOR	TETRACHLOR	TRICHLOROE'	TRICHLOROE'	TRICHLOROE'	DICHLOROET	DICHLOROET	BENZENE	BENZENE	TOLUENE	TOLUENE	XYLENE	XYLENE	VINYL CHLOR	VINYL CHLORIDE
Q1 Mass	164.00	166.00	166.00	130.00	132.00	132.00	96.00	98.00	78.00	78.00	92.00	92.00	106.00	106.00	62.00	64.00
Q3 Mass	129.00	129.00	131.00	95.00	95.00	97.00	61.00	63.00	39.00	52.00	91.00	65.00	91.00	65.00	27.00	27.00
Slope	93.58	54.50	164.62	223.85	56.87	110.13	214.61	72.08	8.91	60.89	468.52	156.67	463.07	80.42	1.29	0.36
Intercept	-96.24	-33.21	-43.85	4.43	-8.32	-2.02	44.89	3.19	3.49	-7.33	55.20	-0.22	-391.22	9.34	0.05	0.63
Intensity	0.28	0.00	1.11	4.72	2.78	1.11	0.56	0.28	1.39	3.06	35.00	6.67	12.22	2.50	0.28	0.28
Int SD	1.67	0.00	3.98	6.96	6.59	4.65	2.32	1.67	3.51	5.25	20.35	7.56	12.67	5.54	1.67	1.67
Concentratio	1.03	0.61	0.27	0.00	0.20	0.03	-0.21	-0.04	-0.24	0.17	-0.04	0.04	0.87	-0.09	0.18	-0.96
Conc SD	0.02	0.00	0.02	0.03	0.12	0.04	0.01	0.02	0.39	0.09	0.04	0.05	0.03	0.07	1.29	4.57
Compound C	0.64			0.07			-0.12		-0.03		0.00		0.39		-0.39	
Compound SI	0.01			0.04			0.01		0.17		0.03		0.03		2.07	
Det. Limit	0.05	0.00	0.07	0.09	0.35	0.13	0.03	0.07	1.18	0.26	0.13	0.14	0.08	0.21	3.88	13.72
Compound D	0.04			0.19			0.05		0.72		0.14		0.14		8.80	

Period 1, Expt. 1; Dwell: 100.0 ms; Pause: 5.0 ms

Acq. Time: Wed, May 4, 2016 at 17:50:20; Exp. Comment: Cal. Gas Bottle Number 2





Filename: 64MSMS00087 et al.

Compound na TETRACHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 18:08:51

Num. ions: 3

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.28	8.22	10.14	12.14	14.14

	Ion 1	Ion 2	Ion 3
Q1 Mass:	164	166	166
Q3 Mass:	129	129	131
Slope:	66.4113214	41.6937248	126.611982
Intercept:	-54.781708	-22.748635	-29.462339
Correlation:	0.99551287	0.99772008	0.9996642

Q1 Mass: 164 166 166

Q3 Mass: 129 129 131

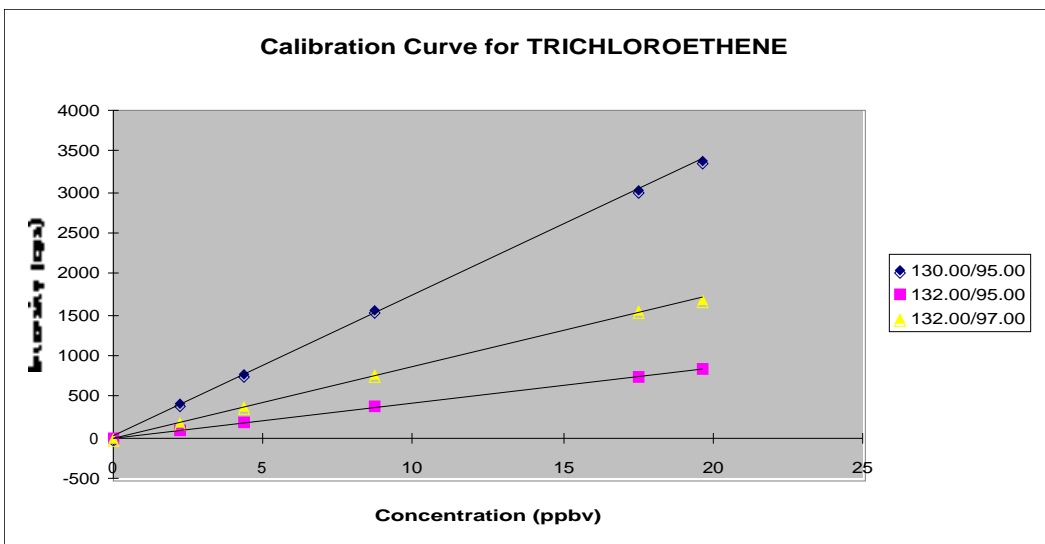
Slope: 66.4113214 41.6937248 126.611982

Intercept: -54.781708 -22.748635 -29.462339

Correlation: 0.99551287 0.99772008 0.9996642

Concentration 164.00/129.00 166.00/129.00 166.00/131.00

0	0.55555556	0.27777778	0.27777778
2.22	102.972973	74.0540541	254.054054
4.44	223.243243	158.378378	508.918919
8.89	441.621622	305.135135	1065.13514
17.78	1133.24324	719.189189	2255.94595
20	1311.38889	830	2491.11111



Filename: 64MSMS00087 et al.

Compound na TRICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 18:09:32

Num. ions: 3

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.28	8.22	10.14	12.14	14.14

	Ion 1	Ion 2	Ion 3
Q1 Mass:	130	132	132
Q3 Mass:	95	95	97
Slope:	171.164169	43.0769732	87.123789
Intercept:	26.1686747	-1.6176021	-2.6637287
Correlation:	0.99988204	0.99995827	0.99959216

Q1 Mass: 130 132 132

Q3 Mass: 95 95 97

Slope: 171.164169 43.0769732 87.123789

Intercept: 26.1686747 -1.6176021 -2.6637287

Correlation: 0.99988204 0.99995827 0.99959216

Concentration 130.00/95.00 132.00/95.00 132.00/97.00

0 0.83333333 0.55555556 1.38888889

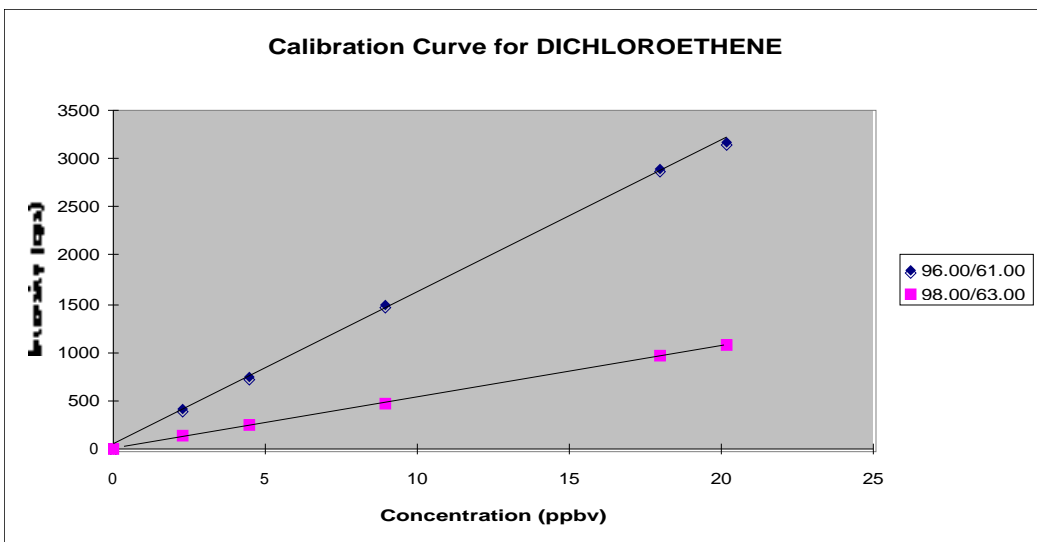
2.19 418.918919 90.2702703 178.378378

4.38 766.486486 187.027027 377.297297

8.76 1554.05405 376.756757 764.594595

17.51 3031.35135 747.837838 1555.67568

19.7 3378.33333 851.111111 1684.16667



Filename: 64MSMS00087 et al.

Compound name: DICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 18:07:10

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.28	8.22	10.14	12.14	14.14

	Ion 1	Ion 2
Q1 Mass:	96	98
Q3 Mass:	61	63
Slope:	156.954613	53.2726874
Intercept:	42.7060616	5.38874408
Correlation:	0.99966747	0.99970642

Q1 Mass: 96 98

Q3 Mass: 61 63

Slope: 156.954613 53.2726874

Intercept: 42.7060616 5.38874408

Correlation: 0.99966747 0.99970642

Concentration 96.00/61.00 98.00/63.00

0 0.55555556 0.83333333

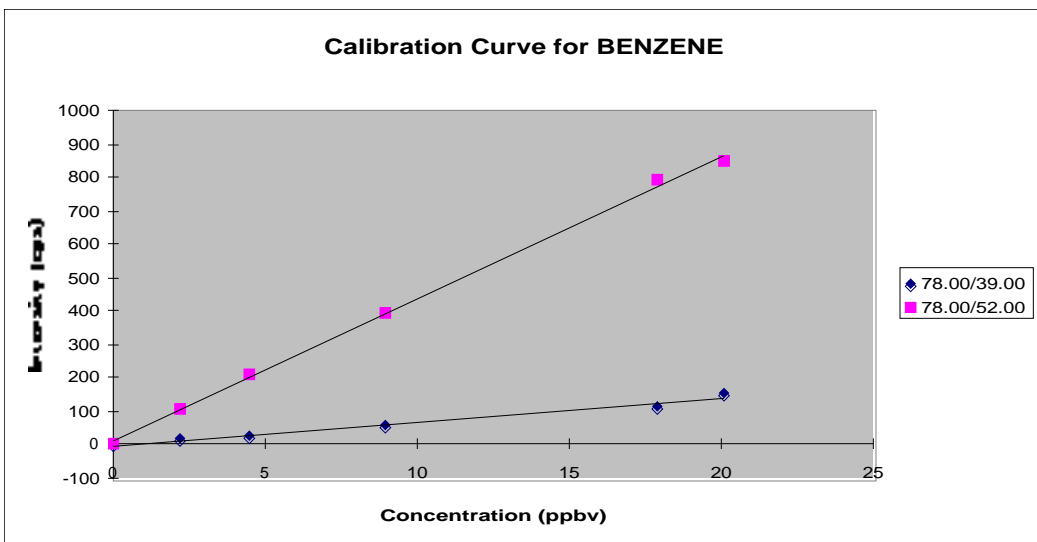
2.24 414.864865 127.567568

4.49 752.702703 258.108108

8.98 1481.89189 466.756757

17.96 2890.81081 970.810811

20.2 3170.55556 1078.05556



Filename: 64MSMS00087 et al.

Compound na BENZENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 18:08:09

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.28	8.22	10.14	12.14	14.14

	Ion 1	Ion 2
Q1 Mass:	78	78
Q3 Mass:	39	52
Slope:	7.15550662	42.6475528
Intercept:	-1.2848881	10.8620422
Correlation:	0.98978091	0.99920314

Q1 Mass: 78 78

Q3 Mass: 39 52

Slope: 7.15550662 42.6475528

Intercept: -1.2848881 10.8620422

Correlation: 0.98978091 0.99920314

Concentration 78.00/39.00 78.00/52.00

0 0.27777778 3.05555556

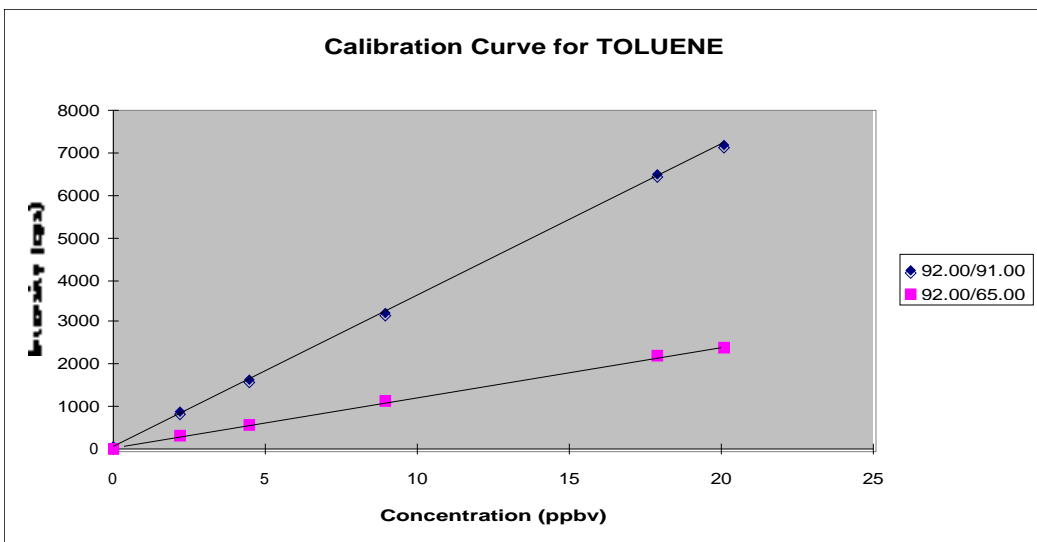
2.23 19.7297297 105.945946

4.47 26.7567568 207.567568

8.93 59.7297297 392.972973

17.87 114.054054 794.594595

20.1 155.277778 846.944444



Filename: 64MSMS00087 et al.

