

**CINDERELLA 248 LLC SITE  
BROOKLYN, NEW YORK**

**PERIODIC REVIEW REPORT**

**NOVEMBER 27, 2017 THROUGH MARCH 27, 2019**

**NYSDEC BCP Number: C224160**

**Prepared for:**

**CINDERELLA 248, LLC**

**For Submittal to:**

**NEW YORK STATE**

**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Prepared by:**

***FPM* group™**

**909 MARCONI AVENUE  
RONKONKOMA, NEW YORK 11779**

**MAY 2019**

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C	EC/IC Certification
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## LIST OF ACRONYMS

<b>Acronym</b>	<b>Definition</b>
AGC	Annual Guidance Concentration
AS	Air sparging
ASP	Analytical Services Protocol
CLP	Contract Laboratory Protocol
DUSR	Data Usability Summary Report
ECs	Engineering Controls
FPM	FPM Group, Ltd.
HASP	Health and Safety Plan
ICs	Institutional Controls
MS/MSD	Matrix spike/matrix spike duplicate
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OM&M	Operation, Monitoring and Maintenance
QA/QC	Quality Assurance/Quality Control
scfm	standard cubic feet per minute
SGC	Short-Term Guidance Concentration
Standards	NYSDEC Class GA Ambient Water Quality Standards
SVE	Soil vapor extraction
ug/l	micrograms per liter
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program
VOC	Volatile organic compound



## EXECUTIVE SUMMARY

The findings in this Periodic Review Report (PRR) for the Cinderella 248 LLC Site (C224160), located in Brooklyn, New York, are summarized as follows:

- The EC (SSDS) remained in place and operational during the reporting period. Quarterly monitoring of the SSDS System was conducted during the reporting period in accordance with the SMP. Effluent emissions were in compliance and did not require treatment.
- An IC (environmental easement) is in place and includes restrictions on property and groundwater use and requirements for operating, monitoring, and maintaining the ECs. The provisions of the IC were adhered to during the reporting period.

➤ Effectiveness of Remedial Program

- The remedial program has been effective at providing mitigation as demonstrated by the effluent testing which indicates that PCE is being removed from soil vapor and from the SVI sampling results which indicate that indoor air PCE concentrations are very low and well below its air guidance value.

➤ Recommendations

- The SSDS should remain in operation to provide mitigation for the Site and select adjoining properties. Termination of mitigation should be considered if the criteria for completion of remediation is achieved.

## **SECTION 1.0 INTRODUCTION AND SITE OVERVIEW**

### **1.1 Introduction**

This Periodic Review Report (PRR) was prepared by FPM Group (FPM) to document site management activities at the Cinderella 248 Site (Site) conducted between November 27, 2017 and March 27, 2019 under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by the New York State Department of Environmental Conservation (NYSDEC). These activities were conducted in accordance with a Site Management Plan (SMP) for the Site. The resumes of the FPM environmental professionals implementing the SMP on behalf of the Owner are included in Appendix B.

The Site has an EC consisting of a sub-slab depressurization system (SSDS) which was installed in accordance with a NYSDEC approved Remedial Design Work Plan to prevent soil vapor intrusion (SVI) at the Site and select nearby properties and prevent further migration of sub-slab soil vapors. The remedial activities were documented in the October 2017 Final Engineering Report, which the NYSDEC approved on November 27, 2017. SVI sampling was performed in accordance with the SMP to demonstrate effectiveness of the SSDS in April 2018. Ongoing activities are conducted by FPM on behalf of the owner in accordance with the Site Management Plan (SMP), which the NYSDEC approved on October 3, 2017. Copies of these NYSDEC correspondence are included in Appendix A.

### **1.2 Site Overview**

Detailed Site background information was provided in the SMP. Information pertinent to implementation of the SMP during the current reporting period is summarized herein.

The site is located in Brooklyn, Kings County, New York and is identified as Block 936 and Lot 12 on the Kings County Tax Map. The site is an approximately 0.057-acre area and is bounded by 244 Flatbush Avenue to the north, 250 Flatbush Avenue to the south, Flatbush Avenue to the east, and 77 Prospect Place to the west (see Figure 1.2.1 – Site and Vicinity Plan).

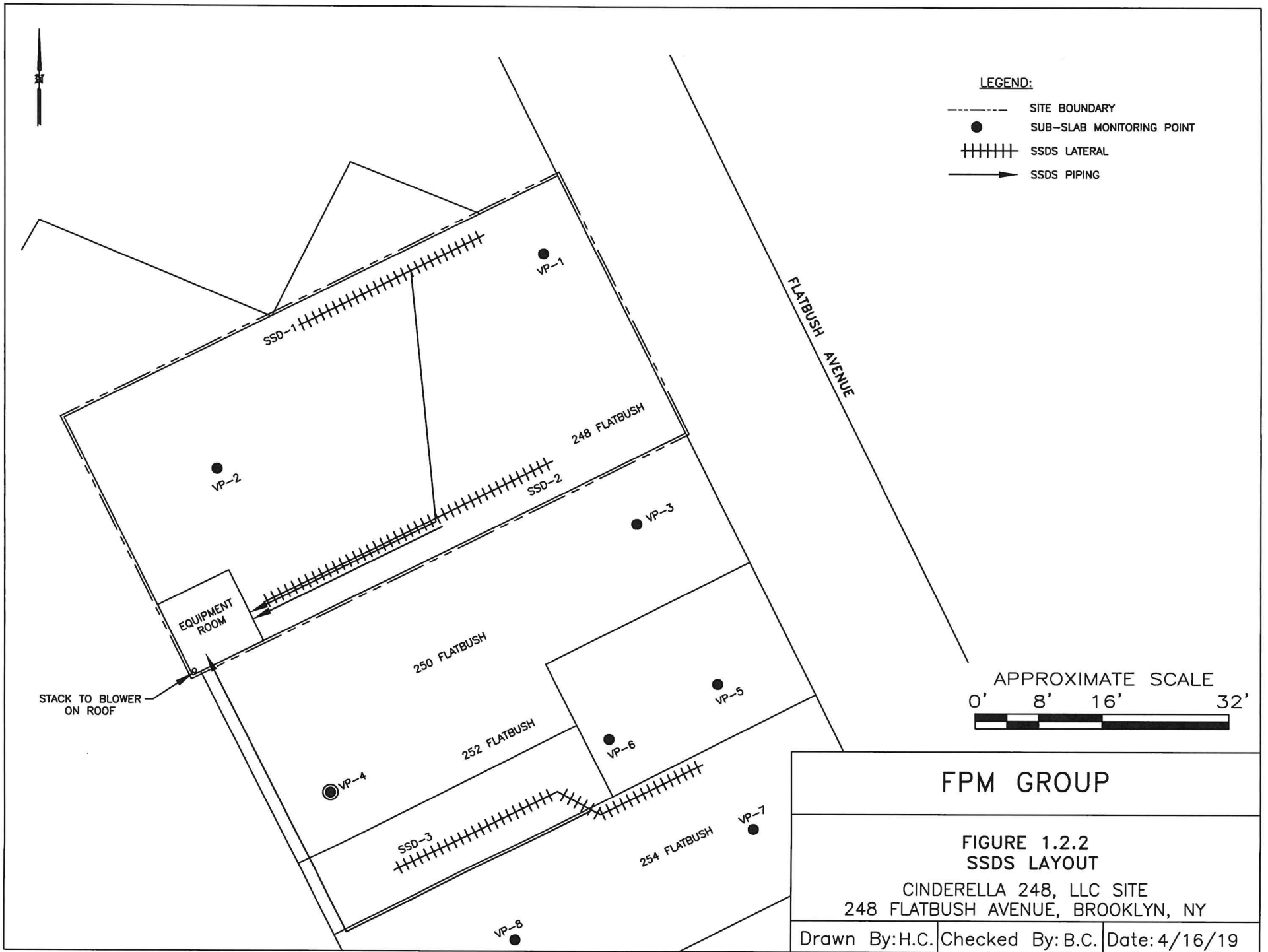
The Site was formerly operated as a dry-cleaners from at least 1985 to 2005. During operations tetrachloroethylene (PCE), a common dry-cleaning solvent, was utilized onsite. Investigations identified VOC (primarily PCE) impacts to soil, groundwater, soil vapor and indoor air. Soils impacted with PCE were excavated and removed from the Site prior to the Site entering the BCP. Groundwater impacts were identified at low levels during prior investigations and did not require remediation or further investigation. Soil vapor and indoor air impacted by PCE was identified at levels for which mitigation was necessary at the Site and at other buildings in close proximity to the Site.

A SSDS system for the Site was installed between November 2015 and August 2016 to provide mitigation in accordance with the NYSDEC-approved Remedial Design Work Plan for the Site dated July 2015. SVI sampling results are documented in Section 3 of the report. As discussed in Section 3, the results indicate that the SSDS is effective. Figure 1.2.2 depicts the remediation system layout.



**FPM GROUP**  
FIGURE 1.2.1  
SITE AND VICINITY PLAN  
CINDERELLA 248 LLC SITE  
248 FLATBUSH AVENUE  
BROOKLYN, NEW YORK

Drawn by: BC	Checked By: BC	Date: 4/12/19
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### **1.3 Evaluation of Remedy Performance, Effectiveness, and Protectiveness**

The remedy has been implemented in compliance with the submitted and approved work plans and associated correspondence and was managed during this reporting period in compliance with the SMP approved by the NYSDEC. During the reporting period, the remedy performed effectively to prevent SVI at the Site and at properties in its nearby proximity.

## **SECTION 2.0**

### **ENGINEERING AND INSTITUTIONAL CONTROLS COMPLIANCE**

Contamination identified at the Site includes groundwater and soil vapor impacted with chlorinated solvent compounds, primarily PCE, in excess of Standards. Groundwater impacts identified at the Site included low levels of VOCs and did not require additional monitoring or remediation. The Engineering Control (EC) includes a SSDS system to provide mitigation of soil vapor and prevent SVI at the Site and select offsite properties. The SSDS has remained in operation during this reporting period as per NYSDEC requirements. The EC implemented at the Site is described in more detail below.

At present, the SMP and related NYSDEC-approved documents serve as an IC as they are used to implement, maintain, and monitor the EC. Additional ICs are outlined in the IC/EC Certification Form and include a groundwater use restriction and land use restriction.

#### **2.1 Engineering Control Component**

The Site EC consisting of a SSDS was installed and has been in continuous operation from August 2016 to present to provide mitigation to the Site and select properties. The layout consists of three sub-slab depressurization laterals, as shown on previously-presented Figure 1.2.2. Emissions from the SSDS are directed to a stack that discharges above the roof of the Site.

Monitoring of the EC was performed during the reporting period in accordance with the approved SMP; the results are documented in Section 3 of this report.

#### **2.2 Institutional Control Component**

The Site remedy required that an IC in the form of an environmental easement be placed on the property to (1) implement, maintain and monitor the ECs; (2) prevent future exposure to the remaining contamination by controlling disturbances of the subsurface contamination; and (3) limit the use and development of the property to restricted residential, commercial and industrial uses only. Adherence to these restrictions on the property is required by the environmental easement and is implemented under the SMP. The environmental easement for the property was executed by the property owner, Cinderella 248 LLC and filed with the Kings County Clerk. Copies of the environmental easement and proof of filing are provided in the FER.

The IC for this Site includes the following requirements and restrictions:

- Requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- Allows the use and development of the controlled property for residential use, which allows for restricted-residential use, commercial use and industrial use, as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and

- Requires compliance with the Department approved Site Management Plan.

These requirements and restrictions are more fully described in the SMP and were complied with during the reporting period. The observed Site use during the reporting period (commercial) is consistent with the allowed uses. No disturbances or excavations of the Site occurred during the reporting period. Municipal water supply is provided in the Site vicinity and the Site groundwater is not used.

### **2.3 EC/IC Certification**

The EC/IC Certification Form provided by the NYSDEC has been completed in accordance with the associated general certification instructions. The completed certification form is included in Appendix C



## SECTION 3.0 MONITORING PLAN COMPLIANCE

The monitoring plan for the Site includes measures for evaluating the performance and effectiveness of the EC in mitigating soil vapor at the Site and select nearby properties. Monitoring of the EC was performed during the reporting period by monitoring the SSDS system and SVI sampling was conducted to evaluate the effectiveness of the EC.

### 3.1 SSDS Monitoring

Monitoring of the SSDS system was performed quarterly during the reporting period, as discussed below. The monitoring included procedures to confirm and ensure system operation and to monitor effluent concentrations. Effluent monitoring was performed with a calibrated photoionization detector (PID) and periodically by obtaining effluent samples for laboratory analysis to evaluate the soil vapor conditions.

#### 3.1.1 Summary of Monitoring Program

All monitoring activities were in general accordance with the SMP and were recorded on the System Operating Log. A copy of the System Operating Log is included in Appendix D.

System operation monitoring was performed on a quarterly basis during the reporting period from November 27, 2017 through March 27, 2017. System operation monitoring included recording vacuums and flowrate to confirm system operation parameters and vacuum measurements at monitoring points to confirm depressurization of the building slabs.

Effluent screening was performed during each monitoring event by collecting an effluent sample from the blower discharge piping and screening it with a calibrated PID. Effluent sampling was also performed periodically to further evaluate VOC emissions.

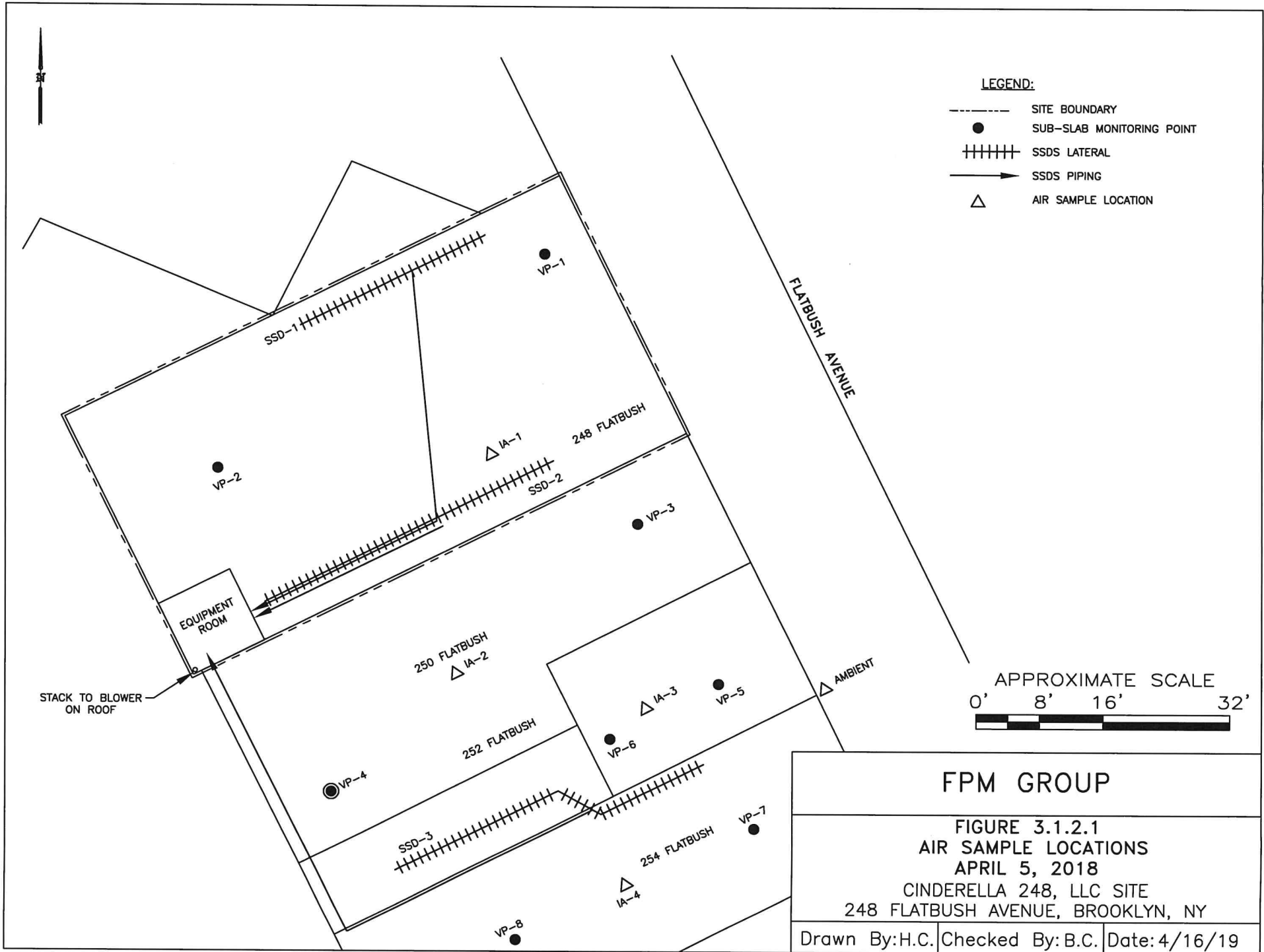
#### 3.1.2 SVI Sampling

To demonstrate the effectiveness of the SSDS system, SVI testing was conducted on April 4, 2018. The work was conducted in general accordance with the procedures in the SMP. One additional indoor air sample was collected from the basement of 252 Flatbush Avenue as this space is now being utilized for storage. An effluent sample was also collected for informational purposes in lieu of soil vapor samples because the SSDS is currently in continuous operation. The SVI testing findings and recommendations (discussed below) were submitted to the NYSDEC (FPM, June 1, 2018, See Appendix A). A site plan showing the locations of the SVI samples is included as Figure 3.1.2.1.

The indoor air samples were collected from a height of approximately four feet above the slab and the ambient air sample was collected from an outdoor location in between 254 and 252 Flatbush Avenue and in a similar manner as the indoor air samples.

The SSDS effluent sample was collected from the sampling port of the SSDS system at the conclusion of indoor air sampling to prevent potential contamination with the indoor sample at 248 Flatbush Avenue.





The air samples were collected in laboratory-provided Summa canisters equipped with flow controllers in accordance with NYSDOH guidance. The flow controllers for the indoor air and ambient air samples were set for an approximately eight-hour period, comparable to typical building occupancy. The effluent air sample was collected in laboratory-provided Summa canister as a grab sample. The filled indoor canisters were managed under chain-of-custody procedures and transmitted to a NYSDOH-certified lab for analysis of volatile organic compounds (VOCs) using the TO-15 low level method. The SSDS effluent samples was analyzed for standard level VOCs by Method TO-15.

A building inventory form for each property was completed during the course of the sampling event to document the construction, HVAC system operations, and the potential presence of VOC sources in the building. No issues with the potential to affect indoor air quality were identified. The completed building inventory form is included as an attachment to FPM's June 1, 2018 data submittal in Appendix A.

Quality assurance/quality control (QA/QC) procedures were implemented and included field screening for organic vapors using a calibrated photoionization detector (PID), use of a chain of custody to document the sequence of sample possession, and collection and analysis of duplicate sample for QA/QC. In addition, the laboratory utilized internal QA/QC procedures and samples to confirm that the laboratory data are of sufficient accuracy and precision for their intended use. Following receipt of the chemical analytical data, the data package and associated QA/QC sample results were evaluated and a Data Usability Summary Report (DUSR) was prepared. The DUSR is included as an attachment to FPM's June 1, 2018 data submittal in Appendix A and did not identify any significant data usability issues.

The data from this sampling event are summarized in Table 3.1.2.1 and the indoor air sample results were evaluated in accordance with NYSDOH Guidance. Based upon the absence of collocated soil vapor data (since the SSDS is currently in operation), which prevents a comparison with the NYSDOH soil vapor/indoor air matrix tables, the applicable air guidance values (AGVs) were utilized to demonstrate that the SSDS is effective and operating as designed. The effluent sample was collected in accordance with the NYSDEC requests, for general informational purposes, this data is summarized in Table 3.1.2.2. Our review of these data indicates the following:

- Two VOCs for which the NYSDOH provides guidance, methylene chloride (MeCl) and tetrachloroethene (PCE), were detected in the indoor air samples;
- PCE was detected in the indoor air at a low (1.5 ug/m<sup>3</sup>) concentration at the Site (248 Flatbush Ave) and at low estimated concentrations at 250 and 254 Flatbush Avenue (0.95 ug/m<sup>3</sup> and 0.75 ug/m<sup>3</sup>, respectively) and also is the primary contaminant of concern detected in the effluent sample (3,900 ug/m<sup>3</sup>). PCE was not detected in the ambient outdoor air sample. These results indicate that PCE is well below its respective AGV (30 ug/m<sup>3</sup>). We conclude that PCE does not present a concern for indoor air;
- MeCl was detected at each of the indoor air sampling locations at generally low concentrations, ranging from 0.73 to 0.97 ug/m<sup>3</sup>. MeCl was also noted in the ambient outdoor air sample at concentrations similar to the indoor air samples. MeCl is noted well below its respective AGV (60 ug/m<sup>3</sup>) in all indoor air samples. We conclude that the low MeCl concentration are not attributed to the Site and are related to ambient air conditions in the Site vicinity; and

**TABLE 3.1.2.1  
INDOOR AIR SAMPLING RESULTS  
CINDERELLA 248 LLC SITE -NYSDEC SITE NO. C224160  
248 FLATBUSH AVENUE, BROOKLYN, NEW YORK**

Sample No.	IA-1	IA-1D (duplicate)	IA-2	IA-3	IA-4	Ambient	Indoor Air Background Levels, Commercial*
Sample Location	248 Flatbush Avenue Basement		250 Flatbush Avenue Basement	252 Flatbush Avenue Basement	254 Flatbush Avenue Basement	Outdoors	
Sample Date	4/5/18						
<b>Volatile Organic Compounds in ug/m<sup>3</sup></b>							
1,4-Dichlorobenzene	1.9	1.3	ND	ND	ND	62	<0.8 - 12.5
Acetone	23	26	3.8	4.4	4.9	26	32.4 - 120.2
Benzene	0.48	0.48	0.35 J	ND	0.48	0.42 J	2.1 - 12.5
Chloroform	6.3	4.3	2.9	ND	4.3	ND	<0.4 - 1.4
Chloromethane	ND	ND	0.54	0.47	0.66	0.58	2.1 - 4.4
Ethyl Acetate	0.94	1.4	ND	ND	ND	0.54	<1.0 - 9.5
Freon 11	1.3	1.1	1.0	0.79 J	1.2	1.1	<3.7 - 54.0
Freon 12	2.0	1.9	1.7	1.4	2.1	1.5	4.8 - 32.9
Heptane	0.49 J	0.66	ND	ND	ND	1.9	-
Hexane	ND	0.46 J	ND	ND	ND	0.81	1.6 - 15.2
Isopropyl alcohol	150	230	4.8	2.4	4.4	4.5	-
m&p-xylene	0.65 J	0.69 J	0.43 J	ND	0.48 J	0.91 J	4.1 - 28.5
Methyl Ethyl Ketone	1.9	2.2	0.80 J	0.65 J	ND	1.3	3.3 - 13.5
Methylene chloride	0.73	0.97	0.97	0.94	0.76	0.97	<1.7 - 16.0
Tetrachloroethene	1.5	1.4	0.95 J	ND	0.75 J	ND	<1.9 - 25.4
Toluene	3.0	4.2	1.2	0.90	2.7	3.4	10.7 - 70.8

**Notes:**

All samples analyzed using Method TO-15.

Only compounds detected in one or more samples are reported herein. See lab report for complete data.

ug/m<sup>3</sup> = micrograms per cubic meter.

Shaded compounds are those for which the NYSDOH has provided guidance.

ND = Not detected.

\* = US EPA BASE Study 2001; 25th to 95th percentiles.

**TABLE 3.1.2.2**  
**EFFLUENT SAMPLING RESULTS - APRIL 5, 2018**  
**CINDERELLA 248 LLC SITE - NYSDEC SITE NO. C224160**  
**248 FLATBUSH AVENUE , BROOKLYN, NEW YORK**

Sample No.	SSDS Effluent
Sample Location	248 Flatbush Avenue Basement
<b>Volatile Organic Compounds in ug/m<sup>3</sup></b>	
1,2,4-Trimethylbenzene	2.0
1,3,5-Trimethylbenzene	0.84
1,4-Dichlorobenzene	0.60 J
2,2,4-trimethylpentane	5.6
4-ethyltoluene	0.59 J
Acetone	10
Benzene	3.9
Chloroform	6.4
Chloromethane	0.23 J
Cyclohexane	1.3
Ethylbenzene	1.2
Freon 11	1.2
Freon 12	2.1
Heptane	7.0
Hexane	5.5
Isopropyl alcohol	15
m&p-Xylene	3.1
Methyl Ethyl Ketone	1.4
Methylene chloride	0.76
o-Xylene	1.0
Tetrachloroethene	3,900
Toluene	2.6

**Notes:**

All samples analyzed using Method TO-15.

Only compounds detected in one or more samples are reported herein. See lab report for complete data.

ug/m<sup>3</sup> = micrograms per cubic meter.

ND = Not detected. J- Low estimated concentration below method reporting limit.



- Several VOCs were detected at concentrations generally comparable to concentrations found within indoor air at commercial buildings. None of these detections was highly elevated or presents a concern.

In conclusion, the SVI sampling results confirm that the SSDS is operating as intended to prevent soil vapor intrusion. This testing was performed in general accordance with the NYSDEC-SMP, except as discussed above.

### 3.1.3 SSDS Monitoring Results

Effluent monitoring was performed to ensure that effluent treatment is not required prior to discharge. During the reporting period PID responses, as measured with a calibrated Photovac 2020 Pro PID, were all low, ranging from 0 to 12.4 ppm (see System Operating Logs in Appendix D).

The summarized effluent sampling results for PCE, the primary compound of concern for the Site, are included in Table 3.1.3.1 and indicate that moderate concentrations continue to be removed by the SSDS. These data were also evaluated for compliance with NYSDEC Air Guide 1 criteria to calculate potential air impacts with respect to the corresponding AGCs and SGCs, as appropriate. No VOCs were noted to exceed their respective AGCs and SGCs, and therefore, the system emissions remain in compliance with NYSDEC Air Guide 1 criteria and well below the levels required for treatment. The complete effluent laboratory reports for the reporting period are included in Appendix E.

System monitoring parameters and vacuum monitoring points were also measured to evaluate the performance of the SSDS. The system parameters (flow rates, vacuums) were generally noted to be within the operating conditions as observed during the startup period of the SSDS. Vapor monitoring point vacuums were generally noted to be variable and have decreased since startup, however the decreased sub-slab vacuum measurements do not appear to be affecting the performance or effectiveness of the system based on the effluent PCE concentrations.

### 3.1.4 Monitoring Deficiencies

No system monitoring deficiencies were noted during this reporting period.

### 3.1.5 Monitoring Conclusions and Recommendations

The monitoring results for the reporting period demonstrate that moderate levels of PCE are present in soil vapor. Continued operation of the SSDS to prevent SVI is recommended.

**TABLE 3.1.3.1**  
**PCE EFFLUENT CONCENTRATIONS**  
**CINDERELLA 248 LLC SITE, NYSDEC SITE NO. C224160**  
**248 FLATBUSH AVENUE, BROOKLYN, NEW YORK**

Sample Date	8/16/2016	8/25/2016	8/31/2016	9/20/2016	3/29/2017	6/27/2017	9/28/2017	12/18/2017	6/20/2018	9/17/2018	12/17/2018
Tetrachloroethylene (ug/m <sup>3</sup> )	3,700	2,900	3,800	930	1,900	2,400	1,500	3,000	1,600	1,300	89

## **SECTION 4.0 OPERATION AND MAINTENANCE PLAN COMPLIANCE**

The Site has O&M requirements for the SSDS while the system is operational. During this reporting period the SSDS operation was checked quarterly.

### **4.1 Summary of O&M Activities**

The SSDS was checked quarterly during the reporting period. Routine maintenance of the system including checks of the condensate vessel, air filter, and other components were performed. System operating parameters, including vacuum and flow rates, were also collected to evaluate system performance and the need for preventative maintenance.

### **4.2 Evaluation of O&M Activities**

The O&M activities enabled the SSDS operating as intended.

### **4.3 O&M Deficiencies**

No O&M deficiencies were noted during this reporting period.

### **4.4 O&M Conclusions and Recommendations**

O&M activities were effective during this reporting period. O&M activities will continue, as appropriate, during the next reporting period.

## **SECTION 5.0 CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Compliance with EC/ICs and Monitoring Plan**

Assessment of overall Site compliance, including the EC (SSDS), IC, and monitoring plans during the reporting period are summarized as follows:

➤ ECs and IC Compliance

- The EC for the Site, an SSDS, remained in place and operational during the reporting period.
- An IC (environmental easement) is in place and includes restrictions on property use, and requirements for operating, monitoring, and maintaining the EC. The provisions of the IC were adhered to during the reporting period and the EC/IC Certification is included in this PRR.

➤ Monitoring and O&M

- Monitoring of the SSDS was conducted during the reporting period. Emissions were in compliance and did not require treatment. Routine maintenance was performed, as needed.
- SVI sampling was conducted during the reporting and confirmed the EC was effective for mitigation of soil vapor and preventing SVI.

### **5.2 Performance and Effectiveness of the Remedy**

The remedy has been implemented and managed in compliance with the SMP.

### **5.3 Recommendations**

Based on the current Site conditions, FPM recommends the following:

- The SSDS should remain in operation to provide for mitigation of soil gas as intended. Termination of mitigation should be considered if the criteria for termination of the SSDS is achieved as outlined in section 3.3.2 of the SMP.
- SVI sampling will be performed in late 2019 in accordance with the SMP to confirm the SSDS continues to remain effective at preventing SVI.



## APPENDIX A

- **NYSDEC CERTIFICATE OF COMPLETION/FINAL ENGINEERING REPORT APPROVAL (11/27/17)**
- **NYSDEC SITE MANAGEMENT PLAN APPROVAL (10/3/2017)**
- **FPM AIR SAMPLING DATA TRANSMITTAL (6/1/2018)**
- **PRR REMINDER NOTICE (2/12/2019)**

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Office of the Director  
625 Broadway, 12th Floor, Albany, New York 12233-7011  
P: (518) 402-9706 | F: (518) 402-9020  
www.dec.ny.gov

Mr. Michael Pintchik  
Cinderella 248 LLC  
254 Flatbush Avenue  
Brooklyn, NY 11217

NOV 27 2017

**Re: Certificate of Completion  
Cinderella 248 LLC, Brooklyn, Kings County, BCP  
Site No. C224160**

Dear Mr. Pintchik:

Congratulations on having satisfactorily completed the remedial program at the Cinderella 248 LLC site. Enclosed please find an original, signed Certificate of Completion (COC). The New York State Department of Environmental Conservation (Department) is pleased to inform you that the Final Engineering Report is hereby approved, allowing the COC to be issued for the above-referenced site.

Please note that you are required to perform the following tasks:

- If you are the site owner, you must record a notice of the COC in the recording office for the County (or Counties) where any portion of the site is located within 30 days of issuance of the COC. Or, if you are a prospective purchaser of the site, you must record a notice of the COC within 30 days of the date that you acquire the site. A copy of the recorded notice should be provided to the Department's project manager. If you are a non-owner, you must work with the owner to assure the notice of COC is recorded within the time frame specified. A standard notice form is attached to this letter.

Please return the proof of recording to:

Chief, Site Control Section  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway  
Albany, NY 12233-7020

- Provide the notice of the COC to the Document Repositories within 10 days of issuance of the COC. The Department will develop a fact sheet announcing the issuance of the COC and describing the institutional and engineering controls (IC/ECs), if any, that are required at the site and distribute it to the County Listserv within 10 days;
- Implement the Department-approved Site Management Plan (SMP) which details the activities necessary to assure the performance, effectiveness, and protectiveness of the remedial program. You must report the results of these activities to the Department in a Periodic Review Report (PRR) which also includes any required IC/EC Certifications. The site IC/ECs are identified on the attached Site Management Form. The first PRR including the certification of the IC/ECs is due to the Department in March 2019.

If you have any questions regarding any of these items, please contact Alicia Barraza at [alicia.barraza@dec.ny.gov](mailto:alicia.barraza@dec.ny.gov) or 518-402-9690.

Sincerely,



Michael J. Ryan, P.E.  
Assistant Division Director  
Division of Environmental Remediation

cc w/ enclosure:

A. Barraza

J. Nehila

Ben Cancemi, FPM Group, [b.cancemi@fpm-group.com](mailto:b.cancemi@fpm-group.com)

James Rigano, Rigano LLC, [JRigano@riganollc.com](mailto:JRigano@riganollc.com)

NYSDEC BROWNFIELD CLEANUP PROGRAM (BCP)  
*CERTIFICATE OF COMPLETION*

**Name**

Cinderella 248 LLC

**Address**

254 Flatbush Avenue, Brooklyn, NY 11217

**BROWNFIELD CLEANUP AGREEMENT:**

**Application Approval:** 9/27/12    **Agreement Execution:** 4/10/13    **Agreement Index No.:** C224160-09-12

**Application Approval Amendment:** 9/11/17

**Agreement Execution Amendment:** 9/11/17

**SITE INFORMATION:**

**Site No.:** C224160    **Site Name:** Cinderella 248 LLC

**Site Owner:** Cinderella 248 LLC

**Street Address:** 248 Flatbush Avenue

**Municipality:** Brooklyn    **County:** Kings    **DEC Region:** 2

**Site Size:** 0.05 Acres

**Tax Map Identification Number(s):** 936-12

**Percentage of site located in an EnZone:** 0 - 49 %

A description of the property subject to this Certificate is attached as Exhibit A and a site survey is attached as Exhibit B.

**CERTIFICATE ISSUANCE**

This Certificate of Completion, hereinafter referred to as the "Certificate," is issued pursuant to Article 27, Title 14 of the New York State Environmental Conservation Law ("ECL").

This Certificate has been issued upon satisfaction of the Commissioner, following review by the Department of the final engineering report and data submitted pursuant to the Brownfield Site Cleanup Agreement, as well as any other relevant information regarding the Site, that the applicable remediation requirements set forth in the ECL have been or will be achieved in accordance with the time frames, if any, established in the remedial work plan.

The remedial program for the Site has achieved a cleanup level that would be consistent with the following categories of uses (actual site use is subject to local zoning requirements):

**Allowable Uses under the BCP:** Restricted-Residential, Commercial, and Industrial

**Cleanup Track:** Track 2: Restricted use with generic soil cleanup objectives

**Tax Credit Provisions for Entities Taxable Under Article 9, 9-A, 32, and 33:**

Site Preparation and On-Site Groundwater Remediation Credit Component Rate is 40 %.

Tangible Property Credit Component Rate is 12 %.

**Tax Credit Provisions for Entities Taxable Under Article 22 & S Corporations:**

Site Preparation and On-Site Groundwater Remediation Credit Component Rate is 40 %.

Tangible Property Credit Component Rate is 10 %.



The Remedial Program includes use restrictions or reliance on the long term employment of institutional or engineering controls which are contained in the approved Site Management Plan and an Environmental Easement granted pursuant to ECL Article 71, Title 36 which has been duly recorded in the Recording Office for Kings County as 2017000262435.

**LIABILITY LIMITATION**

Upon issuance of this Certificate of Completion, and subject to the terms and conditions set forth herein, the Certificate holder(s) shall be entitled to the liability limitation provided in ECL Section 27-1421. The liability limitation shall run with the land, extending to the Certificate holder's successors or assigns through acquisition of title to the Site and to a person who develops or otherwise occupies the Site, subject to certain limitations as set forth in ECL Section 27-1421. The liability limitation shall be subject to all rights reserved to the State by ECL Section 27-1421.2 and any other applicable provision of law.

**CERTIFICATE TRANSFERABILITY**

This Certificate may be transferred to the Certificate holder's successors or assigns upon transfer or sale of the Site as provided by ECL Section 27-1419.5 and 6NYCRR Part 375-1.9.

**CERTIFICATE MODIFICATION/REVOCATION**

This Certificate of Completion may be modified or revoked by the Commissioner following notice and an opportunity for a hearing in accordance with ECL Section 27-1419 and 6NYCRR Part 375-1.9(e) upon a finding that:

- (1) either the Applicant or the Applicant's successors or assigns have failed to comply with the terms and conditions of the Brownfield Site Cleanup Agreement;
- (2) the Applicant made a misrepresentation of a material fact tending to demonstrate that it was qualified as a Volunteer;
- (3) either the Applicant or the Applicant's successors or assigns made a misrepresentation of a material fact tending to demonstrate that the cleanup levels identified in the Brownfield Site Cleanup Agreement were reached;
- (4) there is good cause for such modification or revocation;
- (5) either the Applicant or the Applicant's successors or assigns failed to manage the controls or monitoring in full compliance with the terms of the remedial program;
- (6) the terms and conditions of the environmental easement have been intentionally violated or found to be not protective or enforceable.

The Certificate holder(s) (including its successors or assigns) shall have thirty (30) days within which to cure any deficiency or to seek a hearing. If the deficiency is not cured or a request for a hearing is not received within such 30-day period, the Certificate shall be deemed modified or vacated on the 31st day after the Department's notice.

Basil Seggos  
Commissioner  
New York State Department of Environmental Conservation

By: Michael J. Ryan  
Michael J. Ryan, P.E., Assistant Director  
Division of Environmental Remediation

Date: 11/27/17

**NOTICE OF CERTIFICATE OF COMPLETION**  
**Brownfield Cleanup Program**  
**6 NYCRR Part 375-1.9(d)**

**Cinderella 248 LLC, Site ID No. C224160**  
**248 Flatbush Avenue, Brooklyn, NY,**  
**Brooklyn, Kings County, Tax Map Identification Number 936-12**

**PLEASE TAKE NOTICE**, the New York State Department of Environmental Conservation (Department) has issued a Certificate of Completion (Certificate) pursuant to Article 27, Title 14 of the New York State Environmental Conservation Law (ECL) to Cinderella 248 LLC for a parcel approximately 0.05 acres located at 248 Flatbush Avenue in Brooklyn, Kings County.

**PLEASE TAKE NOTICE**, the Certificate was issued upon satisfaction of the Commissioner, following review by the Department of the final engineering report and data submitted pursuant to the Brownfield Site Cleanup Agreement, as well as any other relevant information regarding the Site, that the remediation requirements set forth in ECL Article 27, Title 14 have been or will be achieved in accordance with the time frames, if any, established in the remedial work plan.

**PLEASE TAKE NOTICE**, the remedial program for the Site has achieved a cleanup level that would be consistent with the following categories of uses (actual site use is subject to local zoning requirements):

- Unrestricted Use, as set forth in 6 NYCRR 375-1.8(g)(1)i
- Residential Use, as set forth in 6 NYCRR 375-1.8(g)(2)i.
- Restricted Residential Use, as set forth in 6 NYCRR 375-1.8(g)(2)ii.
- Commercial Use, as set forth in 6 NYCRR 375-1.8(g)(2)iii.
- Industrial Use, as set forth in 6 NYCRR 375-1.8(g)(2)iv.

Further, the use of groundwater is restricted and may not be used, unless treated in accordance with the requirements provided by the New York State Department of Health, or a local County Health Department with jurisdiction in such matters and such is approved by the Department as not inconsistent with the remedy.

**PLEASE TAKE NOTICE**, since the remedial program relies upon use restrictions or the long term employment of institutional or engineering controls; such institutional or engineering controls are contained in an Environmental Easement granted pursuant to ECL Article 71, Title 36 which has been duly recorded in the Recording Office of the City Register of the City of New York, City Register File No. 2017000262435, recorded on 07-18-2017.

**PLEASE TAKE NOTICE**, the Environmental Easement requires that the approved site management plan (SMP) for this property be adhered to. The SMP, which may be amended from time to time, may include sampling, monitoring, and/or operating a treatment system on the property, providing certified reports to the NYSDEC, and generally provides for the management of any and all plans and limitations on the property. A copy of the SMP is available upon request by writing to the Department's Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, New York 12233.

**PLEASE TAKE NOTICE**, provided that the Environmental Easement, SMP and Certificate are complied with, the Certificate holder(s) shall be entitled to the liability limitation provided in ECL Section 27-1421. The liability limitation shall run with the land, extending to the Certificate holder's successors or assigns through acquisition of title to the Site and to a person who develops or otherwise occupies the Site, subject to certain limitations as set forth in ECL Section 27-1421. The liability

*Cinderella 248 LLC, Site No. C224160, 248 Flatbush Avenue, Brooklyn, NY, 11217*

limitation shall be subject to all rights reserved to the State by ECL Section 27-1421.2 and any other applicable provision of law.

**PLEASE TAKE NOTICE**, any change of use of the site, as defined in 6 NYCRR 375, must be preceded by notice to the Department in accordance with 6 NYCRR 375-1.11(d). A transfer of any or all of the property constitutes a change of use.

**PLEASE TAKE NOTICE**, the Certificate may be revoked if the Environmental Easement as implemented, if applicable, is not protective or enforceable.

**PLEASE TAKE NOTICE**, the Certificate may entitle the Certificate holder(s) to tax credits in accordance with Tax Law Sections 21, 22 and 23.

**PLEASE TAKE NOTICE**, the Certificate may only be transferred to the Certificate holder's successors or assigns upon transfer or sale of the Site as provided by ECL Section 27-1419.5 and 6 NYCRR Part 375-1.9. Failure to comply with the regulatory requirements for transfer **WILL** bar the successors and assigns from the benefits of the Certificate.

**PLEASE TAKE NOTICE**, the Certificate may be modified or revoked by the Commissioner as set forth in the applicable regulations.

**PLEASE TAKE NOTICE**, a copy of the Certificate can be reviewed at the NYSDEC's Region 2 office located at 1 Hunter's Point Plaza, 47-40 21<sup>st</sup> Street, Long Island City, NY, 11101-5401, or by contacting the Regional Environmental Remediation Engineer.

**WHEREFORE**, the undersigned has signed this Notice of Certificate

Cinderella 248 LLC

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

STATE OF NEW YORK        ) SS:  
COUNTY OF                 )

On the \_\_\_\_\_ day of \_\_\_\_\_, in the year 20\_\_, before me, the undersigned, personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

\_\_\_\_\_  
Signature and Office of individual  
taking acknowledgment

**Please record and return to:**  
Michael Pintchik  
254 Flatbush Avenue  
Brooklyn, NY, 11217

11/30/16

**Exhibit A**

**Site Description**



ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Borough, the County of Kings, City and State of New York, being more particularly described as, follow:

BEGINNING at a point on the westerly side of Flatbush Avenue distant 289 feet 10 inches northerly from the corner formed by the intersection of the westerly side of Flatbush Avenue with the northeasterly side of Prospect Place;

RUNNING THENCE at right angles to Flatbush Avenue and part of the distance through a party wall 75 feet 6 inches;

THENCE northerly parallel with Flatbush Avenue 30 feet  $\frac{1}{4}$  inch;

THENCE northeasterly parallel with 6th Avenue 5 feet  $4 \frac{1}{4}$  inches;

THENCE easterly at right angles to Flatbush Avenue and part of the distance through a party wall 71 feet  $\frac{5}{8}$  inches to the westerly side of Flatbush Avenue;

THENCE southerly along the westerly side of Flatbush Avenue 33 feet to the point or place of BEGINNING.

Being approximately 2,485 square feet or 0.05 acres more or less.

**Exhibit B**  
**Site Survey**





**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**Site Management Form**  
 11/22/2017



**SITE DESCRIPTION**

**SITE NO.** C224160  
**SITE NAME** Cinderella 248 LLC  
**SITE ADDRESS:** 248 Flatbush Avenue      **ZIP CODE:** 11217  
**CITY/TOWN:** Brooklyn  
**COUNTY:** Kings  
**ALLOWABLE USE:** Restricted-Residential, Commercial, and Industrial

**SITE MANAGEMENT DESCRIPTION**

SITE MANAGEMENT PLAN INCLUDES:	YES	NO
IC/EC Certification Plan	■	□
Monitoring Plan	■	□
Operation and Maintenance (O&M) Plan	■	□

Periodic Review Frequency: once a year  
 Periodic Review Report Submitted Date: 03/30/2019

**Description of Institutional Control**

**Cinderella 248 LLC**  
 254 Flatbush Avenue  
**248 Flatbush Avenue**  
 Environmental Easement  
 Block: 936  
 Lot: 12  
 Sublot:  
 Section: 4  
 Subsection:  
 S\_B\_L Image: 936-12  
 Ground Water Use Restriction  
 IC/EC Plan  
 Landuse Restriction  
 Monitoring Plan  
 O&M Plan  
 Site Management Plan

**Description of Engineering Control**

**Cinderella 248 LLC**

254 Flatbush Avenue

**248 Flatbush Avenue**

Environmental Easement

Block: 936

Lot: 12

Sublot:

Section: 4

Subsection:

S\_B\_L Image: 936-12

Vapor Mitigation

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau B

625 Broadway, 12th Floor, Albany, NY 12233-7016

P: (518) 402-9768 | F: (518) 402-9773

[www.dec.ny.gov](http://www.dec.ny.gov)

October 3, 2017

Michael Pintchik  
254 Flatbush Avenue  
Brooklyn, NY 11217

Re: Cinderella 248 LLC, 248 Flatbush Ave, Brooklyn, NY;  
BCP Site No. C224160; Site Management Plan,  
September 2017

Dear Mr. Pintchik:

The New York State Department of Environmental Conservation (DEC) has reviewed the Site Management Plan (SMP) for the subject site referenced above. DEC finds the SMP acceptable and hereby approves it.

If you have any questions, please contact me at [alicia.barraza@dec.ny.gov](mailto:alicia.barraza@dec.ny.gov) or 518-402-9690.

Sincerely



Alicia Barraza  
Project Manager  
Section A

ec: Ben Cancemi, FPM Group  
G. Burke, DEC  
M. Komoroske, DEC  
J. O'Connell, DEC Region 2  
B. Boyd, DOH  
J. Deming, DOH



Department of  
Environmental  
Conservation

VIA EMAIL

June 1, 2018

Mr. Alicia Barraza  
Project Manager  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, NY 12233

Re: **Air Sampling Data Transmittal**  
**Cinderella 248, LLC Site #C224160**  
**Brooklyn, NY**  
**FPM File No. 1104g-18-05 (02)**

Dear Alicia,

FPM Group (FPM) is hereby transmitting the indoor air sampling data conducted on April 5, 2018 for the above-referenced Site, which included air sampling at 248, 250, 252 and 254 Flatbush Avenue and sampling of the sub-slab depressurization system (SSDS) effluent. This work was conducted in accordance with NYSDEC-approved SMP, with the exception of the collection of one additional indoor air sample in a recently occupied space and collection SSDS effluent was collected in lieu of soil vapor, as per our discussions.

This transmittal includes a copy of the lab data and the associated Data Usability Summary Report (Attachment A), sampling forms and a building inventory (Attachment B), a summary data table, and a site plan showing the sampling locations. We have also included a discussion of the procedures and results and our recommendation. The laboratory data Electronic Data Deliverable (EDD) has been prepared and uploaded.

### **Sampling Procedures**

All samples were collected in accordance with the procedures in the SMP. One additional indoor air sample was collected from the basement of 252 Flatbush Avenue as this space is now being utilized for storage. An effluent sample was also collected for informational purposes in lieu of soil vapor samples because the SSDS is currently in continuous operation. Copies of the sample canister forms documenting the sampling procedures are included in Attachment B. The sample locations are shown on Figure 1 (attached).

The indoor air samples were collected from a height of approximately four feet above the slab and the ambient air sample was collected from an outdoor location in between 254 and 252 Flatbush Avenue and in a similar manner as the indoor air samples.

The SSDS effluent sample was collected from the sampling port of the SSDS system at the conclusion of indoor air sampling to prevent potential contamination with the indoor sample at 248 Flatbush Avenue.



The air samples were collected in laboratory-provided Summa canisters equipped with flow controllers in accordance with NYSDOH guidance. The flow controllers for the indoor air and ambient air samples were set for an approximately eight-hour period, comparable to typical building occupancy. The effluent air sample was collected in laboratory-provided Summa canister as a grab sample. The filled indoor canisters were managed under chain-of-custody procedures and transmitted to a NYSDOH-certified lab for analysis of volatile organic compounds (VOCs) using the TO-15 low level method. The SSDS effluent samples was analyzed for standard level VOCs by Method TO-15.

A building inventory form for each property was completed during the course of the sampling event to document the construction, HVAC system operations, and the potential presence of VOC sources in the building. No issues with the potential to affect indoor air quality were identified. The completed building inventory form is included in Attachment B.

Quality assurance/quality control (QA/QC) procedures were implemented and included field screening for organic vapors using a calibrated photoionization detector (PID), use of a chain of custody to document the sequence of sample possession, and collection and analysis of duplicate sample for QA/QC. In addition, the laboratory utilized internal QA/QC procedures and samples to confirm that the laboratory data are of sufficient accuracy and precision for their intended use.

Following receipt of the chemical analytical data, the data package and associated QA/QC sample results were evaluated and a Data Usability Summary Report (DUSR) was prepared. The DUSR is included in Attachment A and did not identify any significant data usability issues.

### Sample Results

The data from this sampling event are summarized in Table 1 and the indoor air sample results were evaluated in accordance with NYSDOH Guidance. Based upon the absence of collocated soil vapor data (since the SSDS is currently in operation), which prevents a comparison with the NYSDOH soil vapor/indoor air matrix tables, the applicable air guidance values (AGVs) were utilized to demonstrate that the SSDS is effective and operating as designed. The effluent sample was collected in accordance with the NYSDEC requests, for general informational purposes, this data is summarized in Table 2. Our review of these data indicates the following:

- Two VOCs for which the NYSDOH provides guidance, methylene chloride (MeCl) and tetrachloroethene (PCE), were detected in the indoor air samples;
- PCE was detected in the indoor air at a low ( $1.5 \text{ ug/m}^3$ ) concentration at the Site (248 Flatbush Ave) and at low estimated concentrations at 250 and 254 Flatbush Avenue ( $0.95 \text{ ug/m}^3$  and  $0.75 \text{ ug/m}^3$ , respectively) and also is the primary contaminant of concern detected in the effluent sample ( $3,900 \text{ ug/m}^3$ ). PCE was not detected in the ambient outdoor air sample. These results indicate that PCE is well below its respective AGV ( $30 \text{ ug/m}^3$ ). We conclude that PCE does not present a concern for indoor air;
- MeCl was detected at each of the indoor air sampling locations at generally low concentrations, ranging from  $0.73$  to  $0.97 \text{ ug/m}^3$ . MeCl was also noted in the ambient outdoor air sample at concentrations similar to the indoor air samples. MeCl is noted well below its respective AGV ( $60 \text{ ug/m}^3$ ) in all indoor air samples. We conclude that the low MeCl concentration are not contributed to Site and are related to ambient air conditions in the Site vicinity; and
- Several VOCs were detected at concentrations generally comparable to concentrations found within indoor air at commercial buildings. None of these detections was highly elevated or presents a concern.

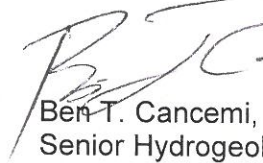


### Conclusions and Recommendations

Indoor air sampling has been conducted at 248 (Site) and neighboring properties located at 250, 252, and 254 Flatbush Avenue to confirm that the SSDS is operating as intended to prevent soil vapor intrusion. This testing was performed in general accordance with the NYSDEC-SMP, except as discussed above. The sampling results demonstrate that the SSDS is operating as intended to prevent soil vapor intrusion.

The information contained within this data transmittal will be included in the next periodic review report for the Site.

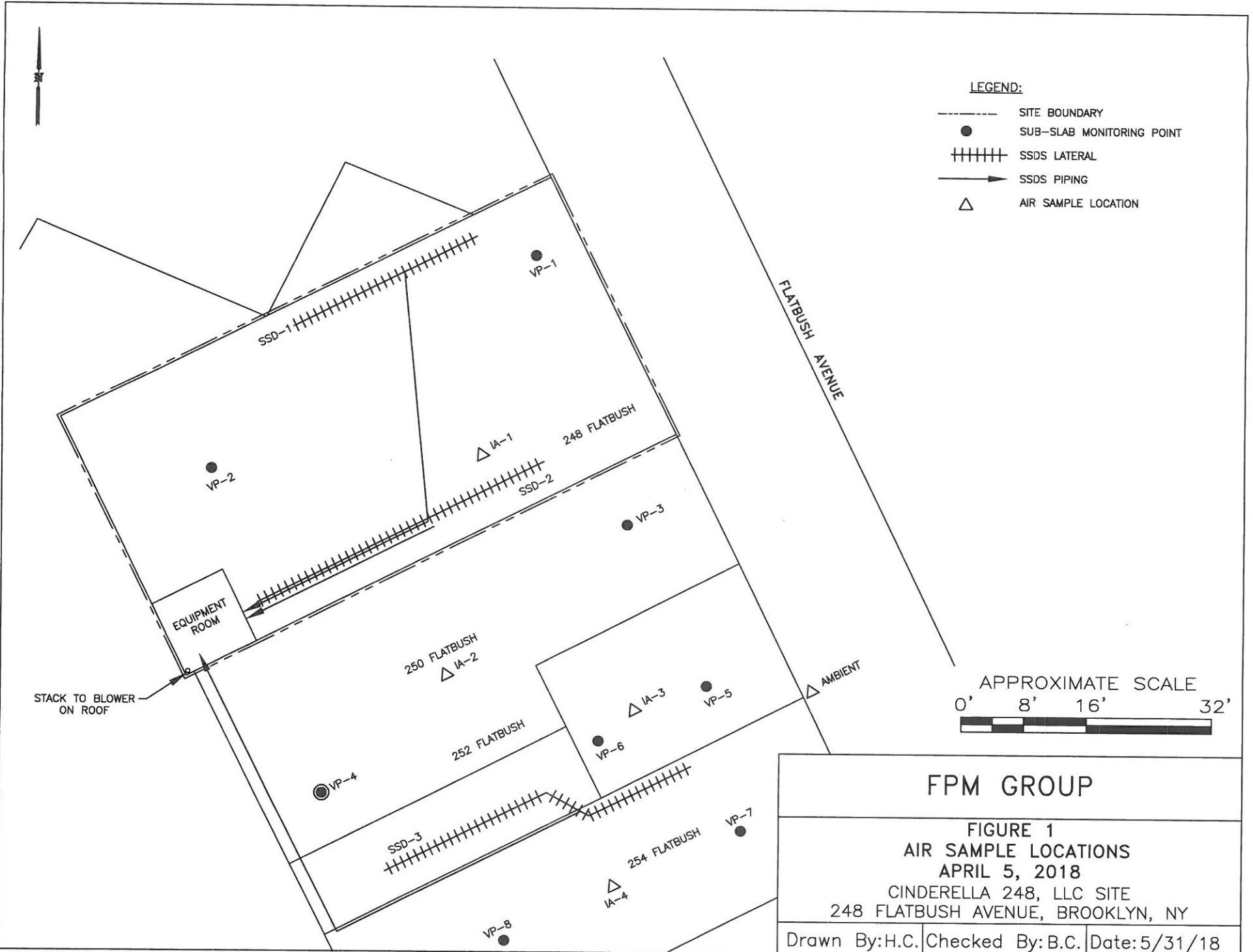
Very truly yours,



Ben T. Cancemi, CPG  
Senior Hydrogeologist  
Department Manager

BTC:btc  
Attachments  
cc: Michael Pintchik

S:\Rigano LLC\Cinderella 248 LLC\Air Sampling\April 2018\IA Report.docx



- LEGEND:**
- SITE BOUNDARY
  - SUB-SLAB MONITORING POINT
  - +++++ SSDS LATERAL
  - ▶— SSDS PIPING
  - △ AIR SAMPLE LOCATION



<b>FPM GROUP</b>		
<b>FIGURE 1</b> <b>AIR SAMPLE LOCATIONS</b> <b>APRIL 5, 2018</b> CINDERELLA 248, LLC SITE 248 FLATBUSH AVENUE, BROOKLYN, NY		
Drawn By: H.C.	Checked By: B.C.	Date: 5/31/18

**TABLE 1  
INDOOR AIR SAMPLING RESULTS  
CINDERELLA LLC, BROOKLYN, NEW YORK**

Sample No.	IA-1	IA-1D (duplicate)	IA-2	IA-3	IA-4	Ambient	Indoor Air Background Levels, Commercial*
Sample Location	248 Flatbush Avenue Basement		250 Flatbush Avenue Basement	252 Flatbush Avenue Basement	254 Flatbush Avenue Basement	Outdoors	
Sample Date	4/5/18						
<b>Volatile Organic Compounds in ug/m<sup>3</sup></b>							
1,4-Dichlorobenzene	1.9	1.3	ND	ND	ND	62	<0.8 - 12.5
Acetone	23	26	3.8	4.4	4.9	26	32.4 - 120.2
Benzene	0.48	0.48	0.35 J	ND	0.48	0.42 J	2.1 - 12.5
Chloroform	6.3	4.3	2.9	ND	4.3	ND	<0.4 - 1.4
Chloromethane	ND	ND	0.54	0.47	0.66	0.58	2.1 - 4.4
Ethyl Acetate	0.94	1.4	ND	ND	ND	0.54	<1.0 - 9.5
Freon 11	1.3	1.1	1.0	0.79 J	1.2	1.1	<3.7 - 54.0
Freon 12	2.0	1.9	1.7	1.4	2.1	1.5	4.8 - 32.9
Heptane	0.49 J	0.66	ND	ND	ND	1.9	-
Hexane	ND	0.46 J	ND	ND	ND	0.81	1.6 - 15.2
Isopropyl alcohol	150	230	4.8	2.4	4.4	4.5	-
m&p-xylene	0.65 J	0.69 J	0.43 J	ND	0.48 J	0.91 J	4.1 - 28.5
Methyl Ethyl Ketone	1.9	2.2	0.80 J	0.65 J	ND	1.3	3.3 - 13.5
Methylene chloride	0.73	0.97	0.97	0.94	0.76	0.97	<1.7 - 16.0
Tetrachloroethene	1.5	1.4	0.95 J	ND	0.75 J	ND	<1.9 - 25.4
Toluene	3.0	4.2	1.2	0.90	2.7	3.4	10.7 - 70.8

Notes:

All samples analyzed using Method TO-15.