Compound na TOLUENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 18:10:14

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.28	8.22	10.14	12.14	14.14

	Ion 1	Ion 2
Q1 Mass:	92	92
Q3 Mass:	91	65
Slope:	357.206795	118.769706
Intercept:	45.7281557	28.9668504
Correlation:	0.99995513	0.99981096

Q1 Mass: 92 92

Q3 Mass: 91 65

Slope: 357.206795 118.769706

Intercept: 45.7281557 28.9668504

Correlation: 0.99995513 0.99981096

Concentration 92.00/91.00 92.00/65.00

0 46.3888889 17.5

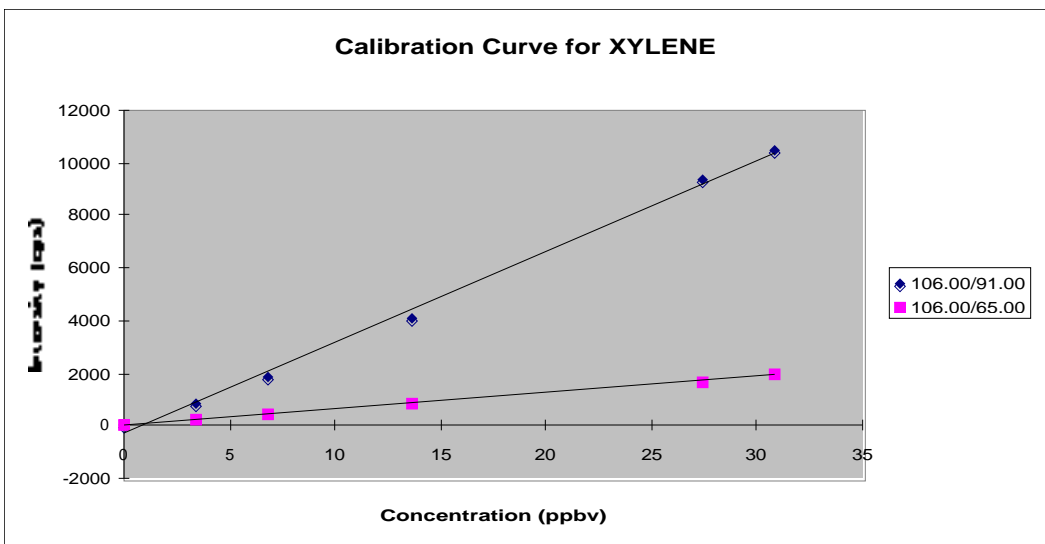
2.23 851.621622 290

4.47 1618.91892 562.972973

8.93 3243.78378 1107.2973

17.87 6472.16216 2174.86486

20.1 7187.77778 2387.22222



Filename: 64MSMS00087 et al.

Compound na XYLENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 18:11:44

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.28	8.22	10.14	12.14	14.14

	Ion 1	Ion 2
Q1 Mass:	106	106
Q3 Mass:	91	65
Slope:	348.876874	62.4451341
Intercept:	-321.11601	-1.3376287
Correlation:	0.99847318	0.99996949

Q1 Mass: 106 106

Q3 Mass: 91 65

Slope: 348.876874 62.4451341

Intercept: -321.11601 -1.3376287

Correlation: 0.99847318 0.99996949

Concentration 106.00/91.00 106.00/65.00

0 6.3888889 3.0555556

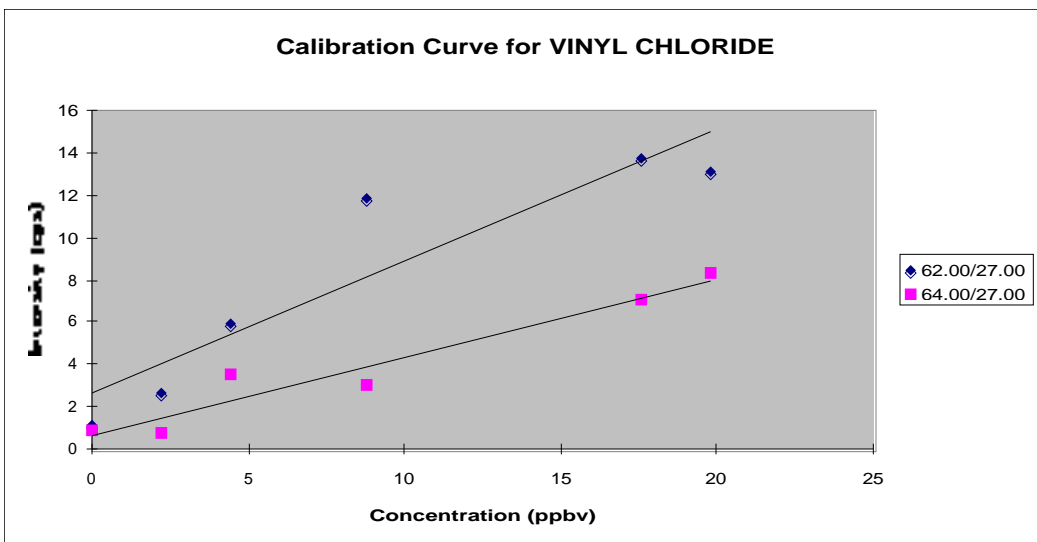
3.42 864.324324 210.540541

6.84 1887.02703 420

13.69 4091.35135 858.108108

27.38 9411.08108 1700

30.8 1.05E+04 1928.88889



Filename: 64MSMS00087 et al.

Compound na VINYL CHLORIDE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Wednesday, May 4, 2016 18:10:54

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.28	8.22	10.14	12.14	14.14

	Ion 1	Ion 2
Q1 Mass:	62	64
Q3 Mass:	27	27
Slope:	0.62317187	0.37001287
Intercept:	2.59791935	0.65905191
Correlation:	0.92474953	0.96912402

Q1 Mass: 62 64

Q3 Mass: 27 27

Slope: 0.62317187 0.37001287

Intercept: 2.59791935 0.65905191

Correlation: 0.92474953 0.96912402

Concentration 62.00/27.00 64.00/27.00

0 1.11111111 0.83333333

2.2 2.7027027 0.81081081

4.4 5.94594595 3.51351351

8.8 11.8918919 2.97297297

17.6 13.7837838 7.02702703

19.8 13.0555556 8.33333333

Report File Name 64MSMS00087 et al.
 Sample Name EOD Calibration - 20160504
 Date Wednesday, May 4, 2016 18:12:39
 Time Range 1.00 to 2.00 min
 Conc Units: ppbv
 Num Ions 16.00

Name	TETRACHLOR	TETRACHLOR	TETRACHLOR	TRICHLOROE'	TRICHLOROE'	TRICHLOROE'	DICHLOROET	DICHLOROET	BENZENE	BENZENE	TOLUENE	TOLUENE	XYLENE	XYLENE	VINYL CHLOR	VINYL CHLORIDE
Q1 Mass	164.00	166.00	166.00	130.00	132.00	132.00	96.00	98.00	78.00	78.00	92.00	92.00	106.00	106.00	62.00	64.00
Q3 Mass	129.00	129.00	131.00	95.00	95.00	97.00	61.00	63.00	39.00	52.00	91.00	65.00	91.00	65.00	27.00	27.00
Slope	66.41	41.69	126.61	171.16	43.08	87.12	156.95	53.27	7.16	42.65	357.21	118.77	348.88	62.45	0.62	0.37
Intercept	-54.78	-22.75	-29.46	26.17	-1.62	-2.66	42.71	5.39	-1.28	10.86	45.73	28.97	-321.12	-1.34	2.60	0.66
Intensity	0.56	0.28	0.28	0.83	0.56	1.39	0.56	0.83	0.28	3.06	46.39	17.50	6.39	3.06	1.11	0.83
Int SD	2.32	1.67	1.67	3.68	2.32	4.24	2.32	3.68	1.67	5.77	25.98	15.00	7.23	7.10	3.98	3.68
Concentratio	0.83	0.55	0.23	-0.15	0.05	0.05	-0.27	-0.09	0.22	-0.18	0.00	-0.10	0.94	0.07	-2.39	0.47
Conc SD	0.03	0.04	0.01	0.02	0.05	0.05	0.01	0.07	0.23	0.14	0.07	0.13	0.02	0.11	6.39	9.96
Compound C	0.54			-0.02			-0.18		0.02		-0.05		0.50		-0.96	
Compound SI	0.02			0.02			0.03		0.13		0.07		0.05		5.78	
Det. Limit	0.10	0.12	0.04	0.06	0.16	0.15	0.04	0.21	0.70	0.41	0.22	0.38	0.06	0.34	19.18	29.87
Compound D	0.09			0.12			0.13		0.55		0.30		0.20		24.52	

Method Information

Method Name: PCE/TCE/DCE/BTX/VC CALIBRATION
Last Modified: Thu, May 5, 2016, 5:15:30
Comment:

Command	Description	Time (sec)	Reps	Duration (min)	Total Time (hh:mm:ss)
Scan	Mode: Profile Thres : 0.1 x 10 E1 cps Pause: 0.1 sec Expt: MacHD3064:Instrument:expt:PCE+TCE+DCE+BTX+VC State: MacHD3064:Instrument:state:LPCI2016MAY05 PCE+TCE Q1 Cal: MacHD3064:Instrument:calibration:Q1 Calib LPCI 20121102 Q3 Cal: MacHD3064:Instrument:calibration:Q3 Calib LPCI 20121102	1.680	1607	45.000	00:45:00

Active Device Methods:

Device Type: LC Pump
Device Name: MKS 146 Single
ROM Version: ROM version cannot be checked.
Comment: ROM version cannot be checked.
Solvents: 1
Solvent name: Solvent A %
Timed events: 0
Device specific parameters: 2
Gradient: 1=Step, 2=Linear 1.0000
Gradient: 1=Step, 2=Linear
Gradient resolution (sec) 5.0000
Gradient resolution in seconds
Timed steps: 9

Min. Pressure : 0.0000
Max. Pressure : 100.0000

Step	T.Time (min)	Dura.(min)	Flow (µL/min)	Sol.1
0	-0.10	0.10	0.00	100.00
1	0.00	3.00	0.00	100.00
2	3.00	2.00	90.00	100.00
3	5.00	2.00	10.00	100.00
4	7.00	2.00	20.00	100.00
5	9.00	2.00	40.00	100.00
6	11.00	2.00	80.00	100.00
7	13.00	2.00	90.00	100.00
8	15.00	2.00	0.00	100.00

Experiment Information

Experiment Name: PCE+TCE+DCE+BTX+VC
Last Modified: Wed, Apr 27, 2016, 14:38:16
Scan Type: MRM
Scan Time: 00:01.680 secs
Peak Hopping : Disabled
Q2 Purge : Disabled
Comment: Cal. Gas Bottle Number 2

Mass Defect: 0 mmu/100amu
Pause Time: 5.000 msec

Mass Range Information

Mass Range 1		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
164.000	129.000	100.000
Mass Range 2		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	129.000	100.000
Mass Range 3		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	131.000	100.000
Mass Range 4		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
130.000	95.000	100.000
Mass Range 5		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	95.000	100.000
Mass Range 6		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	97.000	100.000
Mass Range 7		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
96.000	61.000	100.000
Mass Range 8		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
98.000	63.000	100.000
Mass Range 9		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	39.000	100.000
Mass Range 10		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	52.000	100.000
Mass Range 11		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	91.000	100.000
Mass Range 12		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	65.000	100.000
Mass Range 13		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	91.000	100.000
Mass Range 14		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	65.000	100.000
Mass Range 15		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
62.000	27.000	100.000

Param	Start	Stop
RO1	-7.500	-7.500

Mass Range 16

Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)	Param	Start	Stop
64.000	27.000	100.000	RO1	-7.500	-7.500

State File Information

Last Modified: Thu, May 5, 2016, 5:13:54

Analog Parameters

NC	0.000
TEM	80.000
OR	0.000
RNG	0.000
Q0	-5.200
IQ1	-6.000
ST	-13.000
RO1	-6.100
IQ2	-12.500
RO2	-35.000
IQ3	-40.200
RO3	-37.000
DF	-390.000
CEM	1700.000

On/Off Parameters

POL	Off
NEB	Off
CUR	4
CAD	7

Q1 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.050
75.000	0.053
100.000	0.064
120.000	0.065
180.000	0.087

Q3 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.042
60.000	0.043
100.000	0.045
150.000	0.045
180.000	0.047

Calibration File Information

Type: Q1 Calibration

Last Modified: Fri, Nov 2, 2012, 14:24:38

Mass	DAC
78.050	1466
106.080	2002
129.910	2459
165.870	3146

Calibration File Information

Type: Q3 Calibration

Last Modified: Fri, Nov 2, 2012, 14:40:02

Mass	DAC
30.000	551
78.050	1473
105.070	1992
165.870	3160

Method Information

Method Name: PCE/TCE/DCE/BTX/VC MONITORING
Last Modified: Thu, May 5, 2016, 5:16:00
Comment:

Command	Description	Time (sec)	Reps	Duration (min)	Total Time (hh:mm:ss)
Scan	Mode: Profile Thres : 0.1 x 10 E1 cps Pause: 0.1 sec Expt: MacHD3064:Instrument:expt:PCE+TCE+DCE+BTX+VC State: MacHD3064:Instrument:state:LPCI2016MAY05 PCE+TCE Q1 Cal: MacHD3064:Instrument:calibration:Q1 Calib LPCI 20121102 Q3 Cal: MacHD3064:Instrument:calibration:Q3 Calib LPCI 20121102	1.680	6428	180.000	03:00:00

Active Device Methods:

Experiment Information

Experiment Name: PCE+TCE+DCE+BTX+VC
Last Modified: Wed, Apr 27, 2016, 14:38:16
Scan Type: MRM
Scan Time: 00:01.680 secs
Peak Hopping : Disabled
Q2 Purge : Disabled
Comment: Cal. Gas Bottle Number 2

Mass Defect: 0 mmu/100amu
Pause Time: 5.000 msec

Mass Range Information

Mass Range 1		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
164.000	129.000	100.000
Mass Range 2		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	129.000	100.000
Mass Range 3		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
166.000	131.000	100.000
Mass Range 4		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
130.000	95.000	100.000
Mass Range 5		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	95.000	100.000
Mass Range 6		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
132.000	97.000	100.000
Mass Range 7		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
96.000	61.000	100.000
Mass Range 8		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
98.000	63.000	100.000
Mass Range 9		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	39.000	100.000
Mass Range 10		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
78.000	52.000	100.000
Mass Range 11		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	91.000	100.000
Mass Range 12		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
92.000	65.000	100.000
Mass Range 13		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	91.000	100.000
Mass Range 14		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
106.000	65.000	100.000
Mass Range 15		
Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)
62.000	27.000	100.000

Param	Start	Stop
RO1	-7.500	-7.500

Mass Range 16

Q1 Mass(amu)	Q3 Mass(amu)	Dwell(msec)	Param	Start	Stop
64.000	27.000	100.000	RO1	-7.500	-7.500

State File Information

Last Modified: Thu, May 5, 2016, 5:13:54

Analog Parameters

NC	0.000
TEM	80.000
OR	0.000
RNG	0.000
Q0	-5.200
IQ1	-6.000
ST	-13.000
RO1	-6.100
IQ2	-12.500
RO2	-35.000
IQ3	-40.200
RO3	-37.000
DF	-390.000
CEM	1700.000

On/Off Parameters

POL	Off
NEB	Off
CUR	4
CAD	7

Q1 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.050
75.000	0.053
100.000	0.064
120.000	0.065
180.000	0.087

Q3 Peak Resolution Table

Mass Peak	Mass Shift
30.000	0.042
60.000	0.043
100.000	0.045
150.000	0.045
180.000	0.047

Calibration File Information

Type: Q1 Calibration

Last Modified: Fri, Nov 2, 2012, 14:24:38

Mass	DAC
78.050	1466
106.080	2002
129.910	2459
165.870	3146

Calibration File Information

Type: Q3 Calibration

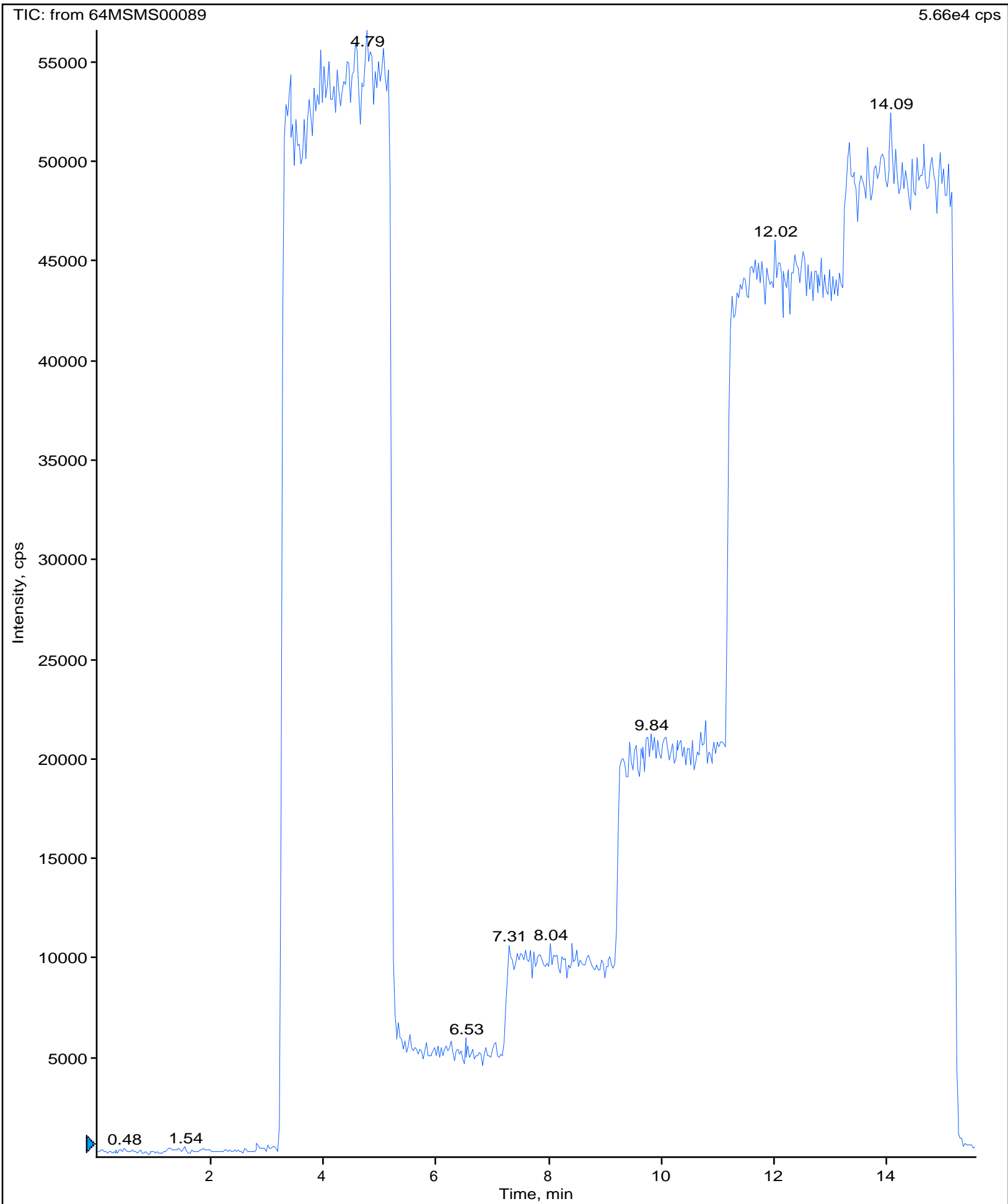
Last Modified: Fri, Nov 2, 2012, 14:40:02

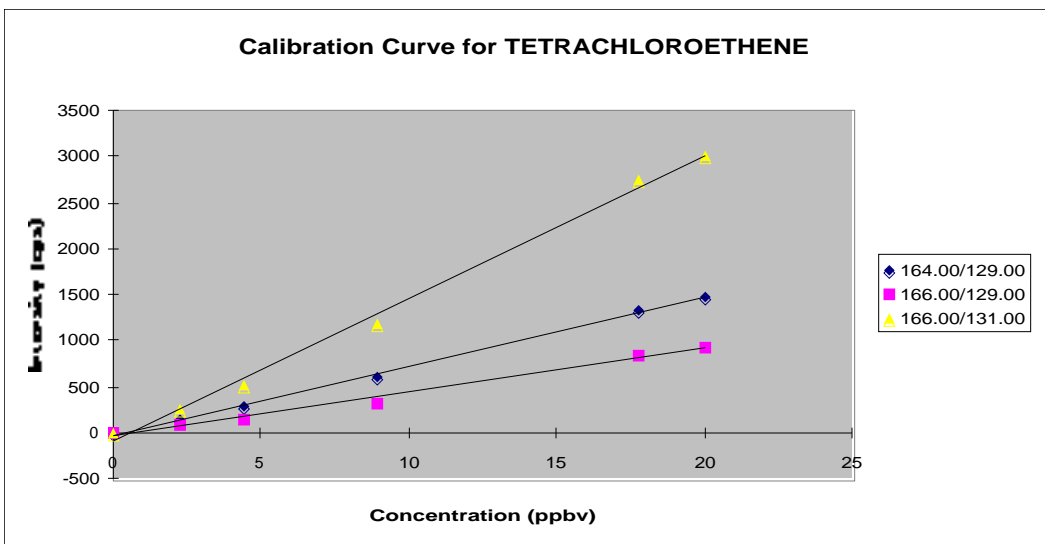
Mass	DAC
30.000	551
78.050	1473
105.070	1992
165.870	3160

5/5/16.5.17.04

Period 1, Expt. 1; Dwell: 100.0 ms; Pause: 5.0 ms

Acq. Time: Thu, May 5, 2016 at 5:17:03; Exp. Comment: Cal. Gas Bottle Number 2





Filename: 64MSMS00089 et al.

Compound na TETRACHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 5:35:14

Num. ions: 3

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.27	8.16	10.09	12.19	13.94

	Ion 1	Ion 2	Ion 3
--	-------	-------	-------

Q1 Mass: 164 166 166

Q3 Mass: 129 129 131

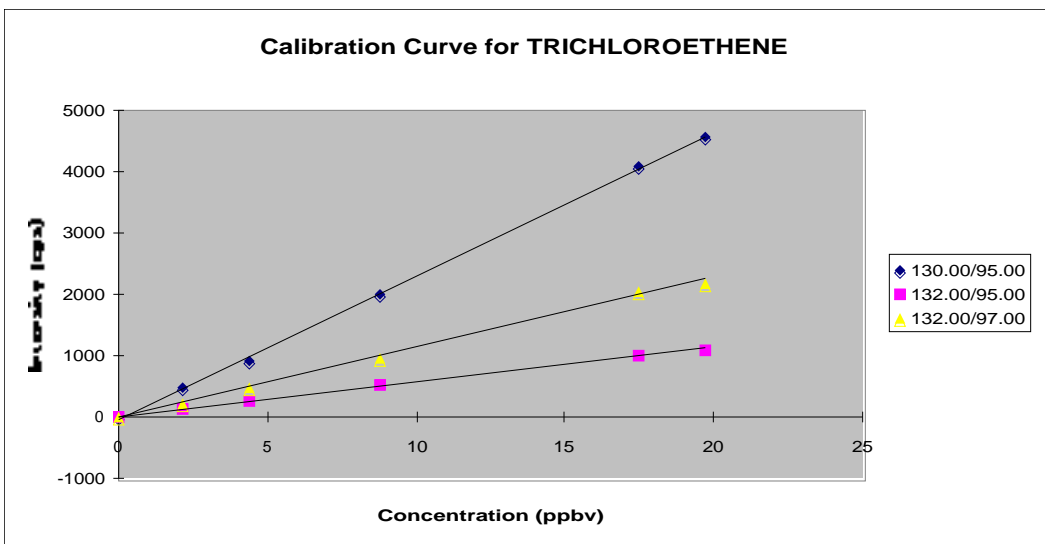
Slope: 74.7061046 47.8889234 155.361774

Intercept: -28.440938 -50.055868 -100.27785

Correlation: 0.99917223 0.99486999 0.99793949

Concentration 164.00/129.00 166.00/129.00 166.00/131.00

0	0	0.27777778	0.83333333
2.22	146.666667	66.3888889	261.666667
4.44	280.540541	127.027027	508.108108
8.89	597.837838	315.135135	1171.08108
17.78	1318.10811	818.918919	2734.86486
20	1470.27778	925.833333	3007.22222



Filename: 64MSMS00089 et al.

Compound name: TRICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 5:35:53

Num. ions: 3

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.27	8.16	10.09	12.19	13.94

	Ion 1	Ion 2	Ion 3
Q1 Mass:	130	132	132
Q3 Mass:	95	95	97
Slope:	234.177577	56.0999906	114.472712
Intercept:	-40.50612	6.25483629	-15.693928
Correlation:	0.99983142	0.99992707	0.99916783

Q1 Mass: 130 132 132

Q3 Mass: 95 95 97

Slope: 234.177577 56.0999906 114.472712

Intercept: -40.50612 6.25483629 -15.693928

Correlation: 0.99983142 0.99992707 0.99916783

Concentration 130.00/95.00 132.00/95.00 132.00/97.00

0 4.16666667 1.38888889 1.11111111

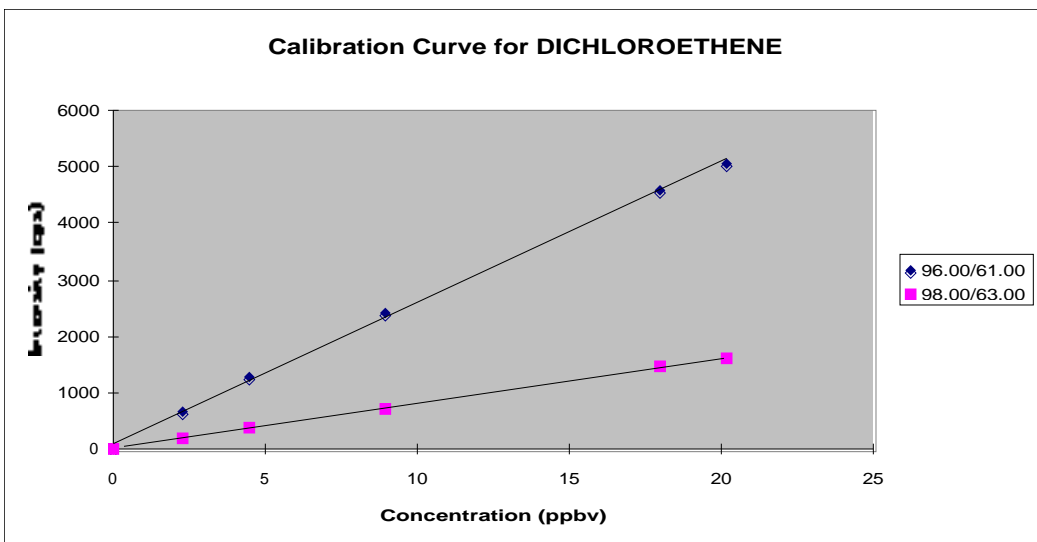
2.19 483.888889 131.111111 232.5

4.38 925.405405 252.702703 475.945946

8.76 1994.32432 500.810811 961.351351

17.51 4066.75676 995.675676 2054.32432

19.7 4586.11111 1103.33333 2195



Filename: 64MSMS00089 et al.