Only compounds detected in one or more samples are reported herein. See lab report for complete data.

ug/m<sup>3</sup> = micrograms per cubic meter.

Shaded compounds are those for which the NYSDOH has provided guidance.

ND = Not detected.

\* = US EPA BASE Study 2001; 25th to 95th percentiles.



**TABLE 2  
EFFLUENT SAMPLING RESULTS  
CINDERELLA LLC, BROOKLYN, NEW YORK**

Sample No.	Effluent
Sample Location	248 Flatbush Avenue Basement
Sample Date	4/5/18
<b>Volatile Organic Compounds in ug/m<sup>3</sup></b>	
1,2,4-Trimethylbenzene	2.0
1,3,5-Trimethylbenzene	0.84
1,4-Dichlorobenzene	0.60 J
2,2,4-trimethylpentane	5.6
4-ethyltoluene	0.59 J
Acetone	10
Benzene	3.9
Chloroform	6.4
Chloromethane	0.23 J
Cyclohexane	1.3
Ethylbenzene	1.2
Freon 11	1.2
Freon 12	2.1
Heptane	7.0
Hexane	5.5
Isopropyl alcohol	15
m&p-Xylene	3.1
Methyl Ethyl Ketone	1.4
Methylene chloride	0.76
o-Xylene	1.0
Tetrachloroethene	3,900
Toluene	2.6

Notes:

All samples analyzed using Method TO-15.  
 Only compounds detected in one or more samples are reported herein.  
 See lab report for complete data.  
 ug/m<sup>3</sup> = micrograms per cubic meter.  
 ND = Not detected.



**ATTACHMENT A**

**LABORATORY DATA**  
**DATA USABILITY SUMMARY REPORT**

**Centek Laboratories TO-15 Package Review Checklist**



**Client:** FPM Group      **Project:** Cinderella      **SDG:** C1804013

		YES	NO	NA
Analytical Results	Present and Complete	✓	—	—
TIC's Present	Present and Complete	✓	—	—
	Holdin Times Met	✓	—	—

Comments: \_\_\_\_\_

Chain of Custody	Present and Complete	✓	—	—
Surrogate	Present and Complete	✓	—	—
	Recoveries within Limits	✓	—	—
	Sample(s) reanalyzed	—	✓	—
Internal Standards	Present and Complete	✓	—	—
Recovery	Recoveries within Limits	✓	—	—
	Sample(s) reanalyzed	—	✓	—

Comments: \_\_\_\_\_

Lab Control Sample (LCS)	Present and Complete	✓	—	—
	Recoveries within Limits	✓	—	—
Lab Control Sample Dupe (LCSD)	Present and Complete	✓	—	—
	Recoveries within Limits	✓	—	—
MS/MSD	Present and Complete	—	—	✓
	Recoveries within Limits	—	—	✓

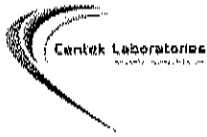
Comments: \_\_\_\_\_

\* NO MS/MSD \*

Sample Raw Data	Present and Complete	✓	—	—
	Spectra present	✓	—	—

Comments: \_\_\_\_\_

**Centek Laboratories TO-15 Package Review Checklist**



**Client:** FPM Group      **Project:** Cinderella      **SDG:** C1804013

		<u>YES</u>	<u>NO</u>	<u>NA</u>
<b><u>Standards Data</u></b>				
Initial Calibration	Present and Complete	✓	—	—
	Calibration meets criteria	✓	—	—
Continuing Calibration	Present and Complete	✓	—	—
	Calibration meets criteria	✓	—	—
Standards Raw Data	Present and Complete	✓	—	—

**Comments:**  
 \_\_\_\_\_  
 \_\_\_\_\_

<b><u>Raw Quality Control Data</u></b>				
Tune Criteria Report	Present and Complete	✓	—	—
Method Blank Data	MB Results <PQL	✓	—	—
	Associated results flagged "B"	—	—	✓
LCS Sample Data	Present and Complete	✓	—	—
LCSD Sample Data	Present and Complete	✓	—	—
MS/MSD Sample Data	Present and Complete	✓	—	—

**Comments:**  
 \_\_\_\_\_  
 \_\_\_\_\_

<b><u>Logbooks</u></b>				
Injection Log		✓	—	—
Standards Log		✓	—	—
Can Cleaning Log		✓	—	—
Calculation Sheet		✓	—	—
IDL's		✓	—	—
Canister Order Form		✓	—	—
Sample Tracking Form		✓	—	—

**Additional Comments:**  
 \_\_\_\_\_  
 \_\_\_\_\_

Section Supervisor: Walt Dohli      Date: 5/17/18  
 QC Supervisor: Tom Chace      Date: 5/17/18

## ASP CAT B DELIVERABLE PACKAGE Table of Contents

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  - d. LCS Summary Report
  - e. MSD Summary Report
  - f. IDL's
  - g. Calculation
8. Sample Data
  - a. Form 1 (if requested) TIC's
  - b. Quantitation Report with Spectra
9. Standards Data
  - a. Initial Calibration with Quant Report
  - b. Continuing Calibration with Quant Report
10. Raw Data
  - a. Tuning Data
11. Raw QC Data
  - a. Method Blank
  - b. LCS
  - c. MS/MSD
12. Log Books
  - a. Injection Log Book
  - b. Standards Log Book
  - c. QC Canister Log Book





## CENTEK LABORATORIES, LLC

143 Midler Park Drive \* Syracuse, NY 13206

Phone (315) 431-9730 \* Emergency 24/7 (315) 416-2752

NYSDOH ELAP Certificate No. 11830

### **Analytical Report**

Chris Linkletter  
FPM Group, Ltd.  
909 Marconi Avenue  
Ronkonkoma, NY 11779

Wednesday, April 11, 2018

Order No.: C1804013

TEL: (631) 737-6200

FAX

RE: Cinderella

Dear Chris Linkletter:

Centek Laboratories, LLC received 7 sample(s) on 4/9/2018 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

Centek Laboratories SOP TS-80

Analytical results relate to samples as received at laboratory. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Please contact your client service representative at (315) 431-9730 or myself, if you would like any additional information regarding this report.

This report cannot be reproduced except in its entirety, without prior written authorization.

Sincerely,



William Dobbin  
Lead Technical Director

Disclaimer: The test results and procedures utilized, and laboratory interpretations of the data obtained by Centek as contained in this report are believed by Centek to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of Centek for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages. ELAP does not offer certification for the following parameters by this method at present time, they are: 4-ethyltoluene, ethyl acetate, propylene, tetrahydrofuran, 4-PCH, sulfur derived and silicon series compounds.

#### Centek Laboratories, LLC Terms and Conditions

##### Sample Submission

All samples sent to Centek Laboratories should be accompanied by our Request for Analysis Form or Chain of Custody Form. A Chain of Custody will be provided with each order shipped for all sampling events, or if needed, one is available at our website [www.CentekLabs.com](http://www.CentekLabs.com). Samples received after 3:00pm are considered to be a part of the next day's business.

##### Sample Media

Samples can be collected in an canister or a Tedlar bag. Depending on your analytical needs, Centek Laboratories may receive a bulk, liquid, soil or other matrix sample for headspace analysis.

##### Blanks

Every sample is run with a surrogate or tracer compound at a pre-established concentration. The surrogate compound run with each sample is used as a standard to measure the performance of each run of the instrument. If required, a Minican can be provided containing nitrogen to be run as a trip blank with your samples.

##### Sampling Equipment

Centek Laboratories will be happy to provide the canisters to carry-out your sampling event at no charge. The necessary accessories, such as regulators, tubing or personal sampling belts, are also provided to meet your sampling needs. The customer is responsible for all shipping charges to the client's destination and return shipping to the laboratory. Client assumes all responsibility for lost, stolen and any damages of equipment.

##### Turn Around time (TAT)

Centek Laboratories will provide results to its clients in one business-week by 6:00pm EST after receipt of samples. For example, if samples are received on a Monday they are due on the following Monday by 6:00pm EST. Results are faxed or emailed to the requested location indicated on the Chain of Custody. Non-routine analysis may require more than the one business-week turnaround time. Please confirm non-routine sample turnaround times.

### Reporting

Results are emailed or faxed at no additional charge. A hard copy of the result report is mailed within 24 hours of the faxing or emailing of your results. Cat "B" like packages are within 3-4 weeks from time of analysis. Standard Electronic Disk Deliverables (EDD) is also available at no additional charge.

### Payment Terms

Payment for all purchases shall be due within 30 days from date of invoice. The client agrees to pay a finance charge of 1.5% per month on the overdue balance and cost of collection, including attorney fees, if collection proceedings are necessary. You must have a completed credit application on file to extend credit. Purchase orders or checks information must be submitted for us to release results

### Rush Turnaround Samples

Expedited turn around times is available. Please confirm rush turnaround times with Client Services before submitting samples.

Applicable Surcharges for Rush Turnaround Samples:

Same day TAT = 200%

Next business day TAT by Noon = 150%

Next business day TAT by 6:00pm = 100%

Second business day TAT by 6:00pm = 75%

Third business day TAT by 6:00pm = 50%

Fourth business day TAT by 6:00pm = 35%

Fifth business day = Standard

### Statement of Confidentiality

Centek Laboratories, LLC is aware of the importance of the confidentiality of results to many of our clients. Your name and data will be held in the strictest of confidence. We will not accept business that may constitute a conflict of interest. We commonly sign Confidential Nondisclosure Agreements with clients prior to beginning work. All research, results and reports will be kept strictly confidential. Secrecy Agreements and Disclosure Statements will be signed for the client if so specified. Results will be provided only to the addressee specified on the Chain of Custody Form submitted with the samples unless law requires release. Written permission is required from the addressee to release results to any other party.

### Limitation on Liability

Centek Laboratories, LLC warrants the test results to be accurate to the methodology and sample type for each sample submitted to Centek Laboratories, LLC. In no event shall Centek Laboratories, LLC be liable for direct, indirect, special, punitive, incidental, exemplary or consequential damages, or any damages whatsoever, even if Centek Laboratories, LLC has been previously advised of the possibility of such damages whether in an action under contract, negligence, or any other theory, arising out of or in connection with the use, inability to use or performance of the information, services, products and materials available from the laboratory or this site. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. Because some jurisdictions do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of liability for consequential or incidental damages, the above limitations may not apply to you. This is a comprehensive limitation of

liability that applies to all damages of any kind, including (without limitation) compensatory, direct, indirect or consequential damages, loss of data, income or profit and or loss of or damage to property and claims of third parties.



**CENTEK LABORATORIES, LLC**

**Date:** 16-May-18

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**CLIENT:** FPM Group, Ltd.  
**Project:** Cinderella  
**Lab Order:** C1804013

## **CASE NARRATIVE**

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Samples were analyzed using the methods outlined in the following references:

Centek Laboratories, LLC SOP TS-80  
Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the corrective action report(s). All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

### **NYSDEC ASP samples:**

Canisters should be evacuated to a reading of less than or equal to 50 millitorr prior to shipment to sampling personnel. The vacuum in the canister will be field checked prior to sampling, and must read 28" of Hg ( $\pm 2$ ", vacuum, absolute) before a sample can be collected. After the sample has been collected, the pressure of the canister will be read and recorded again, and must be 5" of Hg ( $\pm 1$ ", vacuum, absolute) for the sample to be valid. Once received at the laboratory, the canister vacuum should be confirmed to be 5" of Hg,  $\pm 1$ ". Please record and report the pressure/vacuum of received canisters on the sample receipt paperwork. A pressure/vacuum reading should also be taken just prior to the withdrawal of sample from the canister, and recorded on the sample preparation log sheet. All regulators are calibrated to meet these requirements before they leave the laboratory. However, due to environmental conditions and use of the equipment Centek can not guarantee that this criteria can always be achieved.

**Centek Labs - Chain of Custody**

143 Midler Park Drive  
Syracuse, NY 13206  
315-431-8730  
www.CentekLabs.com

Company: FPM Group  
Check Here if Same:

Report to: Chris Linkletter  
Address: 909 Marconi Avenue  
City, State, Zip: Bantock, NY 11719  
Email: c.linkletter@fpm-group.com  
Phone: (65) 737-6700

Site Name: Cindarella  
Project: 1104g-18-05 02  
PO#:   
Quote # 0-5P  
Canister Order #: 7131

Company:   
Check Here if Same:

Detection Limit  
 5ppbv  
 1ug/M3  
 1ug/M3 + 0.2 NYS

Invoice to:  
Address:  
City, State, Zip:  
Email:  
Phone:

Report Level  
 Level I  
 Level II  
 Cat "B" Like

Field Vacuum Start / Stop  
-30 / -8  
-30 / -9  
-30 / -12  
-30 / -15  
-30 / -7  
-30 / -12  
-30 / 0  
-30 / 0

Analysis Request  
TO-15

Regulator Number  
693  
513  
1343  
535  
711  
1470  
243

Canister Number  
368  
1186  
472  
365  
88  
207  
243

Date Sampled  
4/5/18

Sample ID  
IA-1  
IA-10  
IA-2  
IA-3  
IA-4  
Ambient  
Effluent

Labs Vacuum Rec/Analysis  
-8 / 1  
-9 / 1  
-12 / 1  
-15 / 1  
-7 / 1  
-12 / 1  
-1 / 1  
-1 / 1

Comments

Comments

Chain of Custody  
Print Name  
Chris Linkletter  
NICK MANDRINO

Signature  
Chris Linkletter  
NICK MANDRINO

Date/Time  
4/6/18 9:00

Copies: CIRCLE ONE  
FedEx UPS Pickup/Dropoff

Reinquisitioned by:  
Received at Lab by:

\*\*For LAB USE ONLY  
Work Order # C1804013

\*\*\* By signing Centek Labs Chain of Custody, you are accepting Centek Labs Terms and Conditions listed on the reverse side.



CEN TEK LABORATORIES, LLC

Sample Receipt Checklist

Client Name FPM - RONKONKOMA

Date and Time Receive

4/9/2018

Work Order Number C1804013

Received by NM

Checklist completed by

Signature

4-9-18

Date

Reviewed by

WD

Initials

4/9/18

Date

Matrix:

Carrier name: FedEx Ground

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No
- Water - VOA vials have zero headspace? Yes  No  No VOA vials submitted  Yes  No
- Water - pH acceptable upon receipt? Yes  No

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Any No and/or NA (not applicable) response must be detailed in the comments section be

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_



Date: 16-May-18



CENTEK LABORATORIES, LLC

**CLIENT:** FPM Group, Ltd.  
**Project:** Cinderella  
**Lab Order:** C1804013

### Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1804013-001A	IA-1	368.693	4/5/2018	4/9/2018
C1804013-002A	IA-1D	1186.513	4/5/2018	4/9/2018
C1804013-003A	IA-2	422.1343	4/5/2018	4/9/2018
C1804013-004A	IA-3	365.535	4/5/2018	4/9/2018
C1804013-005A	IA-4	88.711	4/5/2018	4/9/2018
C1804013-006A	Ambient	207.1420	4/5/2018	4/9/2018
C1804013-007A	Effluent	243	4/5/2018	4/9/2018

DATES REPORT

Lab Order: C1804013  
 Client: FPM Group, Ltd.  
 Project: Cinderella

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
C1804013-001A	IA-1	4/5/2018	Air	1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
C1804013-002A	IA-1D			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
C1804013-003A	IA-2			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
C1804013-004A	IA-3			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
C1804013-005A	IA-4			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
C1804013-006A	Ambient			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
C1804013-007A	Effluent			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018



**CENTEK LABORATORIES, LLC**

*Air Quality Testing...It's a Gas*

143 Midler Park Drive \* Syracuse, NY 13206  
 TEL: 315-431-9730 \* FAX: 315-431-9731

**CANISTER ORDER**

**7131**

16-May-18

**SHIPPED TO:**

Company: FPM Group, Ltd.  
 Contact: Chris Linkletter  
 Address: 909 Marconi Avenue  
 Ronkonkoma, NY 11779  
 Phone: (631) 737-6200  
 Quote ID: 0  
 Project:  
 PO:

Submitted By:  
 MadeBy: rjp  
 Ship Date: 3/23/2018  
 VIA: FedEx Ground  
 Due Date: 3/28/2018

Bottle Code	Bottle Type	TEST(s)	QTY
MC1000CC	1L Mini-Can	1ug/M3 by Method TO15	11

Can / Reg ID	Description
88	1L Mini-Can - 1107 VI
131	1L Mini-Can - 1079 VI
133	1L Mini-Can - 1082 VI
513	Time-Set Reg - 2780 IAQ
529	Time-Set Reg - 2796 IAQ
530	Time-Set Reg - 2797 IAQ
535	Time-Set Reg - 2802 IAQ
1317	1 L Mini-Can -7330 VI
1343	Time-Set Reg-2195 IAQ
1420	Time-Set Reg-2430 IAQ
711	Time-Set Reg - 2001 IAQ
207	1L Mini-Can - 1162 VI
422	1L Mini-Can - 1349 VI
509	Time-Set Reg - 2776 IAQ
243	1L Mini-Can - 1175 VI
693	Time-Set Reg - 4003 IAQ
1186	1L Mini-Can - 1235 VI
365	1L Mini-Can - 1314 VI
368	1L Mini-Can - 1317 VI

Comments: 8 1L @ 6 hr + 1 1L w/QG + gauge + tubing WAC 032218C-E

**GC/MS VOLATILES-WHOLE AIR**

**METHOD TO-15**

**ANALYTICAL RESULTS**

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-001A

**Client Sample ID:** IA-1  
**Tag Number:** 368.693  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>		<b>FLD</b>		<b>Analyst:</b>		
Lab Vacuum In	-8			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		<b>Analyst: RJP</b>		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,1-Dichloroethane	< 0.040	0.040		ppbV	1	4/10/2018 7:21:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,4-Dichlorobenzene	0.32	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 7:21:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Acetone	9.8	3.0		ppbV	10	4/11/2018 2:11:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Benzene	0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 7:21:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Chloroform	1.3	0.15		ppbV	1	4/10/2018 7:21:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 7:21:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Ethyl acetate	0.26	0.15		ppbV	1	4/10/2018 7:21:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-001A

**Client Sample ID:** IA-1  
**Tag Number:** 368.693  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		Analyst: RJP
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Freon 11	0.23	0.15		ppbV	1	4/10/2018 7:21:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Freon 12	0.40	0.15		ppbV	1	4/10/2018 7:21:00 PM
Heptane	0.12	0.15	J	ppbV	1	4/10/2018 7:21:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Hexane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Isopropyl alcohol	63	6.0		ppbV	40	4/11/2018 2:47:00 AM
m&p-Xylene	0.15	0.30	J	ppbV	1	4/10/2018 7:21:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 7:21:00 PM
Methyl Ethyl Ketone	0.66	0.30		ppbV	1	4/10/2018 7:21:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 7:21:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Methylene chloride	0.21	0.15		ppbV	1	4/10/2018 7:21:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Tetrachloroethylene	0.22	0.15		ppbV	1	4/10/2018 7:21:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Toluene	0.79	0.15		ppbV	1	4/10/2018 7:21:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 7:21:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 7:21:00 PM
Surr: Bromofluorobenzene	95.0	70-130		%REC	1	4/10/2018 7:21:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte, Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-001A

**Client Sample ID:** IA-1  
**Tag Number:** 368.693  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 7:21:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 7:21:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 7:21:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 7:21:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 7:21:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 7:21:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 7:21:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 7:21:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 7:21:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 7:21:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 7:21:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 7:21:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 7:21:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 7:21:00 PM
1,4-Dichlorobenzene	1.9	0.90		ug/m3	1	4/10/2018 7:21:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 7:21:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 7:21:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 7:21:00 PM
Acetone	23	7.1		ug/m3	10	4/11/2018 2:11:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 7:21:00 PM
Benzene	0.48	0.48		ug/m3	1	4/10/2018 7:21:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 7:21:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 7:21:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 7:21:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 7:21:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 7:21:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 7:21:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 7:21:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 7:21:00 PM
Chloroform	6.3	0.73		ug/m3	1	4/10/2018 7:21:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/10/2018 7:21:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 7:21:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 7:21:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 7:21:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 7:21:00 PM
Ethyl acetate	0.94	0.54		ug/m3	1	4/10/2018 7:21:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 7:21:00 PM
Freon 11	1.3	0.84		ug/m3	1	4/10/2018 7:21:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 7:21:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 7:21:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection



**Centek Laboratories, LLC**

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-001A

Client Sample ID: IA-1  
 Tag Number: 368.693  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		Analyst: RJP		
Freon 12	2.0	0.74		ug/m3	1	4/10/2018 7:21:00 PM
Heptane	0.49	0.61	J	ug/m3	1	4/10/2018 7:21:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 7:21:00 PM
Hexane	< 0.53	0.53		ug/m3	1	4/10/2018 7:21:00 PM
Isopropyl alcohol	150	15		ug/m3	40	4/11/2018 2:47:00 AM
m&p-Xylene	0.65	1.3	J	ug/m3	1	4/10/2018 7:21:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 7:21:00 PM
Methyl Ethyl Ketone	1.9	0.88		ug/m3	1	4/10/2018 7:21:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 7:21:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 7:21:00 PM
Methylene chloride	0.73	0.52		ug/m3	1	4/10/2018 7:21:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 7:21:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 7:21:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 7:21:00 PM
Tetrachloroethylene	1.5	1.0		ug/m3	1	4/10/2018 7:21:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 7:21:00 PM
Toluene	3.0	0.57		ug/m3	1	4/10/2018 7:21:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 7:21:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 7:21:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 7:21:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 7:21:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 7:21:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 7:21:00 PM

<b>Qualifiers:</b>	<b>**</b> Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-002A

**Client Sample ID:** IA-1D  
**Tag Number:** 1186.513  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>						
Lab Vacuum In	-9			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 WI 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE TO-15</b>						
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 8:04:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,4-Dichlorobenzene	0.21	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 8:04:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Acetone	11	3.0		ppbV	10	4/11/2018 3:25:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Benzene	0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 8:04:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Chloroform	0.88	0.15		ppbV	1	4/10/2018 8:04:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 8:04:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Ethyl acetate	0.38	0.15		ppbV	1	4/10/2018 8:04:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-002A

**Client Sample ID:** IA-1D  
**Tag Number:** 1186.513  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		Analyst: RJP
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Freon 11	0.20	0.15		ppbV	1	4/10/2018 8:04:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Freon 12	0.39	0.15		ppbV	1	4/10/2018 8:04:00 PM
Heptane	0.16	0.15		ppbV	1	4/10/2018 8:04:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Hexane	0.13	0.15	J	ppbV	1	4/10/2018 8:04:00 PM
Isopropyl alcohol	92	6.0		ppbV	40	4/11/2018 4:02:00 AM
m&p-Xylene	0.16	0.30	J	ppbV	1	4/10/2018 8:04:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 8:04:00 PM
Methyl Ethyl Ketone	0.74	0.30		ppbV	1	4/10/2018 8:04:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 8:04:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Methylene chloride	0.28	0.15		ppbV	1	4/10/2018 8:04:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Tetrachloroethylene	0.21	0.15		ppbV	1	4/10/2018 8:04:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Toluene	1.1	0.15		ppbV	1	4/10/2018 8:04:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 8:04:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 8:04:00 PM
Surr: Bromofluorobenzene	95.0	70-130		%REC	1	4/10/2018 8:04:00 PM

<b>Qualifiers:</b>	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-002A

**Client Sample ID:** IA-1D  
**Tag Number:** 1186.513  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 8:04:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 8:04:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 8:04:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 8:04:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:04:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 8:04:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 8:04:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 8:04:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 8:04:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 8:04:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 8:04:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 8:04:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 8:04:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 8:04:00 PM
1,4-Dichlorobenzene	1.3	0.90		ug/m3	1	4/10/2018 8:04:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 8:04:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 8:04:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 8:04:00 PM
Acetone	26	7.1		ug/m3	10	4/11/2018 3:25:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 8:04:00 PM
Benzene	0.48	0.48		ug/m3	1	4/10/2018 8:04:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 8:04:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 8:04:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 8:04:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 8:04:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 8:04:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 8:04:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 8:04:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 8:04:00 PM
Chloroform	4.3	0.73		ug/m3	1	4/10/2018 8:04:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/10/2018 8:04:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:04:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 8:04:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 8:04:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 8:04:00 PM
Ethyl acetate	1.4	0.54		ug/m3	1	4/10/2018 8:04:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 8:04:00 PM
Freon 11	1.1	0.84		ug/m3	1	4/10/2018 8:04:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 8:04:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 8:04:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 , Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-002A

Client Sample ID: IA-1D  
 Tag Number: 1186.513  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 WI 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		Analyst: RJP
Freon 12	1.9	0.74		ug/m3	1	4/10/2018 8:04:00 PM
Heptane	0.66	0.61		ug/m3	1	4/10/2018 8:04:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 8:04:00 PM
Hexane	0.46	0.53	J	ug/m3	1	4/10/2018 8:04:00 PM
Isopropyl alcohol	230	15		ug/m3	40	4/11/2018 4:02:00 AM
m&p-Xylene	0.69	1.3	J	ug/m3	1	4/10/2018 8:04:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 8:04:00 PM
Methyl Ethyl Ketone	2.2	0.88		ug/m3	1	4/10/2018 8:04:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 8:04:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 8:04:00 PM
Methylene chloride	0.97	0.52		ug/m3	1	4/10/2018 8:04:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 8:04:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 8:04:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 8:04:00 PM
Tetrachloroethylene	1.4	1.0		ug/m3	1	4/10/2018 8:04:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 8:04:00 PM
Toluene	4.2	0.57		ug/m3	1	4/10/2018 8:04:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 8:04:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 8:04:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:04:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 8:04:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 8:04:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 8:04:00 PM

Qualifiers: \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-003A

**Client Sample ID:** IA-2  
**Tag Number:** 422.1343  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>						
Lab Vacuum In	-12			"Hg		Analyst: 4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>						
				<b>FLD</b>		<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 8:46:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 8:46:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Acetone	1.6	0.30		ppbV	1	4/10/2018 8:46:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Benzene	0.11	0.15	J	ppbV	1	4/10/2018 8:46:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 8:46:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Chloroform	0.59	0.15		ppbV	1	4/10/2018 8:46:00 PM
Chloromethane	0.26	0.15		ppbV	1	4/10/2018 8:46:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 8:46:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection



**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-003A

**Client Sample ID:** IA-2  
**Tag Number:** 422.1343  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		Analyst: RJP
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Freon 11	0.18	0.15		ppbV	1	4/10/2018 8:46:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Freon 12	0.35	0.15		ppbV	1	4/10/2018 8:46:00 PM
Heptane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Hexane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Isopropyl alcohol	2.0	0.15		ppbV	1	4/10/2018 8:46:00 PM
m&p-Xylene	0.10	0.30	J	ppbV	1	4/10/2018 8:46:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 8:46:00 PM
Methyl Ethyl Ketone	0.27	0.30	J	ppbV	1	4/10/2018 8:46:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 8:46:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Methylene chloride	0.28	0.15		ppbV	1	4/10/2018 8:46:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Tetrachloroethylene	0.14	0.15	J	ppbV	1	4/10/2018 8:46:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Toluene	0.32	0.15		ppbV	1	4/10/2018 8:46:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 8:46:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 8:46:00 PM
Surr: Bromofluorobenzene	95.0	70-130		%REC	1	4/10/2018 8:46:00 PM

<b>Qualifiers:</b>	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-003A

**Client Sample ID:** IA-2  
**Tag Number:** 422.1343  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 8:46:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 8:46:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 8:46:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 8:46:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:46:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 8:46:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 8:46:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 8:46:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 8:46:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 8:46:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 8:46:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 8:46:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 8:46:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 8:46:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 8:46:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 8:46:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 8:46:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 8:46:00 PM
Acetone	3.8	0.71		ug/m3	1	4/10/2018 8:46:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 8:46:00 PM
Benzene	0.35	0.48	J	ug/m3	1	4/10/2018 8:46:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 8:46:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 8:46:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 8:46:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 8:46:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 8:46:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 8:46:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 8:46:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 8:46:00 PM
Chloroform	2.9	0.73		ug/m3	1	4/10/2018 8:46:00 PM
Chloromethane	0.54	0.31		ug/m3	1	4/10/2018 8:46:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:46:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 8:46:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 8:46:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 8:46:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	4/10/2018 8:46:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 8:46:00 PM
Freon 11	1.0	0.84		ug/m3	1	4/10/2018 8:46:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 8:46:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 8:46:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-003A

Client Sample ID: IA-2  
 Tag Number: 422.1343  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		Analyst: RJP
Freon 12	1.7	0.74		ug/m3	1	4/10/2018 8:46:00 PM
Heptane	< 0.61	0.61		ug/m3	1	4/10/2018 8:46:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 8:46:00 PM
Hexane	< 0.53	0.53		ug/m3	1	4/10/2018 8:46:00 PM
Isopropyl alcohol	4.8	0.37		ug/m3	1	4/10/2018 8:46:00 PM
m&p-Xylene	0.43	1.3	J	ug/m3	1	4/10/2018 8:46:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 8:46:00 PM
Methyl Ethyl Ketone	0.80	0.88	J	ug/m3	1	4/10/2018 8:46:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 8:46:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 8:46:00 PM
Methylene chloride	0.97	0.52		ug/m3	1	4/10/2018 8:46:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 8:46:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 8:46:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 8:46:00 PM
Tetrachloroethylene	0.95	1.0	J	ug/m3	1	4/10/2018 8:46:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 8:46:00 PM
Toluene	1.2	0.57		ug/m3	1	4/10/2018 8:46:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 8:46:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 8:46:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:46:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 8:46:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 8:46:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 8:46:00 PM

Qualifiers: \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-004A

**Client Sample ID:** IA-3  
**Tag Number:** 365.535  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>		<b>FLD</b>		<b>Analyst:</b>		
Lab Vacuum In	-15			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		<b>Analyst: RJP</b>		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 9:29:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 9:29:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Acetone	1.9	0.30		ppbV	1	4/10/2018 9:29:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Benzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 9:29:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Chloroform	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Chloromethane	0.23	0.15		ppbV	1	4/10/2018 9:29:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 9:29:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte, Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-004A

Client Sample ID: IA-3  
 Tag Number: 365.535  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		Analyst: RJP
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Freon 11	0.14	0.15	J	ppbV	1	4/10/2018 9:29:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Freon 12	0.29	0.15		ppbV	1	4/10/2018 9:29:00 PM
Heptane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Hexane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Isopropyl alcohol	0.97	0.15		ppbV	1	4/10/2018 9:29:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	4/10/2018 9:29:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 9:29:00 PM
Methyl Ethyl Ketone	0.22	0.30	J	ppbV	1	4/10/2018 9:29:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 9:29:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Methylene chloride	0.27	0.15		ppbV	1	4/10/2018 9:29:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Toluene	0.24	0.15		ppbV	1	4/10/2018 9:29:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 9:29:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 9:29:00 PM
Surr: Bromofluorobenzene	92.0	70-130		%REC	1	4/10/2018 9:29:00 PM

Qualifiers: \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-004A

**Client Sample ID:** IA-3  
**Tag Number:** 365.535  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 9:29:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 9:29:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 9:29:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 9:29:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 9:29:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 9:29:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 9:29:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 9:29:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 9:29:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 9:29:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 9:29:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 9:29:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 9:29:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 9:29:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 9:29:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 9:29:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 9:29:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 9:29:00 PM
Acetone	4.4	0.71		ug/m3	1	4/10/2018 9:29:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 9:29:00 PM
Benzene	< 0.48	0.48		ug/m3	1	4/10/2018 9:29:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 9:29:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 9:29:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 9:29:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 9:29:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 9:29:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 9:29:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 9:29:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 9:29:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	4/10/2018 9:29:00 PM
Chloromethane	0.47	0.31		ug/m3	1	4/10/2018 9:29:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 9:29:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 9:29:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 9:29:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 9:29:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	4/10/2018 9:29:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 9:29:00 PM
Freon 11	0.79	0.84	J	ug/m3	1	4/10/2018 9:29:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 9:29:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 9:29:00 PM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-004A

**Client Sample ID:** IA-3  
**Tag Number:** 365.535  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>						Analyst: RJP
Freon 12	1.4	0.74		ug/m3	1	4/10/2018 9:29:00 PM
Heptane	< 0.61	0.61		ug/m3	1	4/10/2018 9:29:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 9:29:00 PM
Hexane	< 0.53	0.53		ug/m3	1	4/10/2018 9:29:00 PM
Isopropyl alcohol	2.4	0.37		ug/m3	1	4/10/2018 9:29:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	4/10/2018 9:29:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 9:29:00 PM
Methyl Ethyl Ketone	0.65	0.88	J	ug/m3	1	4/10/2018 9:29:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 9:29:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 9:29:00 PM
Methylene chloride	0.94	0.52		ug/m3	1	4/10/2018 9:29:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 9:29:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 9:29:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 9:29:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/10/2018 9:29:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 9:29:00 PM
Toluene	0.90	0.57		ug/m3	1	4/10/2018 9:29:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 9:29:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 9:29:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 9:29:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 9:29:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 9:29:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 9:29:00 PM

<b>Qualifiers:</b>	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-005A

Client Sample ID: IA-4  
 Tag Number: 88.711  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>						
				<b>FLD</b>		<b>Analyst:</b>
Lab Vacuum In	-7			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>						
				<b>TO-15</b>		<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 10:11:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 10:11:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Acetone	2.0	0.30		ppbV	1	4/10/2018 10:11:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Benzene	0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 10:11:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Chloroform	0.88	0.15		ppbV	1	4/10/2018 10:11:00 PM
Chloromethane	0.32	0.15		ppbV	1	4/10/2018 10:11:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 10:11:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits



**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-005A

**Client Sample ID:** IA-4  
**Tag Number:** 88.711  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		Analyst: RJP		
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Freon 11	0.22	0.15		ppbV	1	4/10/2018 10:11:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Freon 12	0.43	0.15		ppbV	1	4/10/2018 10:11:00 PM
Heptane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Hexane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Isopropyl alcohol	1.8	0.15		ppbV	1	4/10/2018 10:11:00 PM
m&p-Xylene	0.11	0.30	J	ppbV	1	4/10/2018 10:11:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 10:11:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 10:11:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 10:11:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Methylene chloride	0.22	0.15		ppbV	1	4/10/2018 10:11:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Tetrachloroethylene	0.11	0.15	J	ppbV	1	4/10/2018 10:11:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Toluene	0.72	0.15		ppbV	1	4/10/2018 10:11:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 10:11:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 10:11:00 PM
Surr: Bromofluorobenzene	88.0	70-130		%REC	1	4/10/2018 10:11:00 PM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-005A

**Client Sample ID:** 1A-4  
**Tag Number:** 88.711  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>						<b>Analyst: RJP</b>
		<b>TO-15</b>				
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 10:11:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 10:11:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 10:11:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 10:11:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:11:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 10:11:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 10:11:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 10:11:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 10:11:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 10:11:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 10:11:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 10:11:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 10:11:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 10:11:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 10:11:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 10:11:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 10:11:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 10:11:00 PM
Acetone	4.9	0.71		ug/m3	1	4/10/2018 10:11:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 10:11:00 PM
Benzene	0.48	0.48		ug/m3	1	4/10/2018 10:11:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 10:11:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 10:11:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 10:11:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 10:11:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 10:11:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 10:11:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 10:11:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 10:11:00 PM
Chloroform	4.3	0.73		ug/m3	1	4/10/2018 10:11:00 PM
Chloromethane	0.66	0.31		ug/m3	1	4/10/2018 10:11:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:11:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 10:11:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 10:11:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 10:11:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	4/10/2018 10:11:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 10:11:00 PM
Freon 11	1.2	0.84		ug/m3	1	4/10/2018 10:11:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 10:11:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 10:11:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-005A

**Client Sample ID:** IA-4  
**Tag Number:** 88.711  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		Analyst: RJP		
Freon 12	2.1	0.74		ug/m3	1	4/10/2018 10:11:00 PM
Heptane	< 0.61	0.61		ug/m3	1	4/10/2018 10:11:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 10:11:00 PM
Hexane	< 0.53	0.53		ug/m3	1	4/10/2018 10:11:00 PM
Isopropyl alcohol	4.4	0.37		ug/m3	1	4/10/2018 10:11:00 PM
m&p-Xylene	0.48	1.3	J	ug/m3	1	4/10/2018 10:11:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 10:11:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	4/10/2018 10:11:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 10:11:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 10:11:00 PM
Methylene chloride	0.76	0.52		ug/m3	1	4/10/2018 10:11:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 10:11:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 10:11:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 10:11:00 PM
Tetrachloroethylene	0.75	1.0	J	ug/m3	1	4/10/2018 10:11:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 10:11:00 PM
Toluene	2.7	0.57		ug/m3	1	4/10/2018 10:11:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 10:11:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 10:11:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:11:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 10:11:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 10:11:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 10:11:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte, Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-006A

Client Sample ID: Ambient  
 Tag Number: 207.1420  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>						
Lab Vacuum In	-12			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>						
				<b>FLD</b>		<b>Analyst:</b>
						<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 10:54:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,4-Dichlorobenzene	10	1.5		ppbV	10	4/11/2018 5:17:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 10:54:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Acetone	11	3.0		ppbV	10	4/11/2018 5:17:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Benzene	0.13	0.15	J	ppbV	1	4/10/2018 10:54:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 10:54:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Chloroform	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Chloromethane	0.28	0.15		ppbV	1	4/10/2018 10:54:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 10:54:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Ethyl acetate	0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM

Qualifiers: \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-006A

**Client Sample ID:** Ambient  
**Tag Number:** 207.1420  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Freon 11	0.20	0.15		ppbV	1	4/10/2018 10:54:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Freon 12	0.30	0.15		ppbV	1	4/10/2018 10:54:00 PM
Heptane	0.47	0.15		ppbV	1	4/10/2018 10:54:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Hexane	0.23	0.15		ppbV	1	4/10/2018 10:54:00 PM
Isopropyl alcohol	1.8	0.15		ppbV	1	4/10/2018 10:54:00 PM
m&p-Xylene	0.21	0.30	J	ppbV	1	4/10/2018 10:54:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 10:54:00 PM
Methyl Ethyl Ketone	0.44	0.30		ppbV	1	4/10/2018 10:54:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 10:54:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Methylene chloride	0.28	0.15		ppbV	1	4/10/2018 10:54:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Toluene	0.90	0.15		ppbV	1	4/10/2018 10:54:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 10:54:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 10:54:00 PM
Surr: Bromofluorobenzene	90.0	70-130		%REC	1	4/10/2018 10:54:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-006A

**Client Sample ID:** Ambient  
**Tag Number:** 207.1420  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>			<b>TO-15</b>			<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 10:54:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 10:54:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 10:54:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 10:54:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:54:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 10:54:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 10:54:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 10:54:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 10:54:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 10:54:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 10:54:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 10:54:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 10:54:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 10:54:00 PM
1,4-Dichlorobenzene	62	9.0		ug/m3	10	4/11/2018 5:17:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 10:54:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 10:54:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 10:54:00 PM
Acetone	26	7.1		ug/m3	10	4/11/2018 5:17:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 10:54:00 PM
Benzene	0.42	0.48	J	ug/m3	1	4/10/2018 10:54:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 10:54:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 10:54:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 10:54:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 10:54:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 10:54:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 10:54:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 10:54:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 10:54:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	4/10/2018 10:54:00 PM
Chloromethane	0.58	0.31		ug/m3	1	4/10/2018 10:54:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:54:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 10:54:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 10:54:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 10:54:00 PM
Ethyl acetate	0.54	0.54		ug/m3	1	4/10/2018 10:54:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 10:54:00 PM
Freon 11	1.1	0.84		ug/m3	1	4/10/2018 10:54:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 10:54:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 10:54:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 , Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-006A

Client Sample ID: Ambient  
 Tag Number: 207.1420  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>						Analyst: RJP
Freon 12	1.5	0.74		ug/m3	1	4/10/2018 10:54:00 PM
Heptane	1.9	0.61		ug/m3	1	4/10/2018 10:54:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 10:54:00 PM
Hexane	0.81	0.53		ug/m3	1	4/10/2018 10:54:00 PM
Isopropyl alcohol	4.5	0.37		ug/m3	1	4/10/2018 10:54:00 PM
m&p-Xylene	0.91	1.3	J	ug/m3	1	4/10/2018 10:54:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 10:54:00 PM
Methyl Ethyl Ketone	1.3	0.88		ug/m3	1	4/10/2018 10:54:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 10:54:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 10:54:00 PM
Methylene chloride	0.97	0.52		ug/m3	1	4/10/2018 10:54:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 10:54:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 10:54:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 10:54:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/10/2018 10:54:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 10:54:00 PM
Toluene	3.4	0.57		ug/m3	1	4/10/2018 10:54:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 10:54:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 10:54:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:54:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 10:54:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 10:54:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 10:54:00 PM

Qualifiers: \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte, Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-007A

Client Sample ID: Effluent  
 Tag Number: 243  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>						
Lab Vacuum In	-1			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE TO-15</b>						
Analyst: RJP						
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/11/2018 7:12:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,2,4-Trimethylbenzene	0.41	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,3,5-Trimethylbenzene	0.17	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,4-Dichlorobenzene	0.10	0.15	J	ppbV	1	4/11/2018 7:12:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/11/2018 7:12:00 AM
2,2,4-trimethylpentane	1.2	0.15		ppbV	1	4/11/2018 7:12:00 AM
4-ethyltoluene	0.12	0.15	J	ppbV	1	4/11/2018 7:12:00 AM
Acetone	4.4	3.0		ppbV	10	4/10/2018 11:31:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Benzene	1.2	0.15		ppbV	1	4/11/2018 7:12:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Bromoform	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/11/2018 7:12:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Chloroform	1.3	0.15		ppbV	1	4/11/2018 7:12:00 AM
Chloromethane	0.11	0.15	J	ppbV	1	4/11/2018 7:12:00 AM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/11/2018 7:12:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Cyclohexane	0.39	0.15		ppbV	1	4/11/2018 7:12:00 AM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM

Qualifiers: \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits



**Centek Laboratories, LLC**

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-007A

Client Sample ID: Effluent  
 Tag Number: 243  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		Analyst: RJP		
Ethylbenzene	0.27	0.15		ppbV	1	4/11/2018 7:12:00 AM
Freon 11	0.22	0.15		ppbV	1	4/11/2018 7:12:00 AM
Freon 113	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Freon 114	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Freon 12	0.42	0.15		ppbV	1	4/11/2018 7:12:00 AM
Heptane	1.7	0.15		ppbV	1	4/11/2018 7:12:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Hexane	1.6	0.15		ppbV	1	4/11/2018 7:12:00 AM
Isopropyl alcohol	6.1	1.5		ppbV	10	4/10/2018 11:31:00 PM
m&p-Xylene	0.72	0.30		ppbV	1	4/11/2018 7:12:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/11/2018 7:12:00 AM
Methyl Ethyl Ketone	0.47	0.30		ppbV	1	4/11/2018 7:12:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/11/2018 7:12:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Methylene chloride	0.22	0.15		ppbV	1	4/11/2018 7:12:00 AM
o-Xylene	0.23	0.15		ppbV	1	4/11/2018 7:12:00 AM
Propylene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Styrene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Tetrachloroethylene	580	40		ppbV	270	4/11/2018 7:49:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Toluene	0.70	0.15		ppbV	1	4/11/2018 7:12:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Trichloroethene	< 0.030	0.030		ppbV	1	4/11/2018 7:12:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/11/2018 7:12:00 AM
Surr: Bromofluorobenzene	98.0	70-130		%REC	1	4/11/2018 7:12:00 AM

Qualifiers: \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-007A

**Client Sample ID:** Effluent  
**Tag Number:** 243  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/11/2018 7:12:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/11/2018 7:12:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/11/2018 7:12:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/11/2018 7:12:00 AM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/11/2018 7:12:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/11/2018 7:12:00 AM
1,2,4-Trimethylbenzene	2.0	0.74		ug/m3	1	4/11/2018 7:12:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/11/2018 7:12:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/11/2018 7:12:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/11/2018 7:12:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/11/2018 7:12:00 AM
1,3,5-Trimethylbenzene	0.84	0.74		ug/m3	1	4/11/2018 7:12:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/11/2018 7:12:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/11/2018 7:12:00 AM
1,4-Dichlorobenzene	0.60	0.90	J	ug/m3	1	4/11/2018 7:12:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/11/2018 7:12:00 AM
2,2,4-trimethylpentane	5.6	0.70		ug/m3	1	4/11/2018 7:12:00 AM
4-ethyltoluene	0.69	0.74	J	ug/m3	1	4/11/2018 7:12:00 AM
Acetone	10	7.1		ug/m3	10	4/10/2018 11:31:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/11/2018 7:12:00 AM
Benzene	3.9	0.48		ug/m3	1	4/11/2018 7:12:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/11/2018 7:12:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/11/2018 7:12:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	4/11/2018 7:12:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	4/11/2018 7:12:00 AM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/11/2018 7:12:00 AM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/11/2018 7:12:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/11/2018 7:12:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/11/2018 7:12:00 AM
Chloroform	6.4	0.73		ug/m3	1	4/11/2018 7:12:00 AM
Chloromethane	0.23	0.31	J	ug/m3	1	4/11/2018 7:12:00 AM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/11/2018 7:12:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/11/2018 7:12:00 AM
Cyclohexane	1.3	0.52		ug/m3	1	4/11/2018 7:12:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/11/2018 7:12:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	4/11/2018 7:12:00 AM
Ethylbenzene	1.2	0.65		ug/m3	1	4/11/2018 7:12:00 AM
Freon 11	1.2	0.84		ug/m3	1	4/11/2018 7:12:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	4/11/2018 7:12:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	4/11/2018 7:12:00 AM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-007A

**Client Sample ID:** Effluent  
**Tag Number:** 243  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		Analyst: RJP		
Freon 12	2.1	0.74		ug/m3	1	4/11/2018 7:12:00 AM
Heptane	7.0	0.61		ug/m3	1	4/11/2018 7:12:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/11/2018 7:12:00 AM
Hexane	5.5	0.53		ug/m3	1	4/11/2018 7:12:00 AM
Isopropyl alcohol	15	3.7		ug/m3	10	4/10/2018 11:31:00 PM
m&p-Xylene	3.1	1.3		ug/m3	1	4/11/2018 7:12:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/11/2018 7:12:00 AM
Methyl Ethyl Ketone	1.4	0.88		ug/m3	1	4/11/2018 7:12:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/11/2018 7:12:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/11/2018 7:12:00 AM
Methylene chloride	0.76	0.52		ug/m3	1	4/11/2018 7:12:00 AM
o-Xylene	1.0	0.65		ug/m3	1	4/11/2018 7:12:00 AM
Propylene	< 0.26	0.26		ug/m3	1	4/11/2018 7:12:00 AM
Styrene	< 0.64	0.64		ug/m3	1	4/11/2018 7:12:00 AM
Tetrachloroethylene	3900	270		ug/m3	270	4/11/2018 7:49:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/11/2018 7:12:00 AM
Toluene	2.6	0.57		ug/m3	1	4/11/2018 7:12:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/11/2018 7:12:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/11/2018 7:12:00 AM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/11/2018 7:12:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/11/2018 7:12:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/11/2018 7:12:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/11/2018 7:12:00 AM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**GC/MS VOLATILES-WHOLE AIR**

**METHOD TO-15**

**QUALITY CONTROL SUMMARY**

Date: 26-Apr-18



**CEN TEK LABORATORIES, LLC**

**QC SUMMARY REPORT  
SURROGATE RECOVERIES**

**CLIENT:** FPM Group, Ltd.  
**Work Order:** C1804013  
**Project:** Cinderella  
**Test No:** TO-15 **Matrix:** A

Sample ID	BR4FBZ							
ALCS1UG-041018	97.0							
ALCS1UGD-041017	105							
AMB1UG-041018	88.0							
C1804013-001A	95.0							
C1804013-002A	95.0							
C1804013-003A	95.0							
C1804013-004A	92.0							
C1804013-005A	88.0							
C1804013-006A	90.0							
C1804013-007A	98.0							

Acronym	Surrogate	QC Limits
BR4FBZ	= Bromofluorobenzene	70-130

\* Surrogate recovery outside acceptance limits

Centek Laboratories, LLC

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AP041004.D

Tune Time : 10 Apr 2018 11:52 am

Daily Calibration File : C:\HPCHEM\1\DATA\AP041004.D

File	Sample	DL	Surrogate Recovery %	(IS1) 36302	(IS2) 178220	(IS3) 142901
AP041005.D	ALCSIUG-041018		97	35510	180352	145756
AP041006.D	AMBIUG-041018		88	32801	165465	130691
AP041013.D	C1804013-001A		95	35996	177714	139646
AP041014.D	C1804013-002A		95	40213	184462	147579
AP041015.D	C1804013-003A		95	38633	183337	142274
AP041016.D	C1804013-004A		92	36136	176219	137555
AP041017.D	C1804013-005A		88	37097	182265	144466
AP041018.D	C1804013-006A		90	38145	184139	147587
AP041019.D	C1804013-007A 10X		91	35691	179443	150277
AP041022.D	ALCSIUGD-041017		105	41170	196782	153210
AP041023.D	C1804013-001A 10X		90	37157	178195	132786
AP041024.D	C1804013-001A 40X		85	37989	175563	130622
AP041025.D	C1804013-002A 10X		88	37295	172669	131854
AP041026.D	C1804013-002A 40X		87	36733	170002	126293
AP041028.D	C1804013-006A 10X		84	36370	171207	130400
AP041031.D	C1804013-007A		98	38780	186480	183812
AP041032.D	C1804013-007A 270x		83	38056	182345	157472

t - fails 24hr time check \* - fails criteria

Created: Thu Apr 26 08:59:02 2018 MSD #1/

Date: 26-Apr-18

**CEN TEK LABORATORIES, LLC**

**ANALYTICAL QC SUMMARY REPORT**

**CLIENT:** FPM Group, Ltd.  
**Work Order:** C1804013  
**Project:** Cinderella

**TestCode:** 0.20\_NYS

Sample ID: AMB1UG-041018	Sample Type: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 13517
Client ID: ZZZZ	Batch ID: R13517	TestNo: TO-15		Analysis Date: 4/10/2018	SeqNo: 155542

Analyte	Result	PQL	SPK value	SPK Ref Val	Units: ppbV	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15										
1,1,2,2-Tetrachloroethane	< 0.15	0.15										
1,1,2-Trichloroethane	< 0.15	0.15										
1,1-Dichloroethane	< 0.15	0.15										
1,1-Dichloroethene	< 0.040	0.040										
1,2,4-Trichlorobenzene	< 0.15	0.15										
1,2,4-Trimethylbenzene	< 0.15	0.15										
1,2-Dibromoethane	< 0.15	0.15										
1,2-Dichlorobenzene	< 0.15	0.15										
1,2-Dichloroethane	< 0.15	0.15										
1,2-Dichloropropane	< 0.15	0.15										
1,3,5-Trimethylbenzene	< 0.15	0.15										
1,3-butadiene	< 0.15	0.15										
1,3-Dichlorobenzene	< 0.15	0.15										
1,4-Dichlorobenzene	< 0.15	0.15										
1,4-Dioxane	< 0.30	0.30										
2,2,4-trimethylpentane	< 0.15	0.15										
4-ethyltoluene	< 0.15	0.15										
Acetone	< 0.30	0.30										
Allyl chloride	< 0.15	0.15										
Benzene	< 0.15	0.15										
Benzyl chloride	< 0.15	0.15										
Bromodichloromethane	< 0.15	0.15										
Bromoform	< 0.15	0.15										
Bromomethane	< 0.15	0.15										

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: FPM Group, Ltd.  
 Work Order: C1804013  
 Project: Cinderella

TestCode: 0.20\_NYS

Sample ID: AMB1UG-041018	Sample Type: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 13517		
Client ID: ZZZZZ	Batch ID: R13517	TestNo: TO-15	%REC	Analysis Date: 4/10/2018	SeqNo: 156542		
Analyte	Result	PQL	SPK value	SPK Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.030	0.030									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.040	0.040									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									
Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									
Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									

**Qualifiers:**

- Results reported are not blank corrected
- J Analyte detected below quantitation limit
- S Spike Recovery outside accepted recovery limits
- E Estimated Value above quantitation range
- ND Not Detected at the Limit of Detection
- H Holding times for preparation or analysis exceeded
- K RPD outside accepted recovery limits



**CLIENT:** FPM Group, Ltd.  
**Work Order:** C1804013  
**Project:** Cinderella

**TestCode:** 0.20\_NYS

Sample ID: AMB1UG-041018	Sample Type: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 13517						
Client ID: ZZZZ	Batch ID: R13517	TestNo: TO-15		Analysis Date: 4/10/2018	SeqNo: 156542						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropene	< 0.15	0.15									
Trichloroethene	< 0.030	0.030									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.040	0.040									

**Qualifiers:**

- J Results reported are not blank corrected
- J Analytic detected below quantitation limit
- S Spike Recovery outside accepted recovery limits
- E Estimated Value above quantitation range
- ND Not Detected at the Limit of Detection
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits



**CENTEK LABORATORIES, LLC**

Date: 26-Apr-18

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: FPM Group, Ltd.