Compound na DICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 5:33:37

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.27	8.16	10.09	12.19	13.94

	Ion 1	Ion 2
Q1 Mass:	96	98
Q3 Mass:	61	63
Slope:	249.157559	79.1063451
Intercept:	98.2431469	9.44905753
Correlation:	0.99945848	0.99985263

Q1 Mass: 96 98

Q3 Mass: 61 63

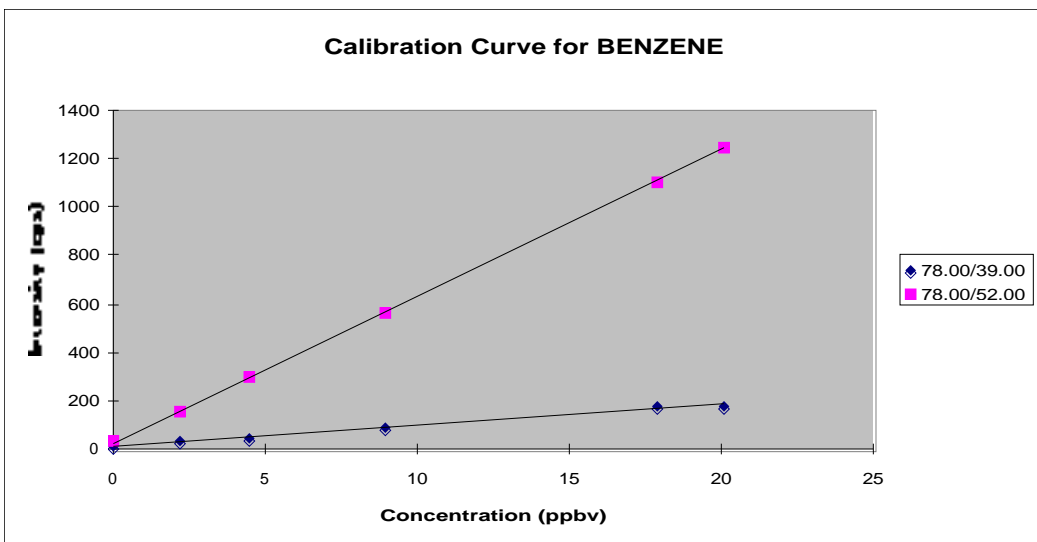
Slope: 249.157559 79.1063451

Intercept: 98.2431469 9.44905753

Correlation: 0.99945848 0.99985263

Concentration 96.00/61.00 98.00/63.00

0	0.83333333	0
2.24	652.777778	197.5
4.49	1295.67568	356.486486
8.98	2404.59459	728.648649
17.96	4582.97297	1441.35135
20.2	5074.72222	1594.16667



Filename: 64MSMS00089 et al.

Compound na BENZENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 5:34:32

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.27	8.16	10.09	12.19	13.94

	Ion 1	Ion 2
Q1 Mass:	78	78
Q3 Mass:	39	52
Slope:	8.74985424	60.398095
Intercept:	8.19099181	27.0365276
Correlation:	0.99695423	0.99996757

Q1 Mass: 78 78

Q3 Mass: 39 52

Slope: 8.74985424 60.398095

Intercept: 8.19099181 27.0365276

Correlation: 0.99695423 0.99996757

Concentration 78.00/39.00 78.00/52.00

0 6.38888889 33.8888889

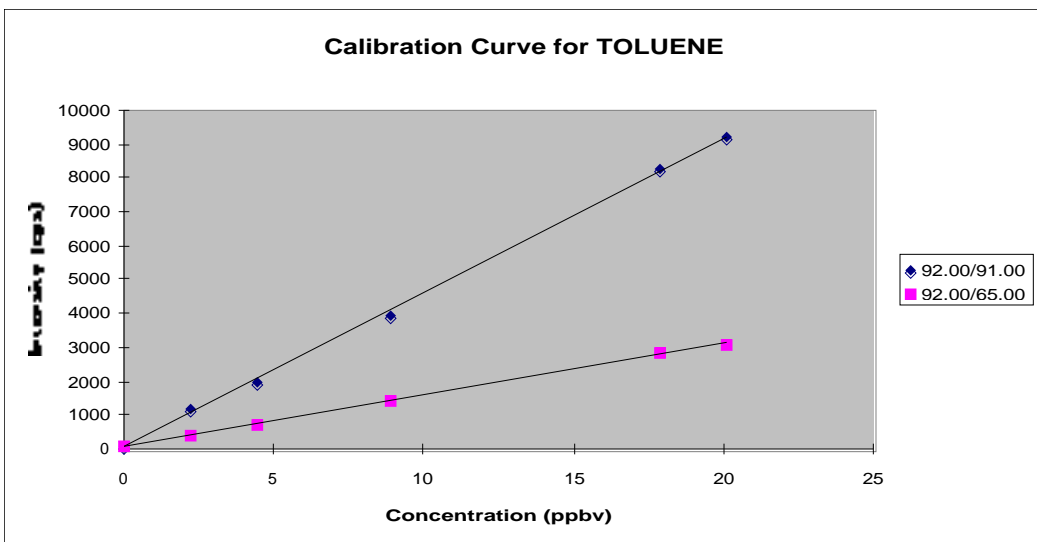
2.23 28.8888889 156.666667

4.47 47.5675676 295.135135

8.93 85.4054054 564.864865

17.87 174.054054 1105.94595

20.1 175.833333 1243.05556



Filename: 64MSMS00089 et al.

Compound name: TOLUENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 5:36:32

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.27	8.16	10.09	12.19	13.94

	Ion 1	Ion 2
Q1 Mass:	92	92
Q3 Mass:	91	65
Slope:	455.324475	152.38989
Intercept:	41.3536109	51.2679305
Correlation:	0.9995224	0.99968831

Q1 Mass: 92 92

Q3 Mass: 91 65

Slope: 455.324475 152.38989

Intercept: 41.3536109 51.2679305

Correlation: 0.9995224 0.99968831

Concentration 92.00/91.00 92.00/65.00

0 113.055556 43.6111111

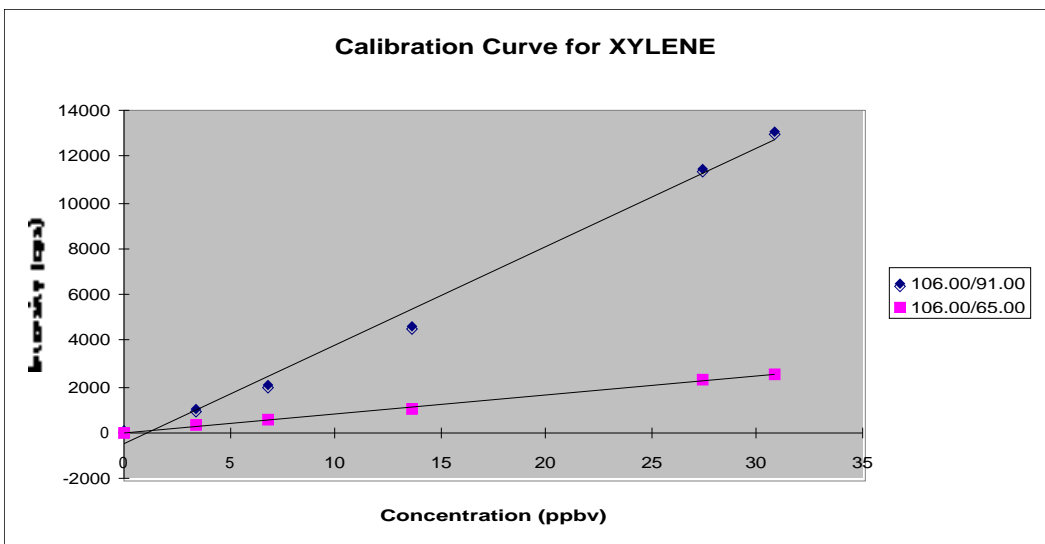
2.23 1146.38889 406.944444

4.47 2001.62162 712.702703

8.93 3916.48649 1418.37838

17.87 8295.40541 2823.51351

20.1 9180.55556 3070.55556



Filename: 64MSMS00089 et al.

Compound na XYLENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 5:38:04

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.27	8.16	10.09	12.19	13.94

	Ion 1	Ion 2
Q1 Mass:	106	106
Q3 Mass:	91	65
Slope:	432.443136	83.6307077
Intercept:	-543.16204	-26.470459
Correlation:	0.99599815	0.99906277

Q1 Mass: 106 106

Q3 Mass: 91 65

Slope: 432.443136 83.6307077

Intercept: -543.16204 -26.470459

Correlation: 0.99599815 0.99906277

Concentration 106.00/91.00 106.00/65.00

0 73.6111111 17.2222222

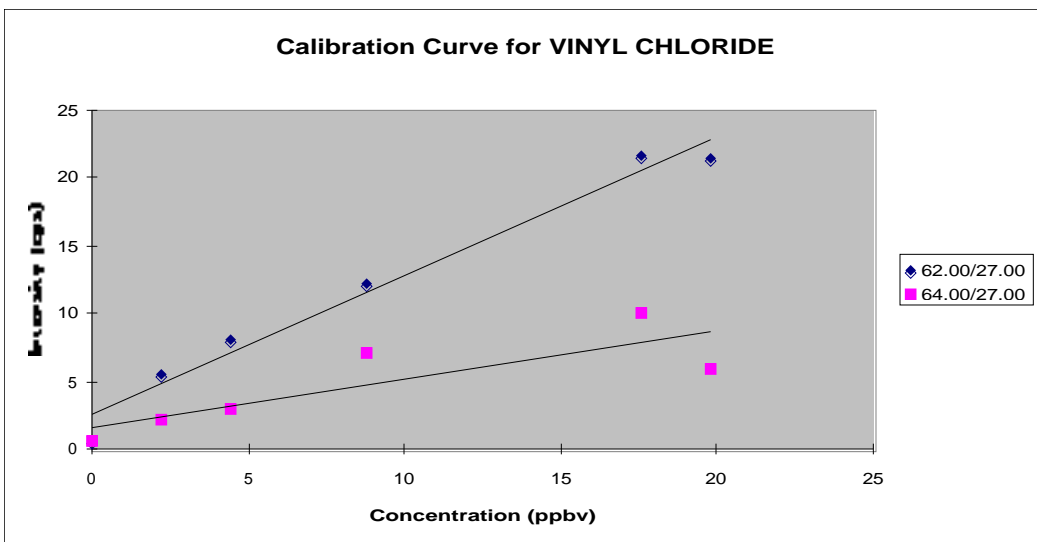
3.42 1045.83333 269.166667

6.84 2018.64865 507.567568

13.69 4611.35135 1065.13514

27.38 1.15E+04 2325.67568

30.8 1.30E+04 2525



Filename: 64MSMS00089 et al.

Compound na VINYL CHLORIDE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 5:37:13

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.27	8.16	10.09	12.19	13.94

	Ion 1	Ion 2
Q1 Mass:	62	64
Q3 Mass:	27	27
Slope:	1.02808978	0.3528041
Intercept:	2.51812527	1.66384241
Correlation:	0.98743515	0.83105123

Q1 Mass: 62 64

Q3 Mass: 27 27

Slope: 1.02808978 0.3528041

Intercept: 2.51812527 1.66384241

Correlation: 0.98743515 0.83105123

Concentration 62.00/27.00 64.00/27.00

0 0.55555556 0.55555556

2.2 5.55555556 2.22222222

4.4 8.10810811 2.97297297

8.8 12.1621622 7.02702703

17.6 21.6216216 10

19.8 21.3888889 5.83333333

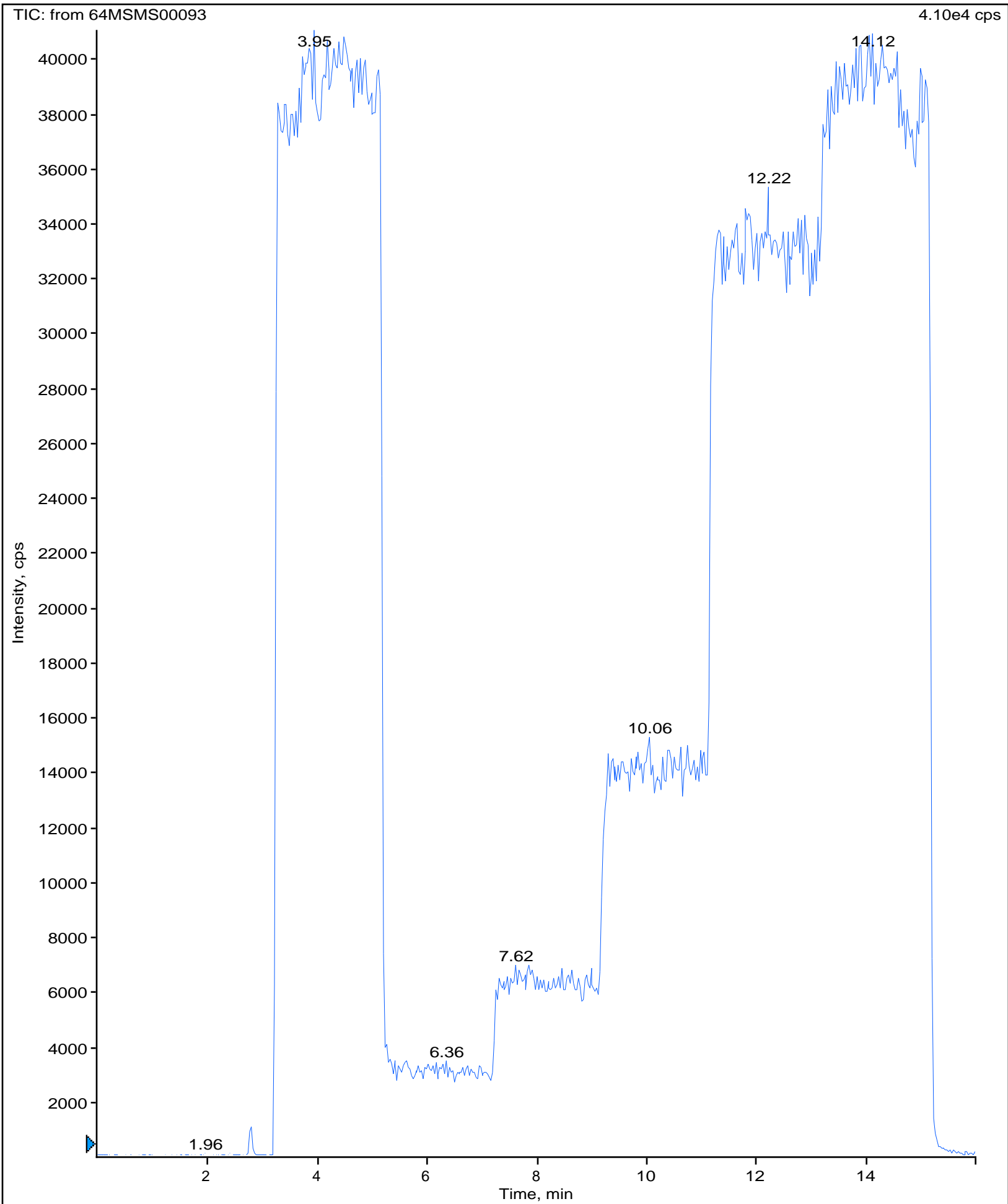
Report File Name 64MSMS00089 et al.
 Sample Name BOD Calibration - 20160505
 Date Thursday, May 5, 2016 5:39:05
 Time Range 1.00 to 2.00 min
 Conc Units: ppbv
 Num Ions 16.00

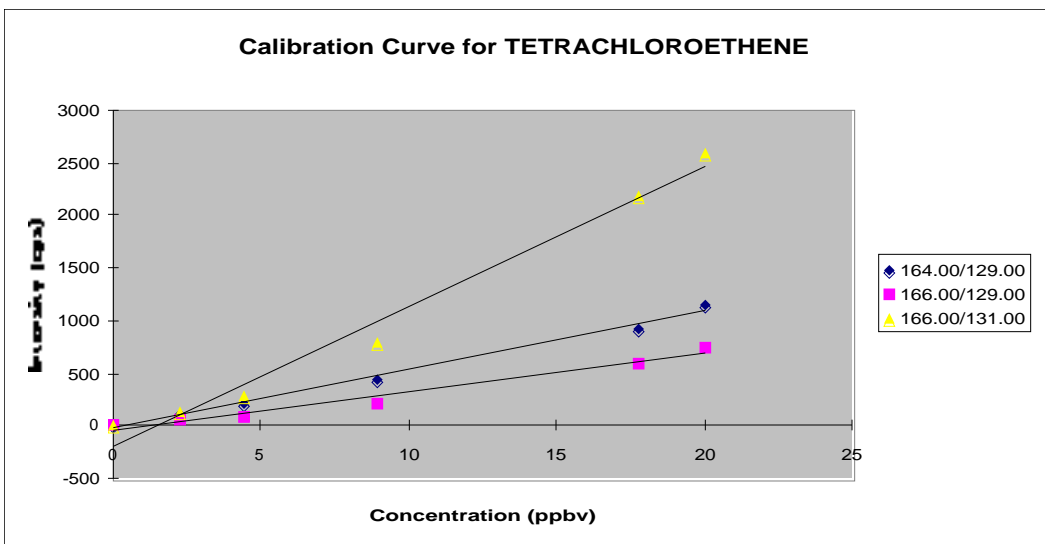
Name	TETRACHLOR	TETRACHLOR	TETRACHLOR	TRICHLOROE'	TRICHLOROE'	TRICHLOROE'	DICHLOROET	DICHLOROET	BENZENE	BENZENE	TOLUENE	TOLUENE	XYLENE	XYLENE	VINYL CHLOR	VINYL CHLORIDE
Q1 Mass	164.00	166.00	166.00	130.00	132.00	132.00	96.00	98.00	78.00	78.00	92.00	92.00	106.00	106.00	62.00	64.00
Q3 Mass	129.00	129.00	131.00	95.00	95.00	97.00	61.00	63.00	39.00	52.00	91.00	65.00	91.00	65.00	27.00	27.00
Slope	74.71	47.89	155.36	234.18	56.10	114.47	249.16	79.11	8.75	60.40	455.32	152.39	432.44	83.63	1.03	0.35
Intercept	-28.44	-50.06	-100.28	-40.51	6.25	-15.69	98.24	9.45	8.19	27.04	41.35	51.27	-543.16	-26.47	2.52	1.66
Intensity	0.00	0.28	0.83	4.17	1.39	1.11	0.83	0.00	6.39	33.89	113.06	43.61	73.61	17.22	0.56	0.56
Int SD	0.00	1.67	3.68	7.32	5.43	3.98	2.80	0.00	9.31	24.41	45.22	25.65	29.87	15.23	2.32	2.32
Concentratio	0.38	1.05	0.65	0.19	-0.09	0.15	-0.39	-0.12	-0.21	0.11	0.16	-0.05	1.43	0.52	-1.91	-3.14
Conc SD	0.00	0.03	0.02	0.03	0.10	0.03	0.01	0.00	1.06	0.40	0.10	0.17	0.07	0.18	2.26	6.58
Compound C	0.69			0.08			-0.26		-0.05		0.05		0.97		-2.53	
Compound SI	0.01			0.03			0.00		0.52		0.09		0.09		3.13	
Det. Limit	0.00	0.10	0.07	0.09	0.29	0.10	0.03	0.00	3.19	1.21	0.30	0.50	0.21	0.55	6.78	19.75
Compound D	0.06			0.16			0.02		2.20		0.40		0.38		13.27	

5/5/16.10.49.46

Period 1, Expt. 1; Dwell: 100.0 ms; Pause: 5.0 ms

Acq. Time: Thu, May 5, 2016 at 10:49:46; Exp. Comment: Cal. Gas Bottle Number 2





Filename: 64MSMS00093 et al.

Compound na TETRACHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 11:09:26

Num. ions: 3

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.33	8.07	10.15	12.06	13.81

	Ion 1	Ion 2	Ion 3
Q1 Mass:	164	166	166
Q3 Mass:	129	129	131
Slope:	55.6617959	36.8565847	133.135939
Intercept:	-25.871727	-49.594361	-183.67318
Correlation:	0.99619983	0.98551537	0.99148219

Q1 Mass: 164 166 166

Q3 Mass: 129 129 131

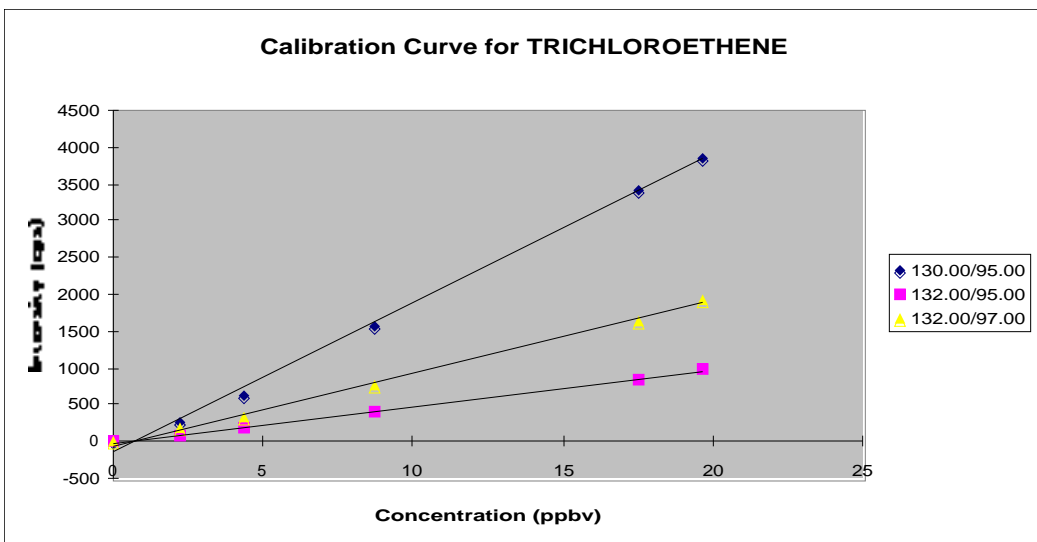
Slope: 55.6617959 36.8565847 133.135939

Intercept: -25.871727 -49.594361 -183.67318

Correlation: 0.99619983 0.98551537 0.99148219

Concentration 164.00/129.00 166.00/129.00 166.00/131.00

0	1.11111111	1.11111111	1.38888889
2.22	109.459459	51.3513514	137.567568
4.44	206.756757	87.2972973	287.567568
8.89	431.081081	197.837838	794.594595
17.78	917.777778	584.722222	2178.33333
20	1147.02703	745.675676	2598.64865



Filename: 64MSMS00093 et al.

Compound name: TRICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 11:10:04

Num. ions: 3

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.33	8.07	10.15	12.06	13.81

	Ion 1	Ion 2	Ion 3
Q1 Mass:	130	132	132
Q3 Mass:	95	95	97
Slope:	202.203898	49.8202286	97.9313703
Intercept:	-145.9462	-20.045421	-51.96678
Correlation:	0.99858162	0.99894188	0.99852947

Q1 Mass: 130 132 132

Q3 Mass: 95 95 97

Slope: 202.203898 49.8202286 97.9313703

Intercept: -145.9462 -20.045421 -51.96678

Correlation: 0.99858162 0.99894188 0.99852947

Concentration 130.00/95.00 132.00/95.00 132.00/97.00

0 0.55555556 0.83333333 0.55555556

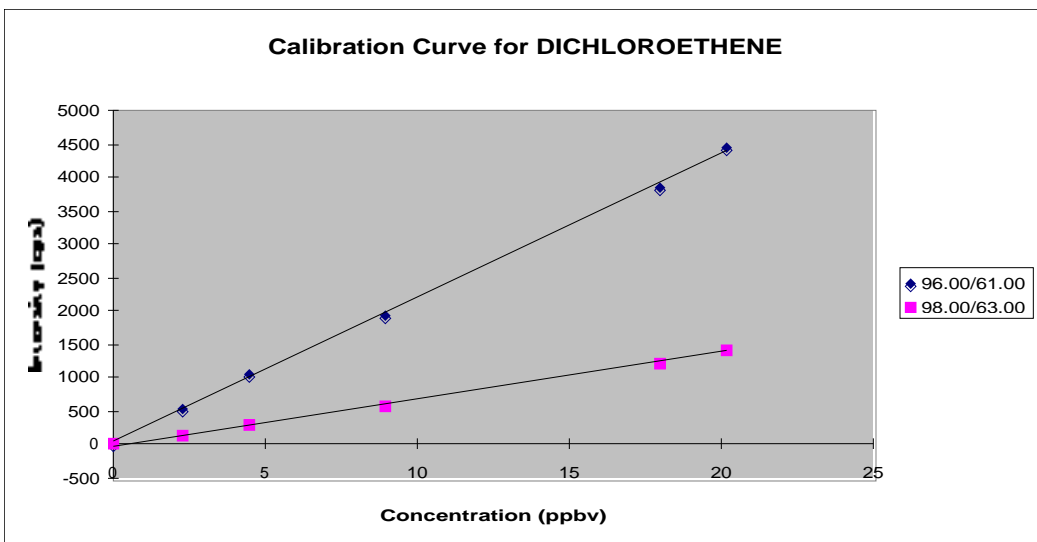
2.19 252.432432 84.3243243 172.972973

4.38 632.972973 195.405405 338.918919

8.76 1575.13514 392.972973 750.540541

17.51 3429.72222 838.611111 1649.44444

19.7 3857.2973 985.135135 1921.08108



Filename: 64MSMS00093 et al.