Work Order: C1804013

Project: Cinderella

TestCode: 0.20\_NYS

Sample ID: ALCS1UG-041018	Batch ID: R13517	SampType: LCS	TestCode: 0.20_NYS	Units: ppbv	Prep Date:	RunNo: 13517
Client ID: ZZZZ	Batch ID: R13517		TestNo: TO-15		Analysis Date: 4/10/2018	SeqNo: 155543

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.9500	0.15	1	0	95.0	70	130				
1,1,2,2-Tetrachloroethane	1.050	0.15	1	0	105	70	130				
1,1,2-Trichloroethane	1.090	0.15	1	0	109	70	130				
1,1-Dichloroethane	0.9700	0.15	1	0	97.0	70	130				
1,1-Dichloroethene	1.250	0.040	1	0	125	70	130				
1,2,4-Trichlorobenzene	1.250	0.15	1	0	125	70	130				
1,2,4-Trimethylbenzene	1.090	0.15	1	0	109	70	130				
1,2-Dibromoethane	1.030	0.15	1	0	103	70	130				
1,2-Dichlorobenzene	1.190	0.15	1	0	119	70	130				
1,2-Dichloroethane	1.030	0.15	1	0	103	70	130				
1,2-Dichloropropane	0.9400	0.15	1	0	94.0	70	130				
1,3,5-Trimethylbenzene	1.100	0.15	1	0	110	70	130				
1,3-butadiene	0.8700	0.15	1	0	87.0	70	130				
1,3-Dichlorobenzene	1.170	0.15	1	0	117	70	130				
1,4-Dichlorobenzene	1.190	0.15	1	0	119	70	130				
1,4-Dioxane	1.050	0.30	1	0	105	70	130				
2,2,4-trimethylpentane	0.8900	0.15	1	0	89.0	70	130				
4-ethyltoluene	1.130	0.15	1	0	113	70	130				
Acetone	0.8400	0.30	1	0	84.0	70	130				
Allyl chloride	0.7700	0.15	1	0	77.0	70	130				
Benzene	1.040	0.15	1	0	104	70	130				
Benzyl chloride	0.8600	0.15	1	0	86.0	70	130				
Bromodichloromethane	0.9800	0.15	1	0	98.0	70	130				
Bromoform	0.9500	0.15	1	0	95.0	70	130				
Bromomethane	1.140	0.15	1	0	114	70	130				

**Qualifiers:**

- Results reported are not blank corrected
- J Analyte detected below quantitation limit
- S Spike Recovery outside accepted recovery limits
- E Estimated Value above quantitation range
- ND Not Detected at the Limit of Detection
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

**CLIENT:** FPM Group, Ltd.  
**Work Order:** C1804013  
**Project:** Cinderella

**TestCode:** 0.20\_NYS

Sample ID: ALCSTUG-041018    SampType: LCS    TestCode: 0.20\_NYS    Units: ppbv    Prep Date:    RunNo: 13517  
 Client ID: ZZZZZ    Batch ID: R13517    TestNo: TO-15    Analysis Date: 4/10/2018    SeqNo: 156543

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	1.070	0.15	1	0	107	70	130				
Carbon tetrachloride	0.7600	0.030	1	0	76.0	70	130				
Chlorobenzene	1.120	0.15	1	0	112	70	130				
Chloroethane	1.050	0.15	1	0	105	70	130				
Chloroform	1.070	0.15	1	0	107	70	130				
Chloromethane	0.9500	0.15	1	0	95.0	70	130				
cis-1,2-Dichloroethene	0.9100	0.040	1	0	91.0	70	130				
cis-1,3-Dichloropropene	0.8800	0.15	1	0	88.0	70	130				
Cyclohexane	0.8800	0.15	1	0	88.0	70	130				
Dibromochloromethane	0.9300	0.15	1	0	93.0	70	130				
Ethyl acetate	0.7800	0.15	1	0	78.0	70	130				
Ethylbenzene	1.030	0.15	1	0	103	70	130				
Freon 11	1.220	0.15	1	0	122	70	130				
Freon 113	1.220	0.15	1	0	122	70	130				
Freon 114	1.130	0.15	1	0	113	70	130				
Freon 12	1.080	0.15	1	0	108	70	130				
Heptane	0.7400	0.15	1	0	74.0	70	130				
Hexachloro-1,3-butadiene	1.260	0.15	1	0	126	70	130				
Hexane	0.8500	0.15	1	0	85.0	70	130				
Isopropyl alcohol	0.9600	0.15	1	0	96.0	70	130				
m&p-Xylene	2.150	0.30	2	0	108	70	130				
Methyl Butyl Ketone	0.6500	0.30	1	0	65.0	70	130				
Methyl Ethyl Ketone	1.050	0.30	1	0	105	70	130				
Methyl Isobutyl Ketone	0.7200	0.30	1	0	72.0	70	130				
Methyl tert-butyl ether	0.9500	0.15	1	0	95.0	70	130				
Methylene chloride	0.9400	0.15	1	0	94.0	70	130				
o-Xylene	1.110	0.15	1	0	111	70	130				
Propylene	0.7300	0.15	1	0	73.0	70	130				
Styrene	1.080	0.15	1	0	108	70	130				
Tetrachloroethylene	1.120	0.15	1	0	112	70	130				
Tetrahydrofuran	0.7300	0.15	1	0	73.0	70	130				

**Qualifiers:**    Results reported are not blank corrected    E    Estimated Value above quantitation range    H    Holding times for preparation or analysis exceeded  
 J    Analyte detected below quantitation limit    ND    Not Detected at the Limit of Detection    R    RPD outside accepted recovery limits  
 S    Spike Recovery outside accepted recovery limits

CLIENT: FPM Group, Ltd.  
 Work Order: C1804013  
 Project: Cinderella

TestCode: 0.20\_NYS

Sample ID: ALCSTUG-041018    SampType: LCS    TestCode: 0.20\_NYS    Units: ppbV    Prep Date:    RunNo: 13517  
 Client ID: ZZZZZ    Batch ID: R13517    TestNo: TO-15    Analysis Date: 4/10/2018    SeqNo: 156543

Analyte	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	0.15	1	0	106	70	130				
trans-1,2-Dichloroethene	0.15	1	0	99.0	70	130				
trans-1,3-Dichloropropene	0.15	1	0	72.0	70	130				
Trichloroethene	0.030	1	0	110	70	130				
Vinyl acetate	0.15	1	0	72.0	70	130				
Vinyl Bromide	0.15	1	0	119	70	130				
Vinyl chloride	0.040	1	0	95.0	70	130				

Sample ID: ALCSTUGD-041017    SampType: LCSD    TestCode: 0.20\_NYS    Units: ppbV    Prep Date:    RunNo: 13517  
 Client ID: ZZZZZ    Batch ID: R13517    TestNo: TO-15    Analysis Date: 4/11/2018    SeqNo: 156544

Analyte	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.15	1	0	92.0	70	130	0.95	3.21	30	
1,1,1,2-Tetrachloroethane	0.15	1	0	123	70	130	1.05	15.8	30	
1,1,2-Trichloroethane	0.15	1	0	119	70	130	1.09	8.77	30	
1,1-Dichloroethane	0.15	1	0	97.0	70	130	0.97	0	30	
1,1-Dichloroethene	0.040	1	0	93.0	70	130	1.25	29.4	30	
1,2,4-Trichlorobenzene	0.15	1	0	111	70	130	1.25	11.9	30	
1,2,4-Trimethylbenzene	0.15	1	0	116	70	130	1.09	6.22	30	
1,2-Dibromoethane	0.15	1	0	112	70	130	1.03	8.37	30	
1,2-Dichlorobenzene	0.15	1	0	129	70	130	1.19	8.06	30	
1,2-Dichloroethane	0.15	1	0	97.0	70	130	1.03	6.00	30	
1,2-Dichloropropane	0.15	1	0	102	70	130	0.94	8.16	30	
1,3,5-Trimethylbenzene	0.15	1	0	123	70	130	1.1	11.2	30	
1,3-butadiene	0.15	1	0	79.0	70	130	0.87	9.64	30	
1,3-Dichlorobenzene	0.15	1	0	125	70	130	1.17	6.61	30	
1,4-Dichlorobenzene	0.15	1	0	124	70	130	1.19	4.12	30	
1,4-Dioxane	0.30	1	0	100	70	130	1.05	4.88	30	
2,2,4-trimethylpentane	0.15	1	0	94.0	70	130	0.89	5.46	30	
4-ethyltoluene	0.15	1	0	119	70	130	1.13	5.17	30	

Qualifiers:    Results reported are not blank corrected    E    Estimated Value above quantitation range    H    Holding times for preparation or analysis exceeded  
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 S    Spike Recovery outside accepted recovery limits

CLIENT: FPM Group, Ltd.  
 Work Order: C1804013  
 Project: Cinderella

TestCode: 0.20\_NYS

Sample ID: ALCS1UGD-041017	SampType: LCSD	TestCode: 0.20_NYS	Units: ppbv	Prep Date:	RunNo: 13517						
Client ID: ZZZZ	Batch ID: R13517	TestNo: TO-15		Analysis Date: 4/11/2018	SeqNo: 156544						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	0.7700	0.30	1	0	77.0	70	130	0.84	8.70	30	
Allyl chloride	0.7300	0.15	1	0	73.0	70	130	0.77	5.33	30	
Benzene	1.130	0.15	1	0	113	70	130	1.04	8.29	30	
Benzyl chloride	0.8300	0.15	1	0	83.0	70	130	0.86	3.55	30	
Bromodichloromethane	1.040	0.15	1	0	104	70	130	0.98	5.94	30	
Bromoform	1.010	0.15	1	0	101	70	130	0.95	6.12	30	
Bromomethane	1.070	0.15	1	0	107	70	130	1.14	6.33	30	
Carbon disulfide	1.060	0.15	1	0	106	70	130	1.07	0.939	30	
Carbon tetrachloride	0.7600	0.030	1	0	76.0	70	130	0.76	0	30	
Chlorobenzene	1.200	0.15	1	0	120	70	130	1.12	6.90	30	
Chloroethane	0.9800	0.15	1	0	98.0	70	130	1.05	6.90	30	
Chloroform	1.070	0.15	1	0	107	70	130	1.07	0	30	
Chloromethane	0.8900	0.15	1	0	89.0	70	130	0.95	6.52	30	
cis-1,2-Dichloroethene	0.8700	0.040	1	0	87.0	70	130	0.91	4.49	30	
cis-1,3-Dichloropropene	0.8900	0.15	1	0	89.0	70	130	0.88	1.13	30	
Cyclohexane	0.9000	0.15	1	0	90.0	70	130	0.88	2.25	30	
Dibromochloromethane	1.040	0.15	1	0	104	70	130	0.93	11.2	30	
Ethyl acetate	0.7500	0.15	1	0	75.0	70	130	0.78	3.92	30	
Ethylbenzene	1.100	0.15	1	0	110	70	130	1.03	6.57	30	
Freon 11	1.100	0.15	1	0	110	70	130	1.22	10.3	30	
Freon 113	1.220	0.15	1	0	122	70	130	1.22	0	30	
Freon 114	1.080	0.15	1	0	108	70	130	1.13	4.52	30	
Freon 12	1.090	0.15	1	0	109	70	130	1.08	0.922	30	
Heptane	0.7400	0.15	1	0	74.0	70	130	0.74	0	30	
Hexachloro-1,3-butadiene	1.270	0.15	1	0	127	70	130	1.26	0.791	30	
Hexane	0.8500	0.15	1	0	85.0	70	130	0.85	0	30	
isopropyl alcohol	0.9200	0.15	1	0	92.0	70	130	0.96	4.26	30	
m&p-Xylene	2.320	0.30	2	0	116	70	130	2.15	7.61	30	
Methyl Butyl Ketone	0.5800	0.30	1	0	58.0	70	130	0.65	11.4	30	S
Methyl Ethyl Ketone	1.060	0.30	1	0	106	70	130	1.05	0.948	30	
Methyl Isobutyl Ketone	0.6600	0.30	1	0	66.0	70	130	0.72	8.70	30	S

Qualifiers: . Results reported are not blank corrected  
 J Analyte detected below quantitation limit  
 S Spike Recovery outside accepted recovery limits  
 E Estimated Value above quantitation range  
 ND Not Detected at the Limit of Detection  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits

CLIENT: FPM Group, Ltd.  
 Work Order: C1804013  
 Project: Cinderella

TestCode: 0.20\_NYS

Sample ID: ALCS1UGD-041017	Batch ID: R13517	Sample Type: LCSD	TestCode: 0.20_NYS	Units: ppbv	Prep Date:	RunNo: 13517					
Client ID: ZZZZ	Batch ID: TO-15		TestNo: TO-15		Analysis Date: 4/11/2018	SeqNo: 156544					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.8400	0.15	1	0	84.0	70	130	0.95	12.3	30	
Methylene chloride	0.9100	0.15	1	0	91.0	70	130	0.94	3.24	30	
o-Xylene	1.230	0.15	1	0	123	70	130	1.11	10.3	30	
Propylene	0.7300	0.15	1	0	73.0	70	130	0.73	0	30	
Styrene	1.180	0.15	1	0	118	70	130	1.08	8.85	30	
Tetrachloroethylene	1.240	0.15	1	0	124	70	130	1.12	10.2	30	
Tetrahydrofuran	0.7300	0.15	1	0	73.0	70	130	0.73	0	30	
Toluene	1.120	0.15	1	0	112	70	130	1.06	5.50	30	
trans-1,2-Dichloroethene	0.9400	0.15	1	0	94.0	70	130	0.99	5.18	30	
trans-1,3-Dichloropropene	0.7500	0.15	1	0	75.0	70	130	0.72	4.08	30	
Trichloroethene	1.130	0.030	1	0	113	70	130	1.1	2.69	30	
Vinyl acetate	0.6700	0.15	1	0	67.0	70	130	0.72	7.19	30	S
Vinyl Bromide	1.110	0.15	1	0	111	70	130	1.19	6.96	30	
Vinyl chloride	0.9200	0.040	1	0	92.0	70	130	0.95	3.21	30	

Qualifiers: - Results reported are not blank corrected  
 J Analyte detected below quantitation limit  
 S Spike Recovery outside accepted recovery limits  
 E Estimated Value above quantitation range  
 ND Not Detected at the Limit of Detection  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits

Method TO-15  
Units=ppb

1ug/m3 Detection Limit  
October 2017

Centek Laboratories  
IDL Study

Compound	Amt	IDL #1	IDL #2	IDL #3	IDL #4	IDL #5	IDL #8	IDL #9	AVG	StdDev	%Rec	IDL
Propylene	0.3	0.33	0.33	0.32	0.32	0.37	0.33	0.33	0.33	0.02	111.0%	0.054
Freon 12	0.3	0.35	0.35	0.35	0.36	0.35	0.32	0.36	0.35	0.01	116.2%	0.042
Chloromethane	0.3	0.34	0.35	0.34	0.33	0.36	0.34	0.33	0.34	0.02	112.4%	0.059
Freon 114	0.3	0.33	0.32	0.35	0.37	0.37	0.32	0.33	0.35	0.02	117.1%	0.056
Vinyl Chloride	0.3	0.35	0.34	0.37	0.35	0.34	0.32	0.32	0.33	0.01	111.0%	0.043
Butane	0.3	0.3	0.38	0.34	0.35	0.36	0.29	0.31	0.33	0.03	111.0%	0.105
1,3-butadiene	0.3	0.35	0.36	0.39	0.38	0.37	0.35	0.36	0.37	0.02	121.9%	0.048
Bromomethane	0.3	0.36	0.33	0.35	0.38	0.41	0.36	0.34	0.36	0.03	120.5%	0.084
Chloroethane	0.3	0.44	0.3	0.34	0.32	0.4	0.34	0.35	0.36	0.05	118.6%	0.152
Ethanol	0.3	0.36	0.35	0.34	0.36	0.37	0.36	0.35	0.36	0.01	118.6%	0.031
Acrolein	0.3	0.35	0.35	0.38	0.36	0.37	0.34	0.35	0.36	0.01	118.0%	0.043
Vinyl Bromide	0.3	0.35	0.34	0.36	0.36	0.37	0.33	0.35	0.35	0.01	116.7%	0.041
Freon 11	0.3	0.34	0.34	0.39	0.37	0.32	0.35	0.29	0.34	0.03	114.3%	0.102
Acetone	0.3	0.38	0.35	0.36	0.35	0.35	0.3	0.38	0.35	0.02	117.1%	0.078
Pentane	0.3	0.36	0.35	0.37	0.4	0.39	0.32	0.36	0.36	0.03	121.0%	0.085
Isopropyl alcohol	0.3	0.37	0.3	0.32	0.37	0.32	0.28	0.31	0.32	0.03	108.1%	0.107
1,1-dichloroethene	0.3	0.33	0.3	0.32	0.32	0.32	0.31	0.31	0.32	0.01	105.2%	0.031
Freon 113	0.3	0.33	0.3	0.32	0.33	0.33	0.24	0.3	0.30	0.03	101.4%	0.097
1-Butyl alcohol	0.3	0.35	0.34	0.35	0.35	0.35	0.33	0.31	0.34	0.02	113.3%	0.048
Methylene chloride	0.3	0.35	0.3	0.32	0.31	0.32	0.32	0.31	0.32	0.02	106.2%	0.049
Allyl chloride	0.3	0.33	0.32	0.31	0.34	0.33	0.32	0.32	0.32	0.01	108.1%	0.031
Carbon disulfide	0.3	0.31	0.3	0.33	0.31	0.32	0.31	0.3	0.31	0.01	103.8%	0.034
trans-1,2-dichloroethene	0.3	0.31	0.3	0.32	0.32	0.33	0.3	0.31	0.31	0.01	104.3%	0.035
methyl tert-butyl ether	0.3	0.32	0.31	0.28	0.32	0.32	0.31	0.31	0.31	0.01	103.8%	0.034
1,1-dichloroethane	0.3	0.32	0.32	0.29	0.33	0.32	0.32	0.32	0.32	0.01	105.7%	0.039
Vinyl acetate	0.3	0.31	0.31	0.34	0.31	0.32	0.28	0.31	0.31	0.02	104.6%	0.060
Methyl Ethyl Ketone	0.3	0.32	0.31	0.28	0.31	0.32	0.3	0.31	0.31	0.01	102.4%	0.043
cis-1,2-dichloroethene	0.3	0.31	0.31	0.25	0.32	0.33	0.31	0.31	0.31	0.03	101.9%	0.081
Hexane	0.3	0.26	0.32	0.32	0.33	0.33	0.29	0.31	0.31	0.02	103.8%	0.061
Ethyl acetate	0.3	0.31	0.31	0.32	0.3	0.33	0.31	0.32	0.31	0.01	104.8%	0.031
Chloroform	0.3	0.33	0.3	0.3	0.33	0.3	0.3	0.32	0.31	0.01	103.8%	0.046
Tetrahydrofuran	0.3	0.31	0.32	0.33	0.3	0.33	0.31	0.32	0.32	0.01	105.7%	0.035
1,2-dichloroethane	0.3	0.33	0.32	0.33	0.34	0.34	0.31	0.33	0.33	0.01	109.5%	0.034
1,1,1-trichloroethane	0.3	0.31	0.32	0.34	0.33	0.31	0.3	0.33	0.32	0.02	105.7%	0.050
Cyclohexane	0.3	0.32	0.31	0.32	0.32	0.33	0.29	0.33	0.32	0.01	105.7%	0.043
Carbon tetrachloride	0.3	0.31	0.32	0.32	0.33	0.32	0.3	0.32	0.32	0.01	105.7%	0.030
Benzene	0.3	0.3	0.32	0.32	0.33	0.32	0.3	0.32	0.32	0.01	105.2%	0.040
Methyl methacrylate	0.3	0.3	0.32	0.31	0.33	0.33	0.3	0.32	0.32	0.01	105.2%	0.040

Confidential

Centek Laboratories IDL Study	µg/m <sup>3</sup> Detection Limit October 2017										Method TO-15 Units=ppb		
	0.3	0.28	0.29	0.31	0.32	0.32	0.31	0.24	0.26	0.29		0.03	
1,4-dioxane	0.3	0.32	0.31	0.31	0.32	0.32	0.31	0.24	0.26	0.29	0.03	96.2%	0.097
2,2,4-trimethylpentane	0.3	0.32	0.31	0.31	0.28	0.31	0.31	0.31	0.31	0.31	0.01	102.4%	0.039
Heptane	0.3	0.32	0.3	0.3	0.33	0.33	0.3	0.3	0.31	0.31	0.01	104.3%	0.043
Trichloroethene	0.3	0.3	0.3	0.29	0.28	0.3	0.3	0.3	0.28	0.29	0.01	97.6%	0.030
1,2-dichloropropane	0.3	0.32	0.31	0.31	0.35	0.31	0.31	0.31	0.32	0.32	0.01	106.2%	0.046
Bromodichloromethane	0.3	0.32	0.33	0.33	0.34	0.33	0.32	0.32	0.31	0.33	0.01	106.8%	0.031
cis-1,3-dichloropropene	0.3	0.31	0.32	0.31	0.34	0.32	0.31	0.31	0.32	0.32	0.01	106.2%	0.034
trans-1,3-dichloropropene	0.3	0.31	0.33	0.33	0.33	0.33	0.31	0.31	0.32	0.32	0.01	107.6%	0.030
1,1,2-trichloroethane	0.3	0.32	0.34	0.33	0.32	0.33	0.3	0.3	0.32	0.32	0.01	107.6%	0.039
Toluene	0.3	0.32	0.31	0.32	0.32	0.32	0.31	0.31	0.32	0.31	0.01	107.6%	0.039
Methyl isobutyl Ketone	0.3	0.32	0.29	0.28	0.31	0.31	0.31	0.31	0.29	0.31	0.01	104.3%	0.035
Dibromochloromethane	0.3	0.32	0.32	0.32	0.32	0.32	0.32	0.31	0.32	0.32	0.01	90.0%	0.130
Methyl Butyl Ketone	0.3	0.23	0.25	0.26	0.29	0.29	0.28	0.2	0.2	0.25	0.01	105.7%	0.030
1,2-dibromoethane	0.3	0.32	0.31	0.32	0.32	0.32	0.29	0.2	0.2	0.25	0.04	81.9%	0.119
Tetrachloroethylene	0.3	0.31	0.3	0.32	0.31	0.31	0.29	0.29	0.3	0.31	0.01	103.8%	0.038
Chlorobenzene	0.3	0.31	0.31	0.31	0.29	0.31	0.31	0.3	0.3	0.31	0.01	101.9%	0.031
Ethylbenzene	0.3	0.31	0.32	0.32	0.3	0.32	0.31	0.28	0.3	0.31	0.01	101.0%	0.030
m,p-xylene	0.6	0.64	0.61	0.63	0.65	0.64	0.63	0.63	0.63	0.63	0.01	102.4%	0.047
Nonane	0.3	0.31	0.35	0.32	0.32	0.32	0.32	0.63	0.63	0.63	0.01	105.5%	0.039
Styrene	0.3	0.27	0.31	0.32	0.32	0.32	0.3	0.3	0.32	0.32	0.02	105.7%	0.054
Bromoform	0.3	0.3	0.32	0.32	0.3	0.31	0.29	0.29	0.31	0.30	0.01	98.5%	0.046
o-xylene	0.3	0.32	0.32	0.32	0.32	0.33	0.31	0.31	0.31	0.32	0.01	105.2%	0.031
Cumene	0.3	0.32	0.32	0.32	0.32	0.32	0.35	0.35	0.31	0.32	0.01	107.6%	0.039
Bromofluorobenzene	1	1.01	1	1	0.99	1.01	0.29	0.29	0.3	0.31	0.01	103.3%	0.036
1,1,2,2-tetrachloroethane	0.3	0.32	0.33	0.32	0.33	0.33	0.31	1	1.02	1.00	0.01	100.4%	0.031
Propylbenzene	0.3	0.32	0.3	0.31	0.3	0.3	0.29	0.31	0.31	0.32	0.01	107.1%	0.028
2-Chlorotoluene	0.3	0.31	0.31	0.31	0.31	0.31	0.31	0.29	0.3	0.30	0.01	101.0%	0.030
4-ethyltoluene	0.3	0.31	0.3	0.3	0.3	0.31	0.27	0.27	0.3	0.30	0.01	101.0%	0.047
1,3,5-trimethylbenzene	0.3	0.31	0.31	0.31	0.3	0.32	0.29	0.29	0.3	0.30	0.01	101.0%	0.030
1,2,4-trimethylbenzene	0.3	0.31	0.31	0.31	0.31	0.31	0.29	0.29	0.28	0.30	0.01	101.4%	0.031
1,3-dichlorobenzene	0.3	0.31	0.31	0.31	0.31	0.31	0.27	0.27	0.3	0.30	0.01	100.5%	0.046
benzyl chloride	0.3	0.32	0.3	0.3	0.3	0.3	0.27	0.3	0.3	0.30	0.01	99.0%	0.039
1,4-dichlorobenzene	0.3	0.3	0.33	0.34	0.32	0.34	0.28	0.28	0.32	0.32	0.02	107.1%	0.064
1,2,3-trimethylbenzene	0.3	0.3	0.29	0.3	0.3	0.3	0.28	0.28	0.28	0.29	0.01	97.6%	0.030
1,2-dichlorobenzene	0.3	0.31	0.31	0.31	0.31	0.31	0.28	0.28	0.31	0.31	0.01	101.9%	0.036
1,2,4-trichlorobenzene	0.3	0.3	0.3	0.3	0.3	0.3	0.27	0.3	0.3	0.30	0.01	98.6%	0.036
Napthalene	0.3	0.27	0.26	0.27	0.27	0.27	0.25	0.25	0.27	0.27	0.01	90.0%	0.031
Hexachloro-1,3-butadiene	0.3	0.27	0.27	0.27	0.27	0.27	0.22	0.22	0.25	0.26	0.02	87.1%	0.064
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.27	0.28	0.29	0.01	98.1%	0.036

Confidential



Centek Laboratories  
IDL Study

0.2 ug/m3 Detection Limit  
October 2017

Method TO-15  
Units=ppb

Compound	Amt	IDL #1	IDL #2	IDL #3	IDL #4	IDL #5	IDL #8	IDL #10	AVG	StdDev	%Rec	IDL
Vinyl Chloride	0.1	0.1100	0.1300	0.1100	0.1300	0.1200	0.1100	0.1300	0.12	0.01	120.0%	0.031
Carbon tetrachloride	0.1	0.0900	0.1100	0.1100	0.1100	0.1100	0.0900	0.1200	0.11	0.01	105.7%	0.036
Trichloroethene	0.1	0.0900	0.1000	0.1000	0.1000	0.1000	0.0900	0.1200	0.10	0.01	100.0%	0.031

Confidential

## GC/MS-Whole Air Calculations

## Relative Response Factor (RRF)

$$\text{RRF} = \frac{A_x * C_{is}}{A_{is} * C_x}$$

where:  $A_x$  = area of the characteristic ion for the compound being measured  
 $A_{is}$  = area of the characteristic ion for the specific internal standard of the compound being measured  
 $C_x$  = concentration of the compound being measured (ppbv)  
 $C_{is}$  = concentration of the internal standard (ppbv)

## Percent Relative Standard Deviation (%RSD)

$$\% \text{ RSD} = \frac{\text{Standard deviation of RRF values} * 100}{\text{mean RRF}}$$

## Percent Difference (%D)

$$\% \text{ D} = \frac{(\text{RRF}_c - \text{mean RRF}_i) * 100}{\text{mean RRF}_i}$$

where:  $\text{RRF}_c$  = relative response factor from the continuing calibration  
 $\text{mean RRF}_i$  = mean relative response factor from the initial calibration

## Sample Calculations

$$\text{ppbv} = \frac{A_x * I_s * D_f}{A_{is} * \text{RRF}}$$

where:  $A_x$  = area of the characteristic ion for the compound being measured  
 $A_{is}$  = area of the characteristic ion for the specific internal standard of the compound being measured  
 $I_s$  = Concentration of the internal standard injected (ppbv)  
 $\text{RRF}$  = relative response factor for the compound being measured  
 $D_f$  = Dilution factor

**GC/MS VOLATILES-WHOLE AIR**

**METHOD TO-15**

**SAMPLE DATA**

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-001A

**Client Sample ID:** IA-1  
**Tag Number:** 368.693  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>						
Lab Vacuum In	-8			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>						
<b>TO-15</b>						
Analyst: RJP						
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 7:21:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,4-Dichlorobenzene	0.32	0.15		ppbV	1	4/10/2018 7:21:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 7:21:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Acetone	9.8	3.0		ppbV	10	4/11/2018 2:11:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Benzene	0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 7:21:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Chloroform	1.3	0.15		ppbV	1	4/10/2018 7:21:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 7:21:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Ethyl acetate	0.26	0.15		ppbV	1	4/10/2018 7:21:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

Centek Laboratories, LLC

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-001A

Client Sample ID: 1A-1  
 Tag Number: 368.693  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE			TO-15			Analyst: RJP
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Freon 11	0.23	0.15		ppbV	1	4/10/2018 7:21:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Freon 12	0.40	0.15		ppbV	1	4/10/2018 7:21:00 PM
Heptane	0.12	0.15	J	ppbV	1	4/10/2018 7:21:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Hexane	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Isopropyl alcohol	63	6.0		ppbV	40	4/11/2018 2:47:00 AM
m&p-Xylene	0.15	0.30	J	ppbV	1	4/10/2018 7:21:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 7:21:00 PM
Methyl Ethyl Ketone	0.66	0.30		ppbV	1	4/10/2018 7:21:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 7:21:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Methylene chloride	0.21	0.15		ppbV	1	4/10/2018 7:21:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Tetrachloroethylene	0.22	0.15		ppbV	1	4/10/2018 7:21:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Toluene	0.79	0.15		ppbV	1	4/10/2018 7:21:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 7:21:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 7:21:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 7:21:00 PM
Surr: Bromofluorobenzene	95.0	70-130		%REC	1	4/10/2018 7:21:00 PM

Qualifiers: \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-001A

**Client Sample ID:** IA-1  
**Tag Number:** 368.693  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 7:21:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 7:21:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 7:21:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 7:21:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 7:21:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 7:21:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 7:21:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 7:21:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 7:21:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 7:21:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 7:21:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 7:21:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 7:21:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 7:21:00 PM
1,4-Dichlorobenzene	1.9	0.90		ug/m3	1	4/10/2018 7:21:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 7:21:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 7:21:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 7:21:00 PM
Acetone	23	7.1		ug/m3	10	4/11/2018 2:11:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 7:21:00 PM
Benzene	0.48	0.48		ug/m3	1	4/10/2018 7:21:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 7:21:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 7:21:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 7:21:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 7:21:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 7:21:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 7:21:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 7:21:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 7:21:00 PM
Chloroform	6.3	0.73		ug/m3	1	4/10/2018 7:21:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/10/2018 7:21:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 7:21:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 7:21:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 7:21:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 7:21:00 PM
Ethyl acetate	0.94	0.54		ug/m3	1	4/10/2018 7:21:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 7:21:00 PM
Freon 11	1.3	0.84		ug/m3	1	4/10/2018 7:21:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 7:21:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 7:21:00 PM

<b>Qualifiers:</b>	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-001A

**Client Sample ID:** IA-1  
**Tag Number:** 368.693  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		Analyst: RJP		
Freon 12	2.0	0.74		ug/m3	1	4/10/2018 7:21:00 PM
Heptane	0.49	0.61	J	ug/m3	1	4/10/2018 7:21:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 7:21:00 PM
Hexane	< 0.53	0.53		ug/m3	1	4/10/2018 7:21:00 PM
Isopropyl alcohol	150	15		ug/m3	40	4/11/2018 2:47:00 AM
m&p-Xylene	0.65	1.3	J	ug/m3	1	4/10/2018 7:21:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 7:21:00 PM
Methyl Ethyl Ketone	1.9	0.88		ug/m3	1	4/10/2018 7:21:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 7:21:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 7:21:00 PM
Methylene chloride	0.73	0.52		ug/m3	1	4/10/2018 7:21:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 7:21:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 7:21:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 7:21:00 PM
Tetrachloroethylene	1.5	1.0		ug/m3	1	4/10/2018 7:21:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 7:21:00 PM
Toluene	3.0	0.57		ug/m3	1	4/10/2018 7:21:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 7:21:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 7:21:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 7:21:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 7:21:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 7:21:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 7:21:00 PM

<b>Qualifiers:</b>	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Data File : C:\HPCHEM\1\DATA\AP041013.D  
 Acq On : 10 Apr 2018 7:21 pm  
 Sample : C1804013-001A  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 07:23:07 2018

Vial: 1  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.48	128	35996	1.00	ppb	0.03
35) 1,4-difluorobenzene	12.71	114	177714	1.00	ppb	0.01
50) Chlorobenzene-d5	17.46	117	139646	1.00	ppb	0.01

System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	91726	0.95	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	95.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.62	85	86337	0.40	ppb	98
14) Freon 11	6.38	101	39039	0.23	ppb	97
15) Acetone	6.54	58	258299	8.00	ppb	92
17) Isopropyl alcohol	6.66	45	3261608m <sup>B</sup>	53.17	ppb	
21) Methylene chloride	7.67	84	14557	0.21	ppb	88
28) Methyl Ethyl Ketone	9.55	72	16150	0.66	ppb	# 100
31) Ethyl acetate	10.15	43	25125m <sup>Q</sup>	0.26	ppb	
32) Chloroform	10.63	83	170414	1.30	ppb	100
39) Benzene	12.06	78	22579	0.15	ppb	99
43) Heptane	13.21	43	9048	0.12	ppb	# 80
51) Toluene	15.43	92	79918	0.79	ppb	100
56) Tetrachloroethylene	16.50	164	14845	0.22	ppb	99
59) m&p-xylene	17.96	91	27284	0.15	ppb	97
74) 1,4-dichlorobenzene	20.87	146	40064	0.32	ppb	97

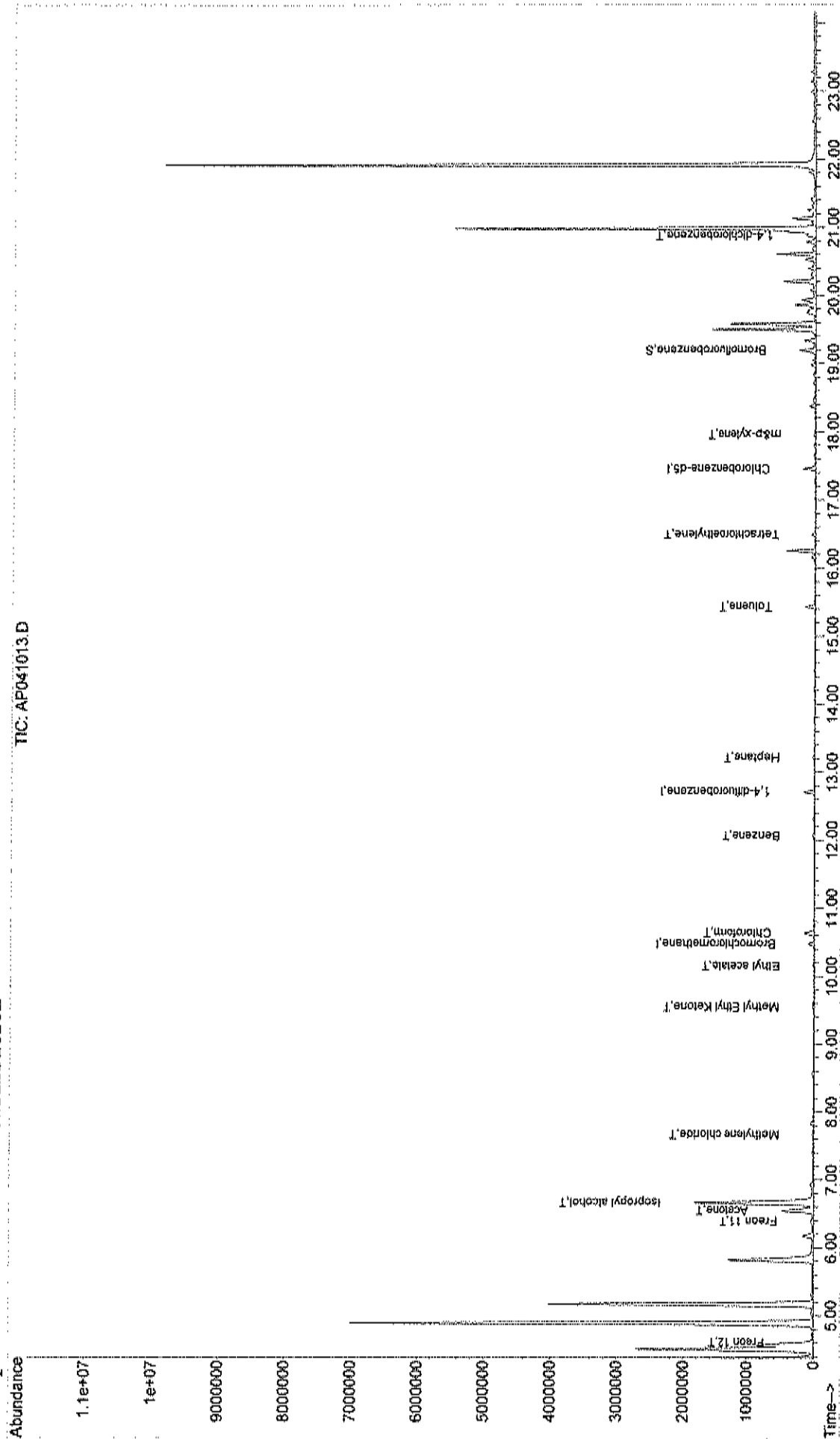


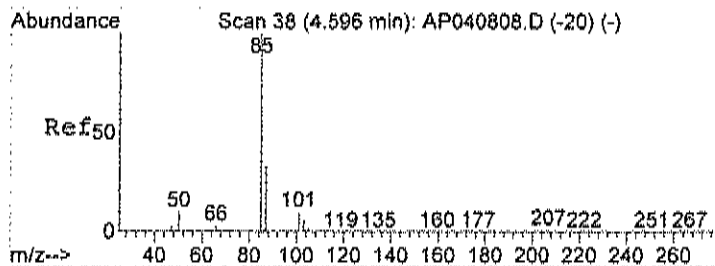
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP041013.D  
 Acq On : 10 Apr 2018 7:21 pm  
 Sample : C1804013-001A  
 Misc : A408\_IUG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 12:32 2018  
 Quant Results File: A408\_IUG.RES

Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration

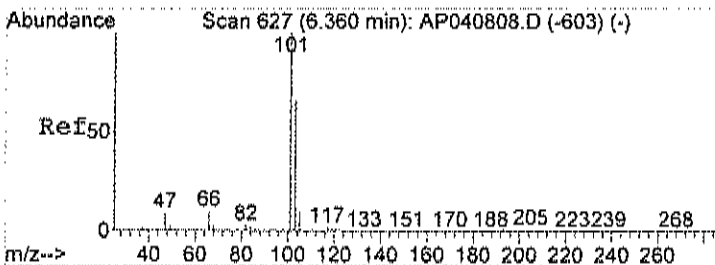
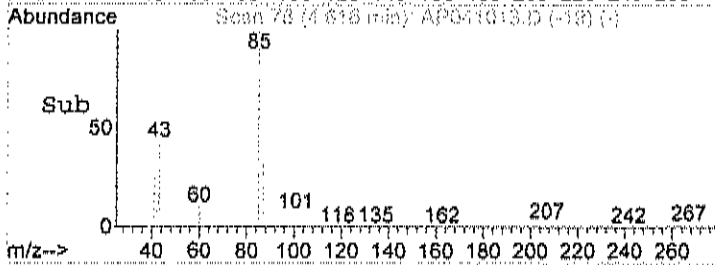
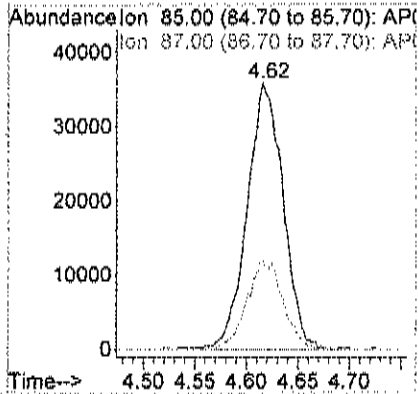
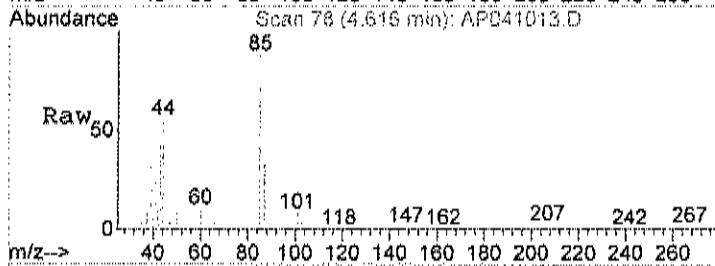
TIC: AP041013.D





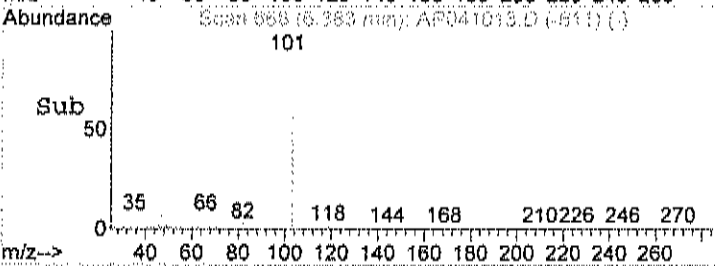
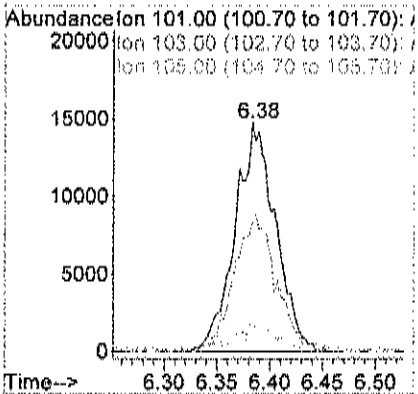
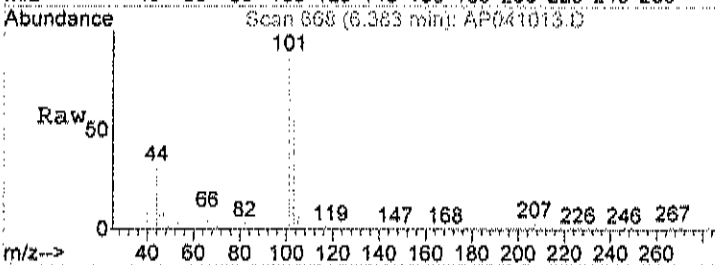
#3  
 Freon 12  
 Concen: 0.40 ppb  
 RT: 4.62 min Scan# 78  
 Delta R.T. 0.03 min  
 Lab File: AP041013.D  
 Acq: 10 Apr 2018 7:21 pm

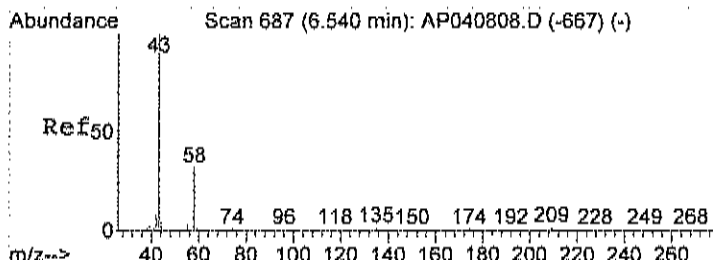
Tgt Ion	Resp	Lower	Upper
85	100		
87	33.2	12.1	52.1



#14  
 Freon 11  
 Concen: 0.23 ppb  
 RT: 6.38 min Scan# 668  
 Delta R.T. 0.02 min  
 Lab File: AP041013.D  
 Acq: 10 Apr 2018 7:21 pm

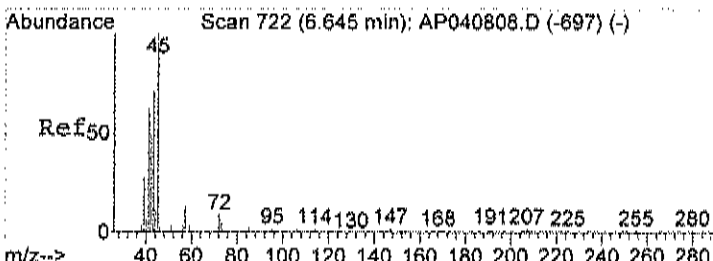
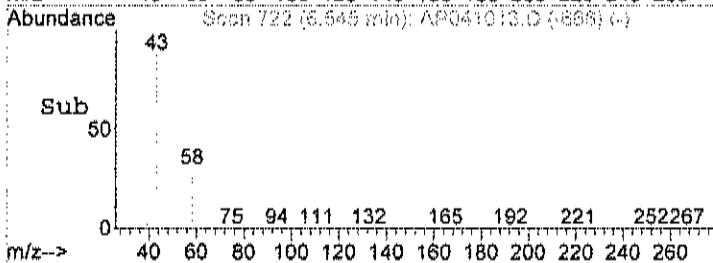
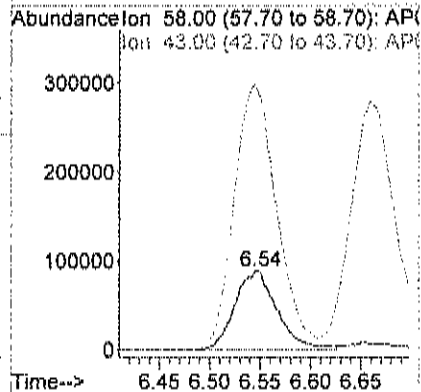
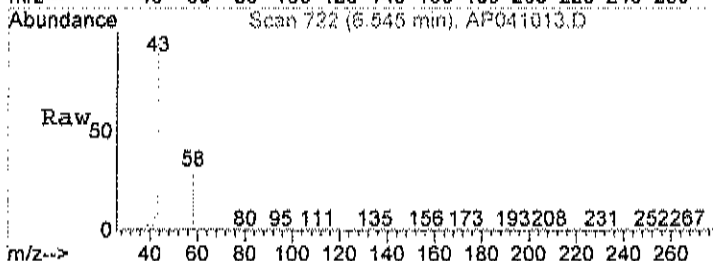
Tgt Ion	Resp	Lower	Upper
101	100		
103	61.6	44.4	84.4
105	11.4	0.0	30.7





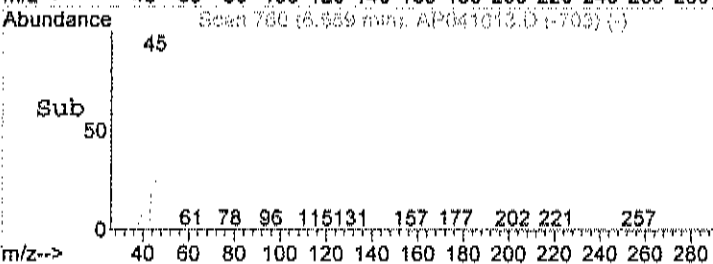
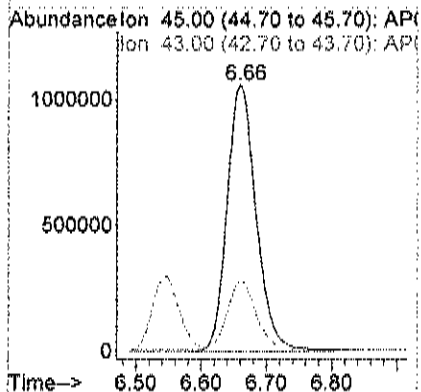
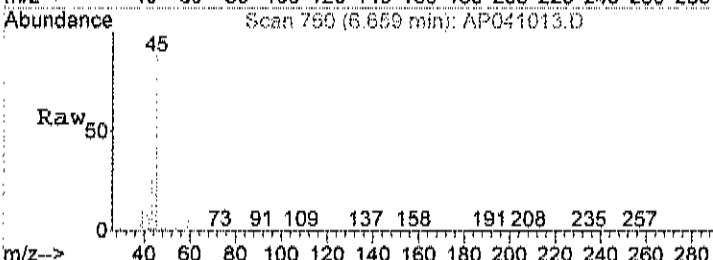
#15  
 Acetone  
 Concen: 8.00 ppb  
 RT: 6.54 min Scan# 722  
 Delta R.T. 0.02 min  
 Lab File: AP041013.D  
 Acq: 10 Apr 2018 7:21 pm

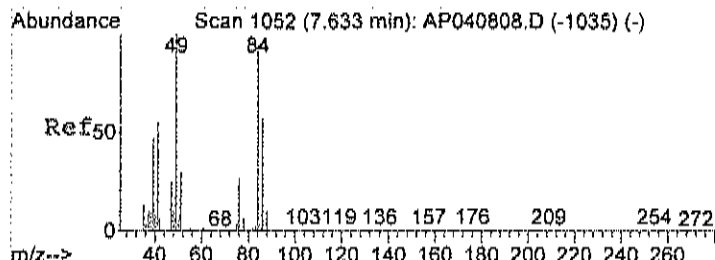
Tgt Ion: 58 Resp: 258299  
 Ion Ratio Lower Upper  
 58 100  
 43 336.7 290.5 350.5



#17  
 Isopropyl alcohol  
 Concen: 53.17 ppb m  
 RT: 6.66 min Scan# 760  
 Delta R.T. 0.02 min  
 Lab File: AP041013.D  
 Acq: 10 Apr 2018 7:21 pm

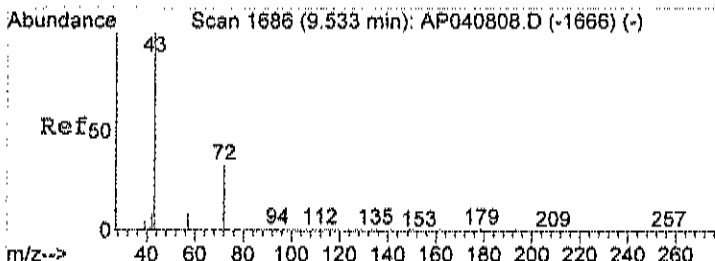
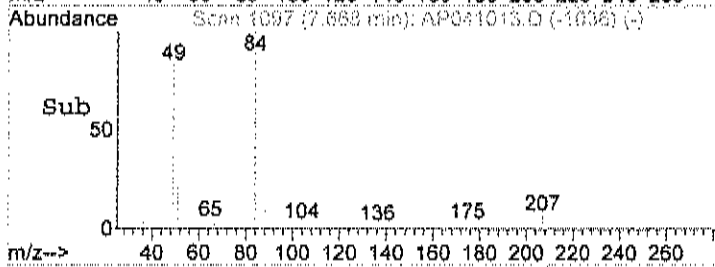
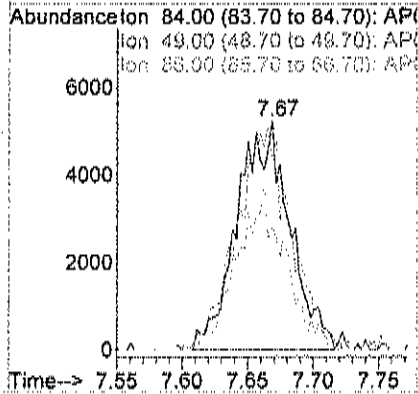
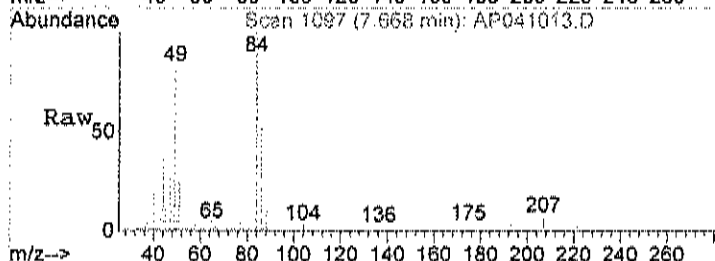
Tgt Ion: 45 Resp: 3261608  
 Ion Ratio Lower Upper  
 45 100  
 43 0.0 92.3 132.3#





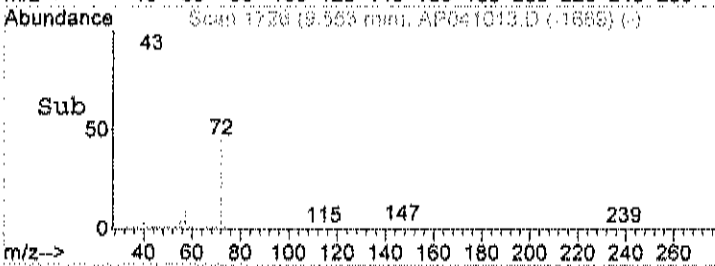
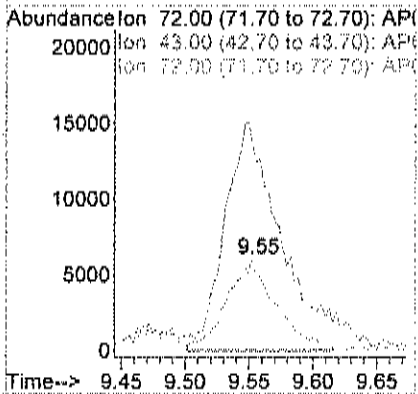
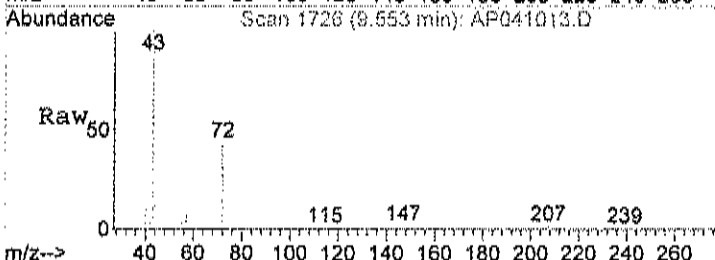
#21  
 Methylene chloride  
 Concen: 0.21 ppb  
 RT: 7.67 min Scan# 1097  
 Delta R.T. 0.03 min  
 Lab File: AP041013.D  
 Acq: 10 Apr 2018 7:21 pm

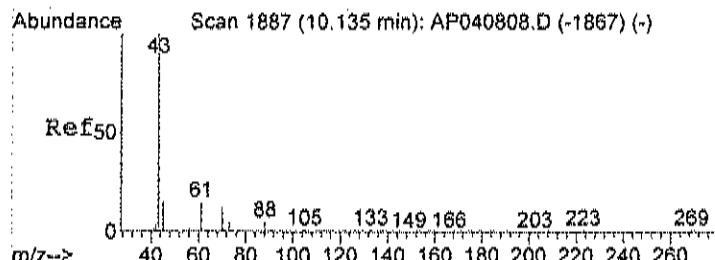
Tgt Ion	Ratio	Lower	Upper
84	100		
49	99.5	97.6	137.6
86	64.7	42.0	82.0



#28  
 Methyl Ethyl Ketone  
 Concen: 0.66 ppb  
 RT: 9.55 min Scan# 1726  
 Delta R.T. 0.02 min  
 Lab File: AP041013.D  
 Acq: 10 Apr 2018 7:21 pm

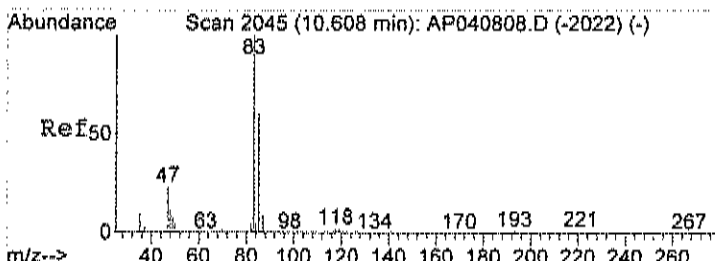
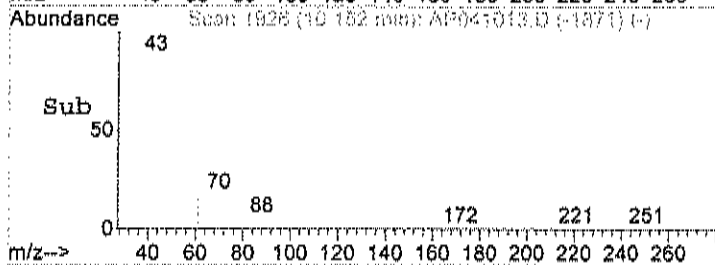
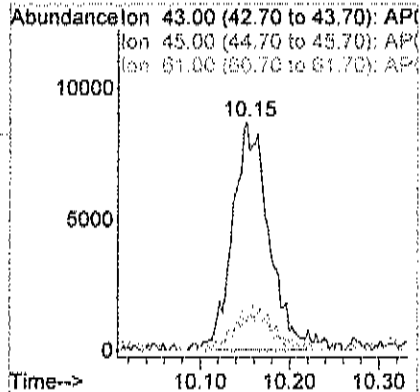
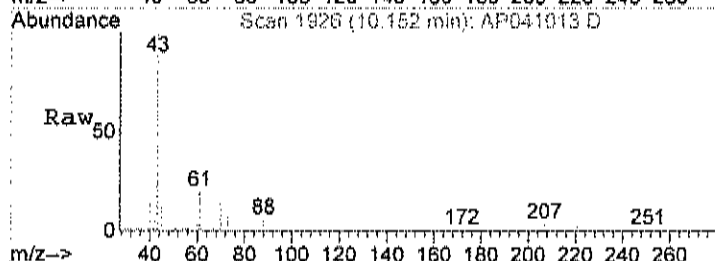
Tgt Ion	Ratio	Lower	Upper
72	100		
43	0.0	0.0	20.0
72	100.0	80.0	120.0





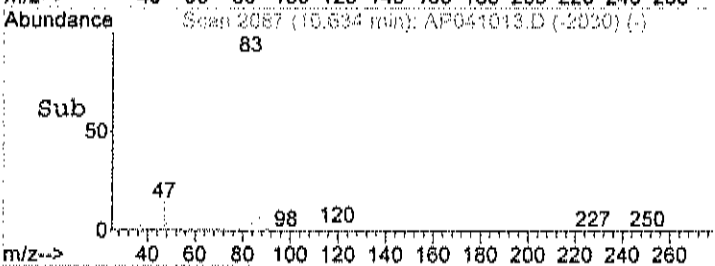
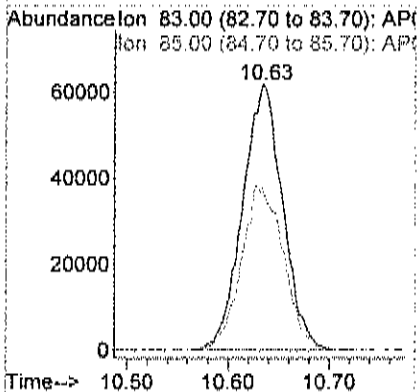
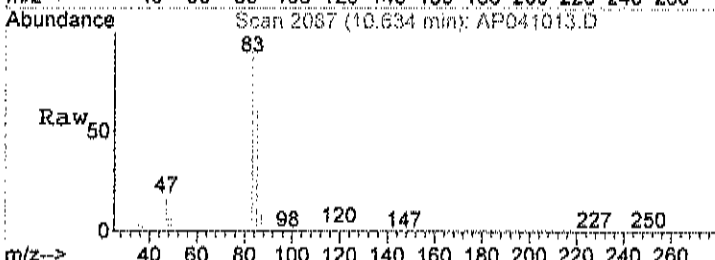
#31  
Ethyl acetate  
Concen: 0.26 ppb m  
RT: 10.15 min Scan# 1926  
Delta R.T. 0.01 min  
Lab File: AP041013.D  
Acq: 10 Apr 2018 7:21 pm

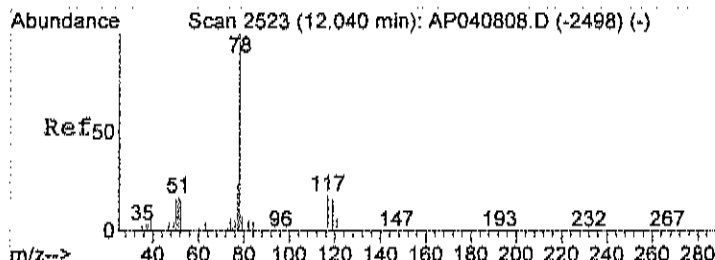
Tgt Ion	Ratio	Lower	Upper
43	100		
45	16.4	0.0	34.5
61	18.6	0.0	35.0



#32  
Chloroform  
Concen: 1.30 ppb  
RT: 10.63 min Scan# 2087  
Delta R.T. 0.02 min  
Lab File: AP041013.D  
Acq: 10 Apr 2018 7:21 pm

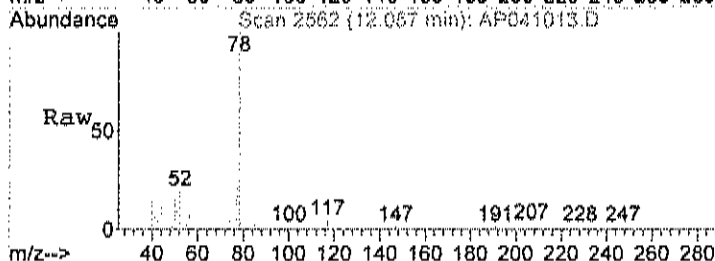
Tgt Ion	Ratio	Lower	Upper
83	100		
85	65.1	45.5	85.5



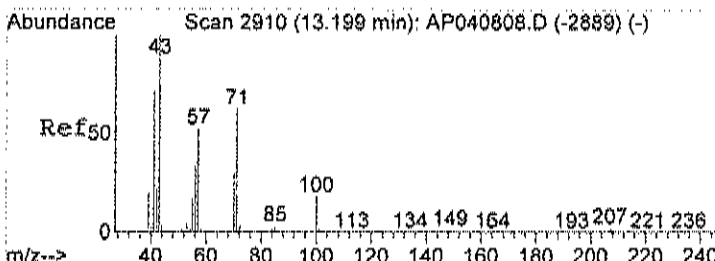
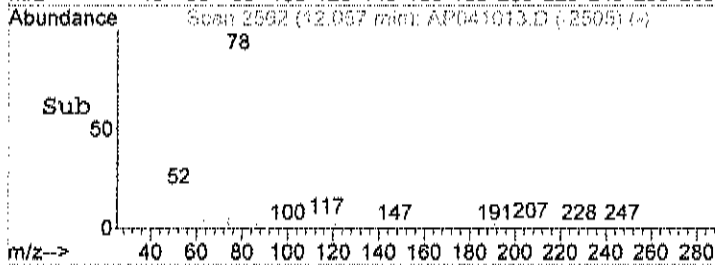
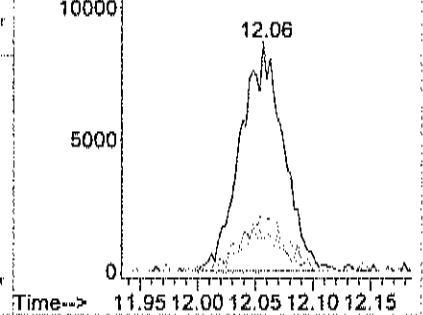


#39  
Benzene  
Concen: 0.15 ppb  
RT: 12.06 min Scan# 2562  
Delta R.T. 0.02 min  
Lab File: AP041013.D  
Acq: 10 Apr 2018 7:21 pm

Tgt Ion	Resp	Lower	Upper
78	100		
77	24.0	3.4	43.4
51	17.3	0.0	37.8

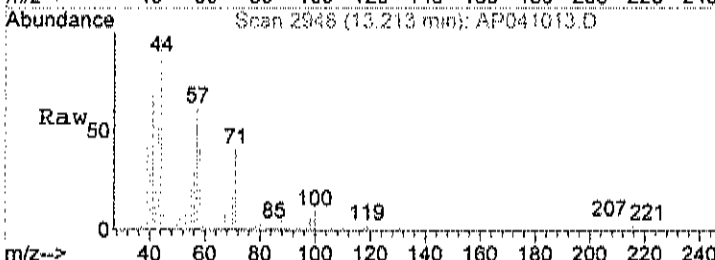


Abundance Ion 78.00 (77.70 to 78.70): AP  
Ion 77.00 (76.70 to 77.70): AP  
Ion 51.00 (50.70 to 51.70): AP

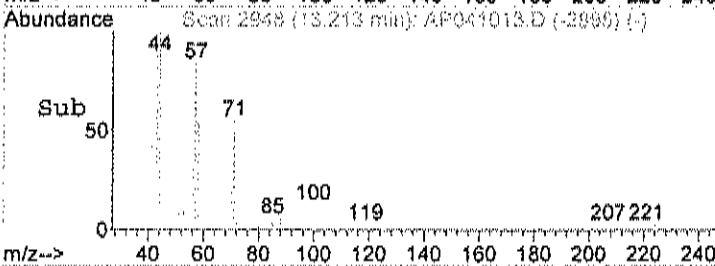
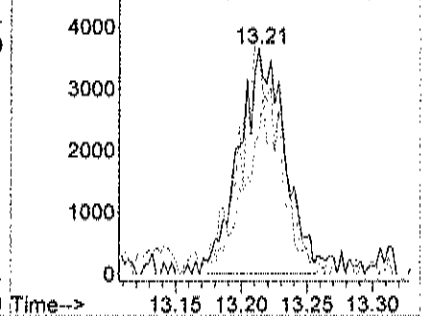


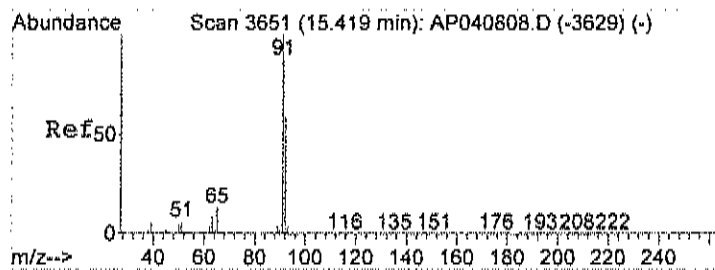
#43  
Heptane  
Concen: 0.12 ppb  
RT: 13.21 min Scan# 2948  
Delta R.T. 0.01 min  
Lab File: AP041013.D  
Acq: 10 Apr 2018 7:21 pm

Tgt Ion	Resp	Lower	Upper
43	100		
57	87.8	37.1	77.1#
71	65.3	44.4	84.4



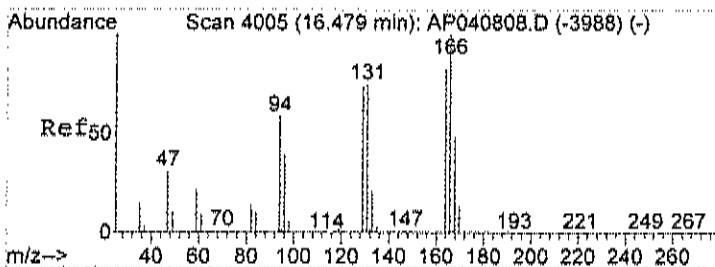
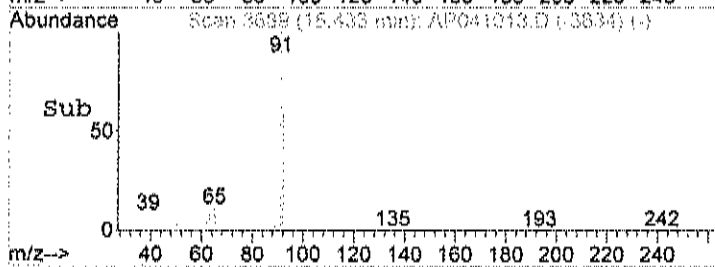
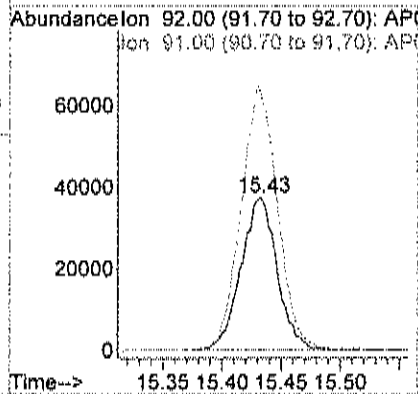
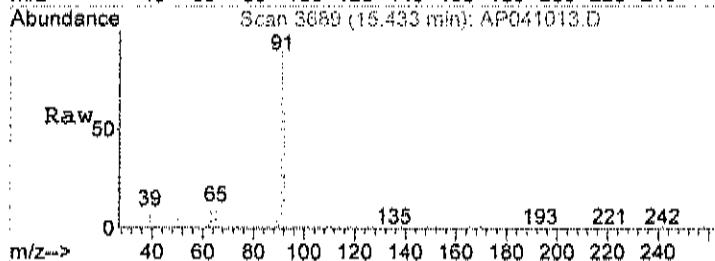
Abundance Ion 43.00 (42.70 to 43.70): AP  
Ion 57.00 (56.70 to 57.70): AP  
Ion 71.00 (70.70 to 71.70): AP





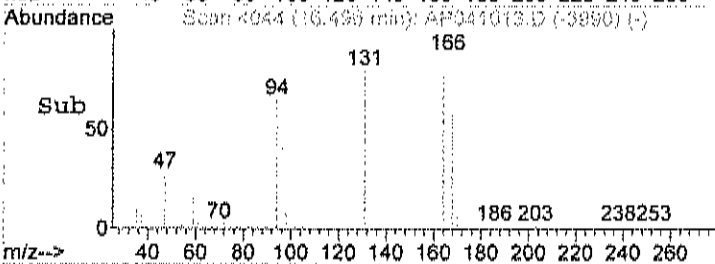
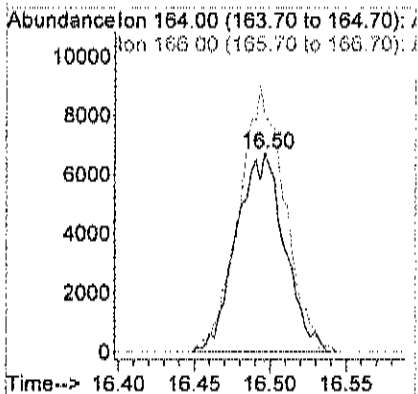
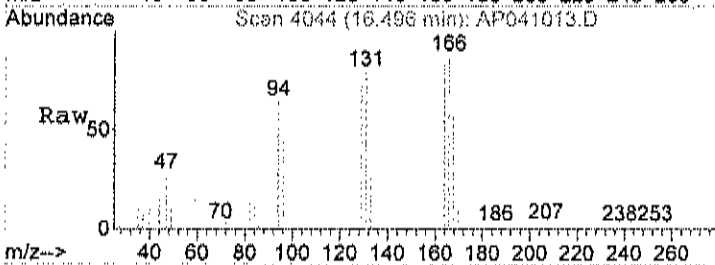
#51  
 Toluene  
 Concen: 0.79 ppb  
 RT: 15.43 min Scan# 3689  
 Delta R.T. 0.01 min  
 Lab File: AP041013.D  
 Acq: 10 Apr 2018 7:21 pm

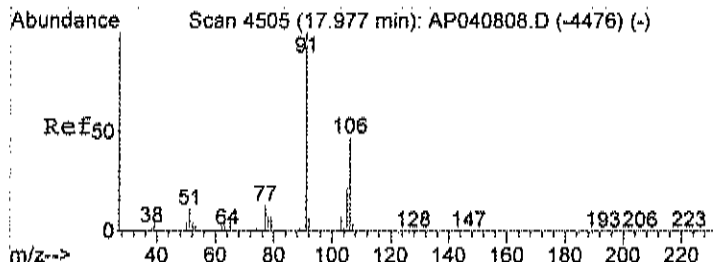
Tgt Ion	Resp	Lower	Upper
92	79918		
91	100	174.2	194.8



#56  
 Tetrachloroethylene  
 Concen: 0.22 ppb  
 RT: 16.50 min Scan# 4044  
 Delta R.T. 0.01 min  
 Lab File: AP041013.D  
 Acq: 10 Apr 2018 7:21 pm

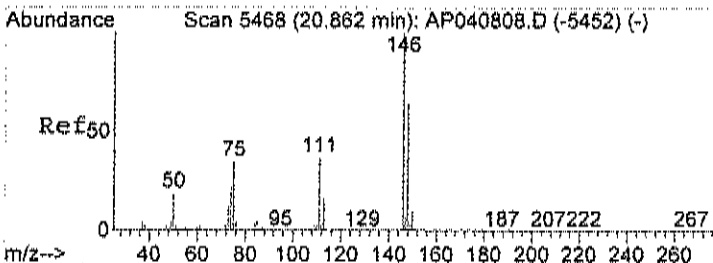
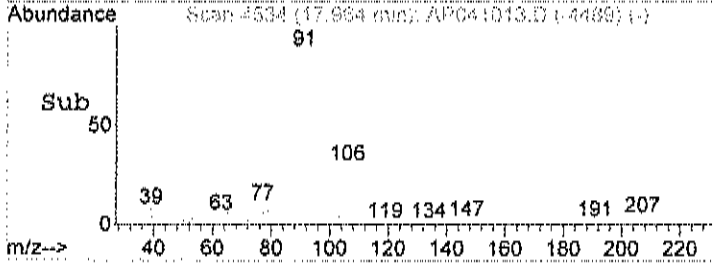
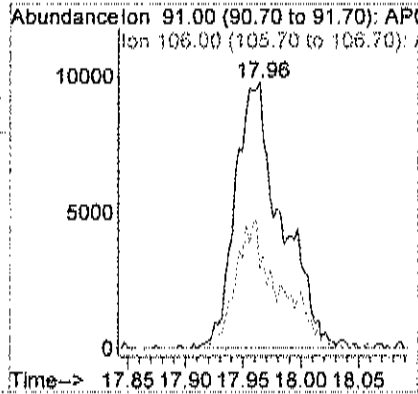
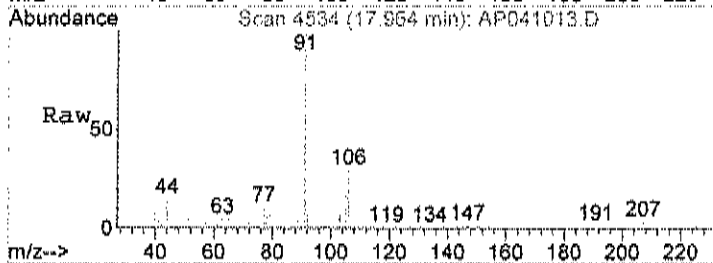
Tgt Ion	Resp	Lower	Upper
164	14845		
166	100	126.3	145.6





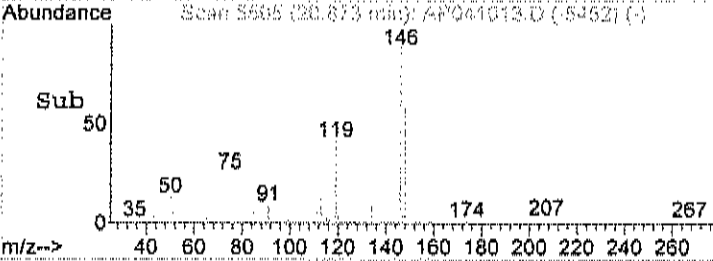
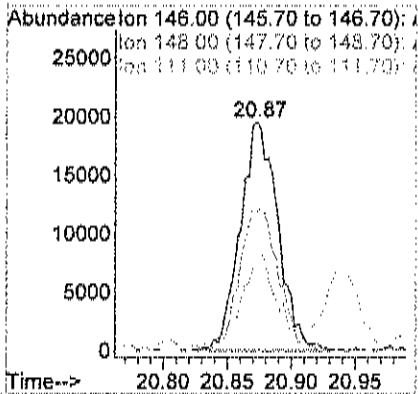
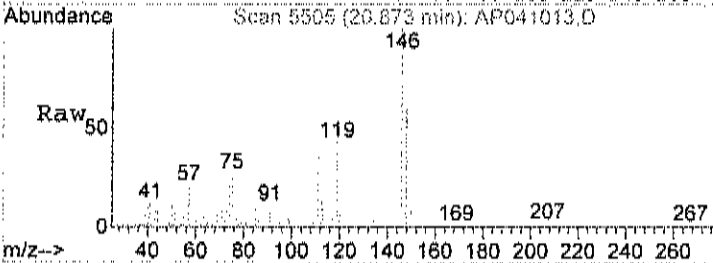
#59  
 m&p-xylene  
 Concen: 0.15 ppb  
 RT: 17.96 min Scan# 4534  
 Delta R.T. -0.02 min  
 Lab File: AP041013.D  
 Acq: 10 Apr 2018 7:21 pm

Tgt Ion	Resp	Lower	Upper
91	27284		
106	44.9	26.8	66.8



#74  
 1,4-dichlorobenzene  
 Concen: 0.32 ppb  
 RT: 20.87 min Scan# 5505  
 Delta R.T. 0.01 min  
 Lab File: AP041013.D  
 Acq: 10 Apr 2018 7:21 pm

Tgt Ion	Resp	Lower	Upper
146	40064		
148	64.6	44.5	84.5
111	36.8	20.8	60.8





Data File : C:\HPCHEM\1\DATA\AP041023.D Vial: 11  
 Acq On : 11 Apr 2018 2:11 am Operator: RJP  
 Sample : C1804013-001A 10X Inst : MSD #1  
 Misc : A408\_1UG Multiplr: 1.00  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 07:23:17 2018 Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	37157	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.70	114	178195	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	132786	1.00	ppb	0.00

System Monitoring Compounds  
 65) Bromofluorobenzene 19.19 95 82821 0.90 ppb 0.00  
 Spiked Amount 1.000 Range 70 - 130 Recovery = 90.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
15) Acetone	6.54	58	32667	0.98	ppb	93
17) Isopropyl alcohol	6.65	45	367404m	5.80	ppb	

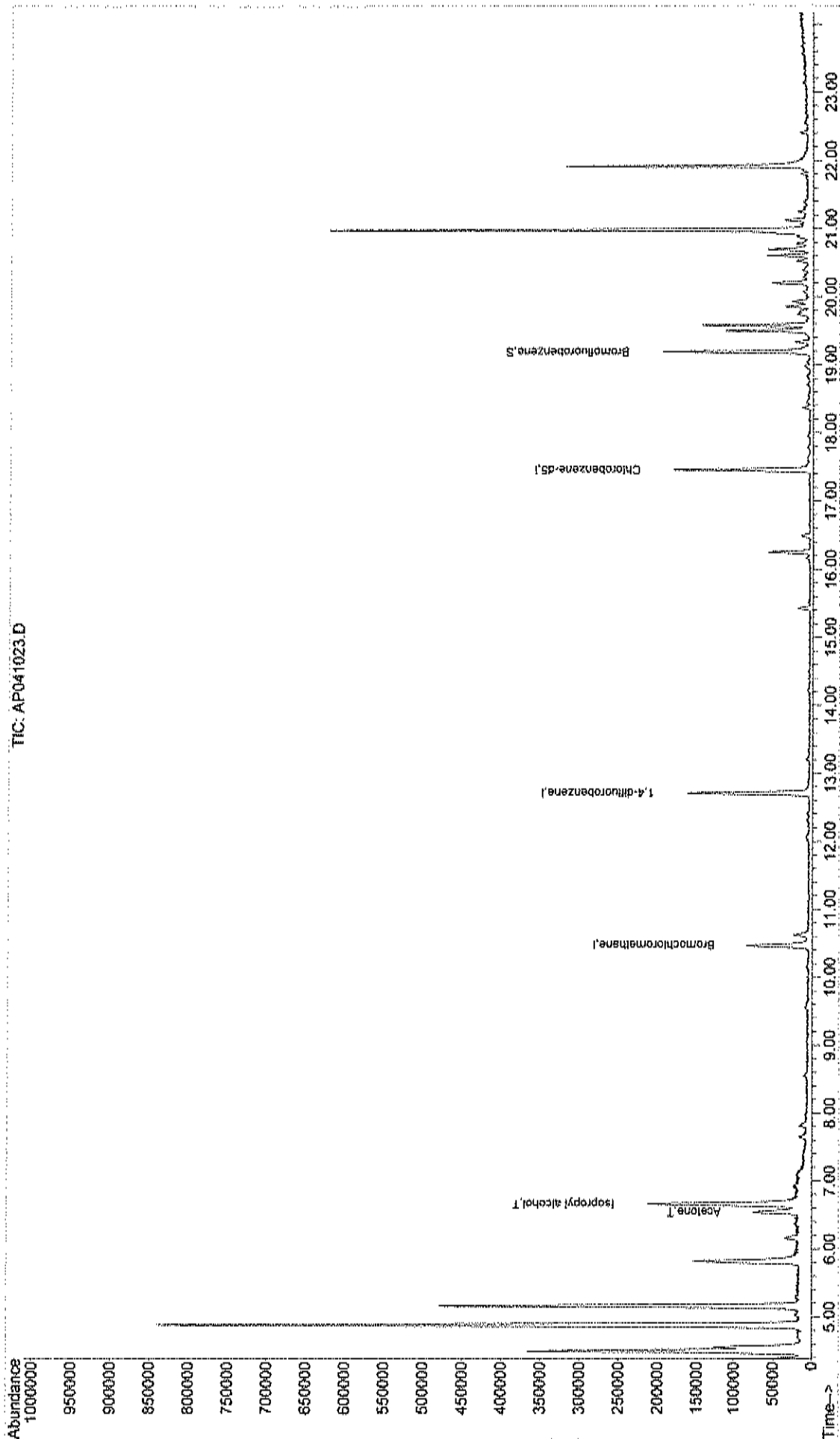
Quantitation Report (QT Reviewed)

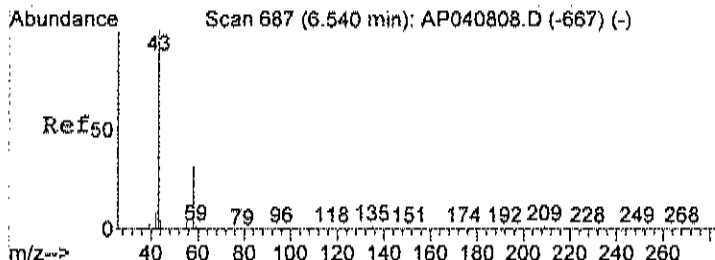
Data File : C:\HPCHEM\1\DATA\AP041023.D  
Acq On : 11 Apr 2018 2:11 am  
Sample : C1804013-001A 10X  
Misc : A408\_IUG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 13:26 2018

Vial: 11  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_IUG.RES

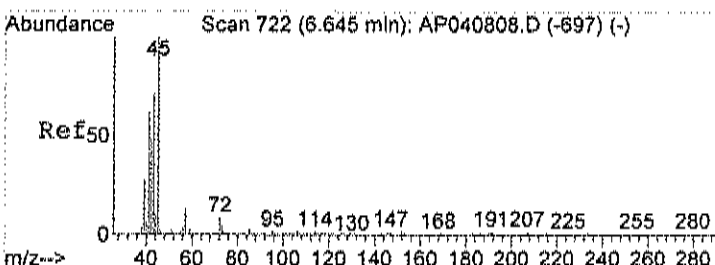
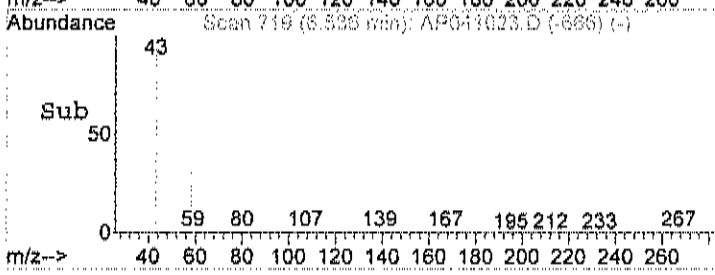
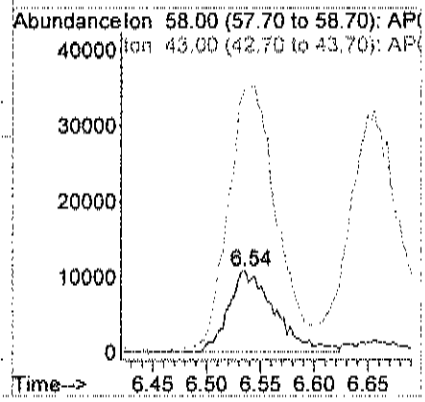
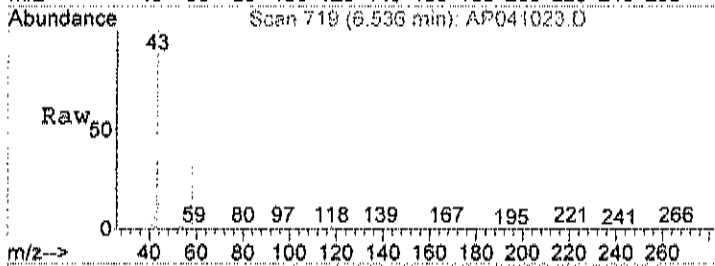
Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration





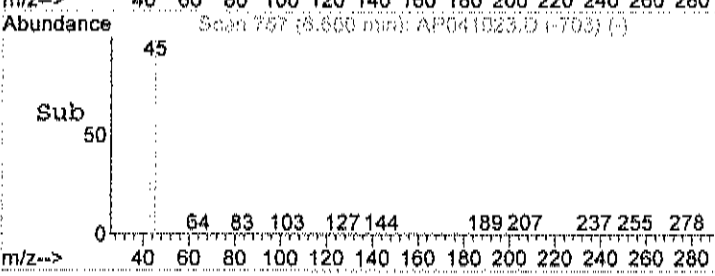
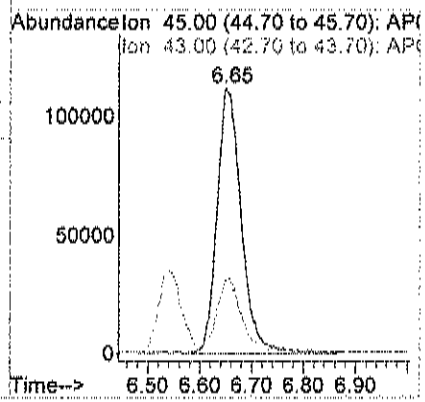
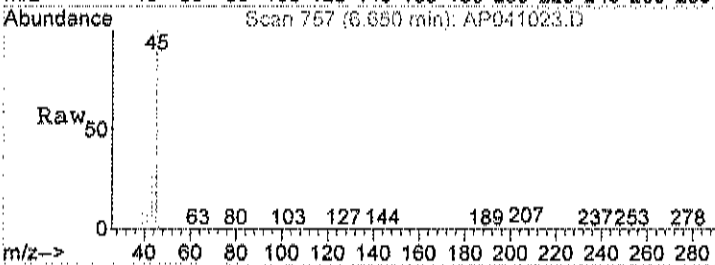
#15  
 Acetone  
 Concen: 0.98 ppb  
 RT: 6.54 min Scan# 719  
 Delta R.T. 0.01 min  
 Lab File: AP041023.D  
 Acq: 11 Apr 2018 2:11 am

Tgt Ion	Resp	Lower	Upper
58	100		
43	335.7	290.5	350.5



#17  
 Isopropyl alcohol  
 Concen: 5.80 ppb m  
 RT: 6.65 min Scan# 757  
 Delta R.T. 0.01 min  
 Lab File: AP041023.D  
 Acq: 11 Apr 2018 2:11 am

Tgt Ion	Resp	Lower	Upper
45	100		
43	0.0	92.3	132.3#



Data File : C:\HPCHEM\1\DATA\AP041024.D  
 Acq On : 11 Apr 2018 2:47 am  
 Sample : C1804013-001A 40X  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 07:23:18 2018

Vial: 12  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	37989	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.71	114	175563	1.00	ppb	0.01
50) Chlorobenzene-d5	17.46	117	130622	1.00	ppb	0.01

System Monitoring Compounds

65) Bromofluorobenzene	19.18	95	76730	0.85	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	85.00%

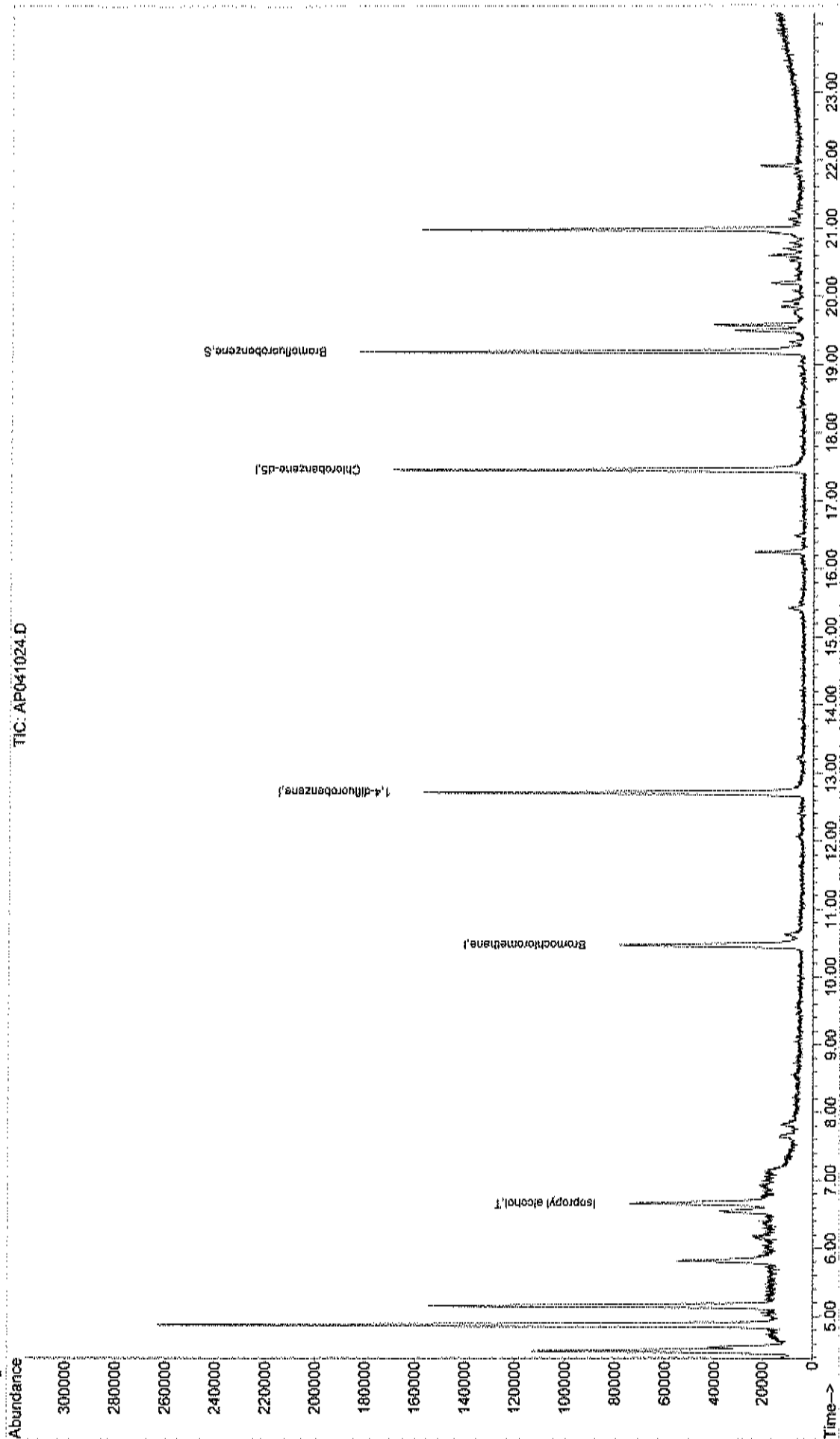
Target Compounds

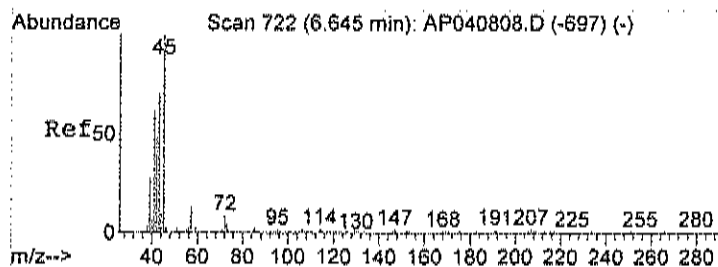
17) Isopropyl alcohol	6.66	45	101438	1.57	ppb	Qvalue # 21
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Data File : C:\HPCHEM\1\DATA\AP041024.D  
Acq On : 11 Apr 2018 2:47 am  
Sample : C1804013-001A 40X  
Misc : A408\_1UG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 12:32 2018

Quant Results File: A408\_1UG.RES

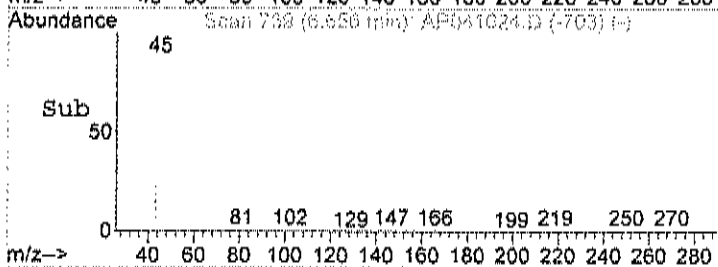
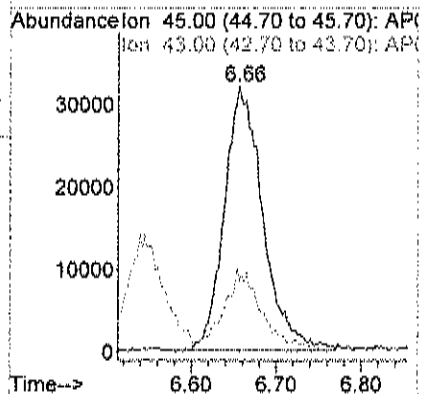
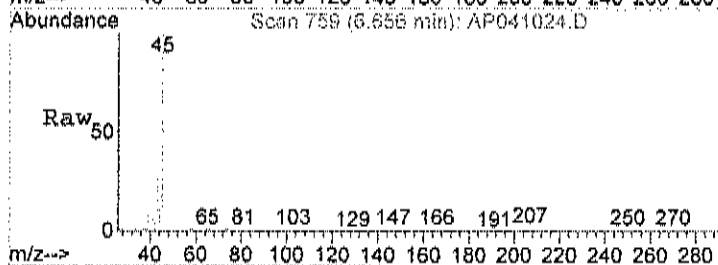
Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration





#17  
 Isopropyl alcohol  
 Concen: 1.57 ppb  
 RT: 6.66 min Scan# 759  
 Delta R.T. 0.02 min  
 Lab File: AP041024.D  
 Acq: 11 Apr 2018 2:47 am

Tgt Ion: 45 Resp: 101438  
 Ion Ratio Lower Upper  
 45 100  
 43 27.4 92.3 132.3#



**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-002A

**Client Sample ID:** IA-1D  
**Tag Number:** 1186.513  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>						
				<b>FLD</b>		<b>Analyst:</b>
Lab Vacuum In	-9			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>						
				<b>TO-15</b>		<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 8:04:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,4-Dichlorobenzene	0.21	0.15		ppbV	1	4/10/2018 8:04:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 8:04:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Acetone	11	3.0		ppbV	10	4/11/2018 3:25:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Benzene	0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 8:04:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Chloroform	0.88	0.15		ppbV	1	4/10/2018 8:04:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 8:04:00 PM
cis-1,3-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Ethyl acetate	0.38	0.15		ppbV	1	4/10/2018 8:04:00 PM

<b>Qualifiers:</b>	<b>**</b> Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte, Quantitation estimated,	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

**Centek Laboratories, LLC**

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-002A

Client Sample ID: IA-1D  
 Tag Number: 1186.513  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Freon 11	0.20	0.15		ppbV	1	4/10/2018 8:04:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Freon 12	0.39	0.15		ppbV	1	4/10/2018 8:04:00 PM
Heptane	0.16	0.15		ppbV	1	4/10/2018 8:04:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Hexane	0.13	0.15	J	ppbV	1	4/10/2018 8:04:00 PM
Isopropyl alcohol	92	6.0		ppbV	40	4/11/2018 4:02:00 AM
m&p-Xylene	0.16	0.30	J	ppbV	1	4/10/2018 8:04:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 8:04:00 PM
Methyl Ethyl Ketone	0.74	0.30		ppbV	1	4/10/2018 8:04:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 8:04:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Methylene chloride	0.28	0.15		ppbV	1	4/10/2018 8:04:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Tetrachloroethylene	0.21	0.15		ppbV	1	4/10/2018 8:04:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Toluene	1.1	0.15		ppbV	1	4/10/2018 8:04:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 8:04:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 8:04:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 8:04:00 PM
Surr: Bromofluorobenzene	95.0	70-130		%REC	1	4/10/2018 8:04:00 PM

Qualifiers: \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection



**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-002A

**Client Sample ID:** IA-1D  
**Tag Number:** 1186.513  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>			<b>TO-15</b>			Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 8:04:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 8:04:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 8:04:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 8:04:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:04:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 8:04:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 8:04:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 8:04:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 8:04:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 8:04:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 8:04:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 8:04:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 8:04:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 8:04:00 PM
1,4-Dichlorobenzene	1.3	0.90		ug/m3	1	4/10/2018 8:04:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 8:04:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 8:04:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 8:04:00 PM
Acetone	26	7.1		ug/m3	10	4/11/2018 3:25:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 8:04:00 PM
Benzene	0.48	0.48		ug/m3	1	4/10/2018 8:04:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 8:04:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 8:04:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 8:04:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 8:04:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 8:04:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 8:04:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 8:04:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 8:04:00 PM
Chloroform	4.3	0.73		ug/m3	1	4/10/2018 8:04:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/10/2018 8:04:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:04:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 8:04:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 8:04:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 8:04:00 PM
Ethyl acetate	1.4	0.54		ug/m3	1	4/10/2018 8:04:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 8:04:00 PM
Freon 11	1.1	0.84		ug/m3	1	4/10/2018 8:04:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 8:04:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 8:04:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-002A

**Client Sample ID:** IA-1D  
**Tag Number:** 1186.513  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		Analyst: RJP		
Freon 12	1.9	0.74		ug/m3	1	4/10/2018 8:04:00 PM
Heptane	0.66	0.61		ug/m3	1	4/10/2018 8:04:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 8:04:00 PM
Hexane	0.46	0.53	J	ug/m3	1	4/10/2018 8:04:00 PM
Isopropyl alcohol	230	15		ug/m3	40	4/11/2018 4:02:00 AM
m&p-Xylene	0.69	1.3	J	ug/m3	1	4/10/2018 8:04:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 8:04:00 PM
Methyl Ethyl Ketone	2.2	0.88		ug/m3	1	4/10/2018 8:04:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 8:04:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 8:04:00 PM
Methylene chloride	0.97	0.52		ug/m3	1	4/10/2018 8:04:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 8:04:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 8:04:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 8:04:00 PM
Tetrachloroethylene	1.4	1.0		ug/m3	1	4/10/2018 8:04:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 8:04:00 PM
Toluene	4.2	0.57		ug/m3	1	4/10/2018 8:04:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 8:04:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 8:04:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:04:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 8:04:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 8:04:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 8:04:00 PM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

Data File : C:\HPCHEM\1\DATA\AP041014.D Vial: 2  
 Acq On : 10 Apr 2018 8:04 pm Operator: RJP  
 Sample : C1804013-002A Inst : MSD #1  
 Misc : A408\_1UG Multiplr: 1.00  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 07:23:08 2018 Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	40213	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.71	114	184462	1.00	ppb	0.01
50) Chlorobenzene-d5	17.46	117	147579	1.00	ppb	0.01

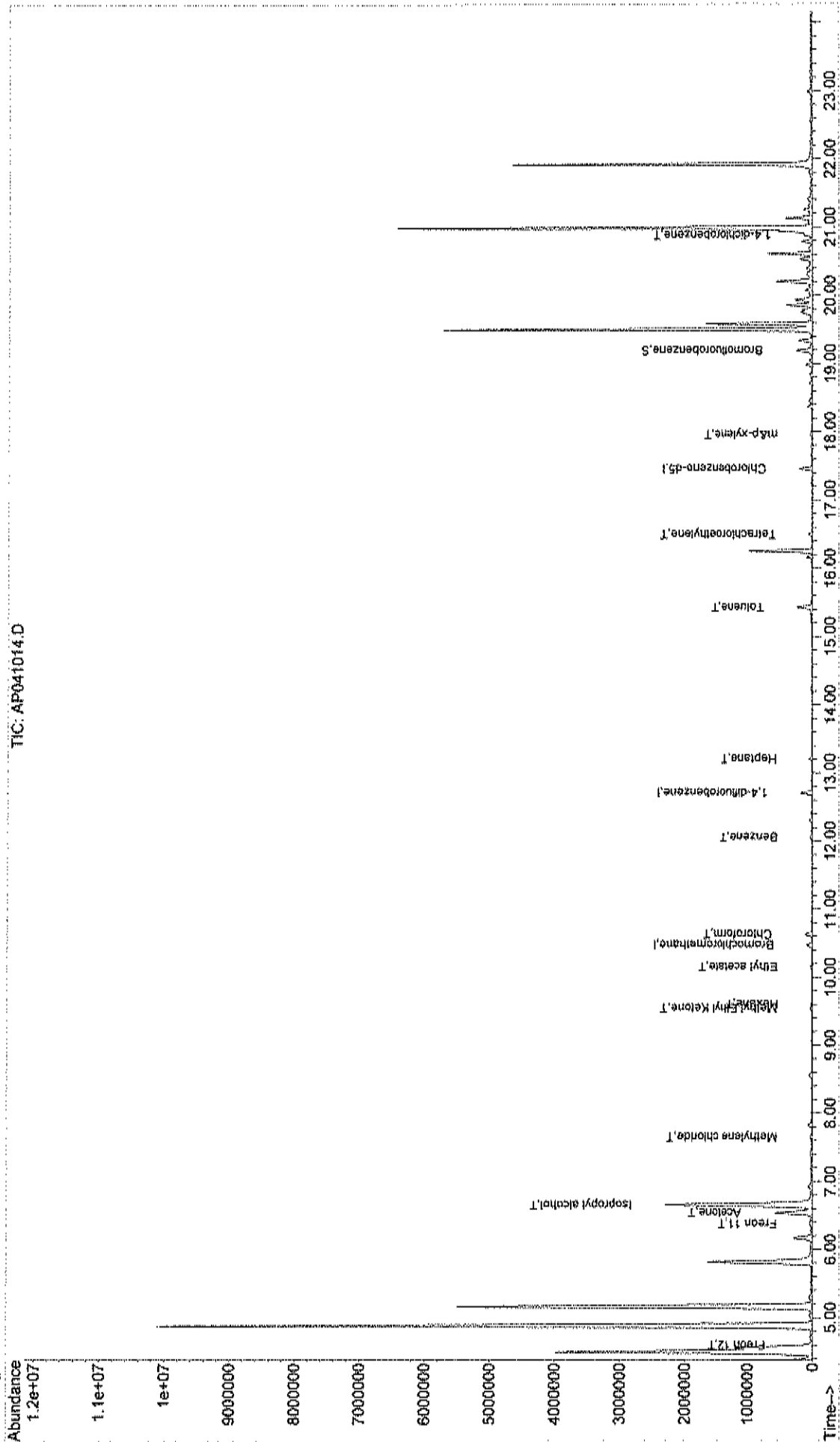
System Monitoring Compounds  
 65) Bromofluorobenzene 19.19 95 96574 0.95 ppb 0.00  
 Spiked Amount 1.000 Range 70 - 130 Recovery = 95.00%

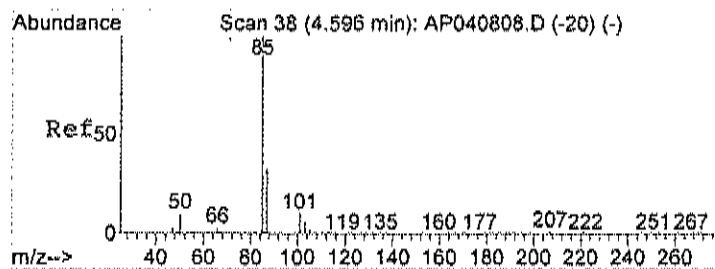
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.61	85	94130	0.39	ppb	98
14) Freon 11	6.38	101	38352	0.20	ppb	97
15) Acetone	6.54	58	306549	8.50	ppb	90
17) Isopropyl alcohol	6.65	45	4011158	58.54	ppb	# 19
21) Methylene chloride	7.65	84	21701	0.28	ppb	# 84
28) Methyl Ethyl Ketone	9.54	72	20303	0.74	ppb	# 100
30) Hexane	9.60	57	10528	0.13	ppb	89
31) Ethyl acetate	10.15	43	41281	0.38	ppb	95
32) Chloroform	10.63	83	129010	0.88	ppb	100
39) Benzene	12.05	78	23005	0.15	ppb	90
43) Heptane	13.22	43	12986	0.16	ppb	# 72
51) Toluene	15.43	92	119077	1.11	ppb	95
56) Tetrachloroethylene	16.49	164	15488	0.21	ppb	99
59) m&p-xylene	17.96	91	31515	0.16	ppb	96
74) 1,4-dichlorobenzene	20.87	146	26743	0.21	ppb	96

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP041014.D  
 Acq On : 10 Apr 2018 8:04 pm Vial: 2  
 Sample : C1804013-002A Operator: RJP  
 Misc : A408\_IUG Inst : MSD #1  
 MS Integration Params: RTEINT.P Multiplr: 1.00  
 Quant Time: Apr 11 12:20 2018 Quant Results File: A408\_IUG.RES

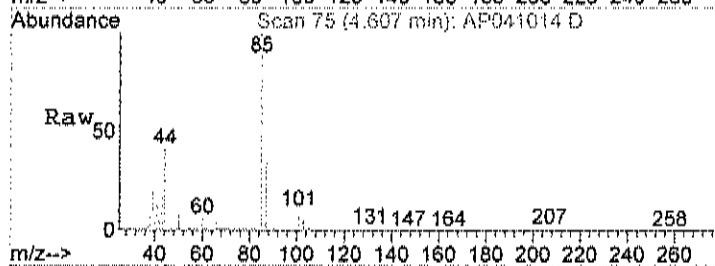
Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration



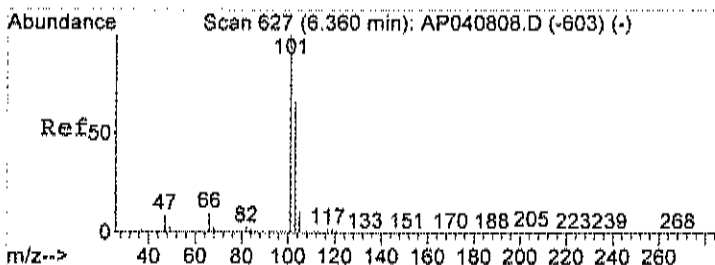
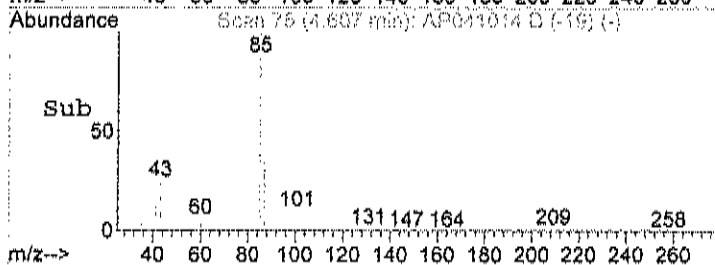
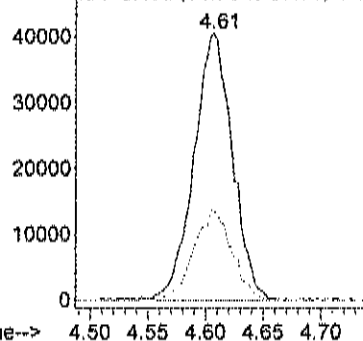


#3  
 Freon 12  
 Concen: 0.39 ppb  
 RT: 4.61 min Scan# 75  
 Delta R.T. 0.02 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

Tgt Ion	Resp	Lower	Upper
85	100		
87	33.4	12.1	52.1

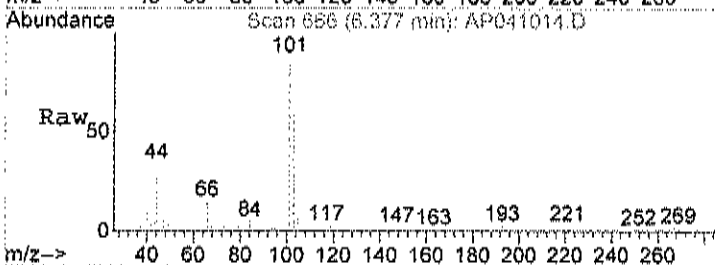


Abundance Ion 85.00 (84.70 to 85.70): AP041014.D  
 Ion 87.00 (86.70 to 87.70): AP041014.D

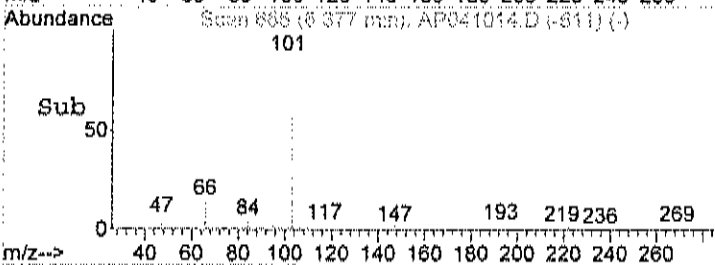
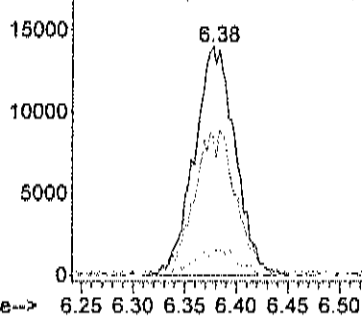


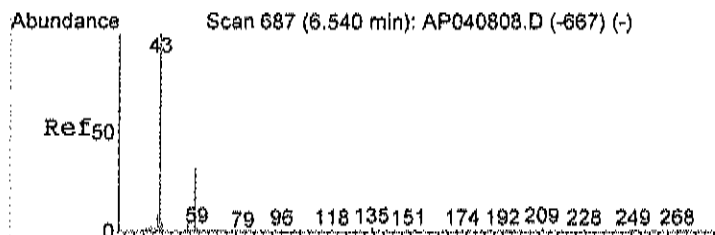
#14  
 Freon 11  
 Concen: 0.20 ppb  
 RT: 6.38 min Scan# 666  
 Delta R.T. 0.01 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