Compound na DICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 11:06:37

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.33	8.07	10.15	12.06	13.81

	Ion 1	Ion 2
Q1 Mass:	96	98
Q3 Mass:	61	63
Slope:	215.026079	70.21471
Intercept:	39.36663	-21.787448
Correlation:	0.99951963	0.99933842

Q1 Mass: 96 98

Q3 Mass: 61 63

Slope: 215.026079 70.21471

Intercept: 39.36663 -21.787448

Correlation: 0.99951963 0.99933842

Concentration 96.00/61.00 98.00/63.00

0 1.3888889 0.5555556

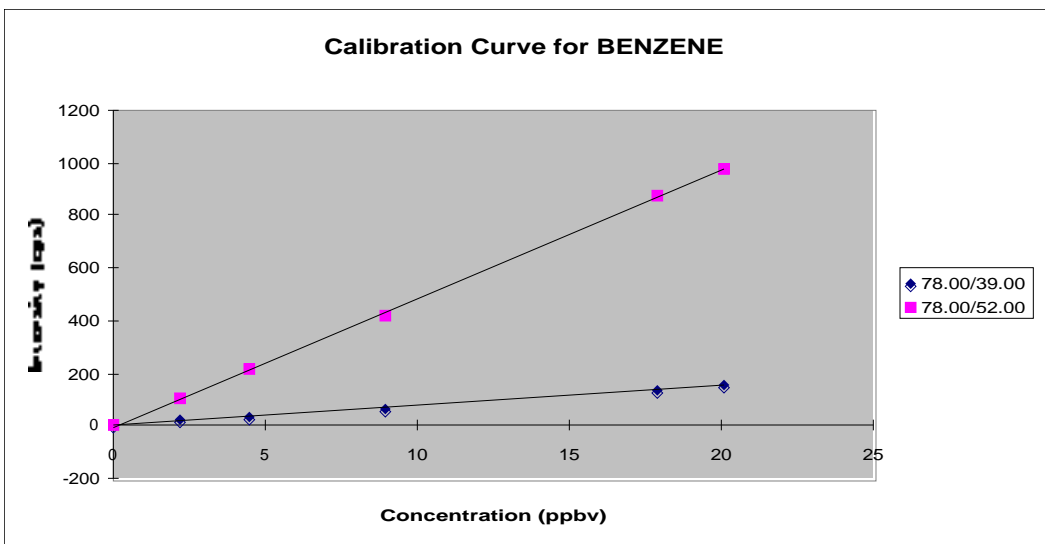
2.24 545.675676 136.756757

4.49 1057.2973 284.864865

8.98 1940.81081 581.621622

17.96 3825.83333 1223.88889

20.2 4448.64865 1424.05405



Filename: 64MSMS00093 et al.

Compound na BENZENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 11:08:47

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.33	8.07	10.15	12.06	13.81

Ion 1	Ion 2
-------	-------

Q1 Mass: 78 78

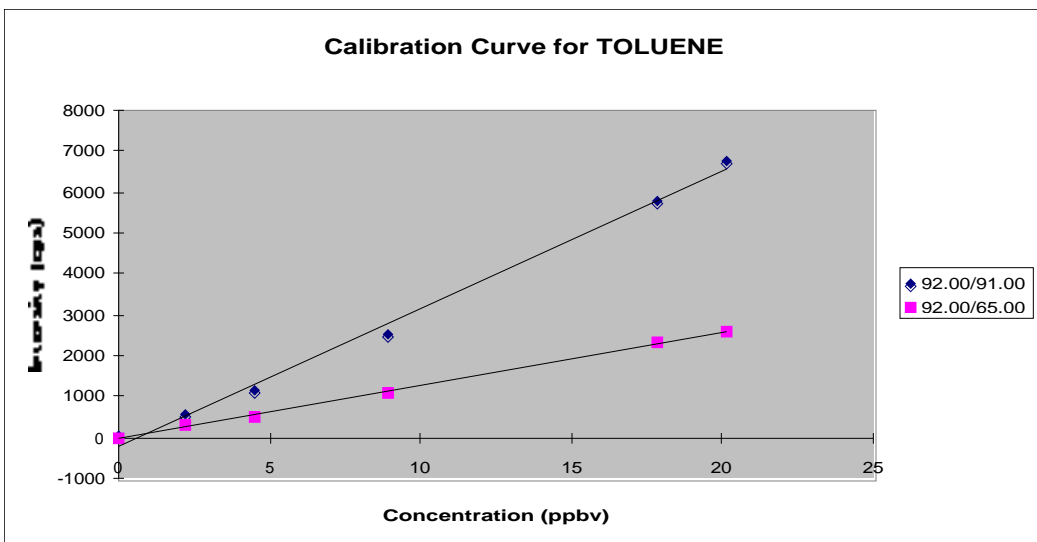
Q3 Mass: 39 52

Slope: 7.32802195 48.9306055

Intercept: 2.93348439 -5.4292252

Correlation: 0.99967418 0.999827

Concentration	78.00/39.00	78.00/52.00
0	0.55555556	1.94444444
2.23	21.0810811	102.702703
4.47	37.2972973	214.864865
8.93	67.5675676	417.027027
17.87	133.6111111	871.944444
20.1	150.27027	981.621622



Filename: 64MSMS00093 et al.

Compound name: TOLUENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 11:10:45

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.33	8.07	10.15	12.06	13.81

	Ion 1	Ion 2
Q1 Mass:	92	92
Q3 Mass:	91	65
Slope:	336.903376	130.854048
Intercept:	-208.64288	-38.203318
Correlation:	0.9975572	0.9992841

Q1 Mass: 92 92

Q3 Mass: 91 65

Slope: 336.903376 130.854048

Intercept: -208.64288 -38.203318

Correlation: 0.9975572 0.9992841

Concentration 92.00/91.00 92.00/65.00

0 13.3333333 5.27777778

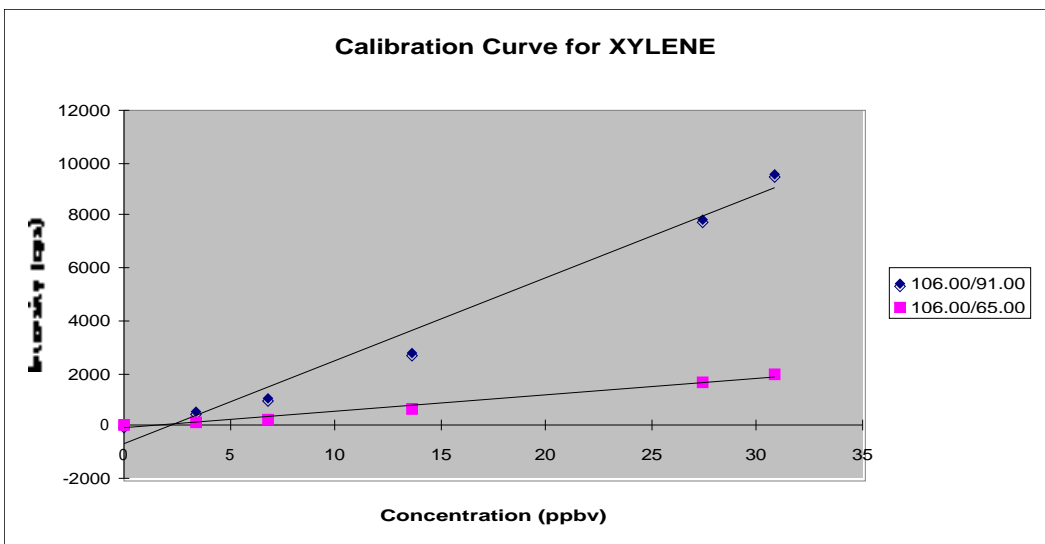
2.23 588.108108 271.891892

4.47 1175.40541 517.297297

8.93 2509.72973 1061.35135

17.87 5754.72222 2313.33333

20.1 6764.86486 2615.40541



Filename: 64MSMS00093 et al.

Compound na XYLENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 11:12:07

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.33	8.07	10.15	12.06	13.81

	Ion 1	Ion 2
--	-------	-------

Q1 Mass: 106 106

Q3 Mass: 91 65

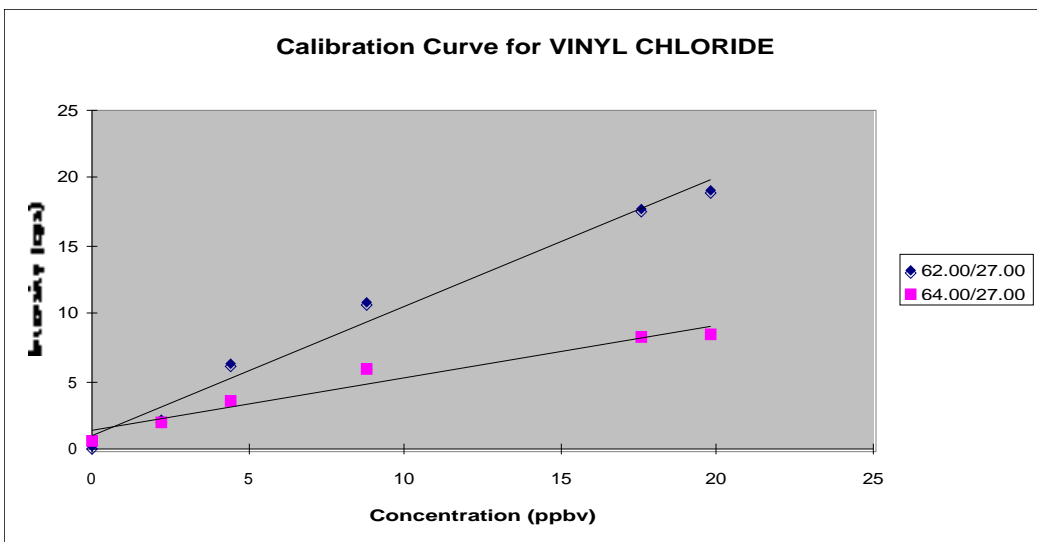
Slope: 315.391919 65.5026581

Intercept: -684.78231 -115.06816

Correlation: 0.98924379 0.99505488

Concentration 106.00/91.00 106.00/65.00

0	5	0.83333333
3.42	521.621622	113.243243
6.84	1094.05405	257.027027
13.69	2742.97297	671.351351
27.38	7819.44444	1684.16667
30.8	9611.35135	1962.7027



Filename: 64MSMS00093 et al.

Compound name: VINYL CHLORIDE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 11:11:25

Num. ions: 2

Num. concs.: 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.33	8.07	10.15	12.06	13.81

	Ion 1	Ion 2
Q1 Mass:	62	64
Q3 Mass:	27	27
Slope:	0.95472095	0.39156039
Intercept:	1.00411125	1.32403832
Correlation:	0.99211252	0.97427145