Tgt Ion	Resp	Lower	Upper
101	100		
103	65.4	44.4	84.4
105	4.5	0.0	30.7



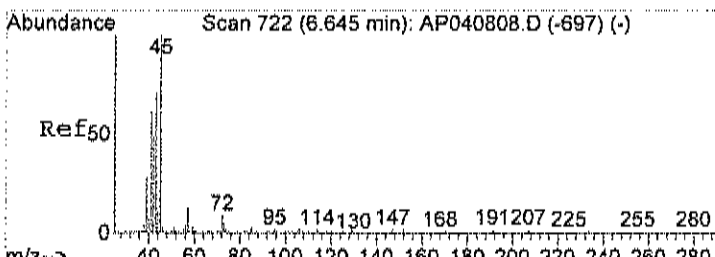
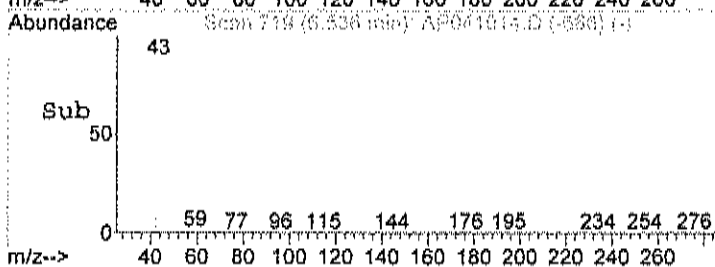
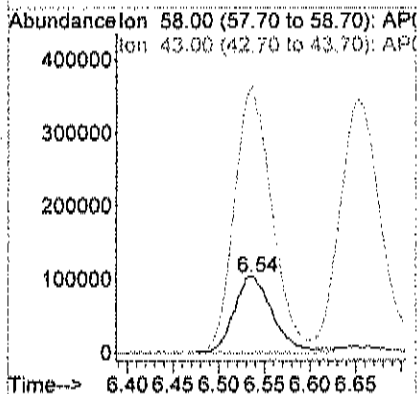
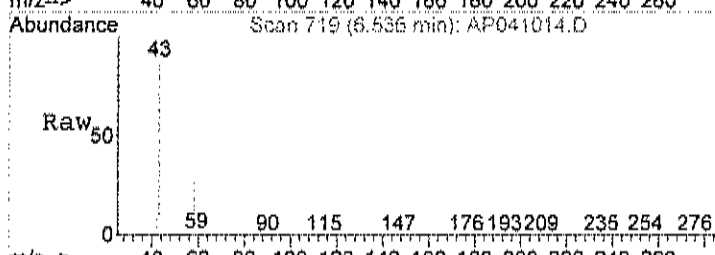
Abundance Ion 101.00 (100.70 to 101.70): AP041014.D  
 Ion 103.00 (102.70 to 103.70): AP041014.D  
 Ion 105.00 (104.70 to 105.70): AP041014.D





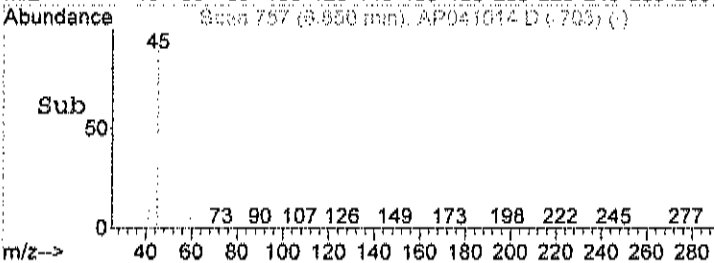
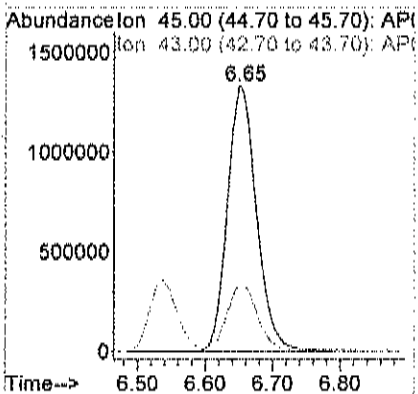
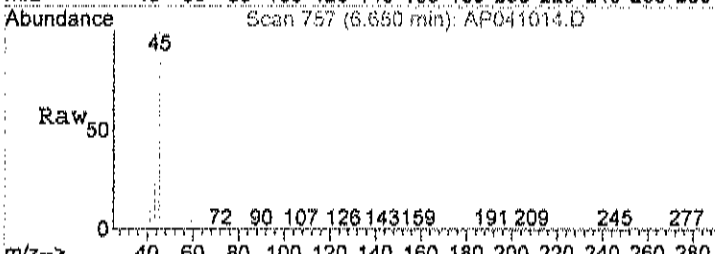
#15  
 Acetone  
 Concen: 8.50 ppb  
 RT: 6.54 min Scan# 719  
 Delta R.T. 0.01 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

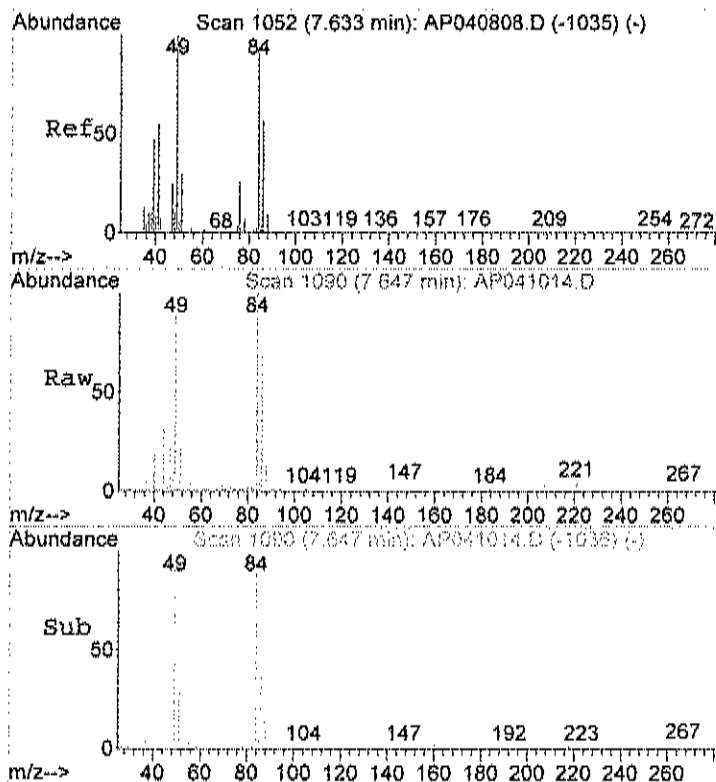
Tgt Ion	Resp	Lower	Upper
58	100		
43	341.1	290.5	350.5



#17  
 Isopropyl alcohol  
 Concen: 58.54 ppb  
 RT: 6.65 min Scan# 757  
 Delta R.T. 0.01 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

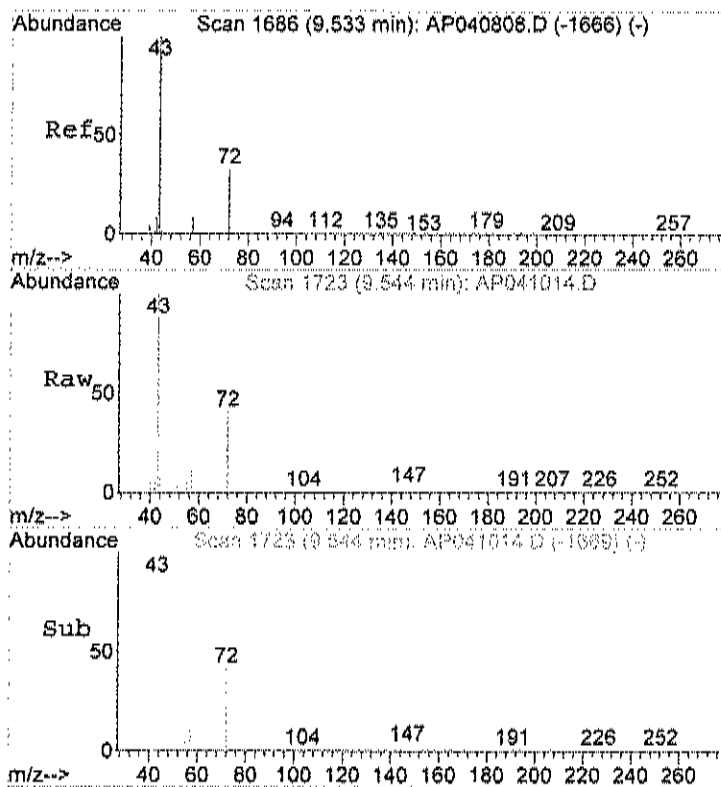
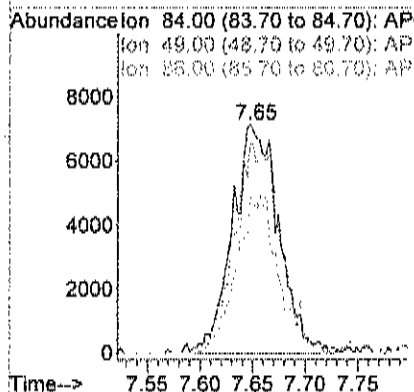
Tgt Ion	Resp	Lower	Upper
45	100		
43	26.2	92.3	132.3#





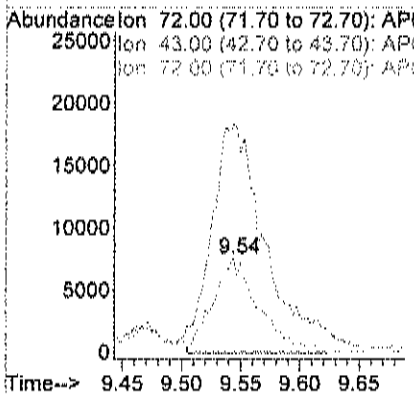
#21  
 Methylene chloride  
 Concen: 0.28 ppb  
 RT: 7.65 min Scan# 1090  
 Delta R.T. 0.01 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

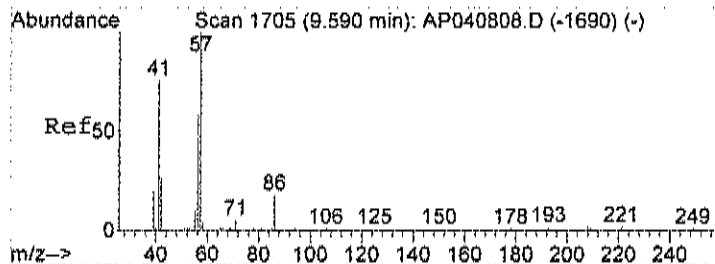
Tgt Ion	Resp	Lower	Upper
84	21701		
49	93.2	97.6	137.6#
86	64.3	42.0	82.0



#28  
 Methyl Ethyl Ketone  
 Concen: 0.74 ppb  
 RT: 9.54 min Scan# 1723  
 Delta R.T. 0.01 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

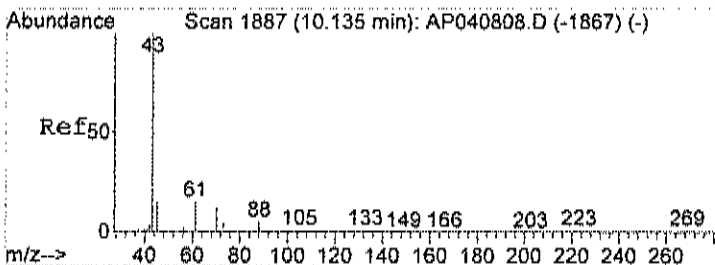
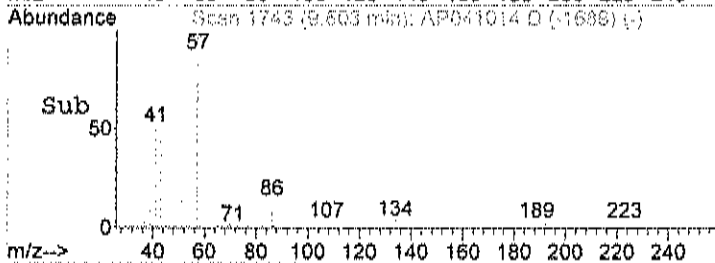
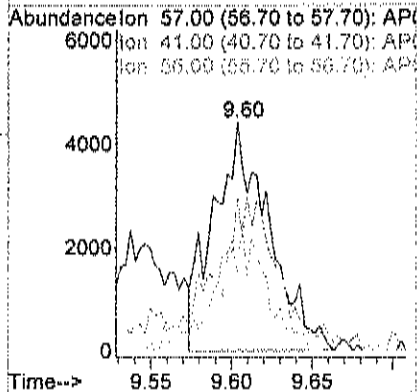
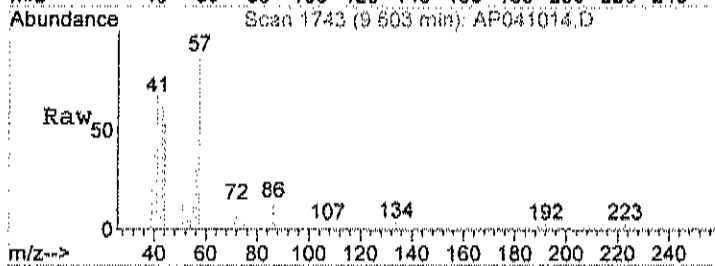
Tgt Ion	Resp	Lower	Upper
72	20303		
43	0.0	0.0	20.0
72	100.0	80.0	120.0





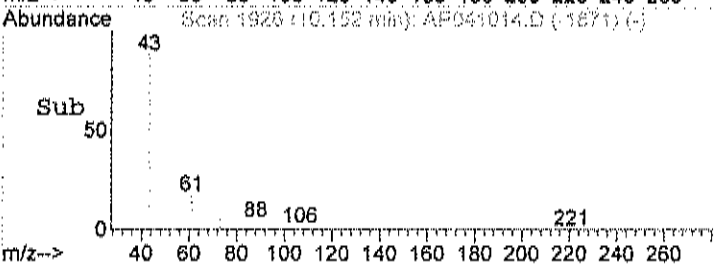
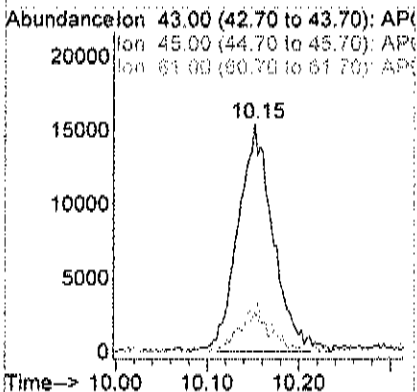
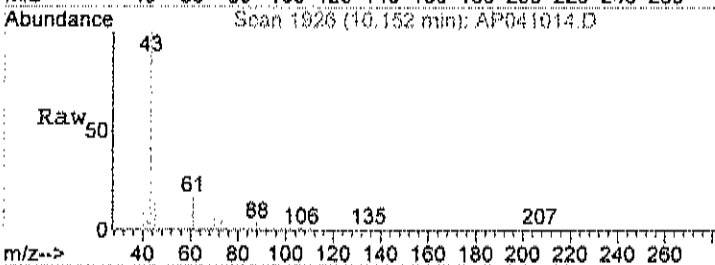
#30  
 Hexane  
 Concen: 0.13 ppb  
 RT: 9.60 min Scan# 1743  
 Delta R.T. 0.01 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

Tgt Ion	Resp	Lower	Upper
57	10528		
41	62.5	56.0	96.0
56	46.9	29.8	69.8

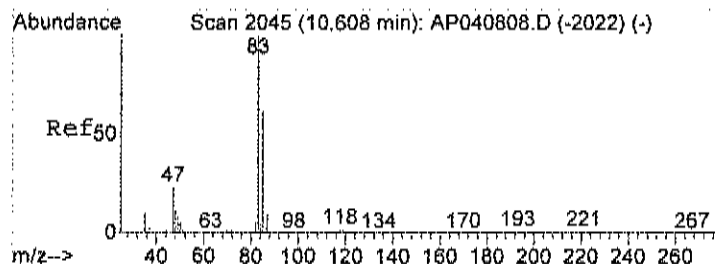


#31  
 Ethyl acetate  
 Concen: 0.38 ppb  
 RT: 10.15 min Scan# 1926  
 Delta R.T. 0.01 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

Tgt Ion	Resp	Lower	Upper
43	41281		
45	16.2	0.0	34.5
61	17.6	0.0	35.0

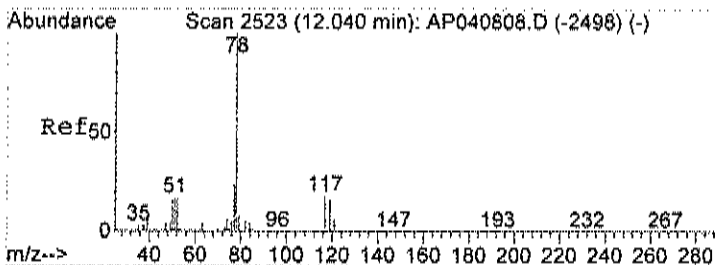
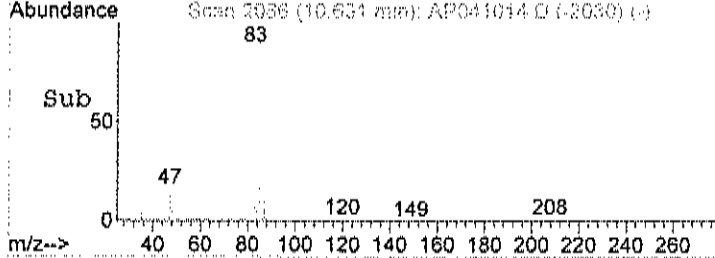
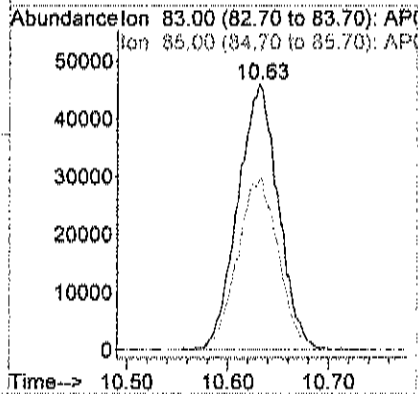
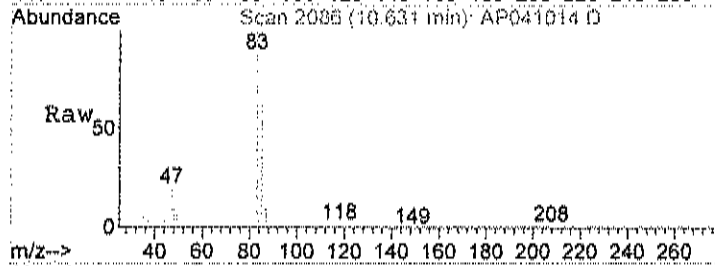






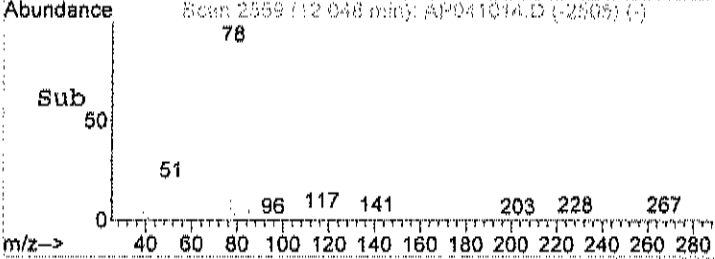
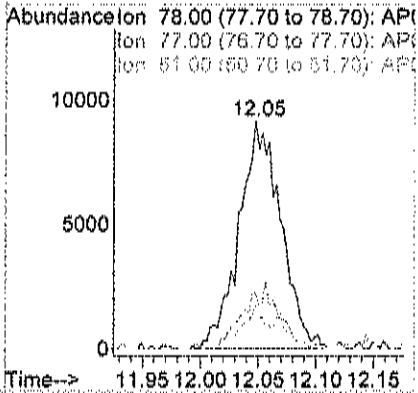
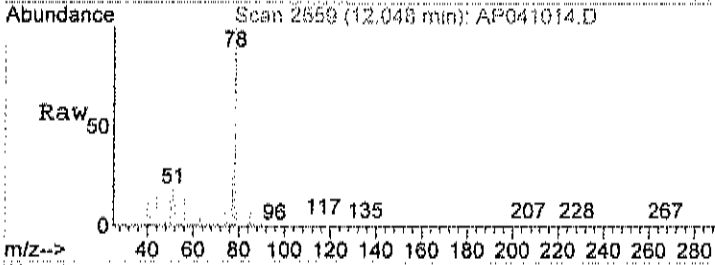
#32  
 Chloroform  
 Concen: 0.88 ppb  
 RT: 10.63 min Scan# 2086  
 Delta R.T. 0.02 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

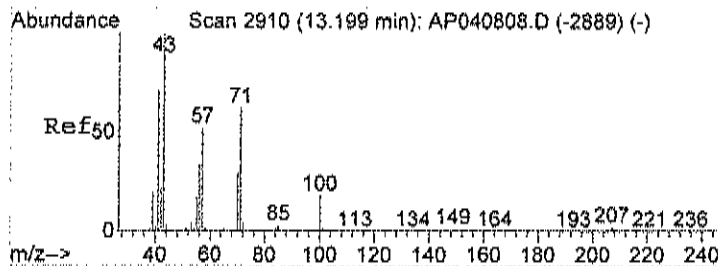
Tgt Ion	Resp	Lower	Upper
83	100		
85	65.9	45.5	85.5



#39  
 Benzene  
 Concen: 0.15 ppb  
 RT: 12.05 min Scan# 2559  
 Delta R.T. 0.01 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

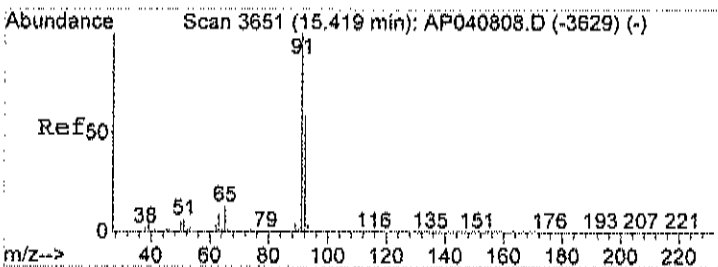
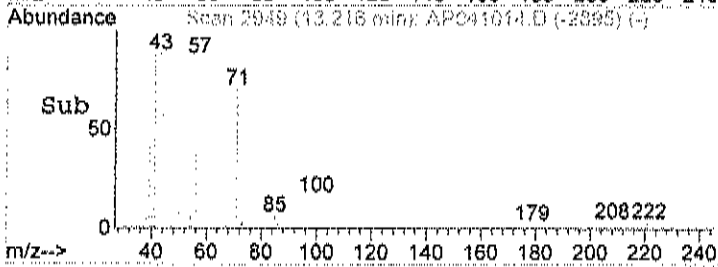
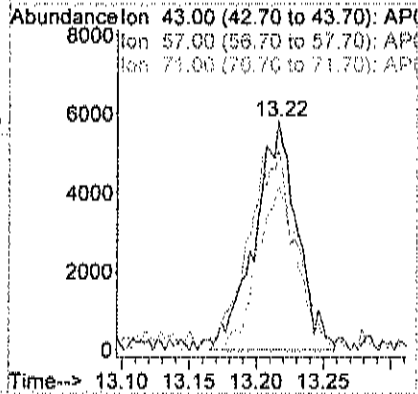
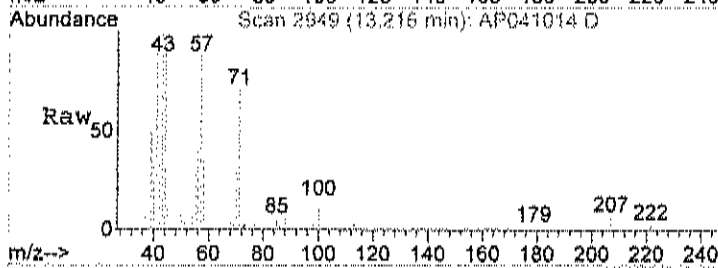
Tgt Ion	Resp	Lower	Upper
78	100		
77	24.6	3.4	43.4
51	9.4	0.0	37.8





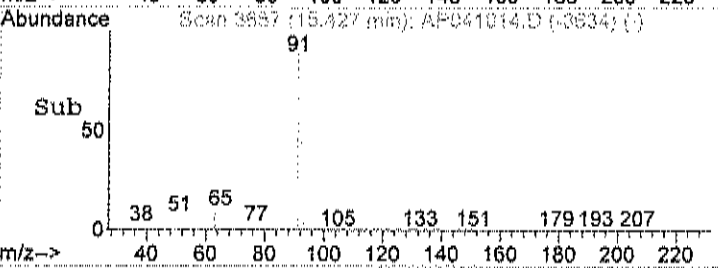
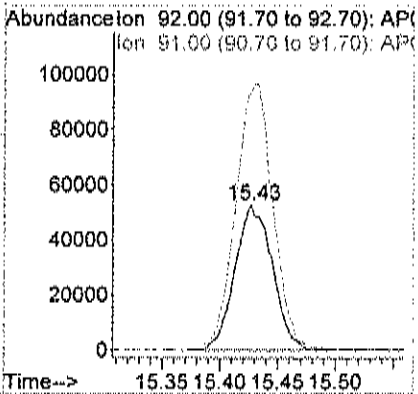
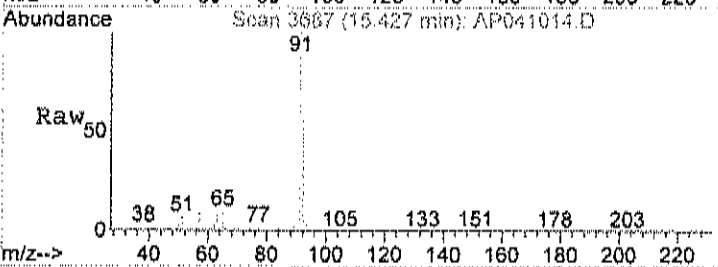
#43  
 Heptane  
 Concen: 0.16 ppb  
 RT: 13.22 min Scan# 2949  
 Delta R.T. 0.01 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

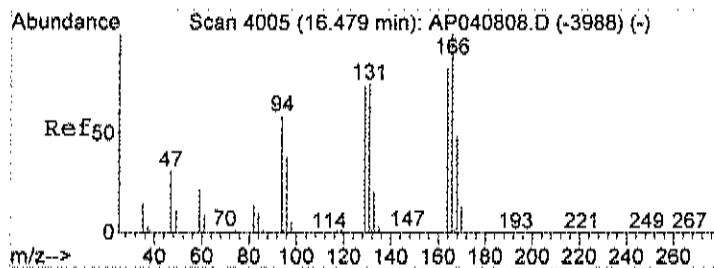
Tgt Ion	Resp	Lower	Upper
43	12986		
57	96.5	37.1	77.1#
71	68.7	44.4	84.4



#51  
 Toluene  
 Concen: 1.11 ppb  
 RT: 15.43 min Scan# 3687  
 Delta R.T. 0.01 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

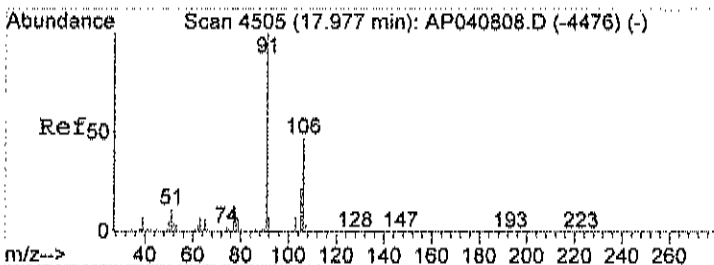
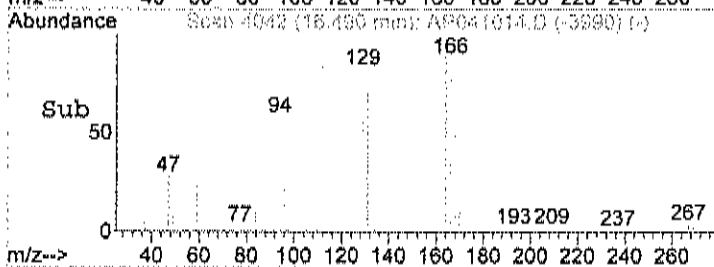
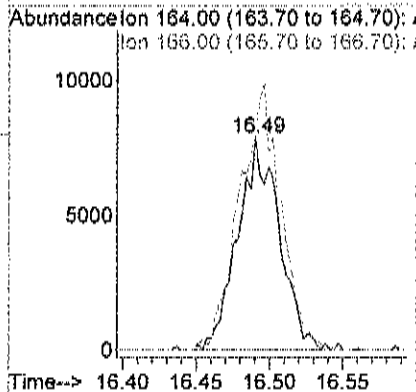
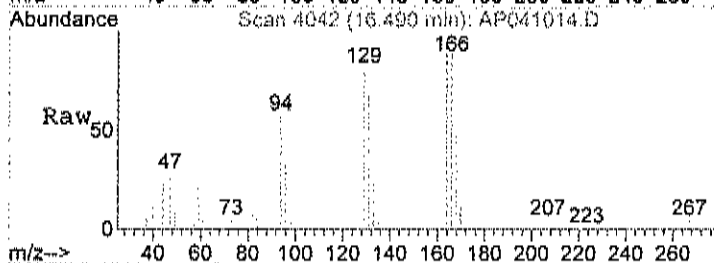
Tgt Ion	Resp	Lower	Upper
92	119077		
91	182.1	154.8	194.8





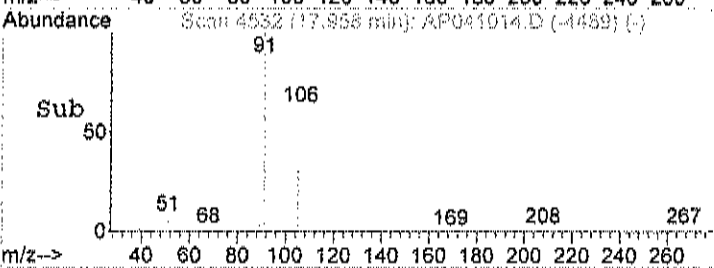
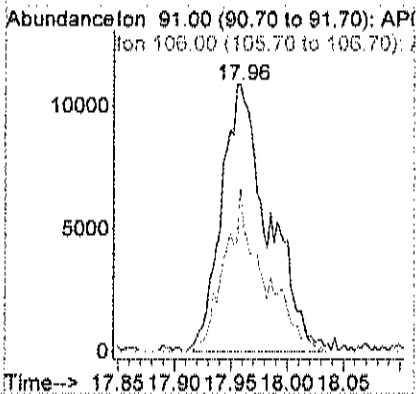
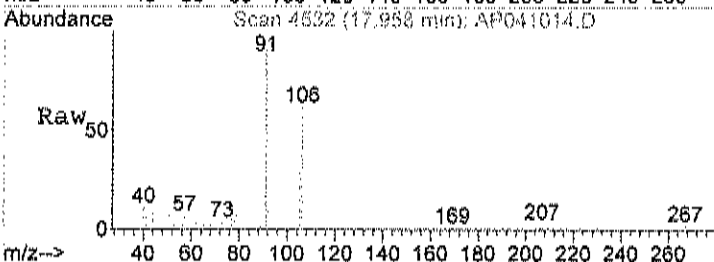
#56  
 Tetrachloroethylene  
 Concen: 0.21 ppb  
 RT: 16.49 min Scan# 4042  
 Delta R.T. 0.00 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

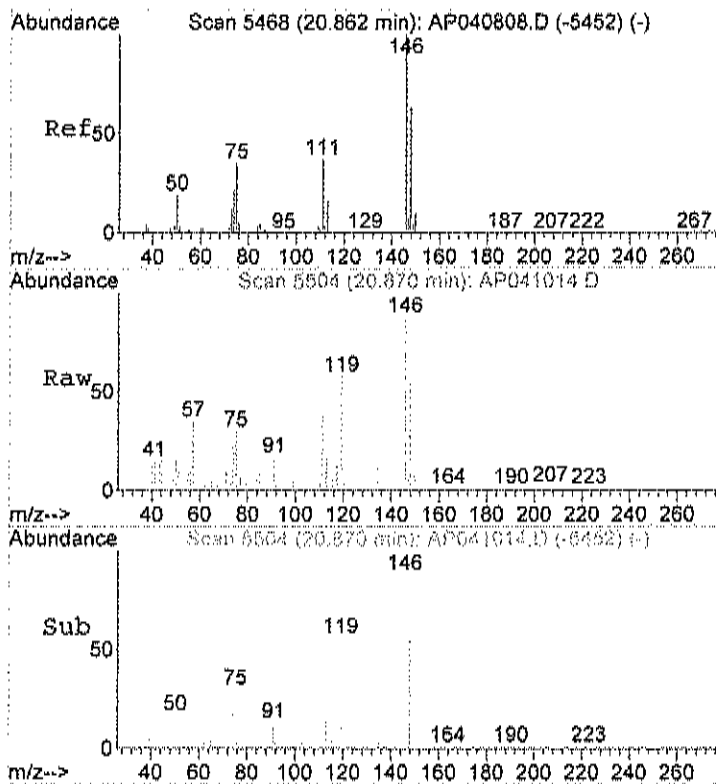
Tgt Ion	Resp	Lower	Upper
164	15488		
166	124.5	105.6	145.6



#59  
 m&p-xylene  
 Concen: 0.16 ppb  
 RT: 17.96 min Scan# 4532  
 Delta R.T. -0.02 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

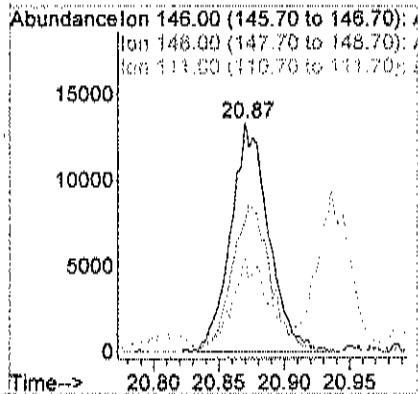
Tgt Ion	Resp	Lower	Upper
91	31515		
106	49.6	26.8	66.8





#74  
 1,4-dichlorobenzene  
 Concen: 0.21 ppb  
 RT: 20.87 min Scan# 5504  
 Delta R.T. 0.00 min  
 Lab File: AP041014.D  
 Acq: 10 Apr 2018 8:04 pm

Tgt Ion	Ratio	Lower	Upper
146	100		
148	64.8	44.5	84.5
111	35.5	20.8	60.8



Data File : C:\HPCHEM\1\DATA\AP041025.D  
 Acq On : 11 Apr 2018 3:25 am  
 Sample : C1804013-002A 10X  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 07:23:19 2018

Vial: 13  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	37295	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.70	114	172669	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	131854	1.00	ppb	0.00

System Monitoring Compounds  
 65) Bromofluorobenzene 19.19 95 80482 0.88 ppb 0.00  
 Spiked Amount 1.000 Range 70 - 130 Recovery = 88.00%

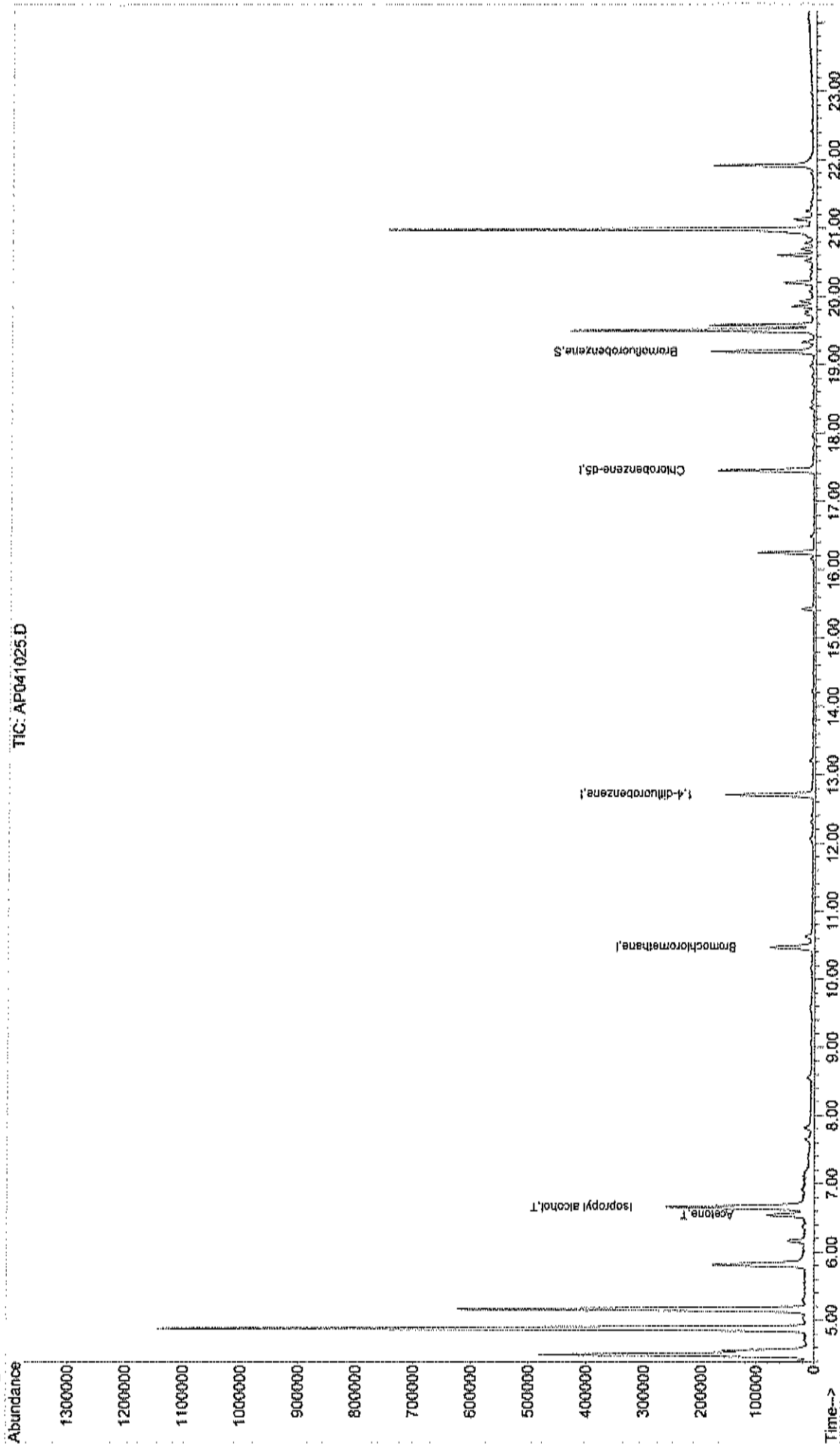
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
15) Acetone	6.54	58	37232	1.11	ppb	91
17) Isopropyl alcohol	6.66	45	437096	6.88	ppb	# 20

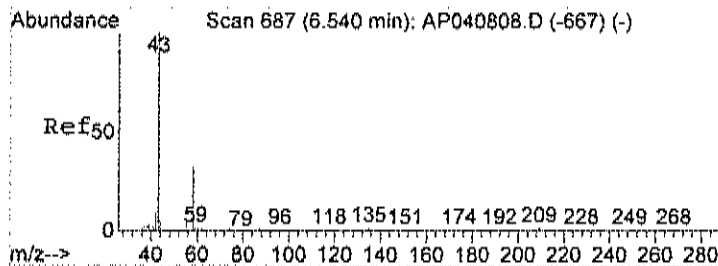
Data File : C:\HPCHEM\1\DATA\AP041025.D  
Acq On : 11 Apr 2018 3:25 am  
Sample : C1804013-002A 10X  
Misc : A408\_1UG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 12:32 2018

Vial: 13  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_1UG.RES

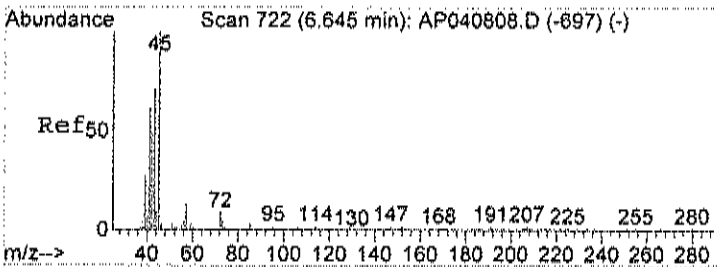
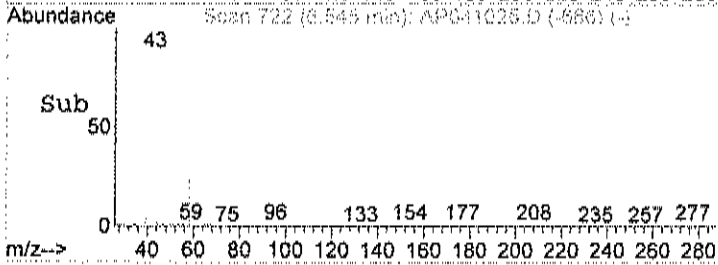
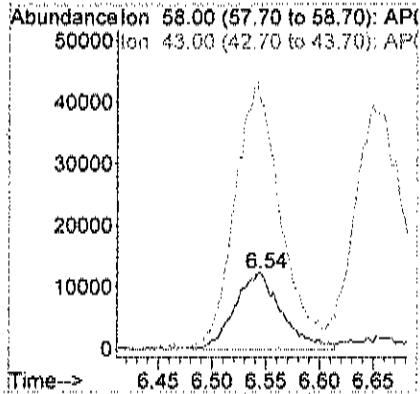
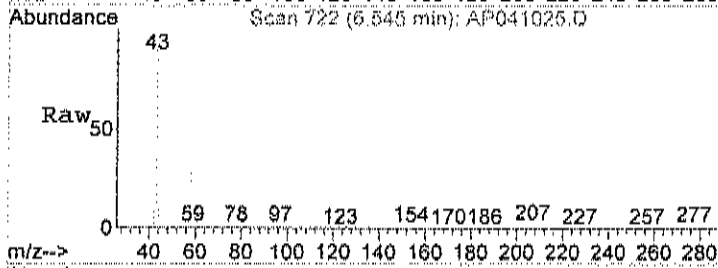
Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration





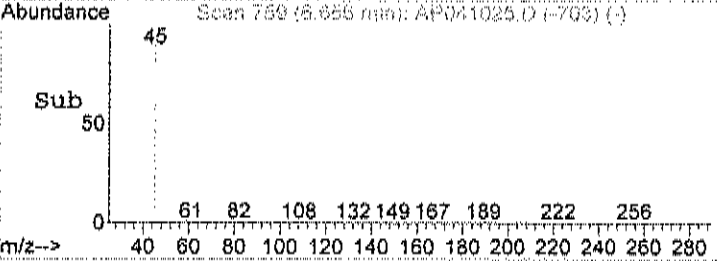
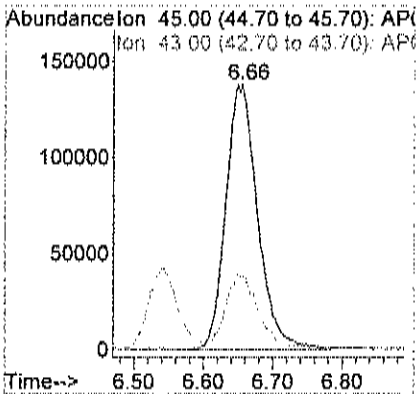
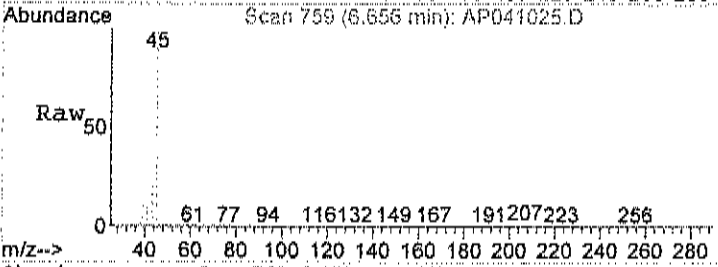
#15  
 Acetone  
 Concen: 1.11 ppb  
 RT: 6.54 min Scan# 722  
 Delta R.T. 0.02 min  
 Lab File: AP041025.D  
 Acq: 11 Apr 2018 3:25 am

Tgt Ion	Resp	Lower	Upper
58	100		
43	339.2	290.5	350.5



#17  
 Isopropyl alcohol  
 Concen: 6.88 ppb  
 RT: 6.66 min Scan# 759  
 Delta R.T. 0.02 min  
 Lab File: AP041025.D  
 Acq: 11 Apr 2018 3:25 am

Tgt Ion	Resp	Lower	Upper
45	100		
43	26.9	92.3	132.3#



Data File : C:\HPCHEM\1\DATA\AP041026.D  
 Acq On : 11 Apr 2018 4:02 am  
 Sample : C1804013-002A 40X  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 07:23:20 2018

Vial: 14  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	36733	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.71	114	170002	1.00	ppb	0.01
50) Chlorobenzene-d5	17.45	117	126293	1.00	ppb	0.00

#### System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	76345	0.87	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	87.00%

#### Target Compounds

17) Isopropyl alcohol	6.66	45	143447	2.29	ppb	Qvalue # 22
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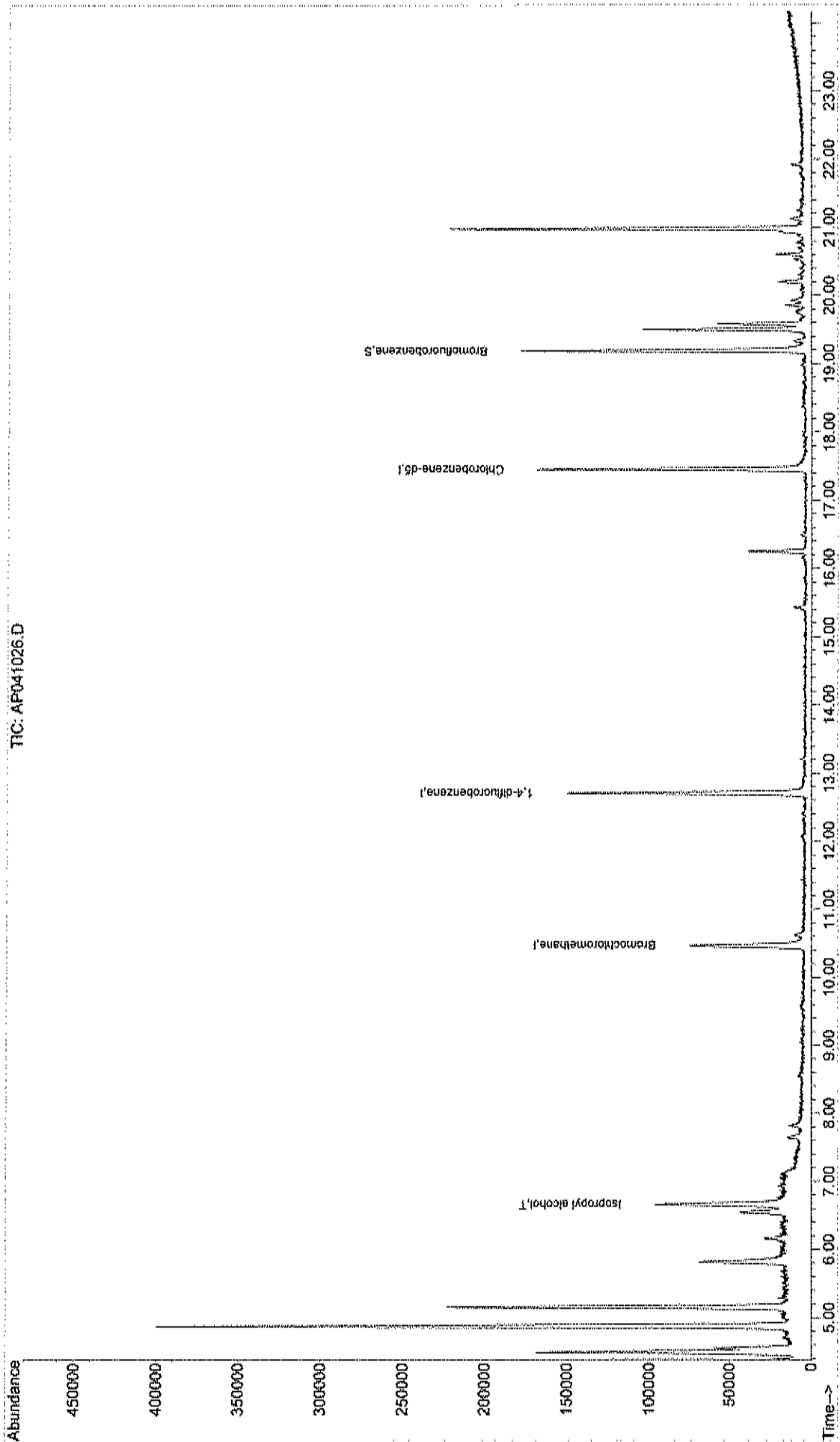


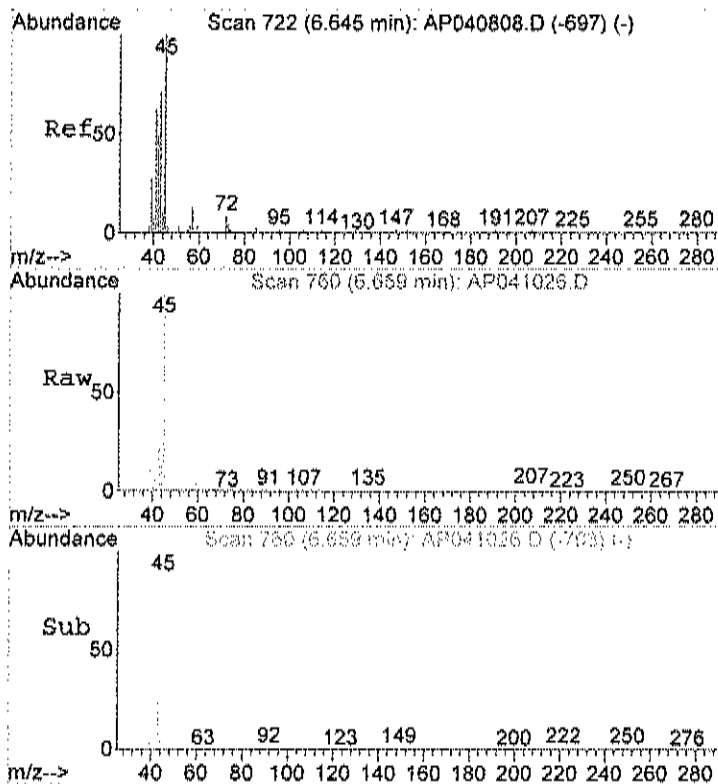
Data File : C:\HPCHEM\1\DATA\AP041026.D  
Acq On : 11 Apr 2018 4:02 am  
Sample : C1804013-002A 40X  
Misc : A408\_IUG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 12:33 2018

Vial: 14  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_IUG.RES

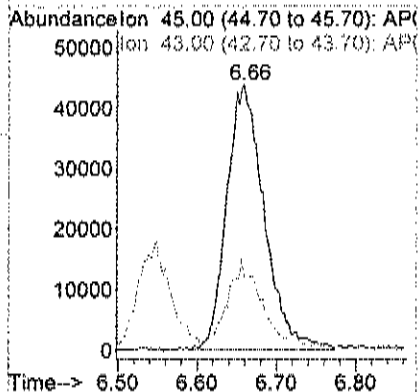
Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration





#17  
 Isopropyl alcohol  
 Concen: 2.29 ppb  
 RT: 6.66 min Scan# 760  
 Delta R.T. 0.02 min  
 Lab File: AP041026.D  
 Acq: 11 Apr 2018 4:02 am

Tgt Ion	Resp	Lower	Upper
45	143447		
43	29.1	92.3	132.3#



**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-003A

**Client Sample ID:** IA-2  
**Tag Number:** 422.1343  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>		<b>FLD</b>		<b>Analyst:</b>		
Lab Vacuum In	-12			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		<b>Analyst: RJP</b>		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 8:46:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 8:46:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Acetone	1.6	0.30		ppbV	1	4/10/2018 8:46:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Benzene	0.11	0.15	J	ppbV	1	4/10/2018 8:46:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 8:46:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Chloroform	0.59	0.15		ppbV	1	4/10/2018 8:46:00 PM
Chloromethane	0.26	0.15		ppbV	1	4/10/2018 8:46:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 8:46:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte, Quantitation estimated,  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-003A

Client Sample ID: IA-2  
 Tag Number: 422.1343  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Freon 11	0.18	0.15		ppbV	1	4/10/2018 8:46:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Freon 12	0.35	0.15		ppbV	1	4/10/2018 8:46:00 PM
Heptane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Hexane	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Isopropyl alcohol	2.0	0.15		ppbV	1	4/10/2018 8:46:00 PM
m&p-Xylene	0.10	0.30	J	ppbV	1	4/10/2018 8:46:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 8:46:00 PM
Methyl Ethyl Ketone	0.27	0.30	J	ppbV	1	4/10/2018 8:46:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 8:46:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Methylene chloride	0.28	0.15		ppbV	1	4/10/2018 8:46:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Tetrachloroethylene	0.14	0.15	J	ppbV	1	4/10/2018 8:46:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Toluene	0.32	0.15		ppbV	1	4/10/2018 8:46:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 8:46:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 8:46:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 8:46:00 PM
Surr: Bromofluorobenzene	95.0	70-130		%REC	1	4/10/2018 8:46:00 PM

<b>Qualifiers:</b>	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-003A

**Client Sample ID:** IA-2  
**Tag Number:** 422.1343  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 8:46:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 8:46:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 8:46:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 8:46:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:46:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 8:46:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 8:46:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 8:46:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 8:46:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 8:46:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 8:46:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 8:46:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 8:46:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 8:46:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 8:46:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 8:46:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 8:46:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 8:46:00 PM
Acetone	3.8	0.71		ug/m3	1	4/10/2018 8:46:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 8:46:00 PM
Benzene	0.35	0.48	J	ug/m3	1	4/10/2018 8:46:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 8:46:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 8:46:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 8:46:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 8:46:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 8:46:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 8:46:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 8:46:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 8:46:00 PM
Chloroform	2.9	0.73		ug/m3	1	4/10/2018 8:46:00 PM
Chloromethane	0.54	0.31		ug/m3	1	4/10/2018 8:46:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:46:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 8:46:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 8:46:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 8:46:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	4/10/2018 8:46:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 8:46:00 PM
Freon 11	1.0	0.84		ug/m3	1	4/10/2018 8:46:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 8:46:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 8:46:00 PM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-003A

**Client Sample ID:** IA-2  
**Tag Number:** 422.1343  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>						Analyst: RJP
Freon 12	1.7	0.74		ug/m3	1	4/10/2018 8:46:00 PM
Heptane	< 0.61	0.61		ug/m3	1	4/10/2018 8:46:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 8:46:00 PM
Hexane	< 0.53	0.53		ug/m3	1	4/10/2018 8:46:00 PM
Isopropyl alcohol	4.8	0.37		ug/m3	1	4/10/2018 8:46:00 PM
m&p-Xylene	0.43	1.3	J	ug/m3	1	4/10/2018 8:46:00 PM
Methyl Butyl Ketone	< 1.2	1.2	J	ug/m3	1	4/10/2018 8:46:00 PM
Methyl Ethyl Ketone	0.80	0.88	J	ug/m3	1	4/10/2018 8:46:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 8:46:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 8:46:00 PM
Methylene chloride	0.97	0.52		ug/m3	1	4/10/2018 8:46:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 8:46:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 8:46:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 8:46:00 PM
Tetrachloroethylene	0.95	1.0	J	ug/m3	1	4/10/2018 8:46:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 8:46:00 PM
Toluene	1.2	0.57		ug/m3	1	4/10/2018 8:46:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 8:46:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 8:46:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 8:46:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 8:46:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 8:46:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 8:46:00 PM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