Q1 Mass: 62 64

Q3 Mass: 27 27

Slope: 0.95472095 0.39156039

Intercept: 1.00411125 1.32403832

Correlation: 0.99211252 0.97427145

Concentration 62.00/27.00 64.00/27.00

0 0.27777778 0.55555556

2.2 2.16216216 1.89189189

4.4 6.21621622 3.51351351

8.8 10.8108108 5.94594595

17.6 17.7777778 8.33333333

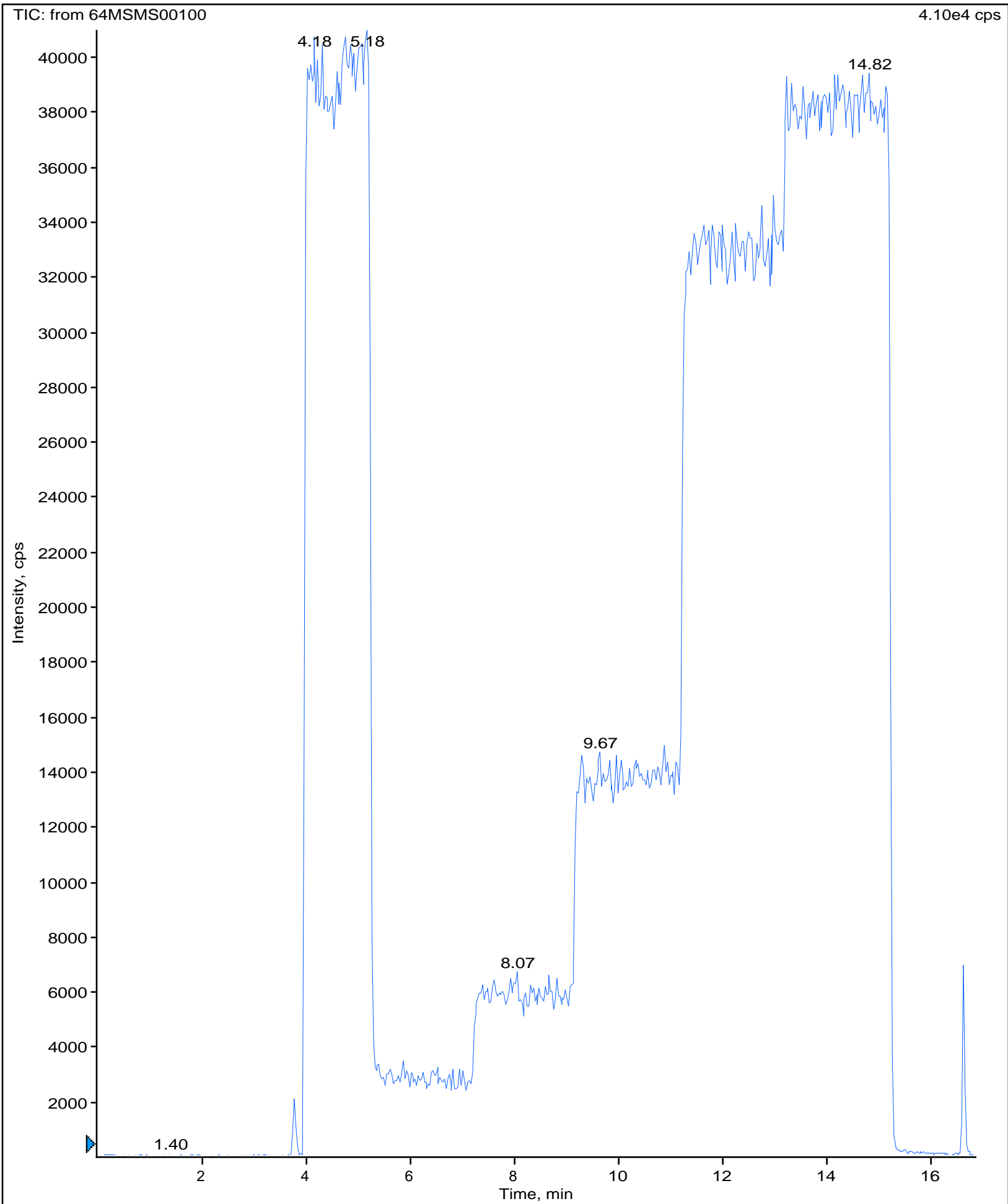
19.8 19.1891892 8.37837838

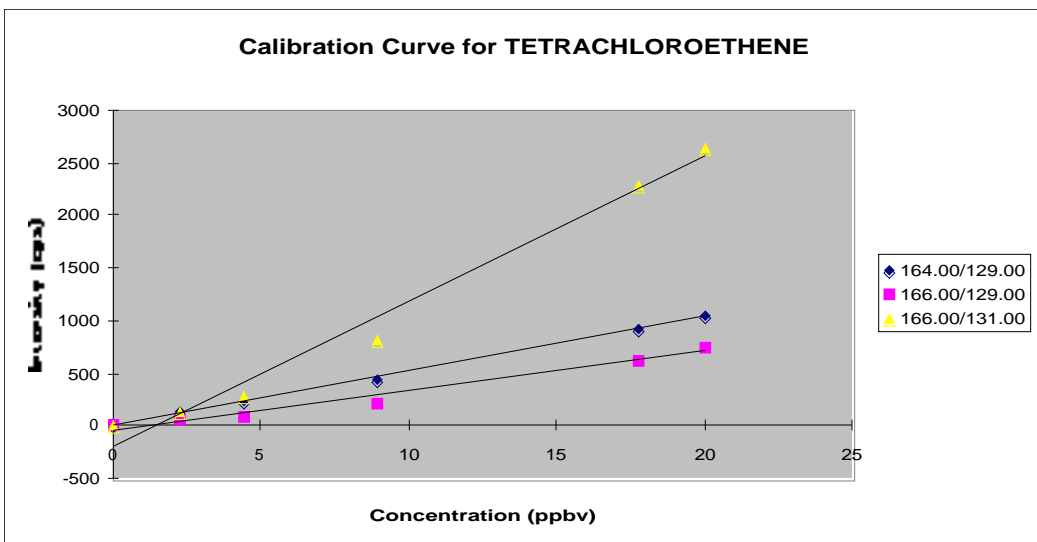
Report File Name 64MSMS00093 et al.
 Sample Name MOD Calibration - 20160505
 Date Thursday, May 5, 2016 11:13:10
 Time Range 1.00 to 2.00 min
 Conc Units: ppbv
 Num Ions 16.00

Name	TETRACHLOR	TETRACHLOR	TETRACHLOR	TRICHLOROE'	TRICHLOROE'	TRICHLOROE'	DICHLOROET	DICHLOROET	BENZENE	BENZENE	TOLUENE	TOLUENE	XYLENE	XYLENE	VINYL CHLOI	VINYL CHLORIDE
Q1 Mass	164.00	166.00	166.00	130.00	132.00	132.00	96.00	98.00	78.00	78.00	92.00	92.00	106.00	106.00	62.00	64.00
Q3 Mass	129.00	129.00	131.00	95.00	95.00	97.00	61.00	63.00	39.00	52.00	91.00	65.00	91.00	65.00	27.00	27.00
Slope	55.66	36.86	133.14	202.20	49.82	97.93	215.03	70.21	7.33	48.93	336.90	130.85	315.39	65.50	0.95	0.39
Intercept	-25.87	-49.59	-183.67	-145.95	-20.05	-51.97	39.37	-21.79	2.93	-5.43	-208.64	-38.20	-684.78	-115.07	1.00	1.32
Intensity	1.11	1.11	1.39	0.56	0.83	0.56	1.39	0.56	0.56	1.94	13.33	5.28	5.00	0.83	0.28	0.56
Int SD	3.98	3.19	3.51	2.32	5.00	2.32	3.51	2.32	2.32	4.67	11.71	8.10	6.55	2.80	1.67	2.32
Concentratio	0.48	1.38	1.39	0.72	0.42	0.54	-0.18	0.32	-0.32	0.15	0.66	0.33	2.19	1.77	-0.76	-1.96
Conc SD	0.07	0.09	0.03	0.01	0.10	0.02	0.02	0.03	0.32	0.10	0.03	0.06	0.02	0.04	1.75	5.93
Compound C	1.08			0.56			0.07		-0.09		0.50		1.98		-1.36	
Compound SI	0.04			0.03			0.02		0.15		0.03		0.02		2.71	
Det. Limit	0.21	0.26	0.08	0.03	0.30	0.07	0.05	0.10	0.95	0.29	0.10	0.19	0.06	0.13	5.24	17.80
Compound D	0.18			0.14			0.07		0.62		0.15		0.10		11.52	

Period 1, Expt. 1; Dwell: 100.0 ms; Pause: 5.0 ms

Acq. Time: Thu, May 5, 2016 at 18:12:01; Exp. Comment: Cal. Gas Bottle Number 2

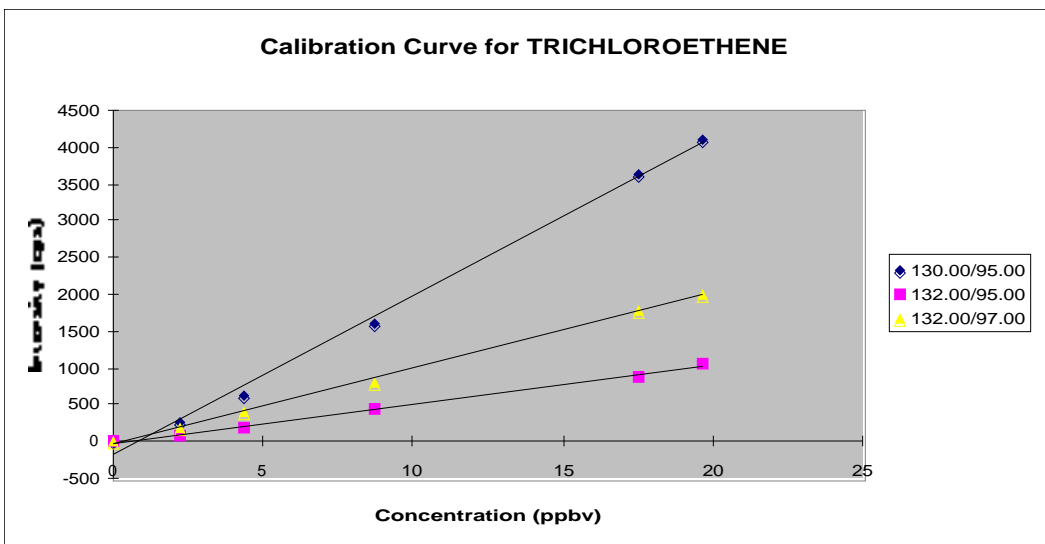




Filename: 64MSMS00100
 Compound na TETRACHLOROETHENE
 Conc. units: ppbv
 Width (min): 0.5
 User name: BPK
 Comment:
 Date: Thursday, May 5, 2016 18:54:20
 Num. ions: 3
 Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.22	10.12	12.18	14.10
	Ion 1	Ion 2	Ion 3			
Q1 Mass:	164	166	166			
Q3 Mass:	129	129	131			
Slope:	52.3250088	37.9675553	137.736379			
Intercept:	-0.3498875	-49.764334	-190.05516			
Correlation:	0.99951731	0.98874189	0.99177213			

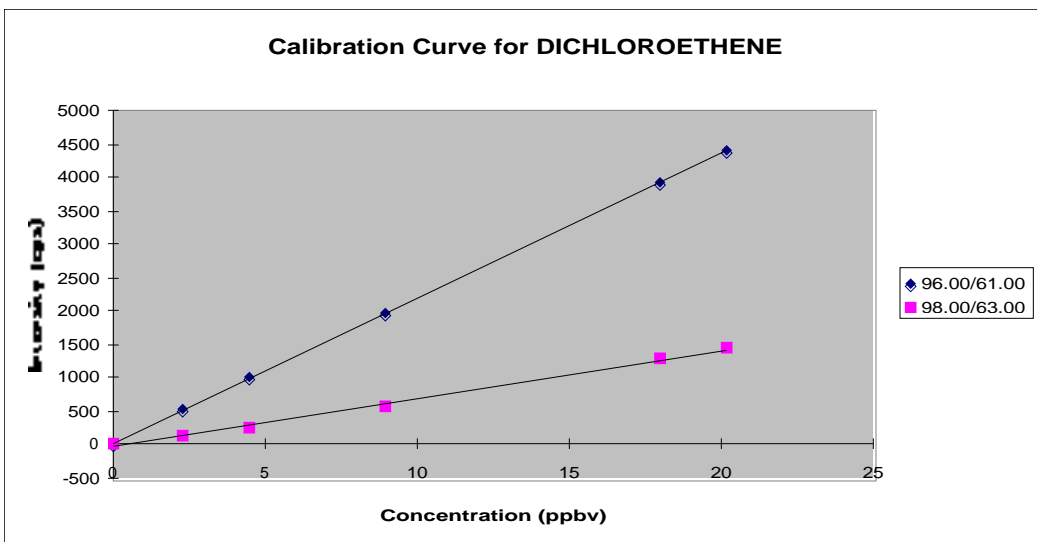
Concentration	164.00/129.00	166.00/129.00	166.00/131.00
0	0.55555556	0.27777778	0.55555556
2.22	131.081081	50.5405405	146.216216
4.44	230.540541	93.7837838	288.108108
8.89	441.081081	206.756757	821.891892
17.78	928.378378	627.027027	2295.94595
20	1056.75676	747.837838	2652.43243



Filename: 64MSMS00100
 Compound na TRICHLOROETHENE
 Conc. units: ppbv
 Width (min): 0.5
 User name: BPK
 Comment:
 Date: Thursday, May 5, 2016 18:55:10
 Num. ions: 3
 Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.22	10.12	12.18	14.10
	Ion 1	Ion 2	Ion 3			
Q1 Mass:	130	132	132			
Q3 Mass:	95	95	97			
Slope:	215.405738	53.4625243	102.823496			
Intercept:	-184.02778	-26.07893	-36.694884			
Correlation:	0.99784477	0.99870896	0.9992029			

Concentration	130.00/95.00	132.00/95.00	132.00/97.00
0	0.27777778	0.55555556	0.55555556
2.19	260.27027	82.1621622	201.351351
4.38	615.135135	194.864865	388.648649
8.76	1611.62162	431.621622	809.189189
17.51	3614.86486	886.756757	1774.86486
19.7	4111.08108	1056.48649	2007.56757



Filename: 64MSMS00100

Compound na DICHLOROETHENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 18:52:52

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.22	10.12	12.18	14.10

	Ion 1	Ion 2
Q1 Mass:	96	98
Q3 Mass:	61	63
Slope:	216.581861	72.704251
Intercept:	30.9989024	-37.89313
Correlation:	0.9999493	0.99909467