Data File : C:\HPCHEM\1\DATA\AP041015.D  
 Acq On : 10 Apr 2018 8:46 pm  
 Sample : C1804013-003A  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 07:23:09 2018

Vial: 3  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QI on	Response	Conc	Units	Dev (Min)
1) Bromochloromethane	10.47	128	38633	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.71	114	183337	1.00	ppb	0.01
50) Chlorobenzene-d5	17.45	117	142274	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	93197	0.95	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	95.00%

Target Compounds

	R.T.	QI on	Response	Conc	Units	Qvalue
3) Freon 12	4.60	85	81105	0.35	ppb	100
4) Chloromethane	4.82	50	13641	0.26	ppb	83
14) Freon 11	6.38	101	32444	0.18	ppb	98
15) Acetone	6.54	58	55048	1.59	ppb	96
17) Isopropyl alcohol	6.66	45	129507	1.97	ppb	# 28
21) Methylene chloride	7.65	84	21111	0.28	ppb	87
28) Methyl Ethyl Ketone	9.55	72	7243m <sup>6</sup>	0.27	ppb	
32) Chloroform	10.62	83	83796	0.59	ppb	99
39) Benzene	12.04	78	16217	0.11	ppb	86
51) Toluene	15.43	92	33168	0.32	ppb	99
56) Tetrachloroethylene	16.50	164	9571	0.14	ppb	94
59) m&p-xylene	17.96	91	19427	0.10	ppb	94

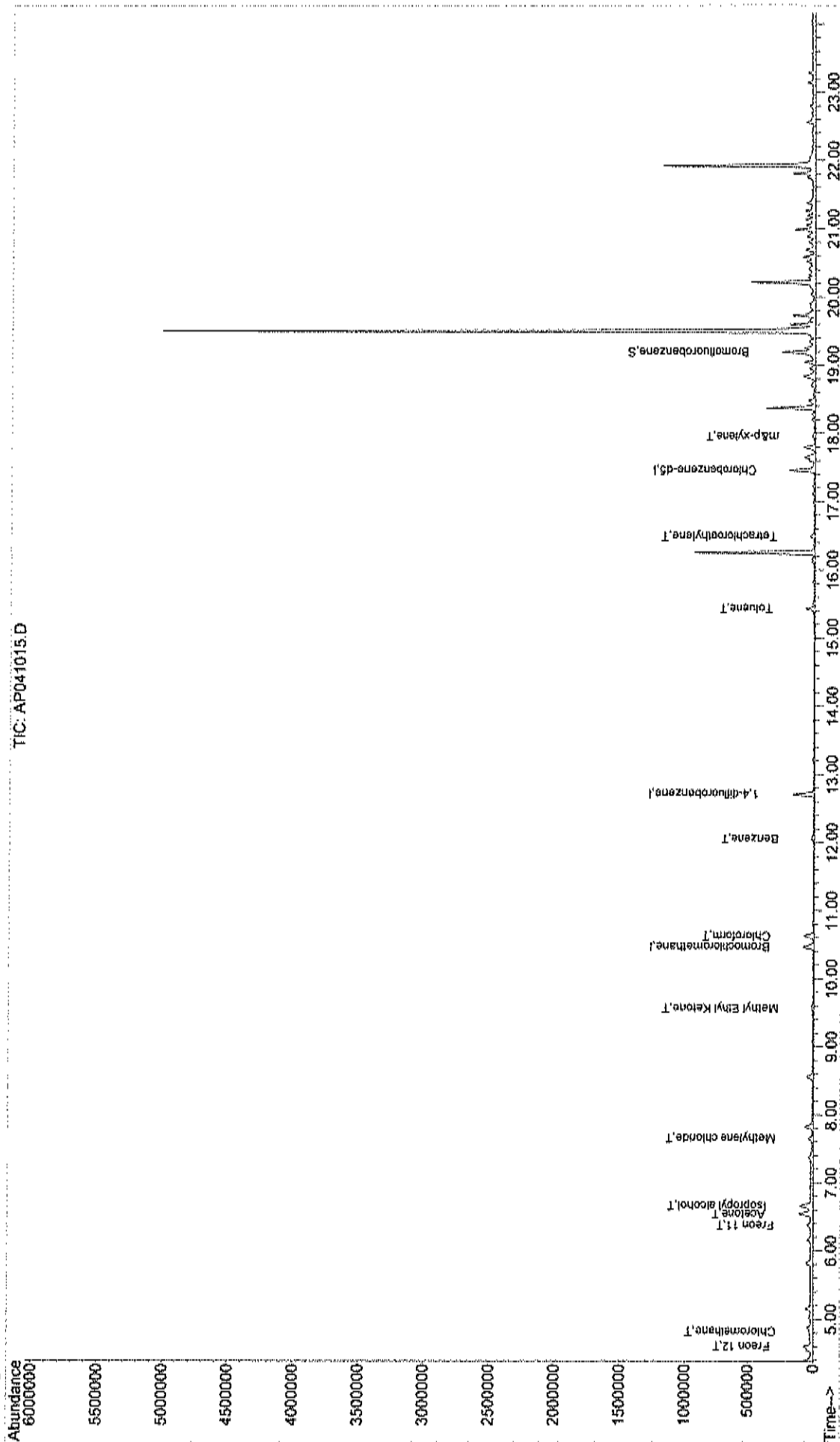
Data File : C:\HPCHEM\1\DATA\AP041015.D  
Acq On : 10 Apr 2018 8:46 pm  
Sample : C1804013-003A  
Misc : A408\_1UG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 12:21 2018

Vial: 3

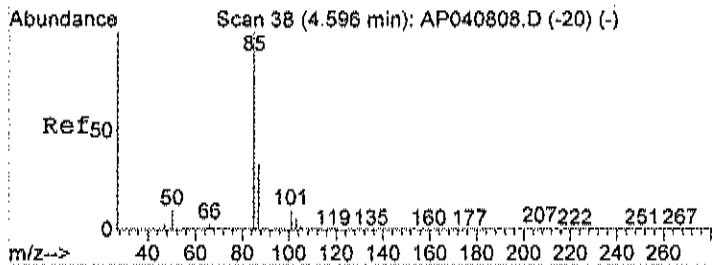
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration

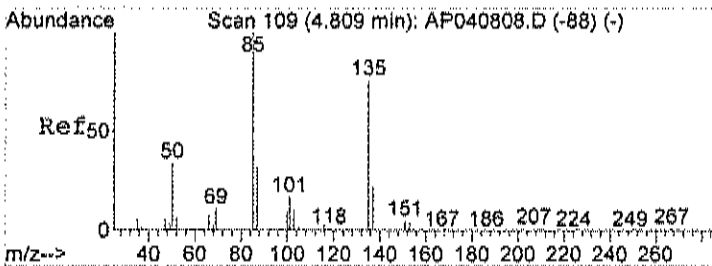
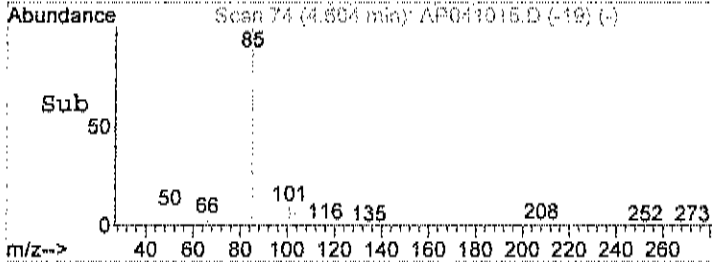
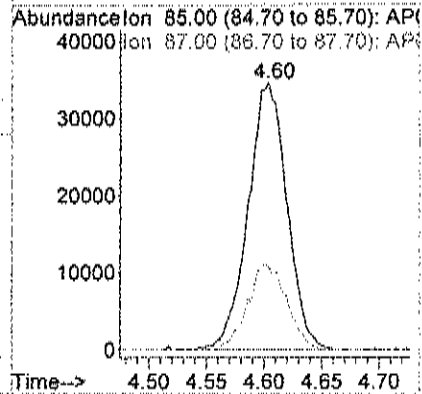
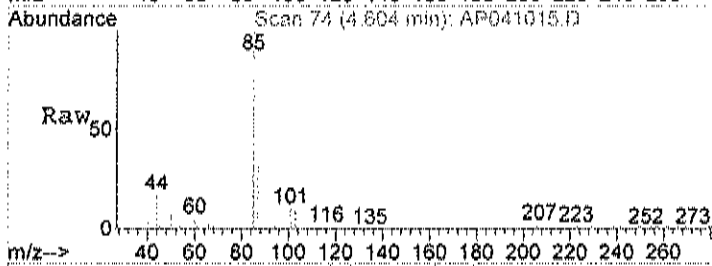






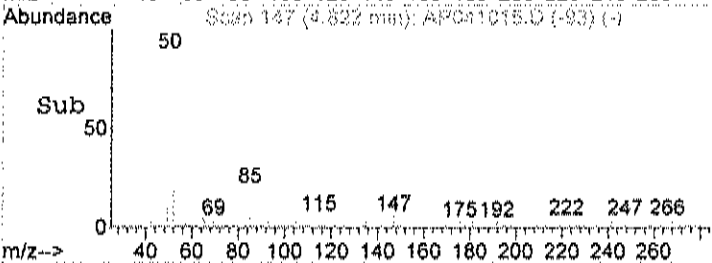
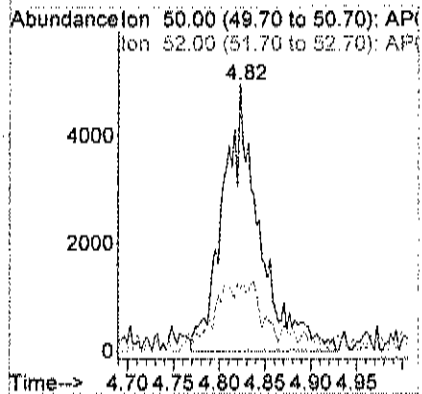
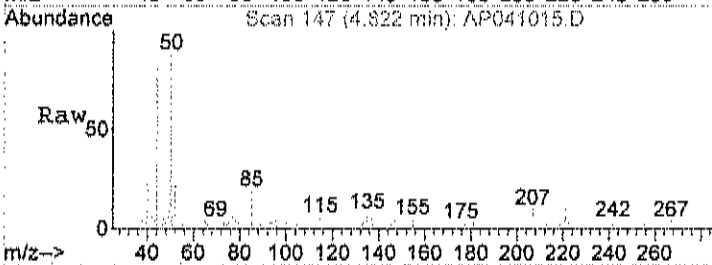
#3  
 Freon 12  
 Concen: 0.35 ppb  
 RT: 4.60 min Scan# 74  
 Delta R.T. 0.01 min  
 Lab File: AP041015.D  
 Acq: 10 Apr 2018 8:46 pm

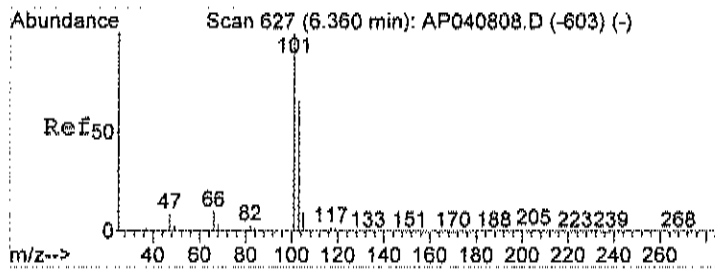
Tgt Ion	Resp	Lower	Upper
85	100		
87	32.4	12.1	52.1



#4  
 Chloromethane  
 Concen: 0.26 ppb  
 RT: 4.82 min Scan# 147  
 Delta R.T. 0.01 min  
 Lab File: AP041015.D  
 Acq: 10 Apr 2018 8:46 pm

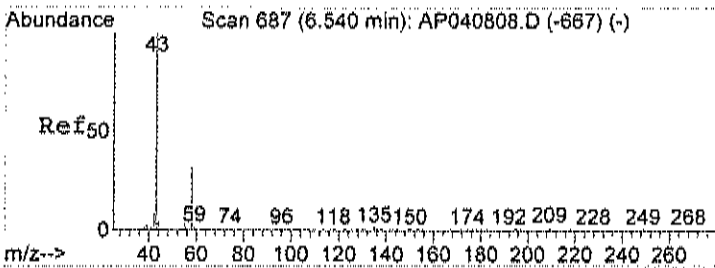
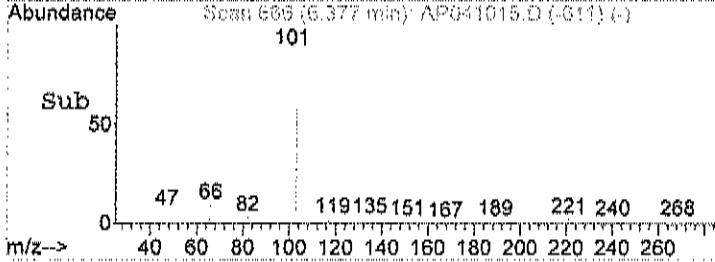
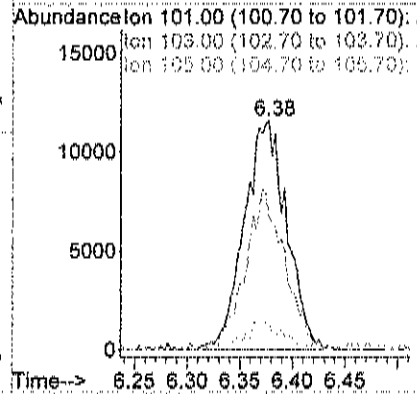
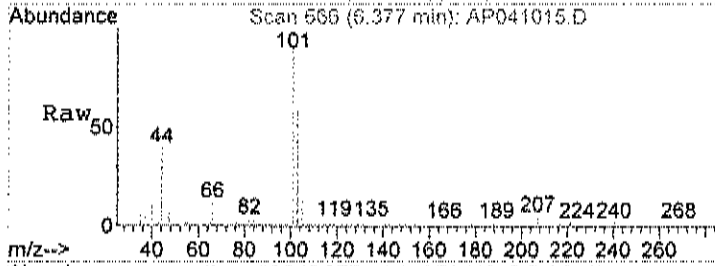
Tgt Ion	Resp	Lower	Upper
50	100		
52	32.0	3.5	43.5





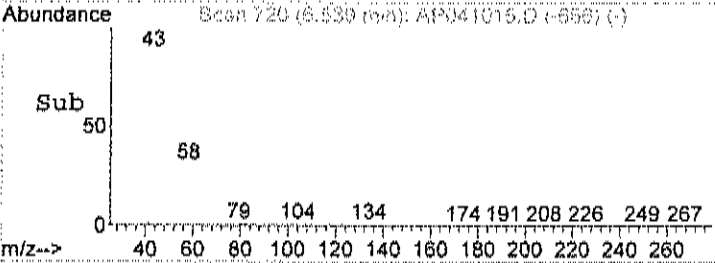
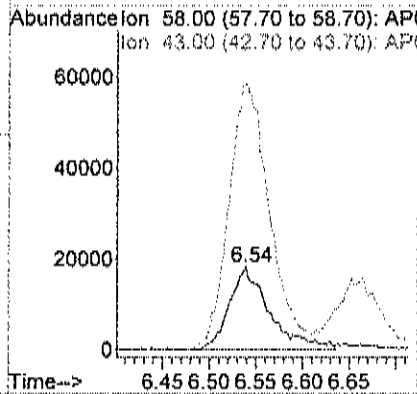
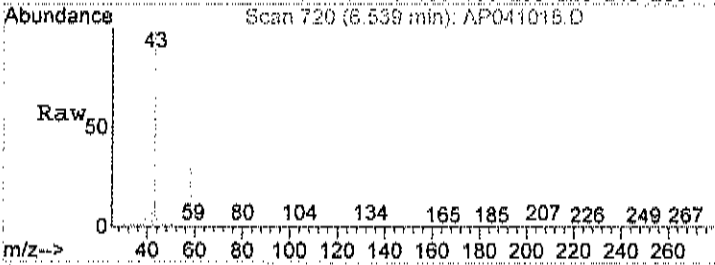
#14  
 Freon 11  
 Concen: 0.18 ppb  
 RT: 6.38 min Scan# 666  
 Delta R.T. 0.01 min  
 Lab File: AP041015.D  
 Acq: 10 Apr 2018 8:46 pm

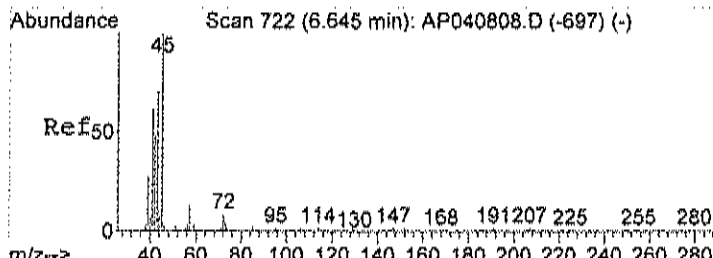
Tgt Ion	Resp	Lower	Upper
101	100		
103	65.8	44.4	84.4
105	10.7	0.0	30.7



#15  
 Acetone  
 Concen: 1.59 ppb  
 RT: 6.54 min Scan# 720  
 Delta R.T. 0.01 min  
 Lab File: AP041015.D  
 Acq: 10 Apr 2018 8:46 pm

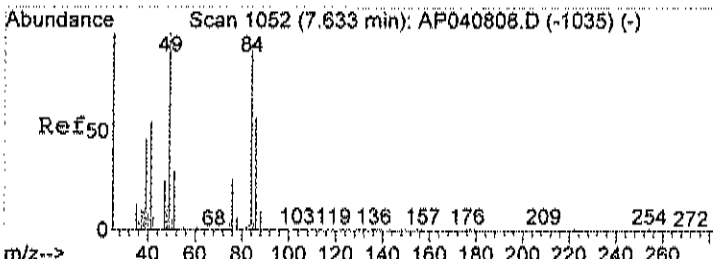
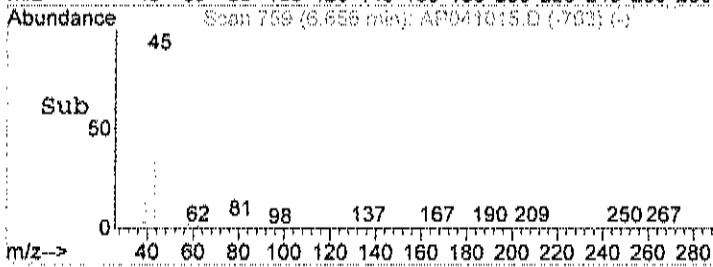
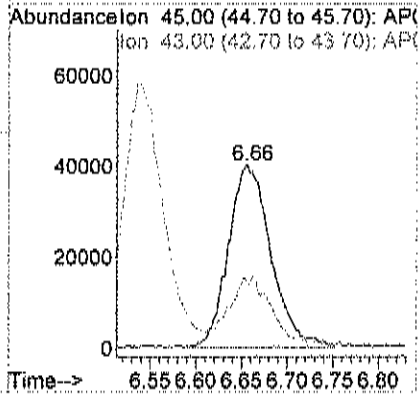
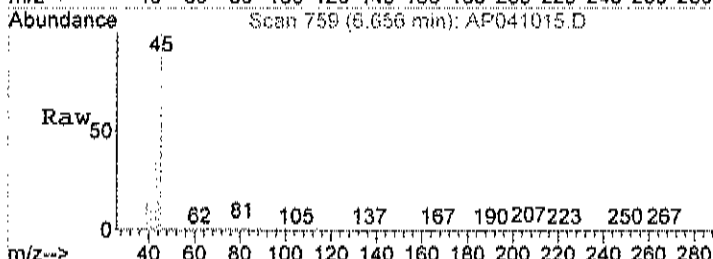
Tgt Ion	Resp	Lower	Upper
58	100		
43	328.9	290.5	350.5





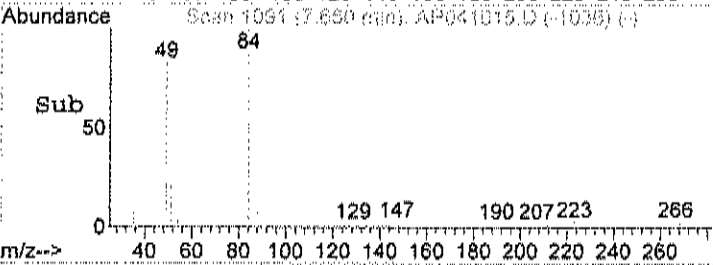
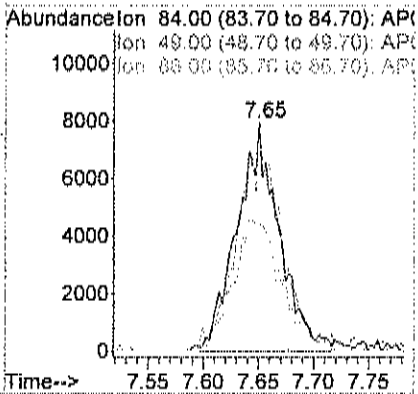
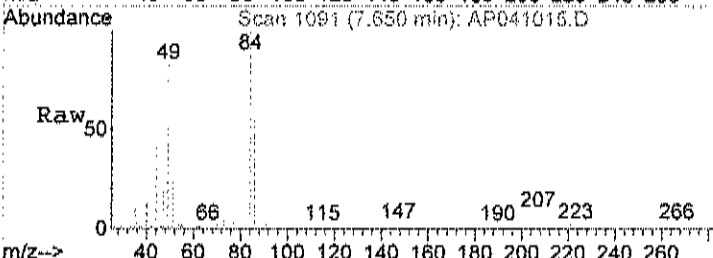
#17  
 Isopropyl alcohol  
 Concen: 1.97 ppb  
 RT: 6.66 min Scan# 759  
 Delta R.T. 0.02 min  
 Lab File: AP041015.D  
 Acq: 10 Apr 2018 8:46 pm

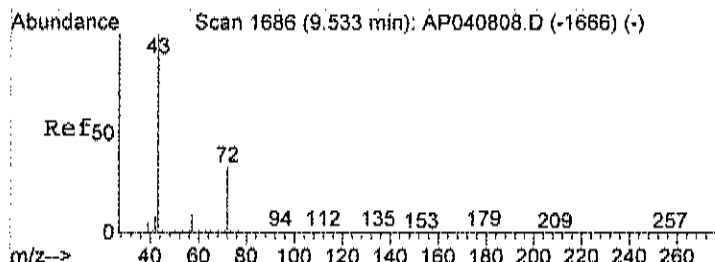
Tgt Ion	Resp	Lower	Upper
45	100		
43	35.7	92.3	132.3#



#21  
 Methylene chloride  
 Concen: 0.28 ppb  
 RT: 7.65 min Scan# 1091  
 Delta R.T. 0.01 min  
 Lab File: AP041015.D  
 Acq: 10 Apr 2018 8:46 pm

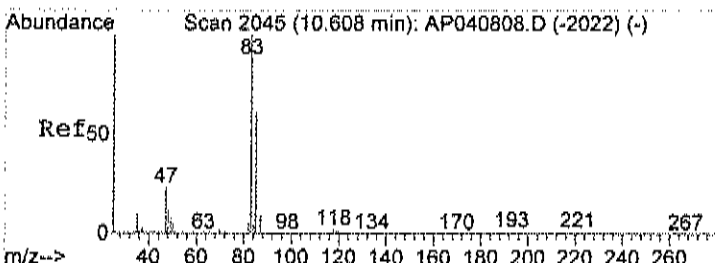
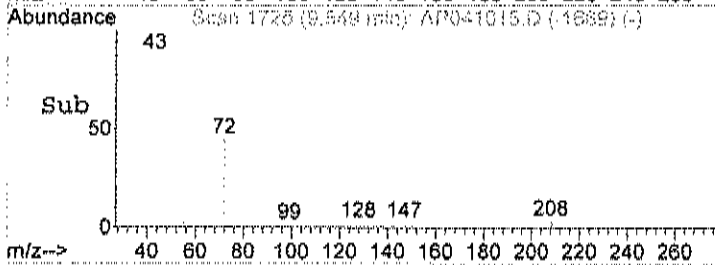
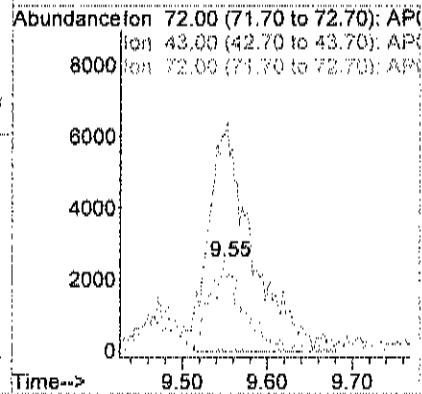
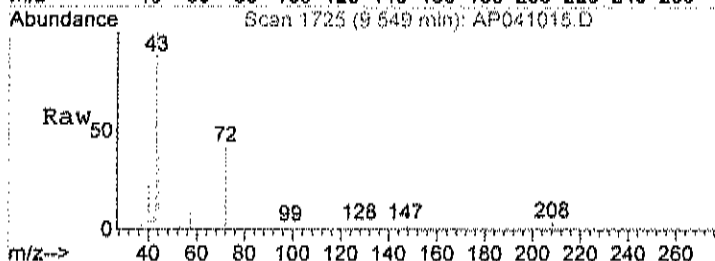
Tgt Ion	Resp	Lower	Upper
84	100		
49	99.5	97.6	137.6
86	66.5	42.0	82.0





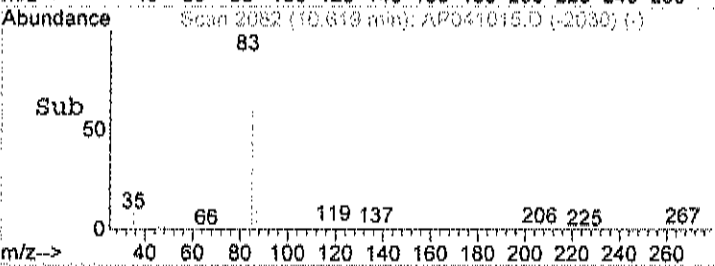
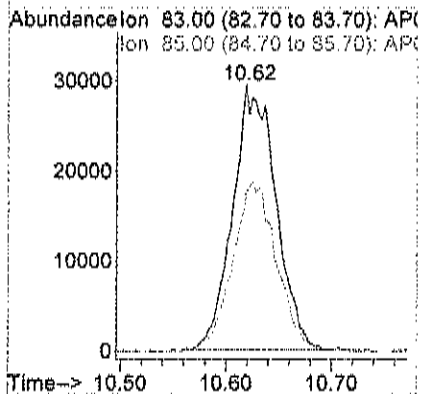
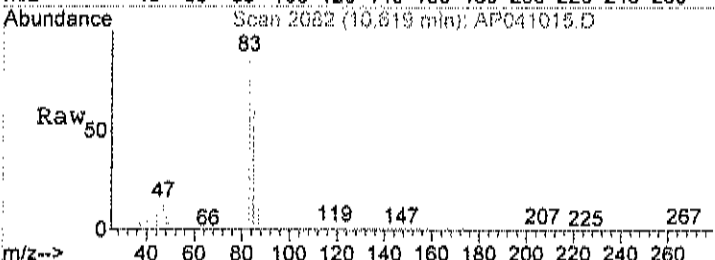
#28  
 Methyl Ethyl Ketone  
 Concen: 0.27 ppb m  
 RT: 9.55 min Scan# 1725  
 Delta R.T. 0.02 min  
 Lab File: AP041015.D  
 Acq: 10 Apr 2018 8:46 pm

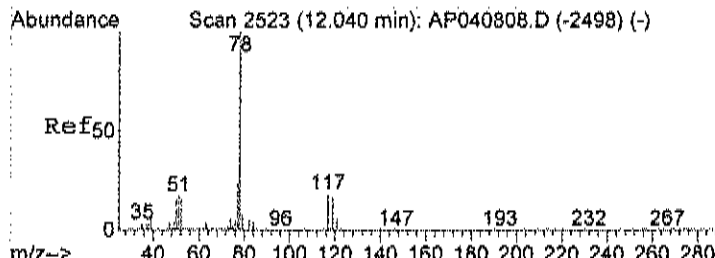
Tgt Ion	Ratio	Lower	Upper
72	100		
43	0.0	0.0	20.0
72	66.4	80.0	120.0#



#32  
 Chloroform  
 Concen: 0.59 ppb  
 RT: 10.62 min Scan# 2082  
 Delta R.T. 0.00 min  
 Lab File: AP041015.D  
 Acq: 10 Apr 2018 8:46 pm

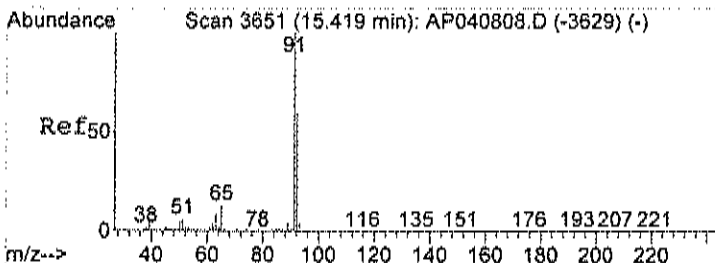
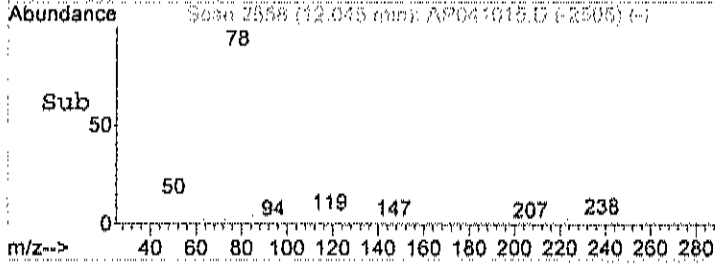
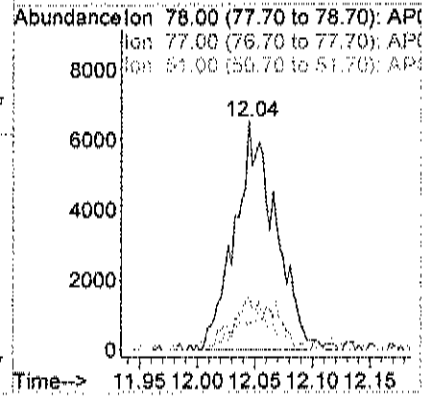
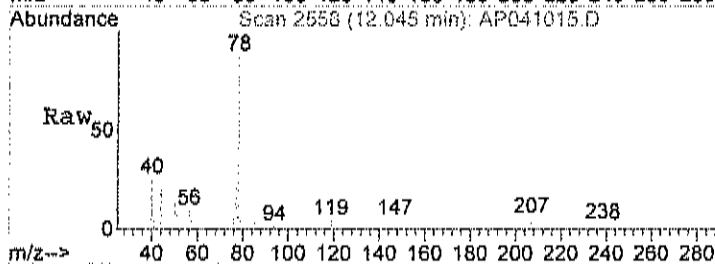
Tgt Ion	Ratio	Lower	Upper
83	100		
85	64.6	45.5	85.5





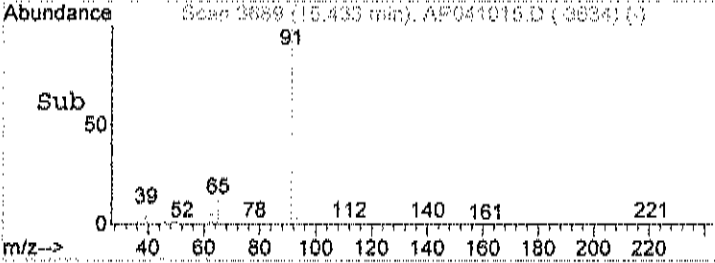
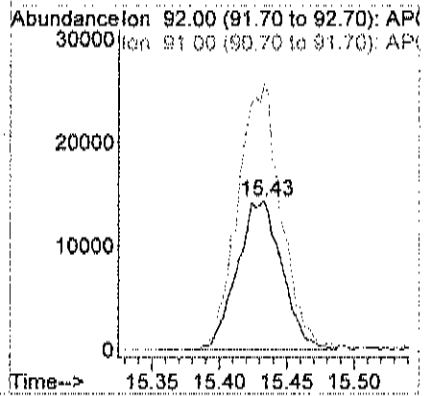
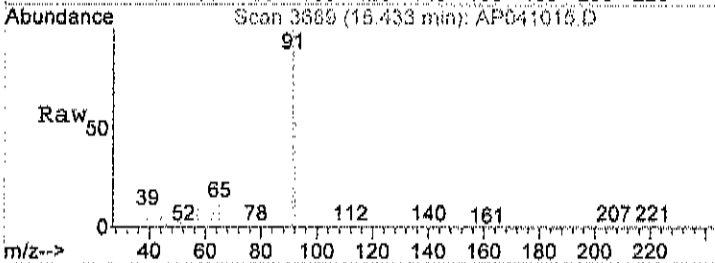
#39  
Benzene  
Concen: 0.11 ppb  
RT: 12.04 min Scan# 2558  
Delta R.T. 0.01 min  
Lab File: AP041015.D  
Acq: 10 Apr 2018 8:46 pm

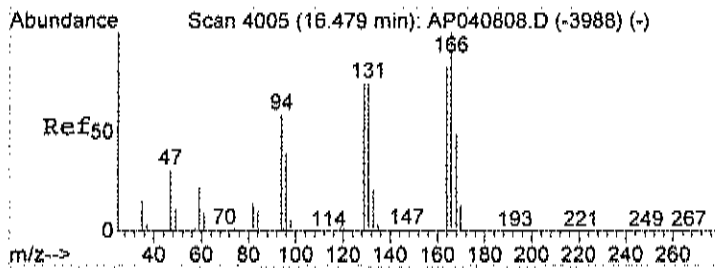
Tgt Ion	Resp	Lower	Upper
78	16217		
77	20.3	3.4	43.4
51	6.9	0.0	37.8



#51  
Toluene  
Concen: 0.32 ppb  
RT: 15.43 min Scan# 3689  
Delta R.T. 0.01 min  
Lab File: AP041015.D  
Acq: 10 Apr 2018 8:46 pm

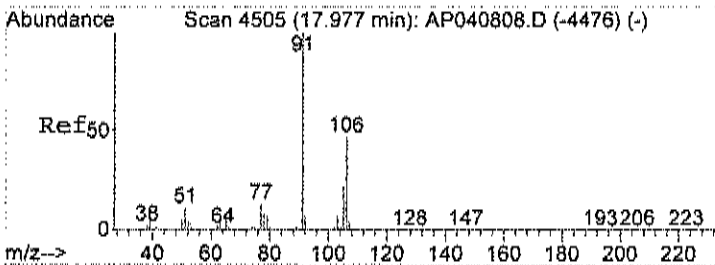
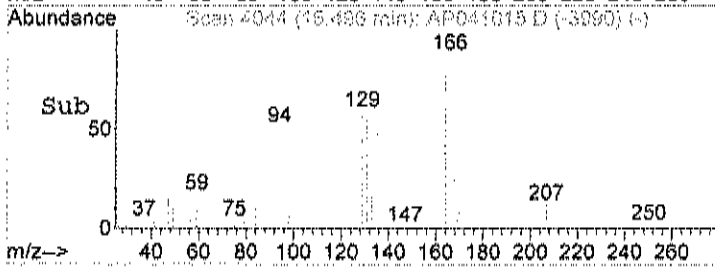
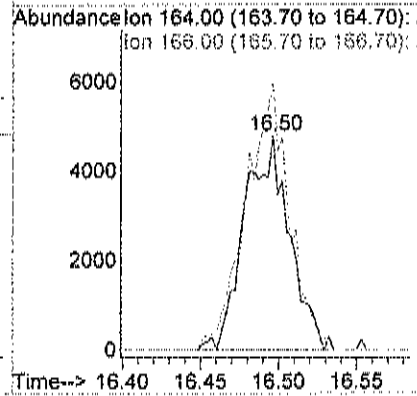
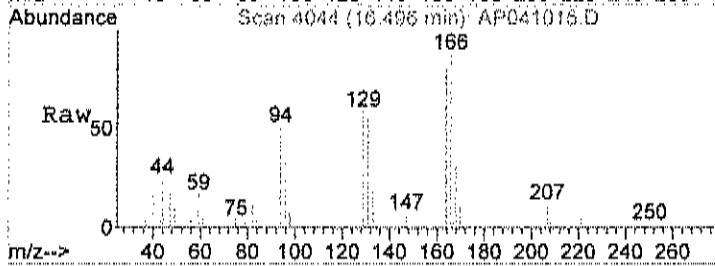
Tgt Ion	Resp	Lower	Upper
92	33168		
91	173.8	154.8	194.8





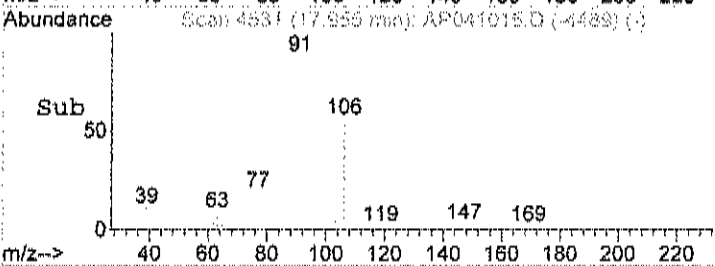
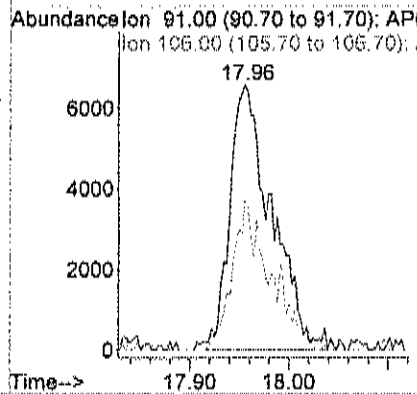
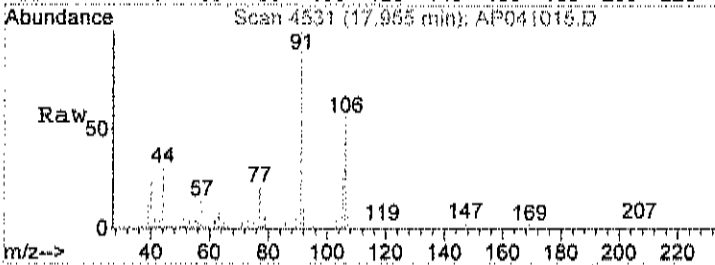
#56  
 Tetrachloroethylene  
 Concen: 0.14 ppb  
 RT: 16.50 min Scan# 4044  
 Delta R.T. 0.01 min  
 Lab File: AP041015.D  
 Acq: 10 Apr 2018 8:46 pm

Tgt Ion	Ratio	Lower	Upper
164	100		
166	118.7	105.6	145.6



#59  
 m&p-xylene  
 Concen: 0.10 ppb  
 RT: 17.96 min Scan# 4531  
 Delta R.T. -0.03 min  
 Lab File: AP041015.D  
 Acq: 10 Apr 2018 8:46 pm

Tgt Ion	Ratio	Lower	Upper
91	100		
106	50.5	26.8	66.8



**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-004A

**Client Sample ID:** 1A-3  
**Tag Number:** 365.535  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>			<b>FLD</b>			<b>Analyst:</b>
Lab Vacuum In	-15			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>			<b>TO-15</b>			<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 9:29:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 9:29:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Acetone	1.9	0.30		ppbV	1	4/10/2018 9:29:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Benzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 9:29:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Chloroform	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Chloromethane	0.23	0.15		ppbV	1	4/10/2018 9:29:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 9:29:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-004A

**Client Sample ID:** IA-3  
**Tag Number:** 365.535  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Freon 11	0.14	0.15	J	ppbV	1	4/10/2018 9:29:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Freon 12	0.29	0.15		ppbV	1	4/10/2018 9:29:00 PM
Heptane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Hexane	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Isopropyl alcohol	0.97	0.15		ppbV	1	4/10/2018 9:29:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	4/10/2018 9:29:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 9:29:00 PM
Methyl Ethyl Ketone	0.22	0.30	J	ppbV	1	4/10/2018 9:29:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 9:29:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Methylene chloride	0.27	0.15		ppbV	1	4/10/2018 9:29:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Toluene	0.24	0.15		ppbV	1	4/10/2018 9:29:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 9:29:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 9:29:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 9:29:00 PM
Surr: Bromofluorobenzene	92.0	70-130		%REC	1	4/10/2018 9:29:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection



**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-004A

**Client Sample ID:** IA-3  
**Tag Number:** 365.535  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 9:29:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 9:29:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 9:29:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 9:29:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 9:29:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 9:29:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 9:29:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 9:29:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 9:29:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 9:29:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 9:29:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 9:29:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 9:29:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 9:29:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 9:29:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 9:29:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 9:29:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 9:29:00 PM
Acetone	4.4	0.71		ug/m3	1	4/10/2018 9:29:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 9:29:00 PM
Benzene	< 0.48	0.48		ug/m3	1	4/10/2018 9:29:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 9:29:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 9:29:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 9:29:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 9:29:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 9:29:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 9:29:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 9:29:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 9:29:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	4/10/2018 9:29:00 PM
Chloromethane	0.47	0.31		ug/m3	1	4/10/2018 9:29:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 9:29:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 9:29:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 9:29:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 9:29:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	4/10/2018 9:29:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 9:29:00 PM
Freon 11	0.79	0.84	J	ug/m3	1	4/10/2018 9:29:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 9:29:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 9:29:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 , Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

**Centek Laboratories, LLC**

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-004A

Client Sample ID: 1A-3  
 Tag Number: 365.535  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		Analyst: RJP		
Freon 12	1.4	0.74		ug/m3	1	4/10/2018 9:29:00 PM
Heptane	< 0.61	0.61		ug/m3	1	4/10/2018 9:29:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 9:29:00 PM
Hexane	< 0.53	0.53		ug/m3	1	4/10/2018 9:29:00 PM
Isopropyl alcohol	2.4	0.37		ug/m3	1	4/10/2018 9:29:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	4/10/2018 9:29:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 9:29:00 PM
Methyl Ethyl Ketone	0.65	0.88	J	ug/m3	1	4/10/2018 9:29:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 9:29:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 9:29:00 PM
Methylene chloride	0.94	0.52		ug/m3	1	4/10/2018 9:29:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 9:29:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 9:29:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 9:29:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/10/2018 9:29:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 9:29:00 PM
Toluene	0.90	0.57		ug/m3	1	4/10/2018 9:29:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 9:29:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 9:29:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 9:29:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 9:29:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 9:29:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 9:29:00 PM

Qualifiers: \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte, Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

Data File : C:\HPCHEM\1\DATA\AP041016.D

Vial: 4

Acq On : 10 Apr 2018 9:29 pm

Operator: RJP

Sample : C1804013-004A

Inst : MSD #1

Misc : A408\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 11 07:23:10 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 09:00:44 2018

Response via : Initial Calibration

DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	36136	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.70	114	176219	1.00	ppb	0.00
50) Chlorobenzene-d5	17.46	117	137555	1.00	ppb	0.01

## System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	87862	0.92	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	92.00%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.61	85	62600	0.29	ppb	99
4) Chloromethane	4.83	50	11225m <sup>o</sup>	0.23	ppb	
14) Freon 11	6.37	101	24806	0.14	ppb	93
15) Acetone	6.54	58	60458	1.86	ppb	100
17) Isopropyl alcohol	6.66	45	59599	0.97	ppb	# 31
21) Methylene chloride	7.65	84	19013	0.27	ppb	# 84
28) Methyl Ethyl Ketone	9.55	72	5565m <sup>o</sup>	0.22	ppb	
51) Toluene	15.42	92	24037	0.24	ppb	96

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 (#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP041016.D A408\_1UG.M Thu Apr 26 08:55:10 2018 MSD1

Quantitation Report (QT Reviewed)

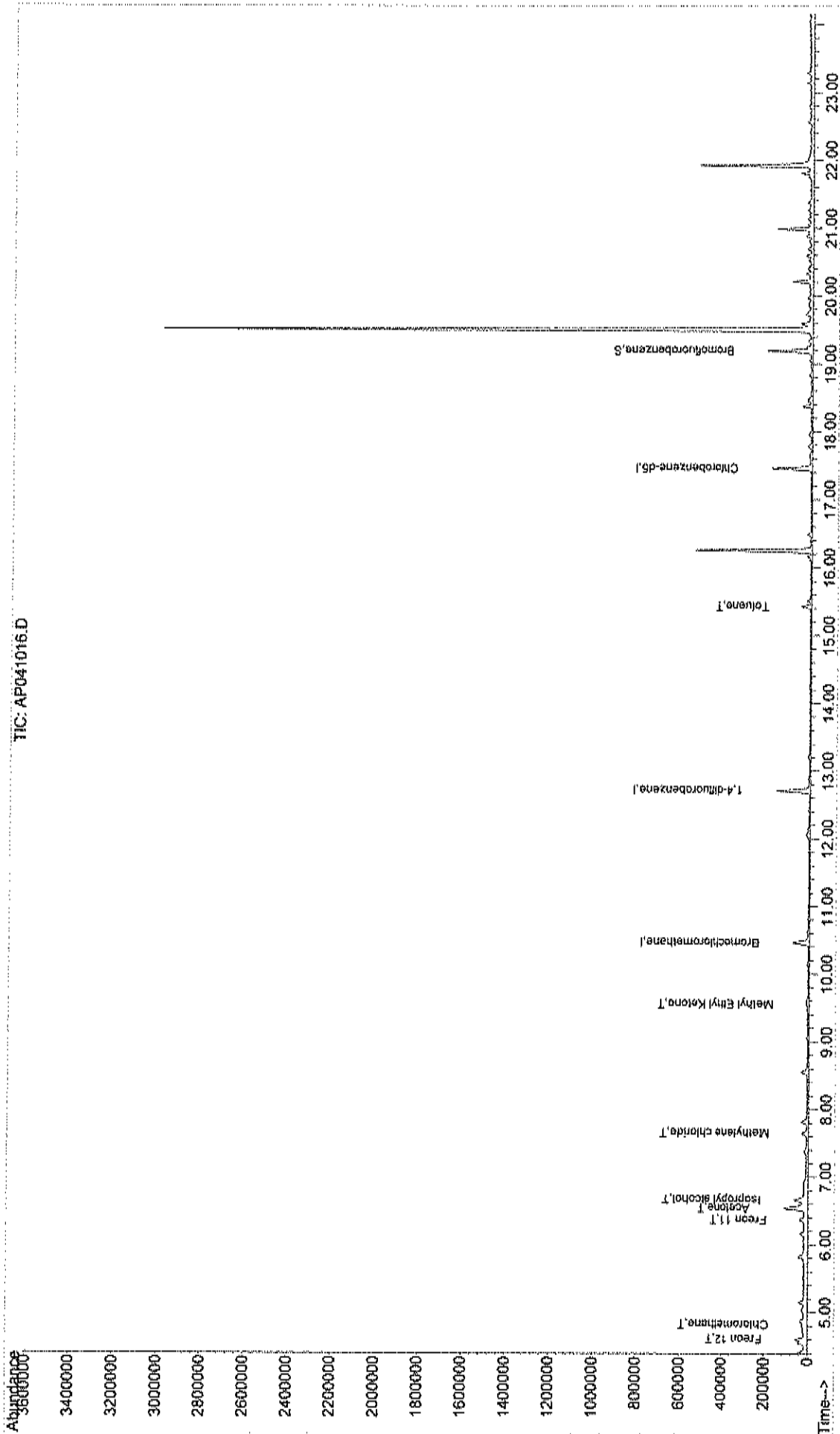
Data File : C:\HPCHEM\1\DATA\AP041016.D  
Acq On : 10 Apr 2018 9:29 pm  
Sample : C1804013-004A  
Misc : A408\_LUG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 12:21 2018

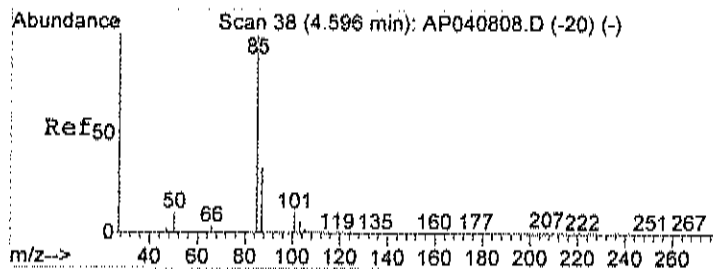
Vial: 4  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_LUG.RES

Method : C:\HPCHEM\1\METHODS\A408\_LUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration

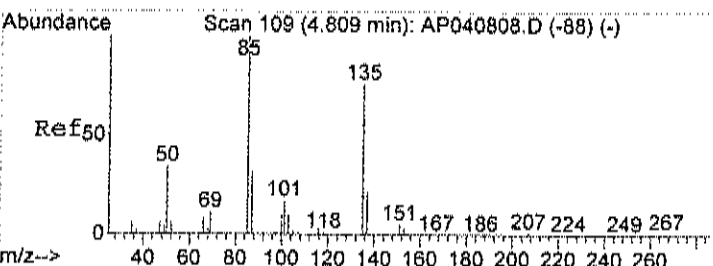
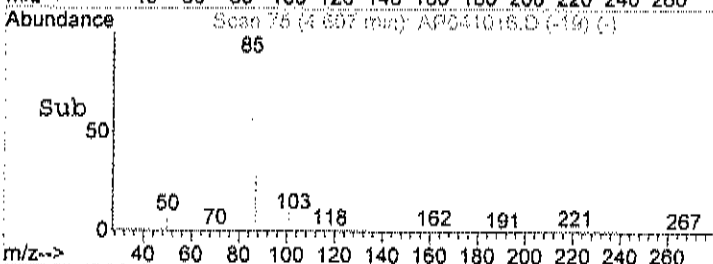
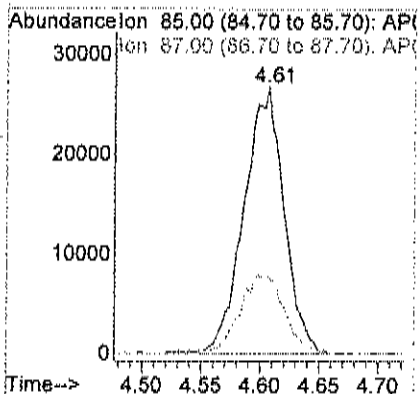
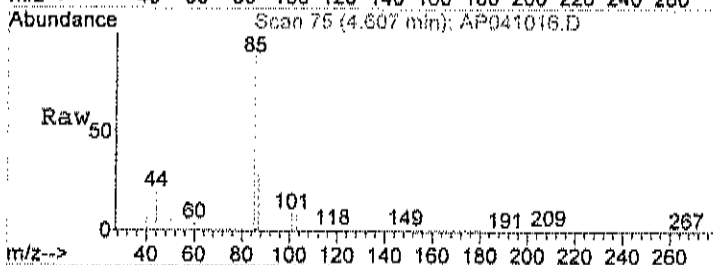
TIC: AP041016.D





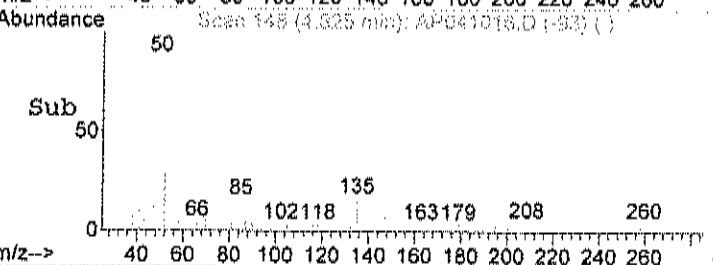
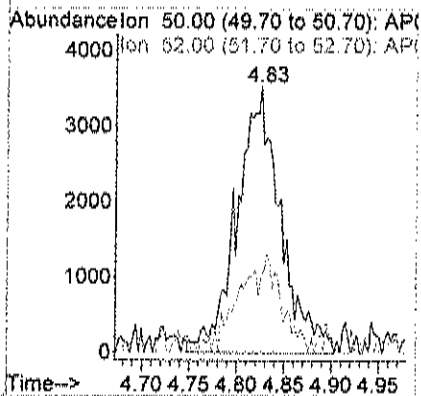
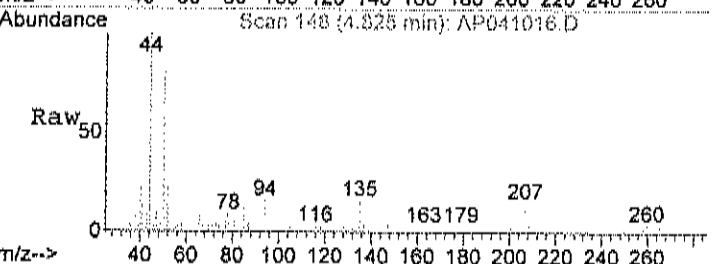
#3  
 Freon 12  
 Concen: 0.29 ppb  
 RT: 4.61 min Scan# 75  
 Delta R.T. 0.02 min  
 Lab File: AP041016.D  
 Acq: 10 Apr 2018 9:29 pm

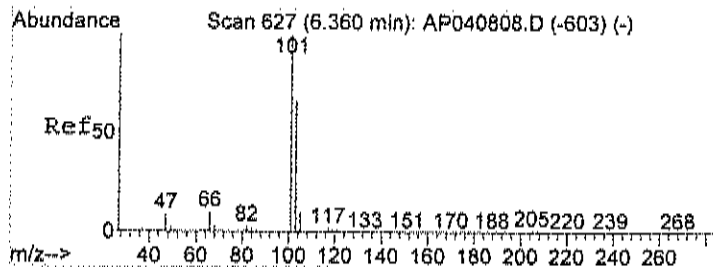
Tgt Ion: 85 Resp: 62600  
 Ion Ratio Lower Upper  
 85 100  
 87 32.6 12.1 52.1



#4  
 Chloromethane  
 Concen: 0.23 ppb m  
 RT: 4.83 min Scan# 148  
 Delta R.T. 0.01 min  
 Lab File: AP041016.D  
 Acq: 10 Apr 2018 9:29 pm

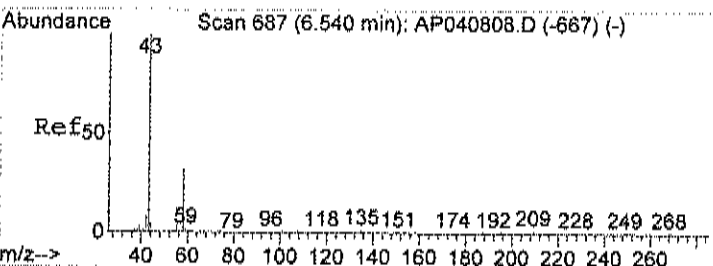
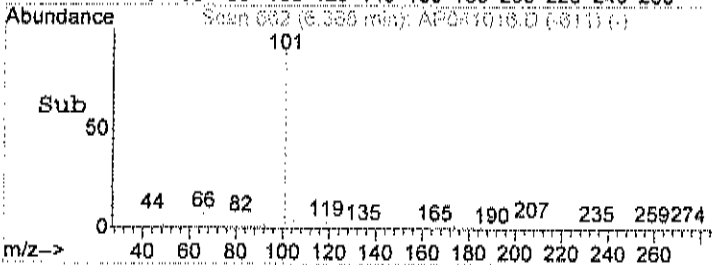
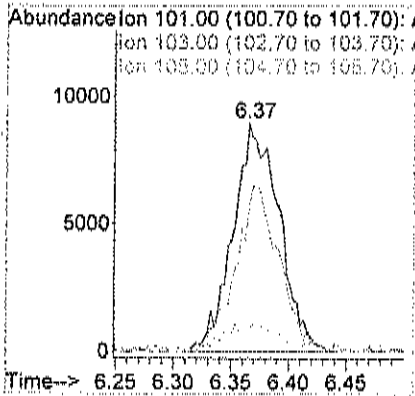
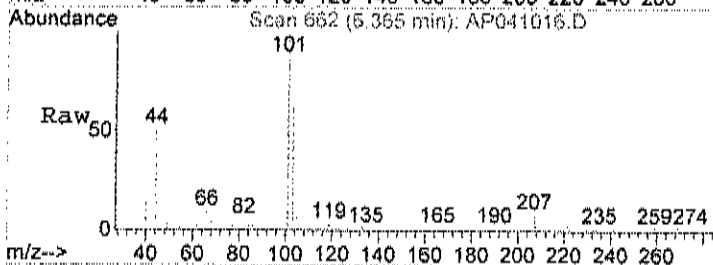
Tgt Ion: 50 Resp: 11225  
 Ion Ratio Lower Upper  
 50 100  
 52 17.9 3.5 43.5





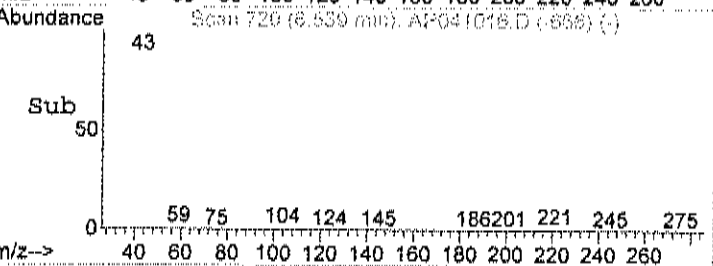
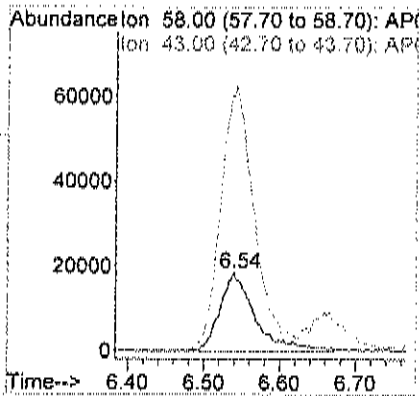
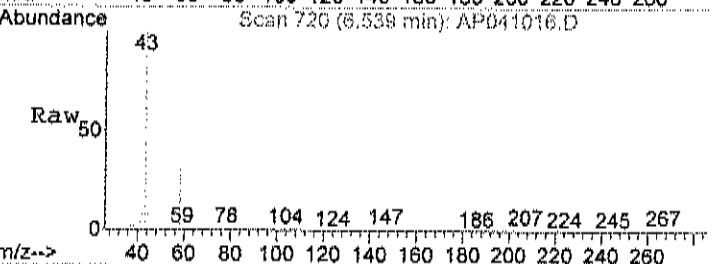
#14  
 Freon 11  
 Concen: 0.14 ppb  
 RT: 6.37 min Scan# 662  
 Delta R.T. 0.00 min  
 Lab File: AP041016.D  
 Acq: 10 Apr 2018 9:29 pm

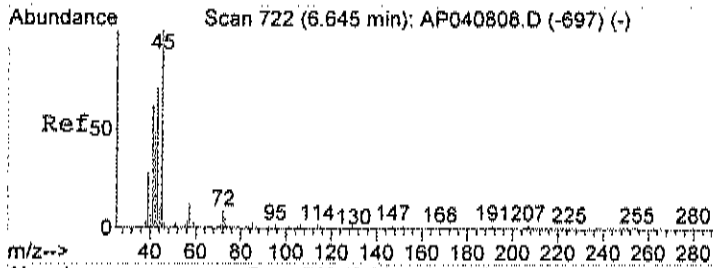
Tgt Ion	Ratio	Lower	Upper
101	100		
103	69.2	44.4	84.4
105	6.6	0.0	30.7



#15  
 Acetone  
 Concen: 1.86 ppb  
 RT: 6.54 min Scan# 720  
 Delta R.T. 0.01 min  
 Lab File: AP041016.D  
 Acq: 10 Apr 2018 9:29 pm

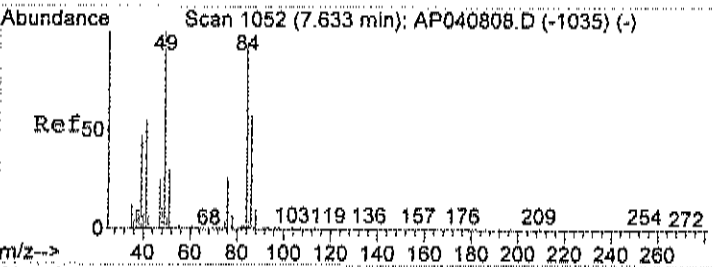
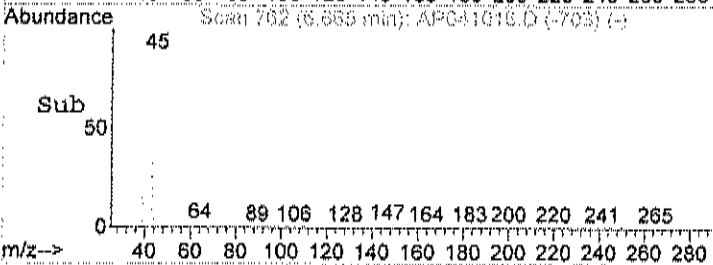
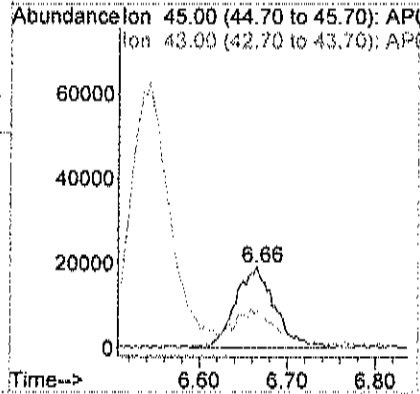
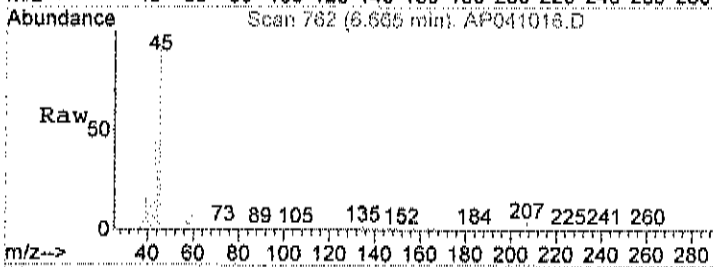
Tgt Ion	Ratio	Lower	Upper
58	100		
43	320.1	290.5	350.5





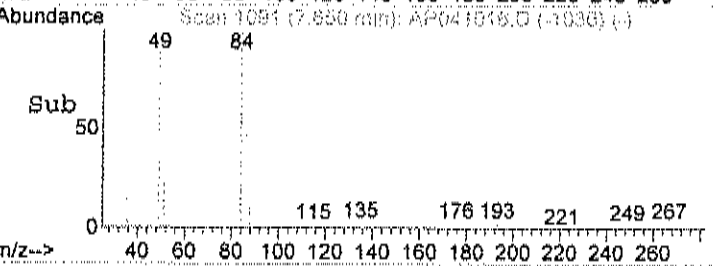
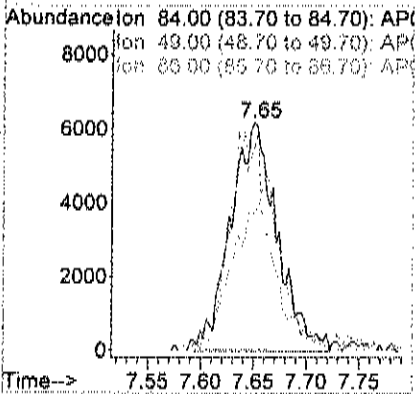
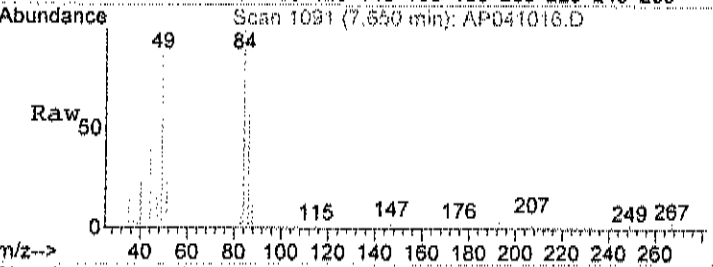
#17  
 Isopropyl alcohol  
 Concen: 0.97 ppb  
 RT: 6.66 min Scan# 762  
 Delta R.T. 0.03 min  
 Lab File: AP041016.D  
 Acq: 10 Apr 2018 9:29 pm

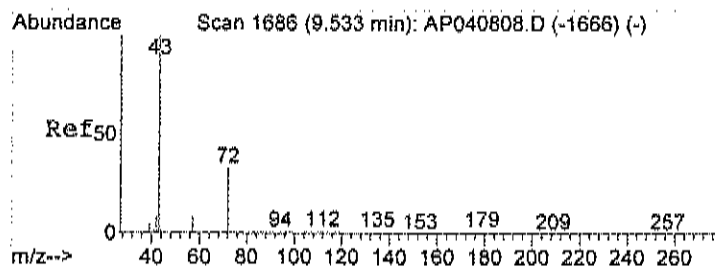
Tgt Ion	Resp	Lower	Upper
45	100		
43	38.6	92.3	132.3#



#21  
 Methylene chloride  
 Concen: 0.27 ppb  
 RT: 7.65 min Scan# 1091  
 Delta R.T. 0.01 min  
 Lab File: AP041016.D  
 Acq: 10 Apr 2018 9:29 pm

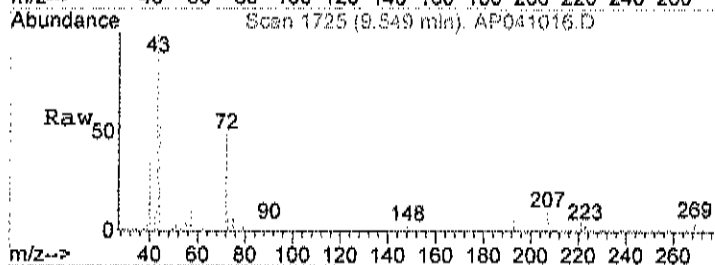
Tgt Ion	Resp	Lower	Upper
84	100		
49	91.8	97.6	137.6#
86	61.4	42.0	82.0



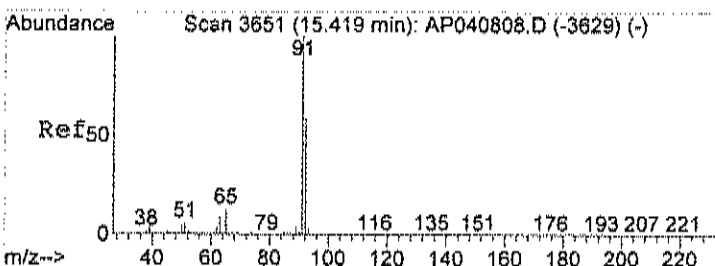
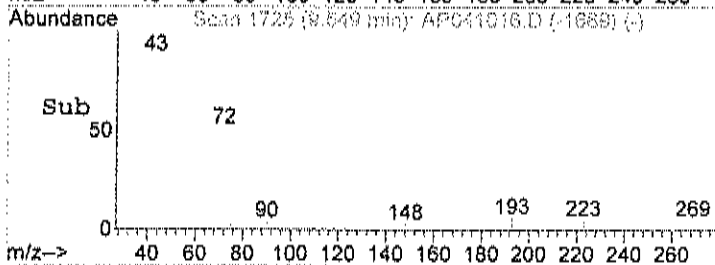
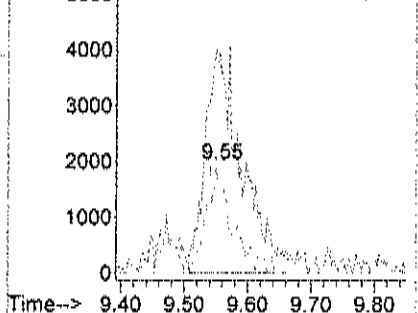


#28  
 Methyl Ethyl Ketone  
 Concen: 0.22 ppb m  
 RT: 9.55 min Scan# 1725  
 Delta R.T. 0.02 min  
 Lab File: AP041016.D  
 Acq: 10 Apr 2018 9:29 pm

Tgt Ion	Resp	Lower	Upper
72	100		
43	0.0	0.0	20.0
72	88.4	80.0	120.0

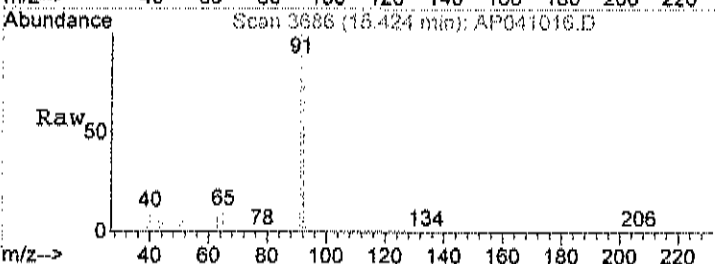


Abundance Ion 72.00 (71.70 to 72.70): AP(

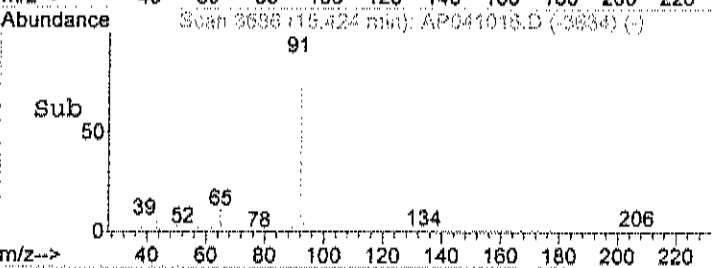
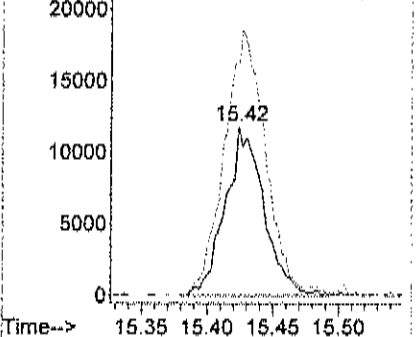


#51  
 Toluene  
 Concen: 0.24 ppb  
 RT: 15.42 min Scan# 3686  
 Delta R.T. 0.00 min  
 Lab File: AP041016.D  
 Acq: 10 Apr 2018 9:29 pm

Tgt Ion	Resp	Lower	Upper
92	100		
91	169.5	154.8	194.8



Abundance Ion 92.00 (91.70 to 92.70): AP(





**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-005A

**Client Sample ID:** IA-4  
**Tag Number:** 88.711  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>			<b>FLD</b>			<b>Analyst:</b>
Lab Vacuum In	-7			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>			<b>TO-15</b>			<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 10:11:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 10:11:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Acetone	2.0	0.30		ppbV	1	4/10/2018 10:11:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Benzene	0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 10:11:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Chloroform	0.88	0.15		ppbV	1	4/10/2018 10:11:00 PM
Chloromethane	0.32	0.15		ppbV	1	4/10/2018 10:11:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 10:11:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM

<b>Qualifiers:</b>	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-005A

**Client Sample ID:** IA-4  
**Tag Number:** 88.711  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		Analyst: RJP		
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Freon 11	0.22	0.15		ppbV	1	4/10/2018 10:11:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Freon 12	0.43	0.15		ppbV	1	4/10/2018 10:11:00 PM
Heptane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Hexane	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Isopropyl alcohol	1.8	0.15		ppbV	1	4/10/2018 10:11:00 PM
m&p-Xylene	0.11	0.30	J	ppbV	1	4/10/2018 10:11:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 10:11:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 10:11:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 10:11:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Methylene chloride	0.22	0.15		ppbV	1	4/10/2018 10:11:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Tetrachloroethylene	0.11	0.15	J	ppbV	1	4/10/2018 10:11:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Toluene	0.72	0.15		ppbV	1	4/10/2018 10:11:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 10:11:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 10:11:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 10:11:00 PM
Surr: Bromofluorobenzene	88.0	70-130		%REC	1	4/10/2018 10:11:00 PM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte, Quantitation estimated, ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-005A

**Client Sample ID:** IA-4  
**Tag Number:** 88.711  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 10:11:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 10:11:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 10:11:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 10:11:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:11:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 10:11:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 10:11:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 10:11:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 10:11:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 10:11:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 10:11:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 10:11:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 10:11:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 10:11:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 10:11:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 10:11:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 10:11:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 10:11:00 PM
Acetone	4.9	0.71		ug/m3	1	4/10/2018 10:11:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 10:11:00 PM
Benzene	0.48	0.48		ug/m3	1	4/10/2018 10:11:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 10:11:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 10:11:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 10:11:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 10:11:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 10:11:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 10:11:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 10:11:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 10:11:00 PM
Chloroform	4.3	0.73		ug/m3	1	4/10/2018 10:11:00 PM
Chloromethane	0.66	0.31		ug/m3	1	4/10/2018 10:11:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:11:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 10:11:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 10:11:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 10:11:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	4/10/2018 10:11:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 10:11:00 PM
Freon 11	1.2	0.84		ug/m3	1	4/10/2018 10:11:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 10:11:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 10:11:00 PM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

Centek Laboratories, LLC

Date: 26-Apr-18

CLIENT: FPM Group, Ltd.  
 Lab Order: C1804013  
 Project: Cinderella  
 Lab ID: C1804013-005A

Client Sample ID: IA-4  
 Tag Number: 88.711  
 Collection Date: 4/5/2018  
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.1	0.74		ug/m3	1	4/10/2018 10:11:00 PM
Heptane	< 0.61	0.61		ug/m3	1	4/10/2018 10:11:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 10:11:00 PM
Hexane	< 0.53	0.53		ug/m3	1	4/10/2018 10:11:00 PM
Isopropyl alcohol	4.4	0.37		ug/m3	1	4/10/2018 10:11:00 PM
m&p-Xylene	0.48	1.3	J	ug/m3	1	4/10/2018 10:11:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 10:11:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	4/10/2018 10:11:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 10:11:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 10:11:00 PM
Methylene chloride	0.76	0.52		ug/m3	1	4/10/2018 10:11:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 10:11:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 10:11:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 10:11:00 PM
Tetrachloroethylene	0.75	1.0	J	ug/m3	1	4/10/2018 10:11:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 10:11:00 PM
Toluene	2.7	0.57		ug/m3	1	4/10/2018 10:11:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 10:11:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 10:11:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:11:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 10:11:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 10:11:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 10:11:00 PM

Qualifiers: \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection

Data File : C:\HPCHEM\1\DATA\AP041017.D  
 Acq On : 10 Apr 2018 10:11 pm  
 Sample : C1804013-005A  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 07:23:11 2018

Vial: 5  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	37097	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.71	114	182265	1.00	ppb	0.01
50) Chlorobenzene-d5	17.46	117	144466	1.00	ppb	0.01

#### System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	88102	0.88	ppb	0.00
Spiked Amount	1.000	Range 70 - 130	Recovery	=	88.00%	

#### Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.61	85	95288	0.43	ppb	100
4) Chloromethane	4.83	50	16110	0.32	ppb	95
14) Freon 11	6.38	101	39451	0.22	ppb	98
15) Acetone	6.54	58	68364	2.05	ppb	98
17) Isopropyl alcohol	6.66	45	113566	1.80	ppb	# 33
21) Methylene chloride	7.66	84	16038	0.22	ppb	89
32) Chloroform	10.63	83	119392	0.88	ppb	98
39) Benzene	12.04	78	23208	0.15	ppb	99
51) Toluene	15.43	92	75328	0.72	ppb	99
56) Tetrachloroethylene	16.50	164	7812	0.11	ppb	96
59) m&p-xylene	17.95	91	21558	0.11	ppb	93

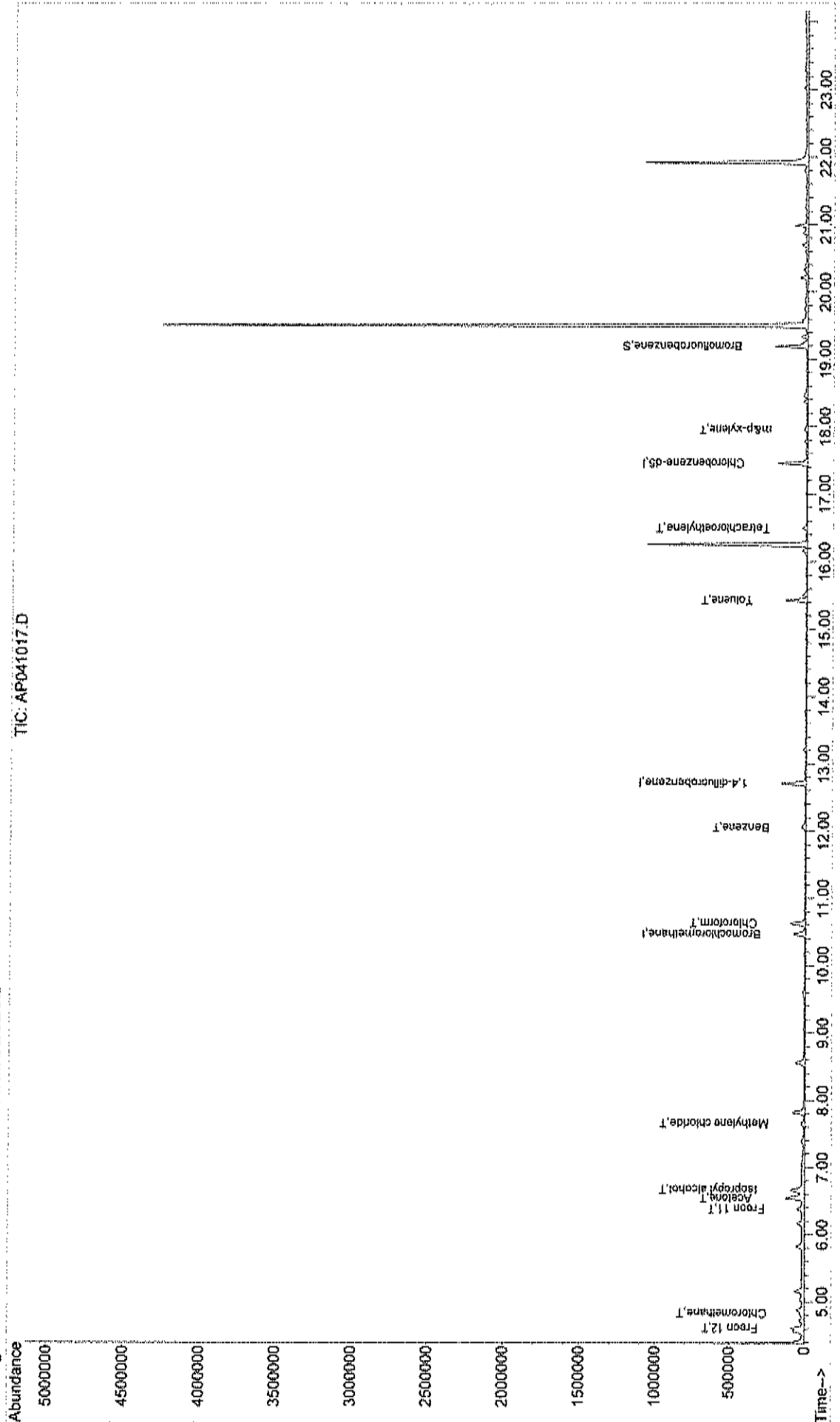
Quantitation Report (QT Reviewed)

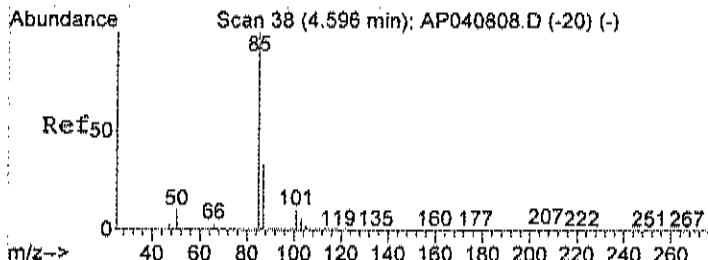
Data File : C:\HPCHEM\1\DATA\AP041017.D  
Acq On : 10 Apr 2018 10:11 pm  
Sample : C1804013-005A  
Misc : A408\_1UG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 12:22 2018

Vial: 5  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_1UG.RES

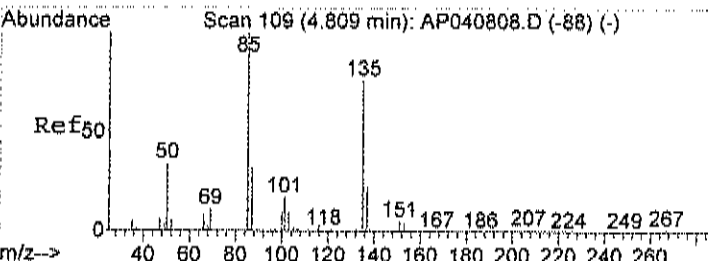
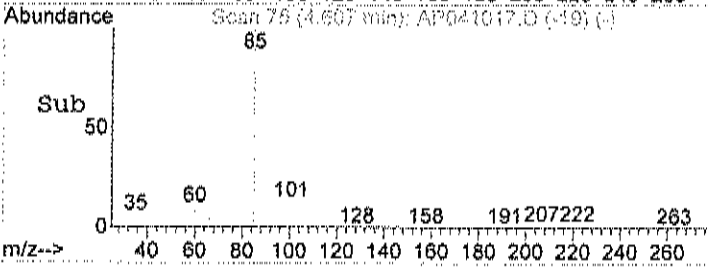
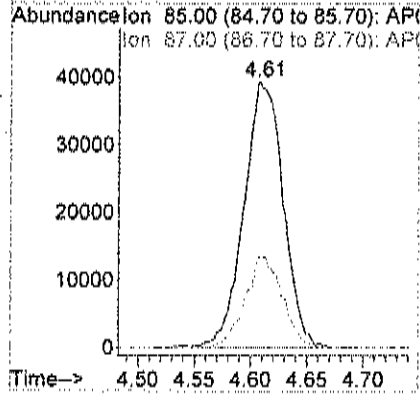
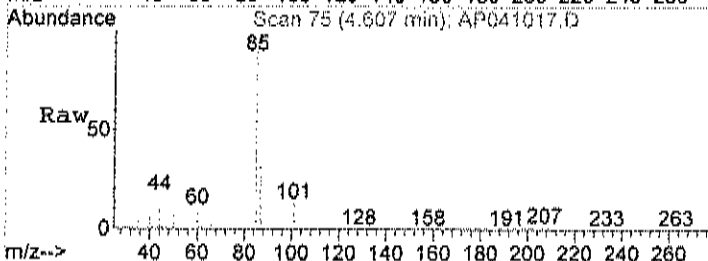
Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration





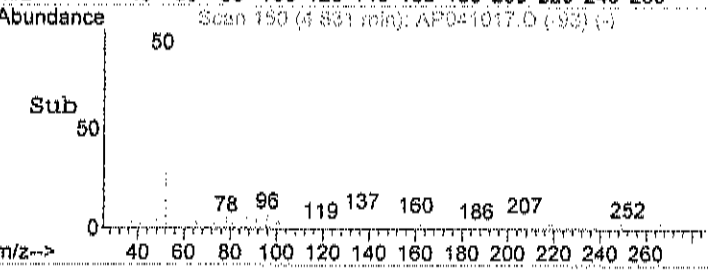
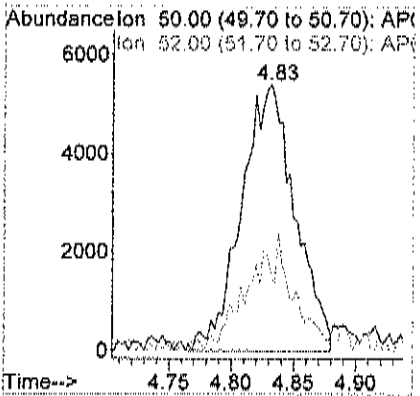
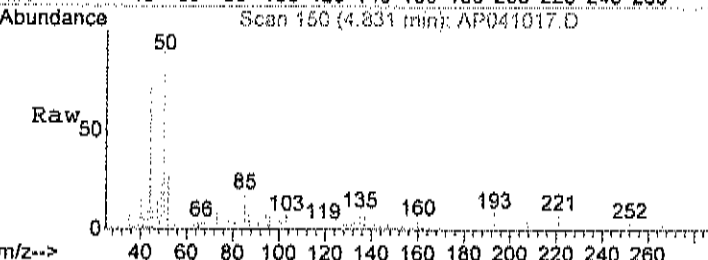
#3  
 Freon 12  
 Concen: 0.43 ppb  
 RT: 4.61 min Scan# 75  
 Delta R.T. 0.02 min  
 Lab File: AP041017.D  
 Acq: 10 Apr 2018 10:11 pm

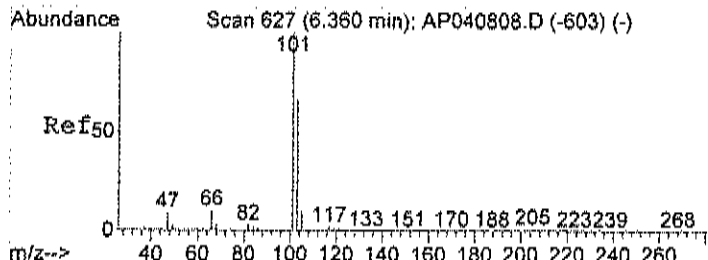
Tgt Ion	Resp	Lower	Upper
85	100		
87	32.3	12.1	52.1



#4  
 Chloromethane  
 Concen: 0.32 ppb  
 RT: 4.83 min Scan# 150  
 Delta R.T. 0.02 min  
 Lab File: AP041017.D  
 Acq: 10 Apr 2018 10:11 pm

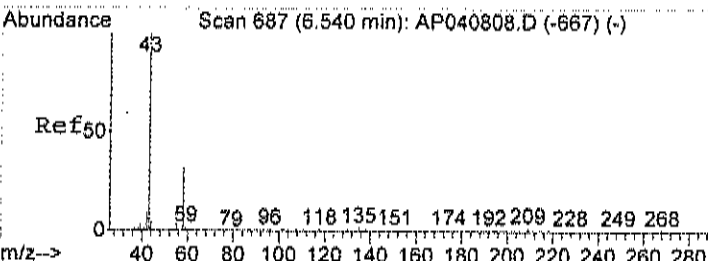
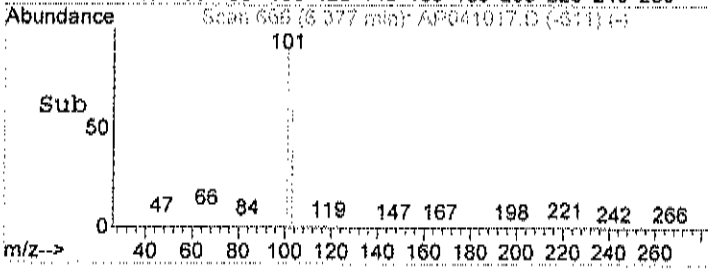
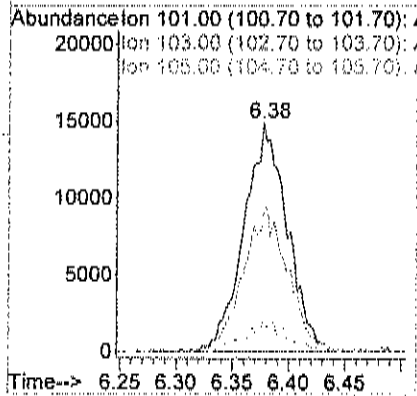
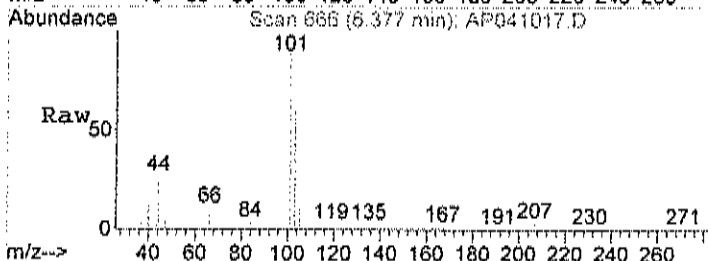
Tgt Ion	Resp	Lower	Upper
50	100		
52	20.9	3.5	43.5





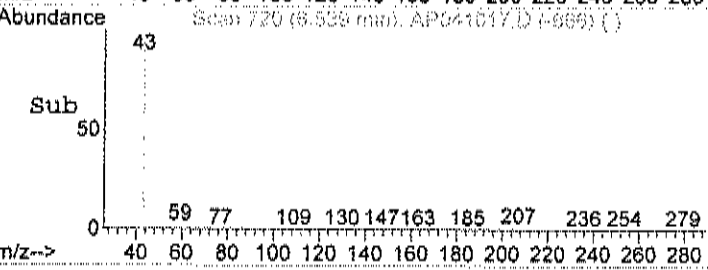
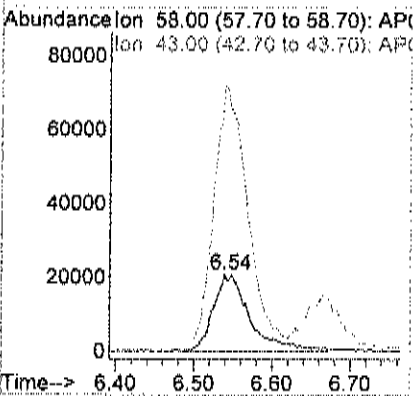
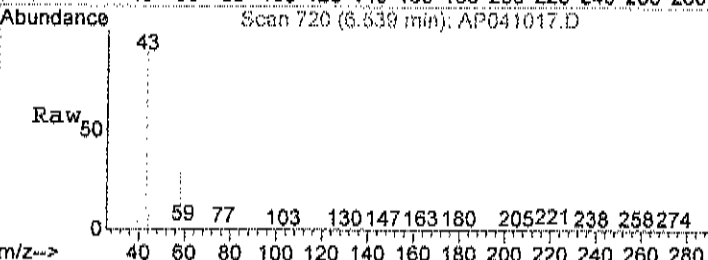
#14  
 Freon 11  
 Concen: 0.22 ppb  
 RT: 6.38 min Scan# 666  
 Delta R.T. 0.01 min  
 Lab File: AP041017.D  
 Acq: 10 Apr 2018 10:11 pm

Tgt Ion	Resp	Lower	Upper
101	39451		
103	65.6	44.4	84.4
105	8.0	0.0	30.7

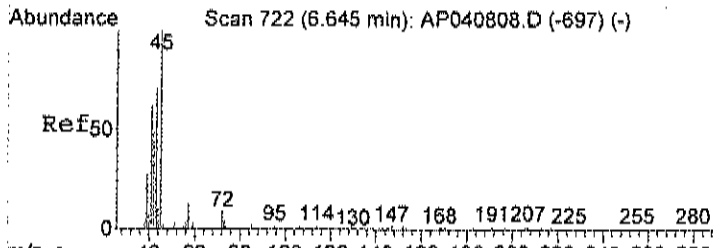


#15  
 Acetone  
 Concen: 2.05 ppb  
 RT: 6.54 min Scan# 720  
 Delta R.T. 0.01 min  
 Lab File: AP041017.D  
 Acq: 10 Apr 2018 10:11 pm

Tgt Ion	Resp	Lower	Upper
58	68364		
43	317.0	290.5	350.5

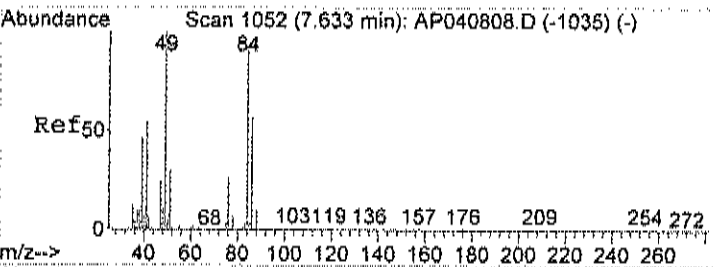
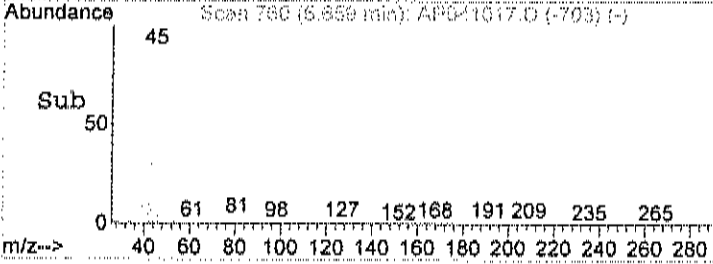
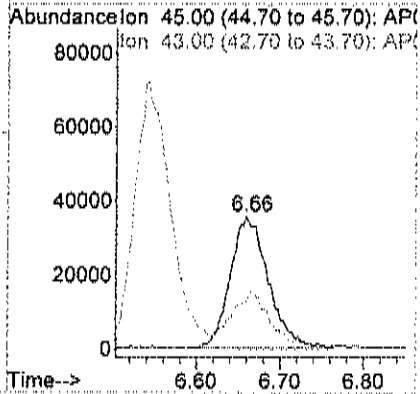
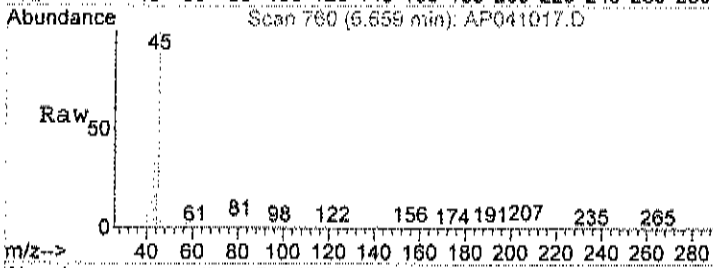






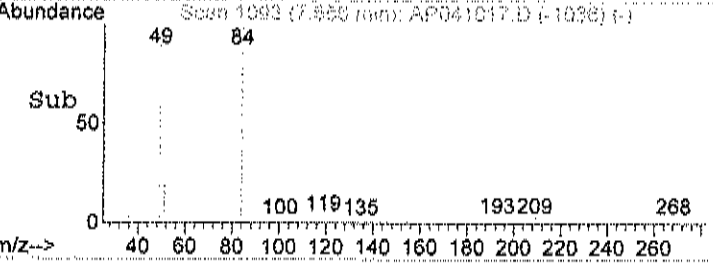
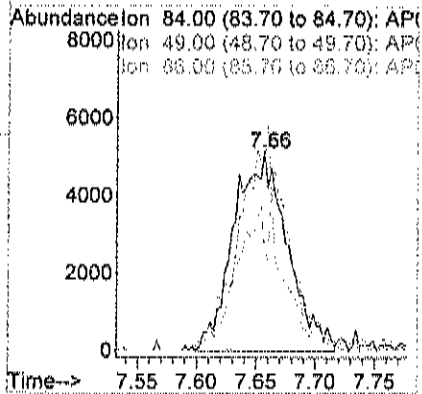
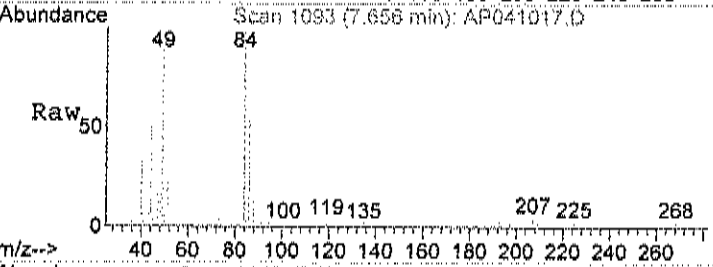
#17  
 Isopropyl alcohol  
 Concen: 1.80 ppb  
 RT: 6.66 min Scan# 760  
 Delta R.T. 0.02 min  
 Lab File: AP041017.D  
 Acq: 10 Apr 2018 10:11 pm

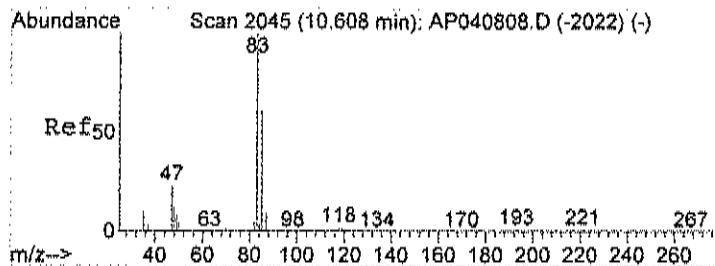
Tgt Ion	Resp	Lower	Upper
45	113566		
43	40.9	92.3	132.3#



#21  
 Methylene chloride  
 Concen: 0.22 ppb  
 RT: 7.66 min Scan# 1093  
 Delta R.T. 0.02 min  
 Lab File: AP041017.D  
 Acq: 10 Apr 2018 10:11 pm

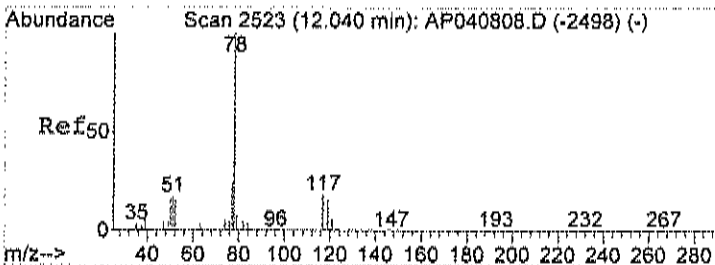
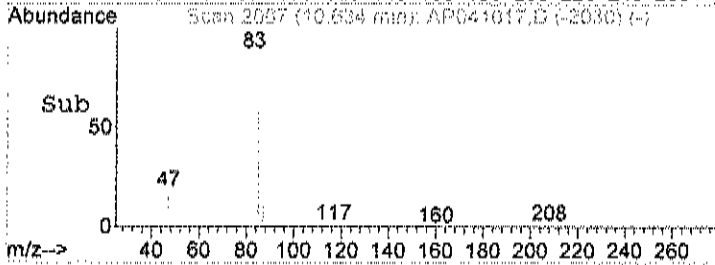
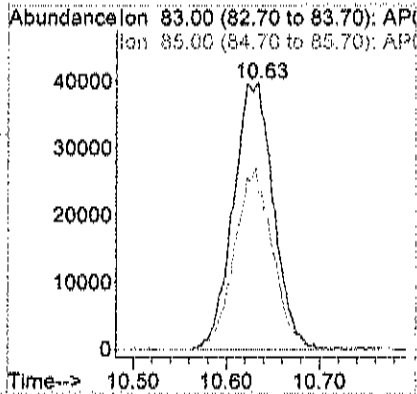
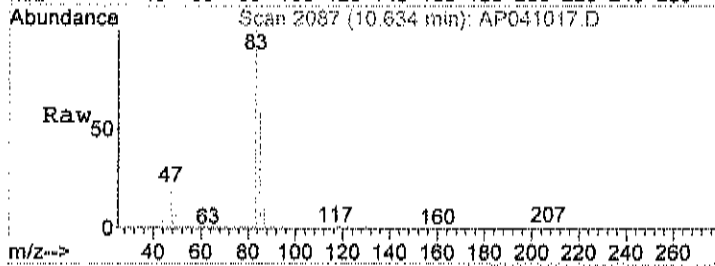
Tgt Ion	Resp	Lower	Upper
84	16038		
49	99.8	97.6	137.6
86	61.5	42.0	82.0





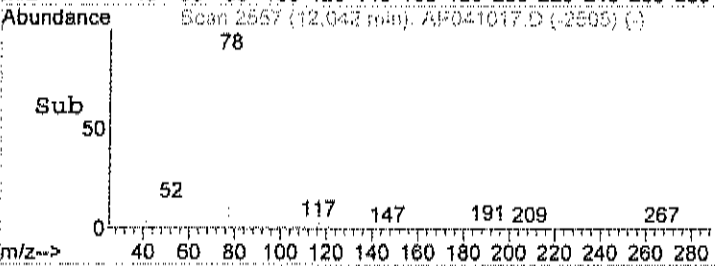
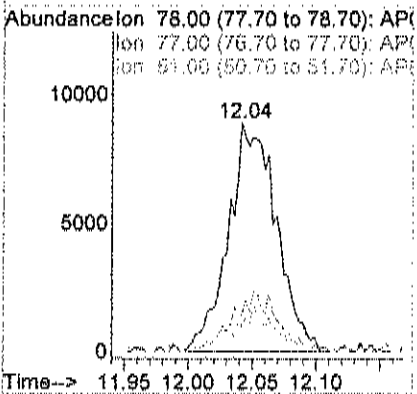
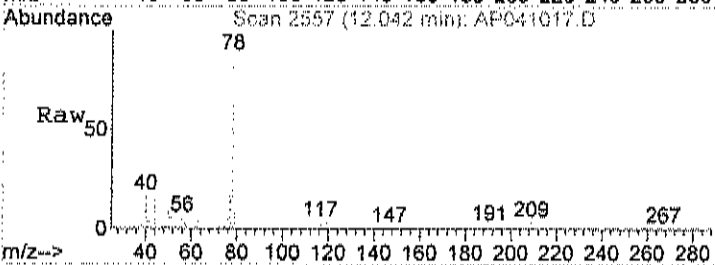
#32  
 Chloroform  
 Concen: 0.88 ppb  
 RT: 10.63 min Scan# 2087  
 Delta R.T. 0.02 min  
 Lab File: AP041017.D  
 Acq: 10 Apr 2018 10:11 pm

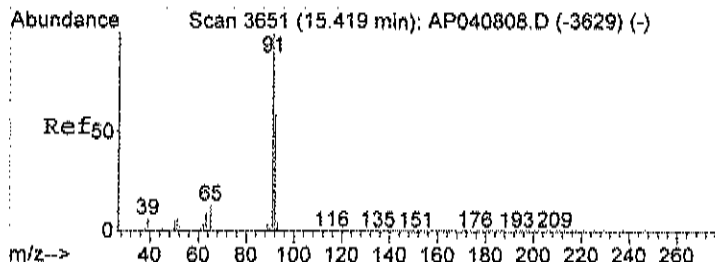
Tgt Ion	Resp	Lower	Upper
83	119392		
85	64.3	45.5	85.5



#39  
 Benzene  
 Concen: 0.15 ppb  
 RT: 12.04 min Scan# 2557  
 Delta R.T. 0.00 min  
 Lab File: AP041017.D  
 Acq: 10 Apr 2018 10:11 pm

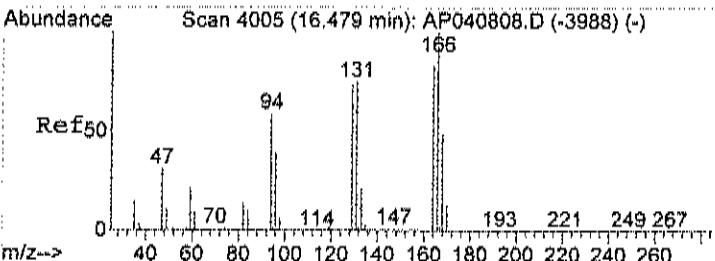
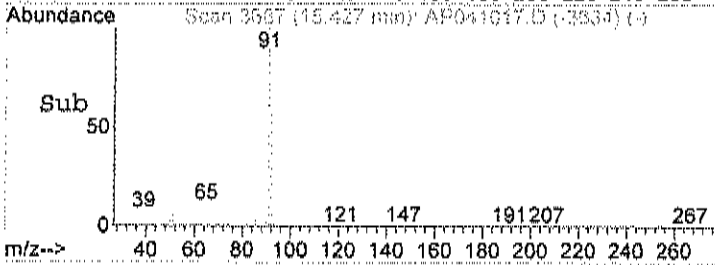
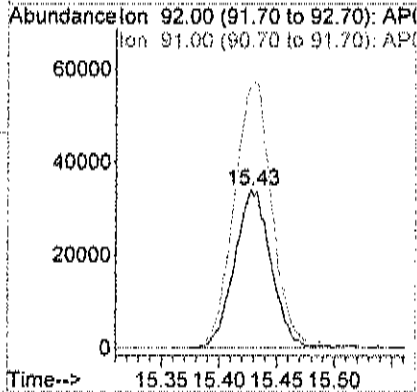
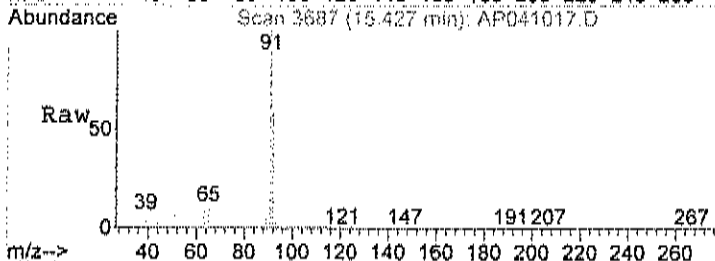
Tgt Ion	Resp	Lower	Upper
78	23208		
77	23.4	3.4	43.4
51	17.0	0.0	37.8





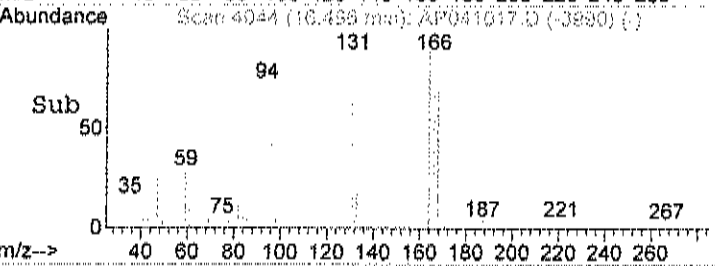
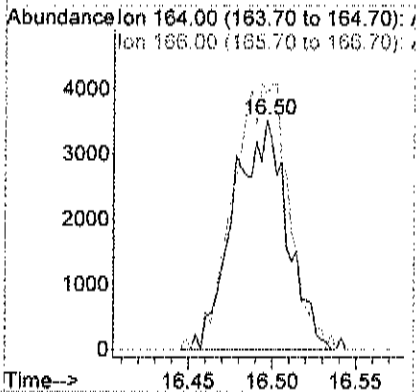
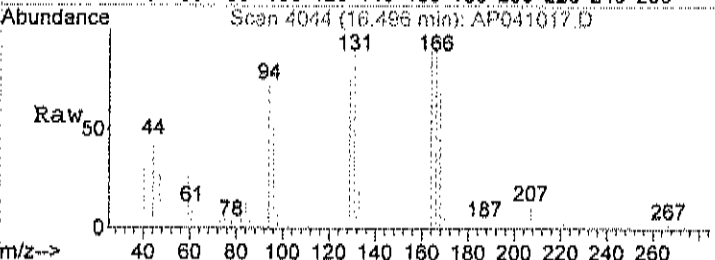
#51  
 Toluene  
 Concen: 0.72 ppb  
 RT: 15.43 min Scan# 3687  
 Delta R.T. 0.01 min  
 Lab File: AP041017.D  
 Acq: 10 Apr 2018 10:11 pm

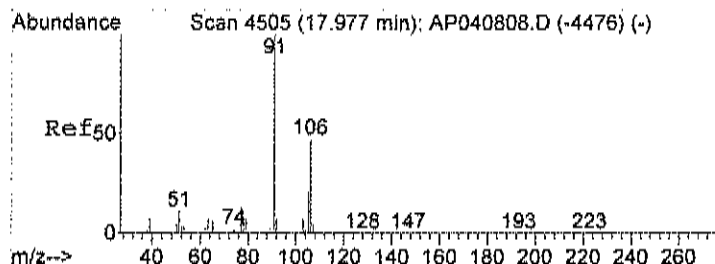
Tgt Ion	Resp	Lower	Upper
92	75328		
92	100		
91	173.8	154.8	194.8



#56  
 Tetrachloroethylene  
 Concen: 0.11 ppb  
 RT: 16.50 min Scan# 4044  
 Delta R.T. 0.01 min  
 Lab File: AP041017.D  
 Acq: 10 Apr 2018 10:11 pm

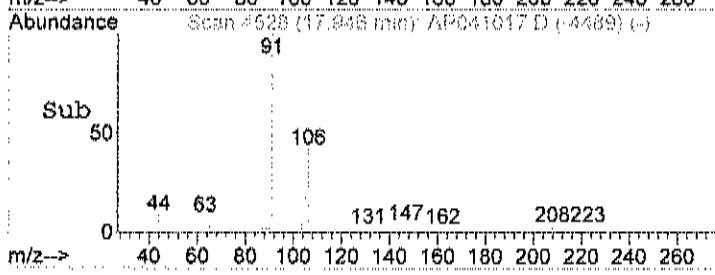
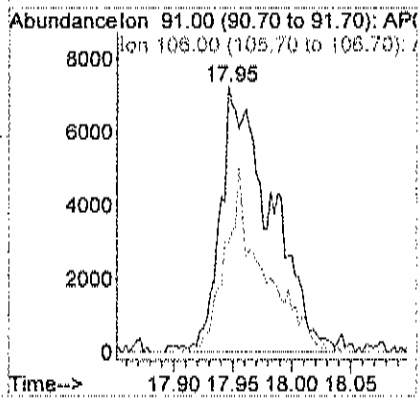
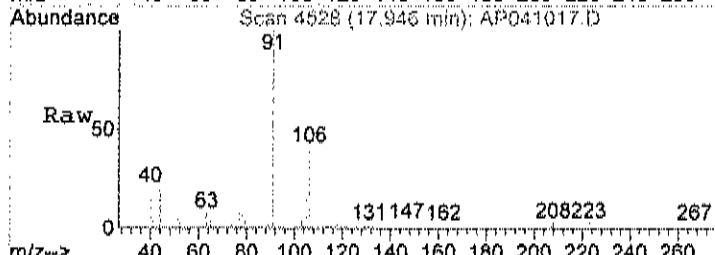
Tgt Ion	Resp	Lower	Upper
164	7812		
164	100		
166	121.4	105.6	145.6





#59  
 m&p-xylene  
 Concen: 0.11 ppb  
 RT: 17.95 min Scan# 4528  
 Delta R.T. -0.03 min  
 Lab File: AP041017.D  
 Acq: 10 Apr 2018 10:11 pm

Tgt Ion	Resp	Lower	Upper
91	100		
106	51.3	26.8	66.8



**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-006A

**Client Sample ID:** Ambient  
**Tag Number:** 207.1420  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>		<b>FLD</b>		<b>Analyst:</b>		
Lab Vacuum In	-12			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		<b>Analyst: RJP</b>		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 10:54:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
1,4-Dichlorobenzene	10	1.5		ppbV	10	4/11/2018 5:17:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/10/2018 10:54:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Acetone	11	3.0		ppbV	10	4/11/2018 5:17:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Benzene	0.13	0.15	J	ppbV	1	4/10/2018 10:54:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/10/2018 10:54:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Chloroform	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Chloromethane	0.28	0.15		ppbV	1	4/10/2018 10:54:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/10/2018 10:54:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Ethyl acetate	0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-006A