Q1 Mass: 96 98

Q3 Mass: 61 63

Slope: 216.581861 72.704251

Intercept: 30.9989024 -37.89313

Correlation: 0.9999493 0.99909467

Concentration 96.00/61.00 98.00/63.00

0 0.55555556 1.11111111

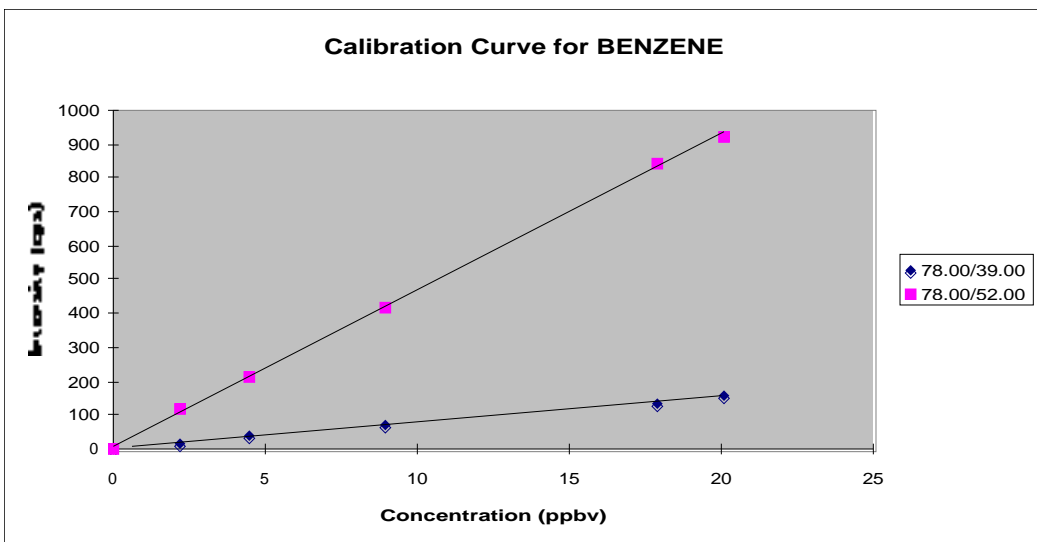
2.24 538.108108 118.918919

4.49 1018.10811 265.675676

8.98 1976.48649 583.243243

17.96 3913.51351 1284.05405

20.2 4406.48649 1436.21622

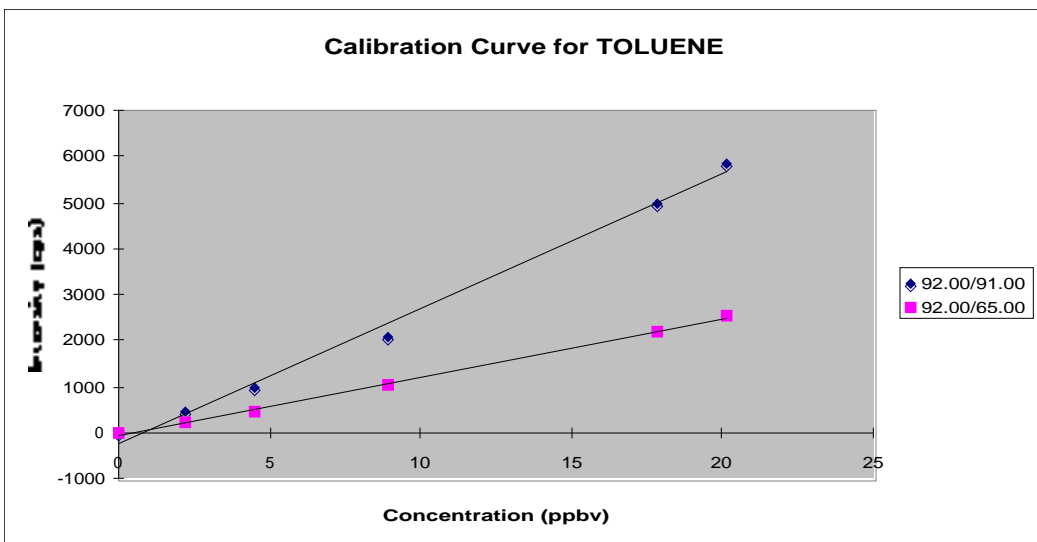


Filename: 64MSMS00100
 Compound na BENZENE
 Conc. units: ppbv
 Width (min): 0.5
 User name: BPK
 Comment:
 Date: Thursday, May 5, 2016 18:53:44
 Num. ions: 2
 Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.22	10.12	12.18	14.10
	Ion 1	Ion 2				

Q1 Mass: 78 78
 Q3 Mass: 39 52
 Slope: 7.60230536 46.1037899
 Intercept: 2.58281886 7.47756537
 Correlation: 0.99950197 0.99980746

Concentration	78.00/39.00	78.00/52.00
0	0.27777778	3.05555556
2.23	18.6486486	116.756757
4.47	39.7297297	212.162162
8.93	71.8918919	416.486486
17.87	137.027027	842.702703
20.1	155.405405	924.864865



Filename: 64MSMS00100

Compound name: TOLUENE

Conc. units: ppbv

Width (min): 0.5

User name: BPK

Comment:

Date: Thursday, May 5, 2016 18:55:51

Num. ions: 2

Num. concs. 6

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Ctr Pt.(min):	1.50	6.31	8.22	10.12	12.18	14.10

	Ion 1	Ion 2
Q1 Mass:	92	92
Q3 Mass:	91	65
Slope:	294.065766	127.151818
Intercept:	-241.16168	-61.091022
Correlation:	0.99647355	0.99886982

Q1 Mass: 92 92

Q3 Mass: 91 65

Slope: 294.065766 127.151818

Intercept: -241.16168 -61.091022

Correlation: 0.99647355 0.99886982

Concentration 92.00/91.00 92.00/65.00

0 13.3333333 5.27777778

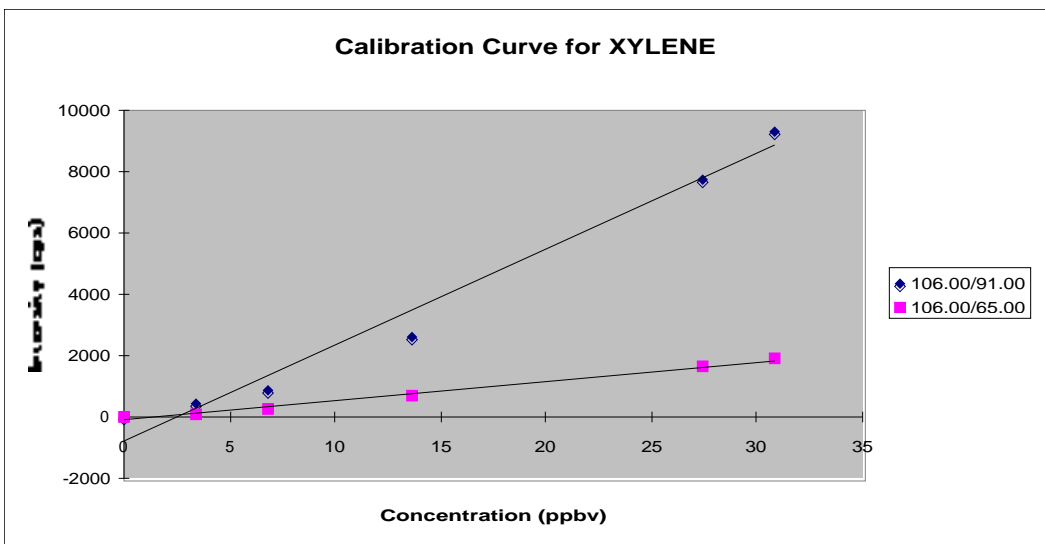
2.23 429.459459 224.594595

4.47 959.459459 455.135135

8.93 2067.2973 1029.72973

17.87 4989.45946 2184.86486

20.1 5855.94595 2549.18919

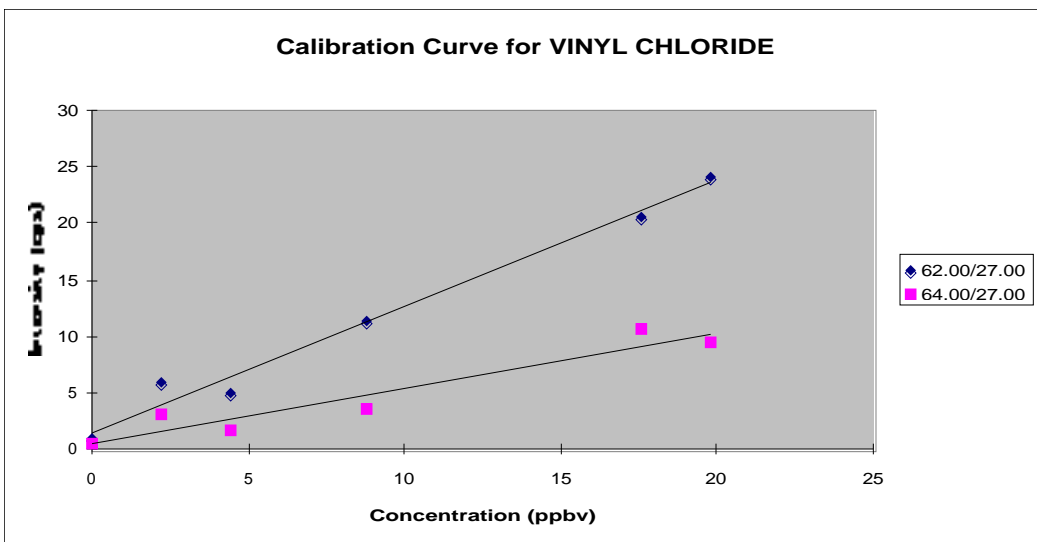


Filename: 64MSMS00100
 Compound na XYLENE
 Conc. units: ppbv
 Width (min): 0.5
 User name: BPK
 Comment:
 Date: Thursday, May 5, 2016 18:57:03
 Num. ions: 2
 Num. concs. 6
 Level 1 Level 2 Level 3 Level 4 Level 5 Level 6
 Ctr Pt.(min): 1.50 6.31 8.22 10.12 12.18 14.10

 lon 1 lon 2

 Q1 Mass: 106 106
 Q3 Mass: 91 65
 Slope: 311.797217 63.9796844
 Intercept: -762.02077 -101.84632
 Correlation: 0.98843264 0.99697283

Concentration	106.00/91.00	106.00/65.00
0	3.88888889	2.22222222
3.42	424.864865	91.0810811
6.84	884.054054	262.972973
13.69	2618.91892	724.054054
27.38	7761.89189	1680
30.8	9342.16216	1883.24324



Filename: 64MSMS00100
 Compound na VINYL CHLORIDE
 Conc. units: ppbv
 Width (min): 0.5
 User name: BPK
 Comment:
 Date: Thursday, May 5, 2016 18:56:27
 Num. ions: 2
 Num. concs. 6
 Level 1 Level 2 Level 3 Level 4 Level 5 Level 6
 Ctr Pt.(min): 1.50 6.31 8.22 10.12 12.18 14.10
 Ion 1 Ion 2
 Q1 Mass: 62 64
 Q3 Mass: 27 27
 Slope: 1.11384111 0.48750049
 Intercept: 1.46321321 0.48727299
 Correlation: 0.99137309 0.957788

Concentration	62.00/27.00	64.00/27.00
0	0.83333333	0.55555556
2.2	5.94594595	2.97297297
4.4	4.86486486	1.62162162
8.8	11.3513514	3.51351351
17.6	20.5405405	10.5405405
19.8	24.0540541	9.45945946

Report File Name 64MSMS00100
 Sample Name EOD Calibration - 20160505
 Date Thursday, May 5, 2016 19:05:15
 Time Range 1.00 to 2.00 min
 Conc Units: ppbv
 Num Ions 16.00

Name	TETRACHLOR	TETRACHLOR	TETRACHLOR	TRICHLOROE	TRICHLOROE	TRICHLOROE	DICHLOROET	DICHLOROET	BENZENE	BENZENE	TOLUENE	TOLUENE	XYLENE	XYLENE	VINYL CHLOR	VINYL CHLORIDE
Q1 Mass	164.00	166.00	166.00	130.00	132.00	132.00	96.00	98.00	78.00	78.00	92.00	92.00	106.00	106.00	62.00	64.00
Q3 Mass	129.00	129.00	131.00	95.00	95.00	97.00	61.00	63.00	39.00	52.00	91.00	65.00	91.00	65.00	27.00	27.00
Slope	52.33	37.97	137.74	215.41	53.46	102.82	216.58	72.70	7.60	46.10	294.07	127.15	311.80	63.98	1.11	0.49
Intercept	-0.35	-49.76	-190.06	-184.03	-26.08	-36.69	31.00	-37.89	2.58	7.48	-241.16	-61.09	-762.02	-101.85	1.46	0.49
Intensity	0.56	0.28	0.56	0.28	0.56	0.56	0.56	1.11	0.28	3.06	13.33	5.28	3.89	2.22	0.83	0.56
Int SD	3.33	1.67	2.32	1.67	2.32	2.32	2.32	4.65	1.67	5.77	14.14	9.71	7.66	6.37	2.80	2.32
Concentratio	0.02	1.32	1.38	0.86	0.50	0.36	-0.14	0.54	-0.30	-0.10	0.87	0.52	2.46	1.63	-0.57	0.14
Conc SD	0.06	0.04	0.02	0.01	0.04	0.02	0.01	0.06	0.22	0.13	0.05	0.08	0.02	0.10	2.52	4.77
Compound C	0.91			0.57			0.20		-0.20		0.69		2.04		-0.21	
Compound SI	0.02			0.01			0.03		0.12		0.04		0.04		2.57	
Det. Limit	0.19	0.13	0.05	0.02	0.13	0.07	0.03	0.19	0.66	0.38	0.14	0.23	0.07	0.30	7.55	14.30
Compound D	0.12			0.07			0.11		0.52		0.19		0.19		10.92	