**Client Sample ID:** Ambient  
**Tag Number:** 207.1420  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
Ethylbenzene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Freon 11	0.20	0.15		ppbV	1	4/10/2018 10:54:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Freon 12	0.30	0.15		ppbV	1	4/10/2018 10:54:00 PM
Heptane	0.47	0.15		ppbV	1	4/10/2018 10:54:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Hexane	0.23	0.15		ppbV	1	4/10/2018 10:54:00 PM
Isopropyl alcohol	1.8	0.15		ppbV	1	4/10/2018 10:54:00 PM
m&p-Xylene	0.21	0.30	J	ppbV	1	4/10/2018 10:54:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 10:54:00 PM
Methyl Ethyl Ketone	0.44	0.30		ppbV	1	4/10/2018 10:54:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/10/2018 10:54:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Methylene chloride	0.28	0.15		ppbV	1	4/10/2018 10:54:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Toluene	0.90	0.15		ppbV	1	4/10/2018 10:54:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/10/2018 10:54:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/10/2018 10:54:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/10/2018 10:54:00 PM
Surr: Bromofluorobenzene	90.0	70-130		%REC	1	4/10/2018 10:54:00 PM

<b>Qualifiers:</b>	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-006A

**Client Sample ID:** Ambient  
**Tag Number:** 207.1420  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 10:54:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/10/2018 10:54:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/10/2018 10:54:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 10:54:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:54:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/10/2018 10:54:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 10:54:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/10/2018 10:54:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 10:54:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/10/2018 10:54:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/10/2018 10:54:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	4/10/2018 10:54:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/10/2018 10:54:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/10/2018 10:54:00 PM
1,4-Dichlorobenzene	62	9.0		ug/m3	10	4/11/2018 5:17:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/10/2018 10:54:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/10/2018 10:54:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/10/2018 10:54:00 PM
Acetone	26	7.1		ug/m3	10	4/11/2018 5:17:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/10/2018 10:54:00 PM
Benzene	0.42	0.48	J	ug/m3	1	4/10/2018 10:54:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/10/2018 10:54:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/10/2018 10:54:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/10/2018 10:54:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/10/2018 10:54:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/10/2018 10:54:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/10/2018 10:54:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/10/2018 10:54:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/10/2018 10:54:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	4/10/2018 10:54:00 PM
Chloromethane	0.58	0.31		ug/m3	1	4/10/2018 10:54:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:54:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 10:54:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/10/2018 10:54:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/10/2018 10:54:00 PM
Ethyl acetate	0.54	0.54		ug/m3	1	4/10/2018 10:54:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	4/10/2018 10:54:00 PM
Freon 11	1.1	0.84		ug/m3	1	4/10/2018 10:54:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/10/2018 10:54:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/10/2018 10:54:00 PM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-006A

**Client Sample ID:** Ambient  
**Tag Number:** 207.1420  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>			<b>TO-15</b>			Analyst: RJP
Freon 12	1.5	0.74		ug/m3	1	4/10/2018 10:54:00 PM
Heptane	1.9	0.61		ug/m3	1	4/10/2018 10:54:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/10/2018 10:54:00 PM
Hexane	0.81	0.53		ug/m3	1	4/10/2018 10:54:00 PM
Isopropyl alcohol	4.5	0.37		ug/m3	1	4/10/2018 10:54:00 PM
m&p-Xylene	0.91	1.3	J	ug/m3	1	4/10/2018 10:54:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 10:54:00 PM
Methyl Ethyl Ketone	1.3	0.88		ug/m3	1	4/10/2018 10:54:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/10/2018 10:54:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/10/2018 10:54:00 PM
Methylene chloride	0.97	0.52		ug/m3	1	4/10/2018 10:54:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	4/10/2018 10:54:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/10/2018 10:54:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/10/2018 10:54:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/10/2018 10:54:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/10/2018 10:54:00 PM
Toluene	3.4	0.57		ug/m3	1	4/10/2018 10:54:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/10/2018 10:54:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/10/2018 10:54:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/10/2018 10:54:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/10/2018 10:54:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/10/2018 10:54:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/10/2018 10:54:00 PM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection



Data File : C:\HPCHEM\1\DATA\AP041018.D  
 Acq On : 10 Apr 2018 10:54 pm  
 Sample : C1804013-006A  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 07:23:12 2018

Vial: 6  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	38145	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.71	114	184139	1.00	ppb	0.01
50) Chlorobenzene-d5	17.45	117	147587	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	91745	0.90	ppb	0.00
Spiked Amount	1.000	Range 70 - 130	Recovery	=	90.00%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.60	85	67619	0.30	ppb	99
4) Chloromethane	4.83	50	14633	0.28	ppb	94
14) Freon 11	6.37	101	36566	0.20	ppb	98
15) Acetone	6.53	58	218344m <sup>g</sup>	6.38	ppb	
17) Isopropyl alcohol	6.66	45	118570	1.82	ppb	# 70
21) Methylene chloride	7.65	84	20873	0.28	ppb	# 84
28) Methyl Ethyl Ketone	9.55	72	11515	0.44	ppb	# 100
30) Hexane	9.60	57	18315	0.23	ppb	86
31) Ethyl acetate	10.15	43	15218	0.15	ppb	90
39) Benzene	12.05	78	20504	0.13	ppb	# 62
43) Heptane	13.20	43	36824	0.47	ppb	# 40
51) Toluene	15.42	92	96121	0.90	ppb	100
59) m&p-xylene	17.96	91	40230	0.21	ppb	97
74) 1,4-dichlorobenzene	20.87	146	987433	7.57	ppb	99

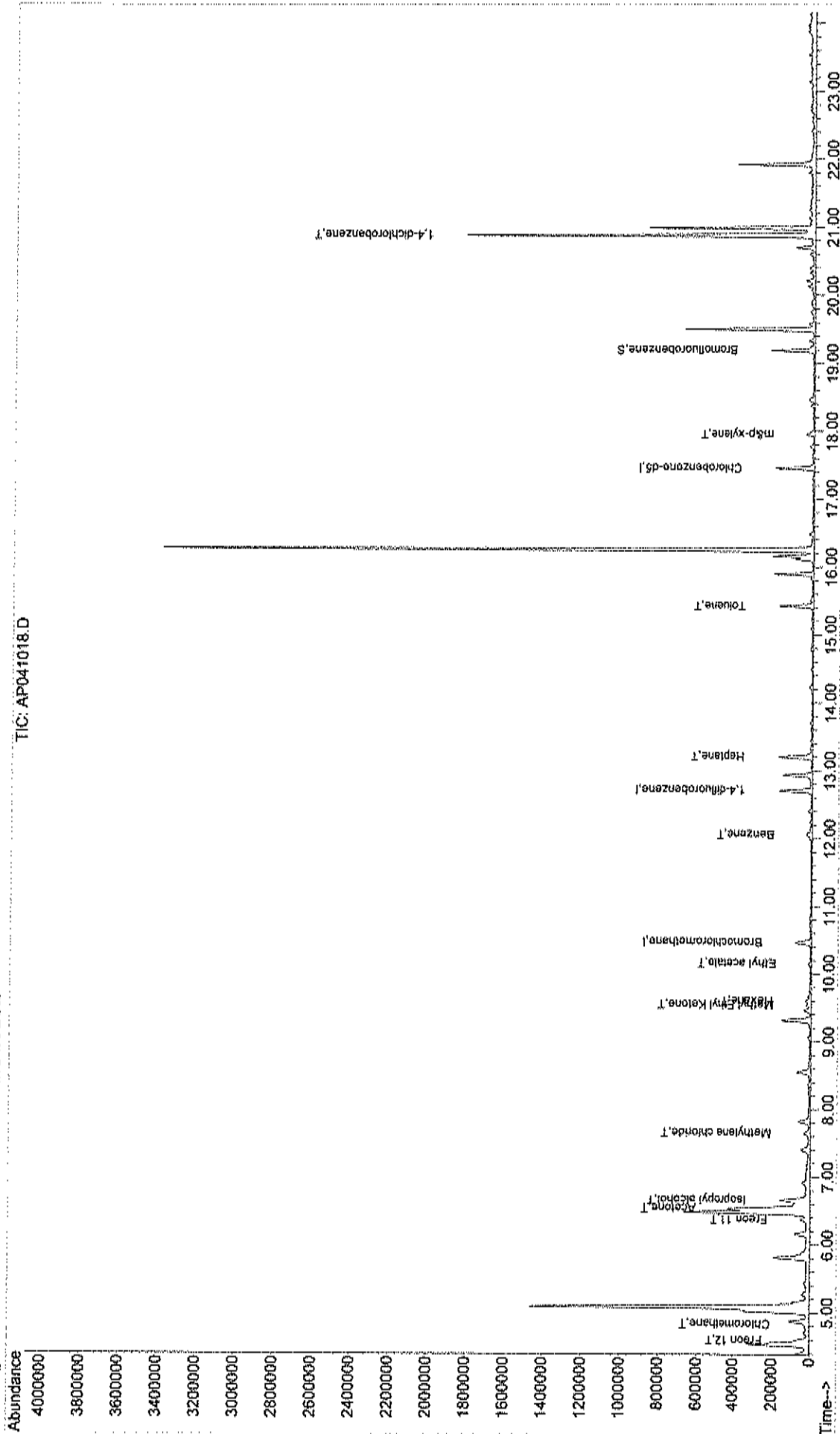
Quantitation Report (QT Reviewed)

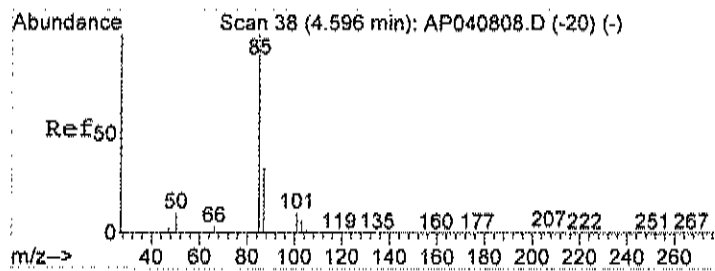
Data File : C:\HPCHEM\1\DATA\AP041018.D  
Acq On : 10 Apr 2018 10:54 pm  
Sample : C1804013-006A  
Misc : A408\_IUG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 12:23 2018

Vial: 6  
Operator: RJP  
Inst : MSD #1  
Multiplx: 1.00

Quant Results File: A408\_IUG.RES

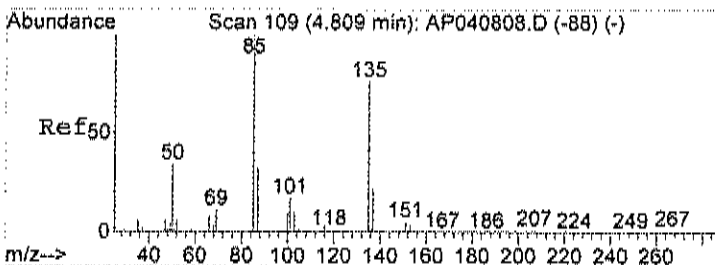
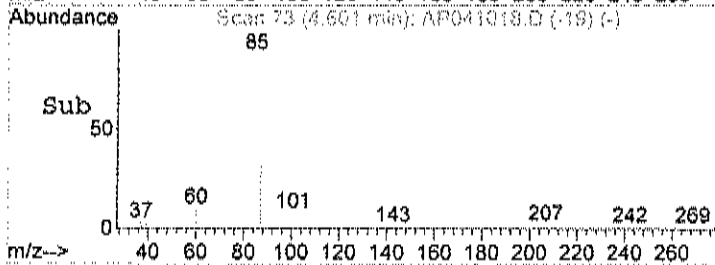
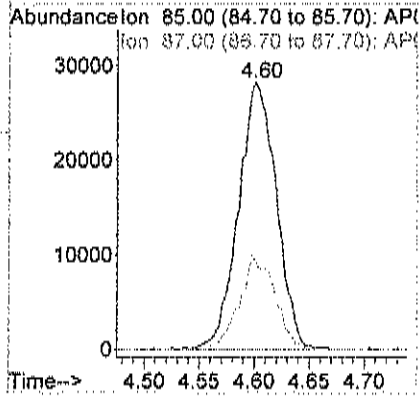
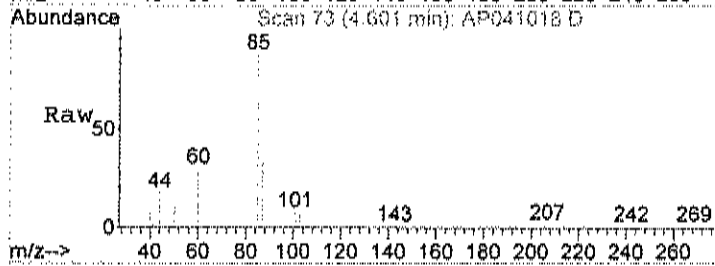
Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration





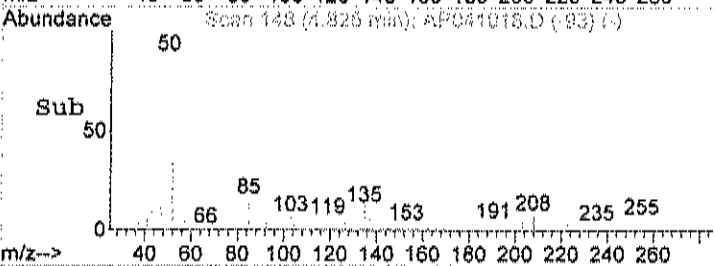
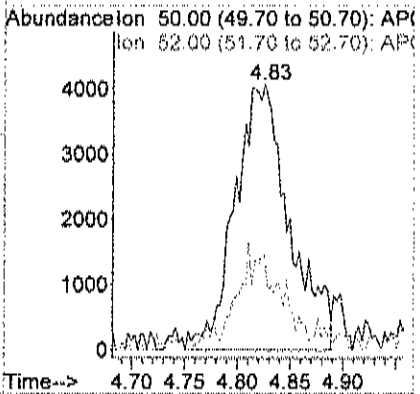
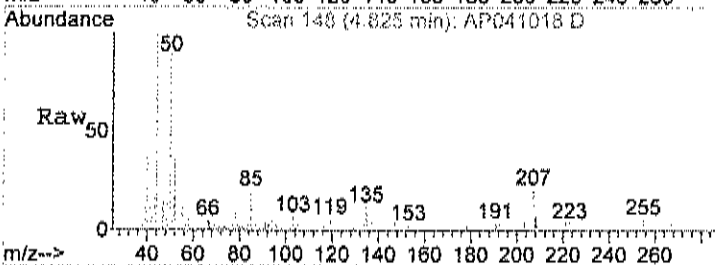
#3  
 Freon 12  
 Concen: 0.30 ppb  
 RT: 4.60 min Scan# 73  
 Delta R.T. 0.01 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

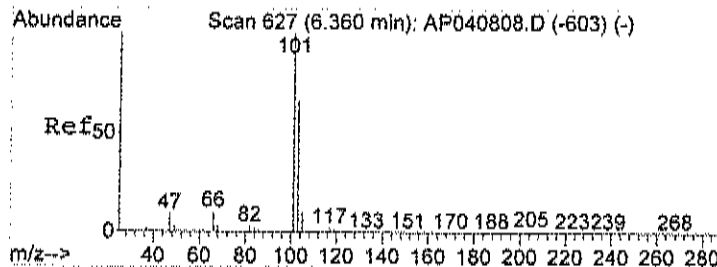
Tgt Ion	Resp	Lower	Upper
85	100		
87	32.8	12.1	52.1



#4  
 Chloromethane  
 Concen: 0.28 ppb  
 RT: 4.83 min Scan# 148  
 Delta R.T. 0.01 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

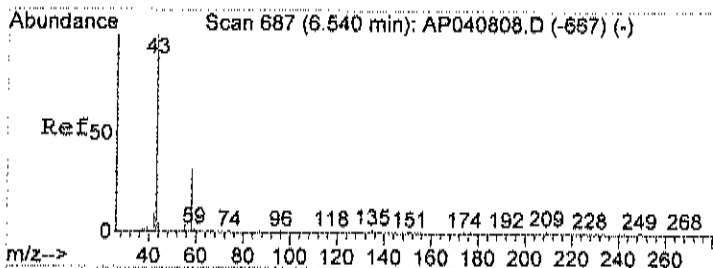
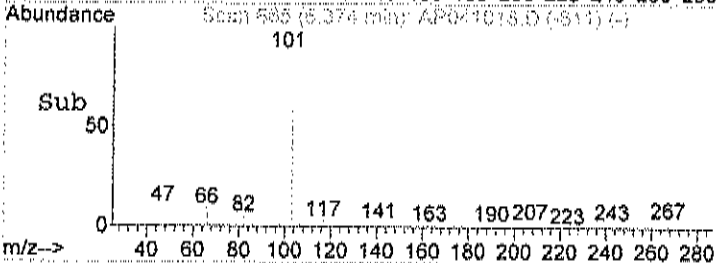
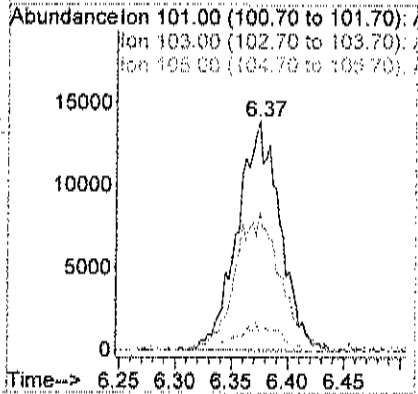
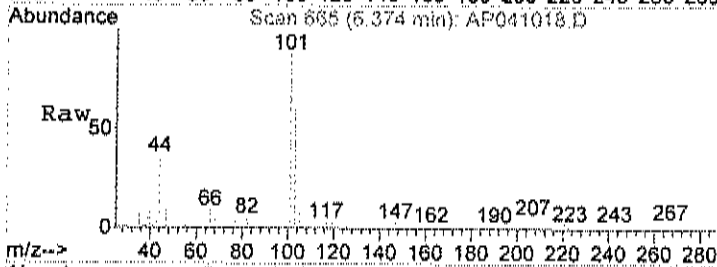
Tgt Ion	Resp	Lower	Upper
50	100		
52	26.3	3.5	43.5





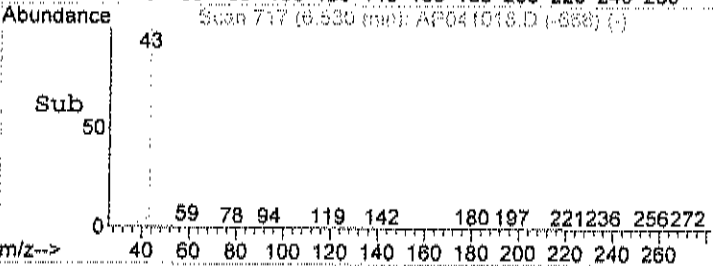
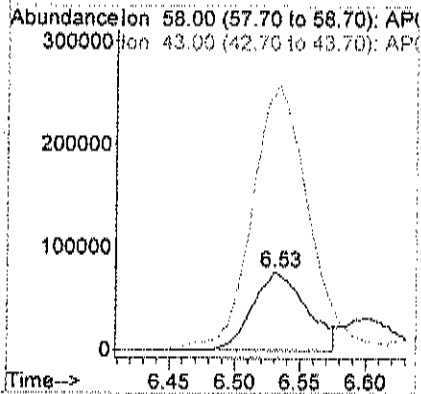
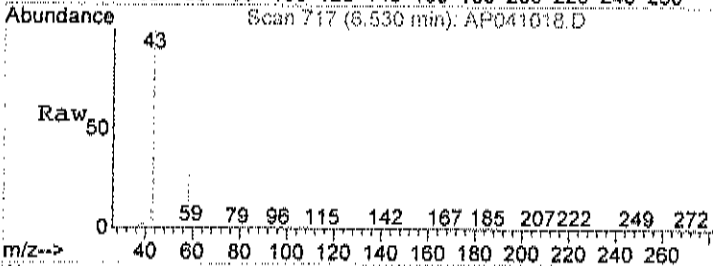
#14  
 Freon 11  
 Concen: 0.20 ppb  
 RT: 6.37 min Scan# 665  
 Delta R.T. 0.01 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

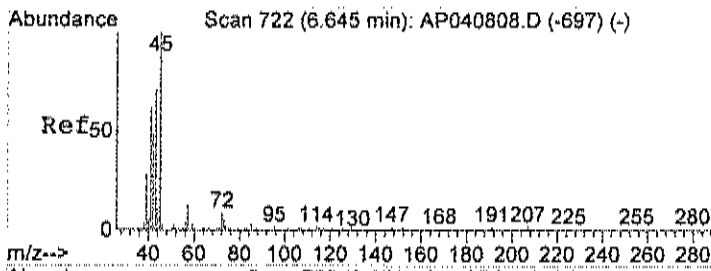
Tgt Ion	Resp	Lower	Upper
101	36566		
103	64.6	44.4	84.4
105	7.0	0.0	30.7



#15  
 Acetone  
 Concen: 6.38 ppb m  
 RT: 6.53 min Scan# 717  
 Delta R.T. 0.00 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

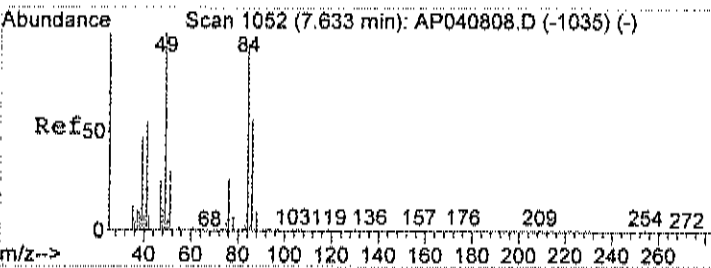
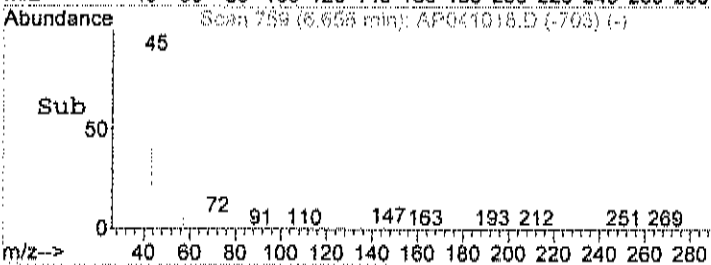
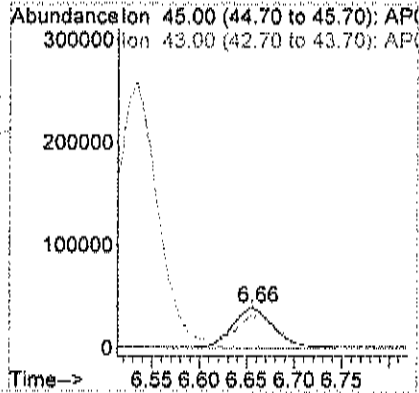
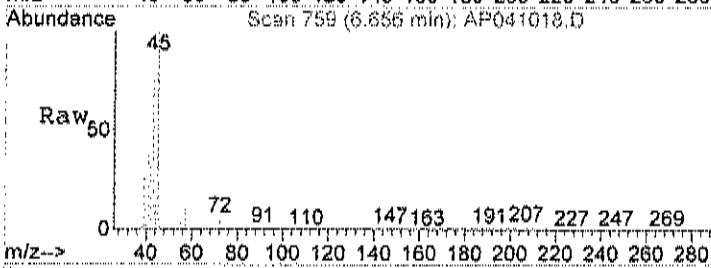
Tgt Ion	Resp	Lower	Upper
58	218344		
43	357.9	290.5	350.5#





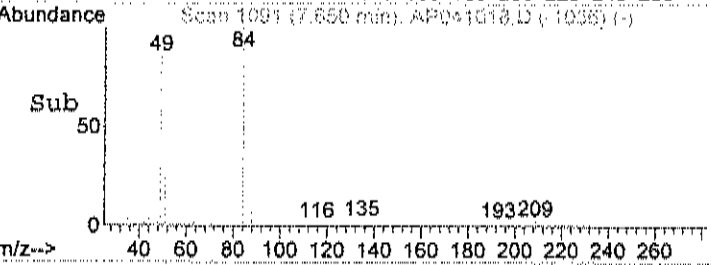
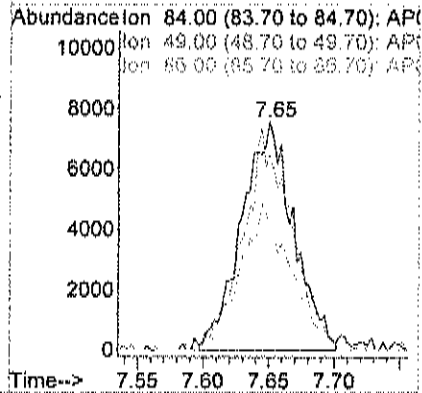
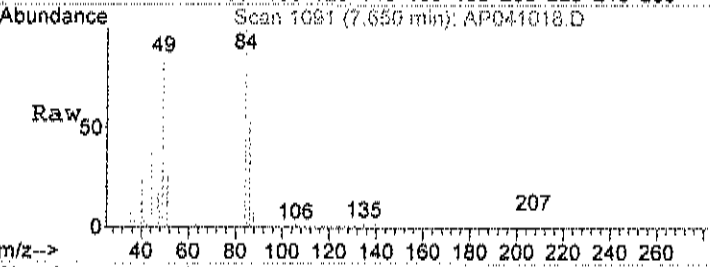
#17  
 Isopropyl alcohol  
 Concen: 1.82 ppb  
 RT: 6.66 min Scan# 759  
 Delta R.T. 0.02 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

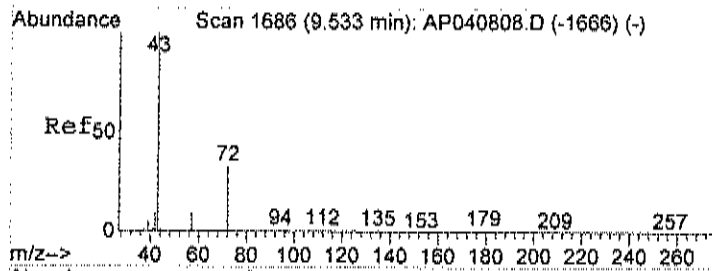
Tgt Ion	Resp	Lower	Upper
45	118570		
43	79.8	92.3	132.3#



#21  
 Methylene chloride  
 Concen: 0.28 ppb  
 RT: 7.65 min Scan# 1091  
 Delta R.T. 0.01 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

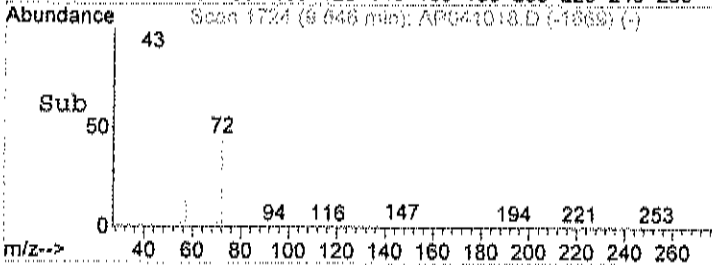
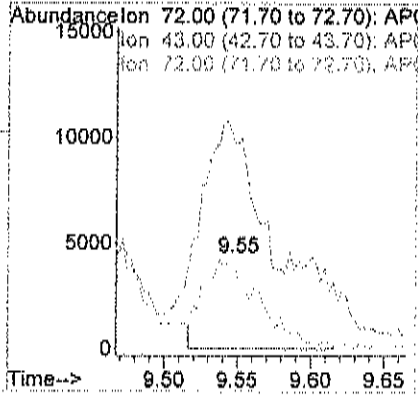
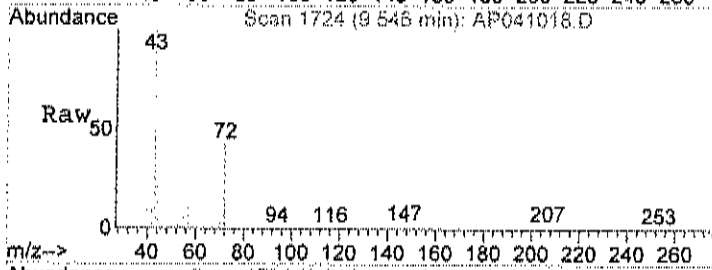
Tgt Ion	Resp	Lower	Upper
84	20873		
49	91.6	97.6	137.6#
86	63.1	42.0	82.0





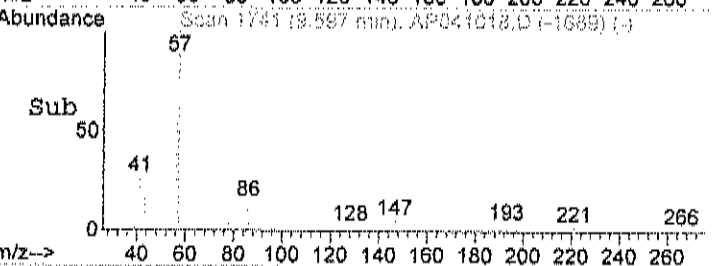
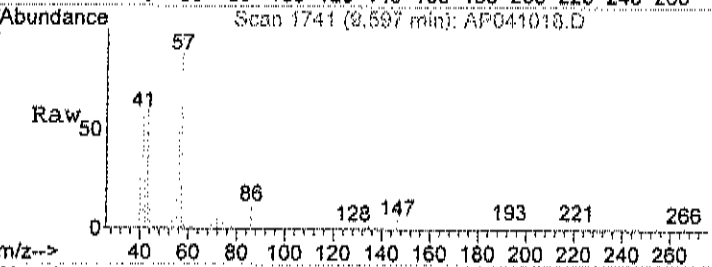
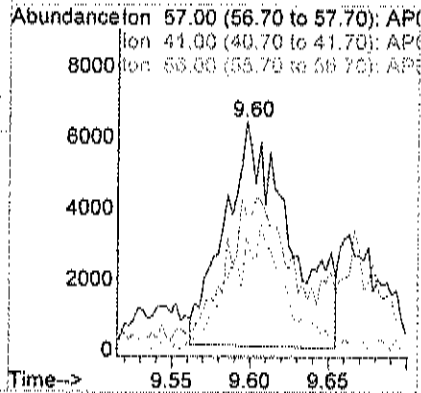
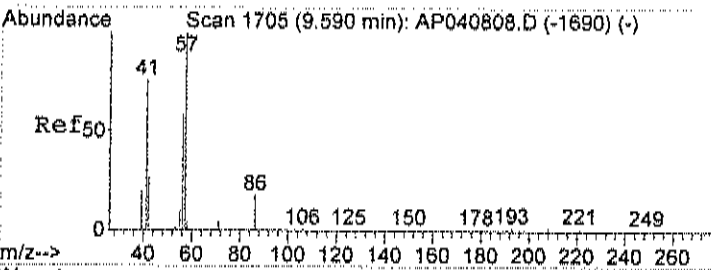
#28  
 Methyl Ethyl Ketone  
 Concen: 0.44 ppb  
 RT: 9.55 min Scan# 1724  
 Delta R.T. 0.01 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

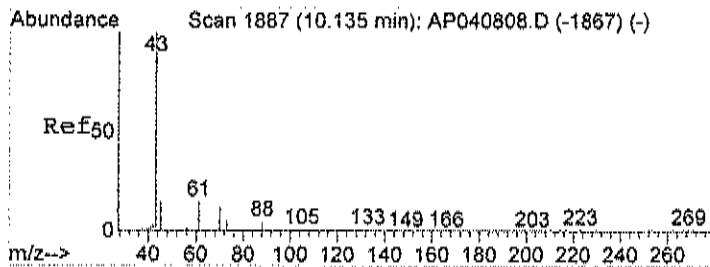
Tgt Ion	Resp	Lower	Upper
72	11515		
72	100		
43	0.0	0.0	20.0
72	100.0	80.0	120.0



#30  
 Hexane  
 Concen: 0.23 ppb  
 RT: 9.60 min Scan# 1741  
 Delta R.T. 0.00 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

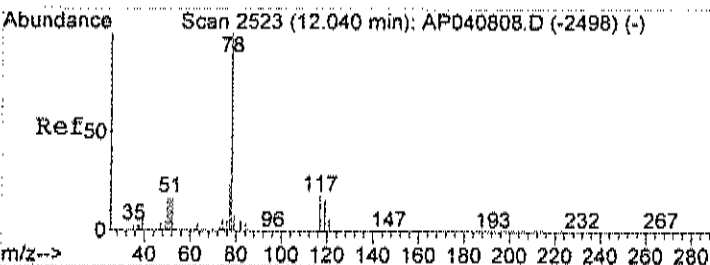
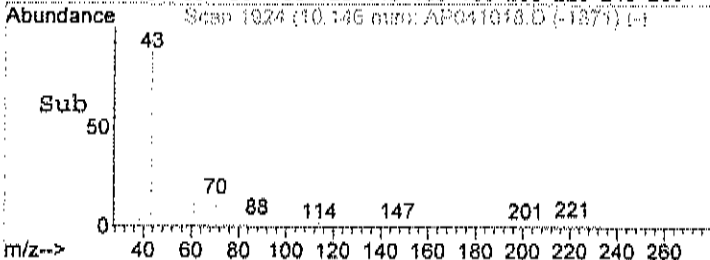
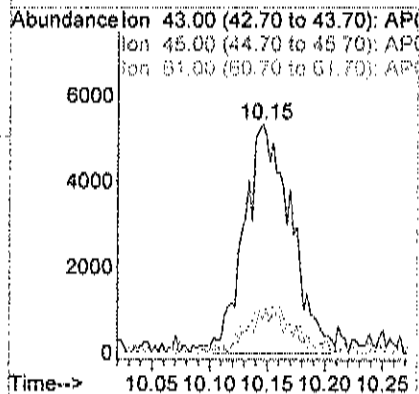
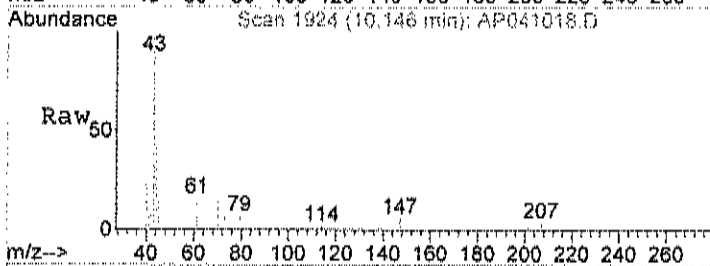
Tgt Ion	Resp	Lower	Upper
57	18315		
57	100		
41	57.2	56.0	96.0
56	48.4	29.8	69.8





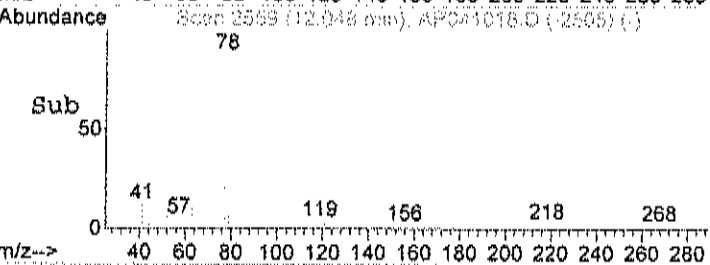
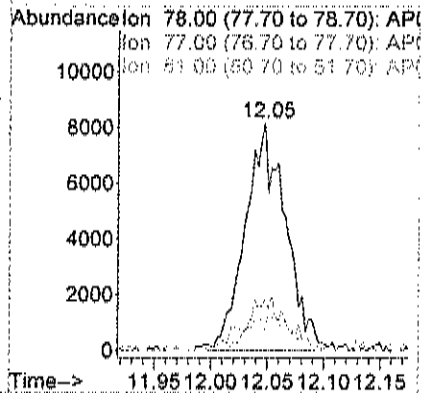
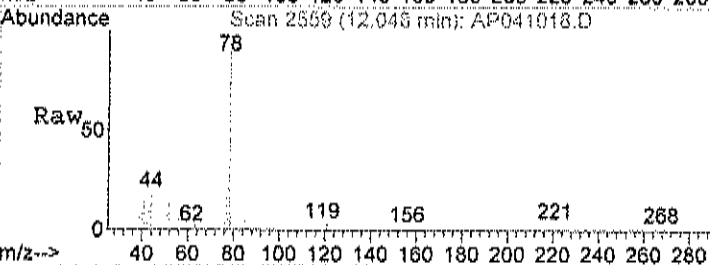
#31  
 Ethyl acetate  
 Concen: 0.15 ppb  
 RT: 10.15 min Scan# 1924  
 Delta R.T. 0.01 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

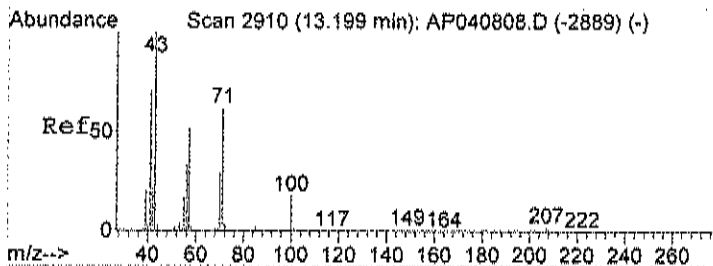
Tgt Ion	Ratio	Lower	Upper
43	100		
45	12.9	0.0	34.5
61	8.5	0.0	35.0



#39  
 Benzene  
 Concen: 0.13 ppb  
 RT: 12.05 min Scan# 2559  
 Delta R.T. 0.01 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

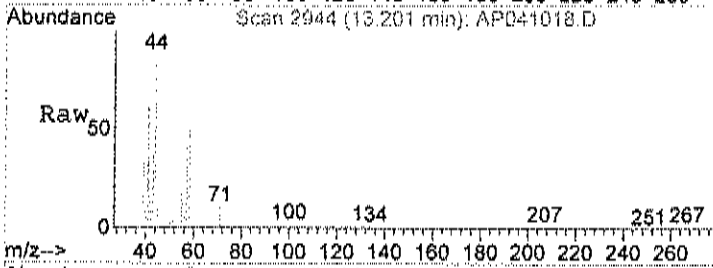
Tgt Ion	Ratio	Lower	Upper
78	100		
77	0.0	3.4	43.4#
51	6.9	0.0	37.8



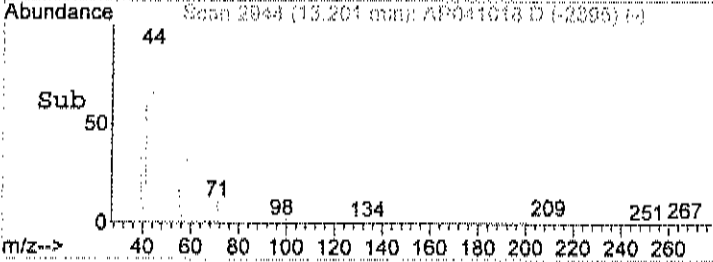
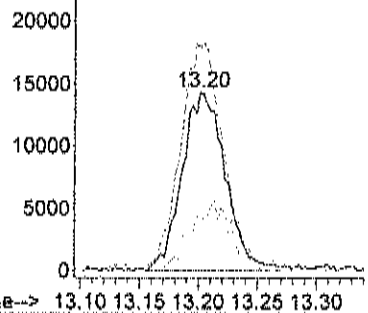


#43  
 Heptane  
 Concen: 0.47 ppb  
 RT: 13.20 min Scan# 2944  
 Delta R.T. -0.00 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

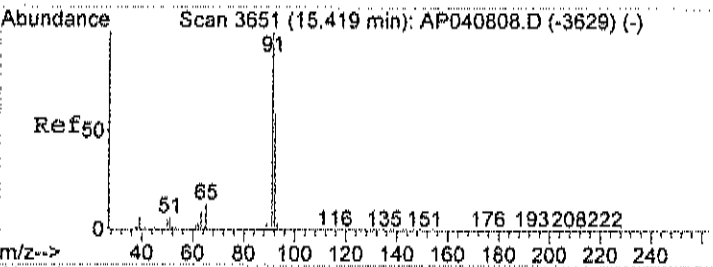
Tgt Ion	Resp	Lower	Upper
43	100		
57	120.4	37.1	77.1#
71	35.6	44.4	84.4#



Abundance Ion 43.00 (42.70 to 43.70): AP041018.D  
 Ion 57.00 (56.70 to 57.70): AP041018.D  
 Ion 71.00 (70.70 to 71.70): AP041018.D

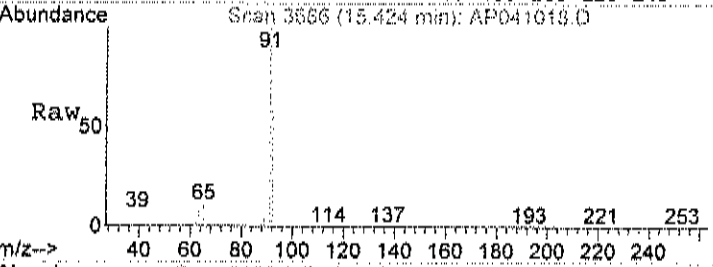


Time--> 13.10 13.15 13.20 13.25 13.30

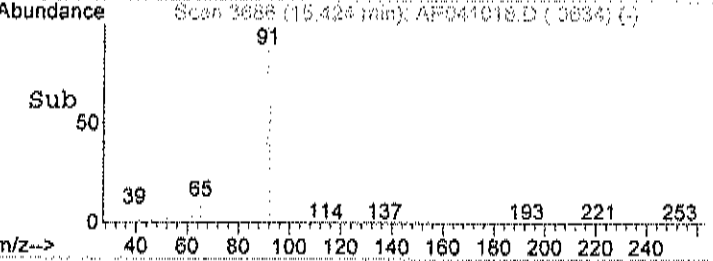
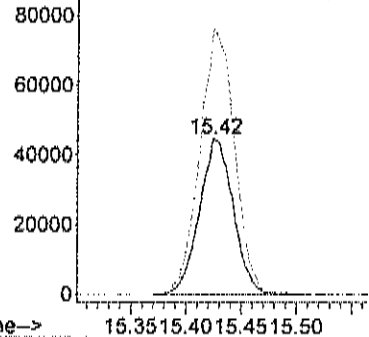


#51  
 Toluene  
 Concen: 0.90 ppb  
 RT: 15.42 min Scan# 3686  
 Delta R.T. 0.00 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

Tgt Ion	Resp	Lower	Upper
92	100		
91	174.9	154.8	194.8

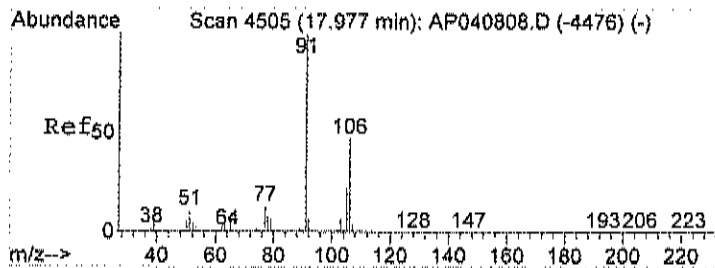


Abundance Ion 92.00 (91.70 to 92.70): AP041018.D  
 Ion 91.00 (90.70 to 91.70): AP041018.D



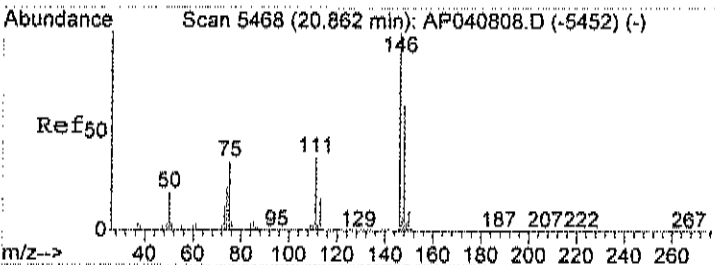
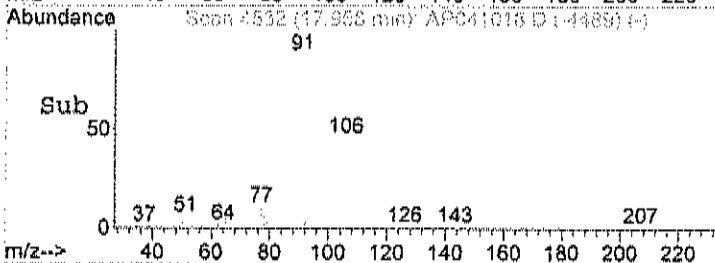
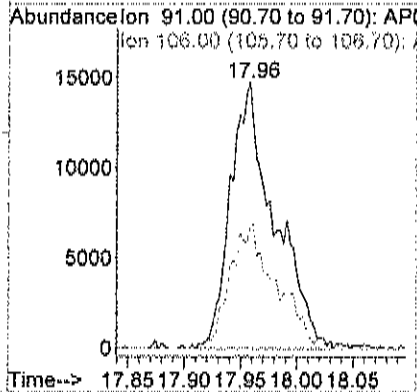
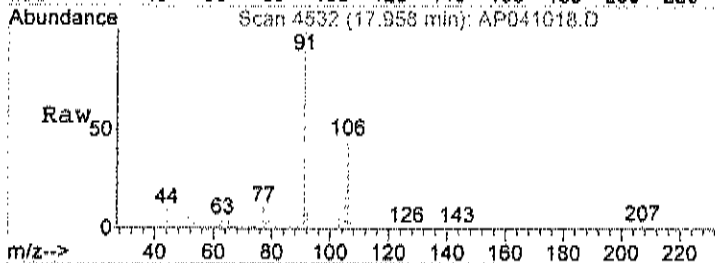
Time--> 15.35 15.40 15.45 15.50





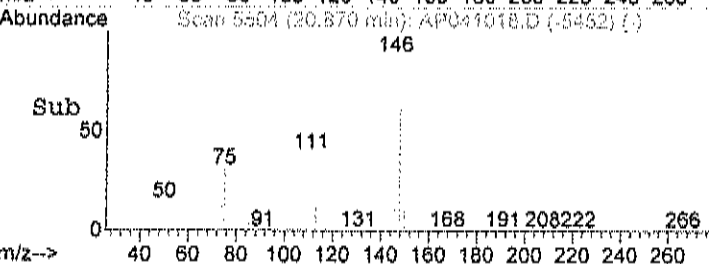
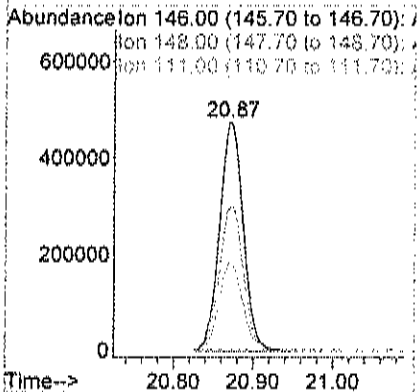
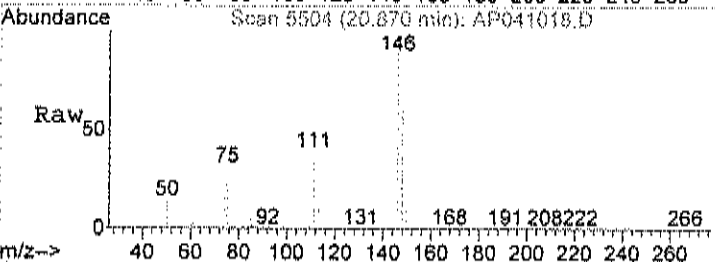
#59  
 m&p-xylene  
 Concen: 0.21 ppb  
 RT: 17.96 min Scan# 4532  
 Delta R.T. -0.02 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

Tgt Ion	Resp	Lower	Upper
91	40230		
106	49.1	26.8	66.8



#74  
 1,4-dichlorobenzene  
 Concen: 7.57 ppb  
 RT: 20.87 min Scan# 5504  
 Delta R.T. 0.00 min  
 Lab File: AP041018.D  
 Acq: 10 Apr 2018 10:54 pm

Tgt Ion	Resp	Lower	Upper
146	987433		
148	64.3	44.5	84.5
111	39.3	20.8	60.8



Data File : C:\HPCHEM\1\DATA\AP041028.D Vial: 17  
 Acq On : 11 Apr 2018 5:17 am Operator: RJP  
 Sample : C1804013-006A 10X Inst : MSD #1  
 Misc : A408\_1UG Multiplr: 1.00  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 07:23:22 2018 Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	36370	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.70	114	171207	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	130400	1.00	ppb	0.00

System Monitoring Compounds						
65) Bromofluorobenzene	19.19	95	76163	0.84	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	84.00%

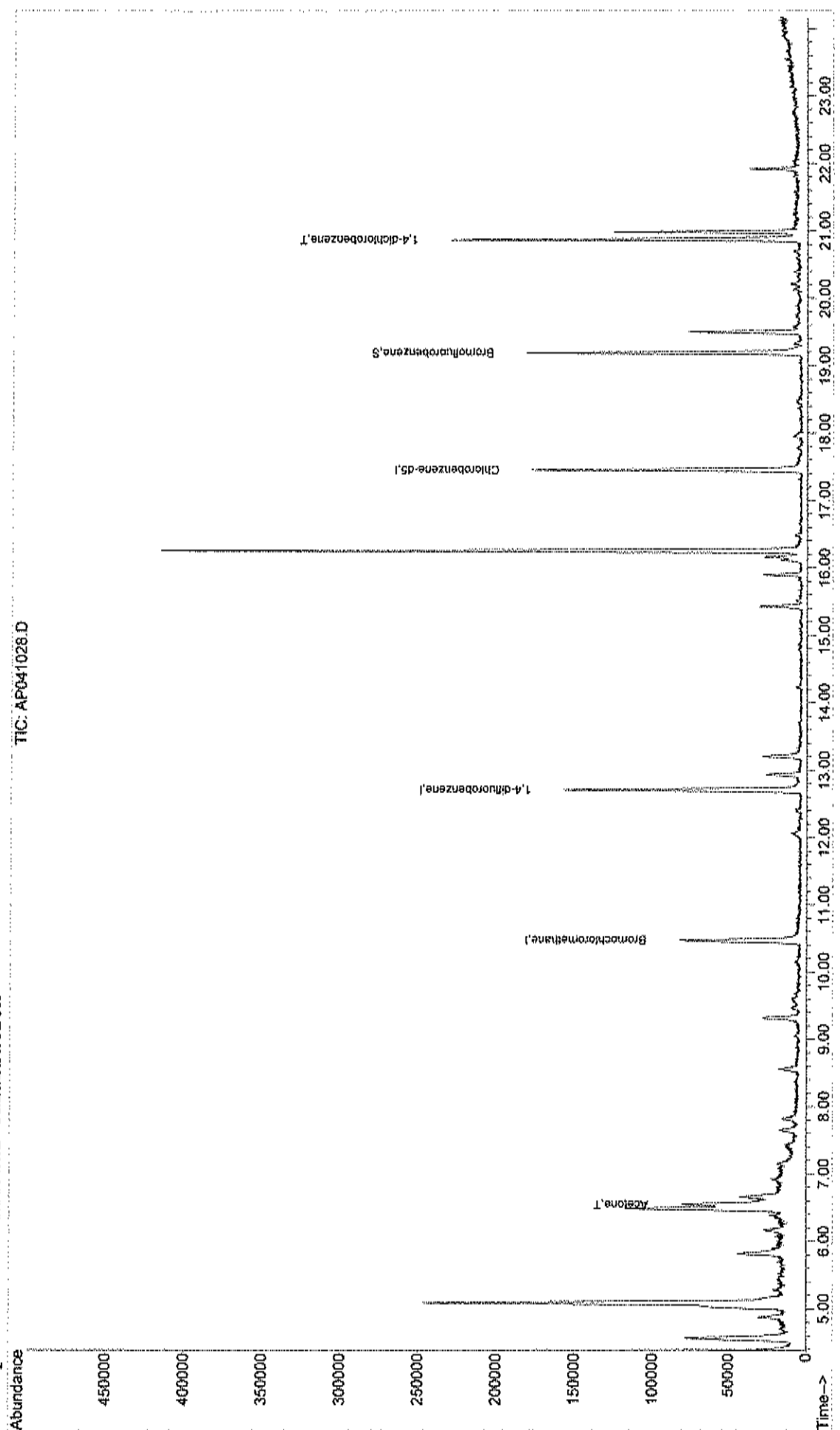
Target Compounds						Qvalue
15) Acetone	6.54	58	35988m	1.10	ppb	
74) 1,4-dichlorobenzene	20.87	146	118822	1.03	ppb	99

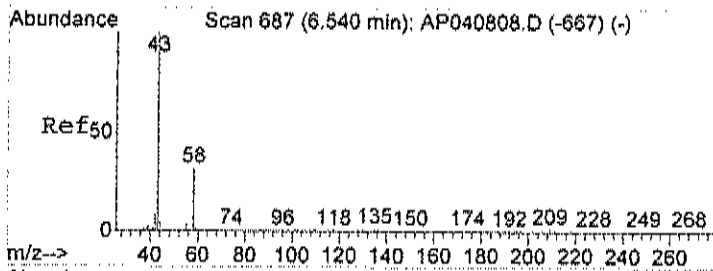
Data File : C:\HPCHEM\1\DATA\AP041028.D  
 Acq On : 11 Apr 2018 5:17 am  
 Sample : C1804013-006A 10X  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 12:34 2018

Vial: 17  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.REB

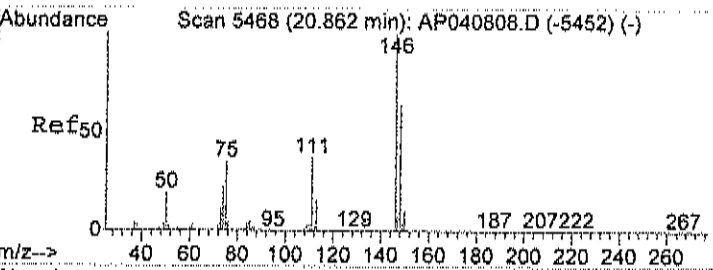
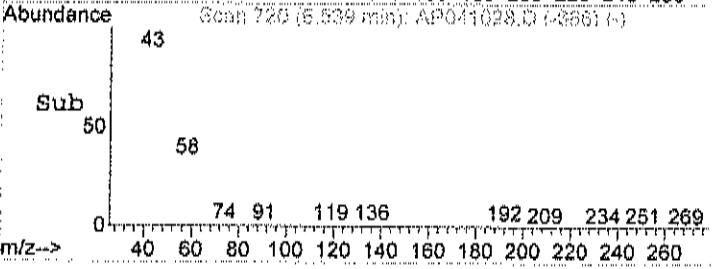
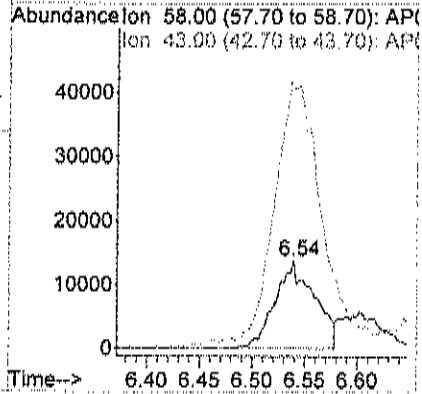
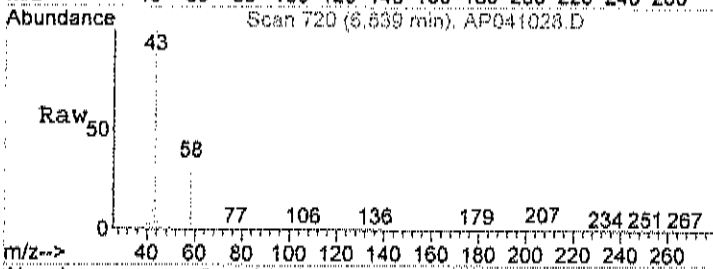
Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration





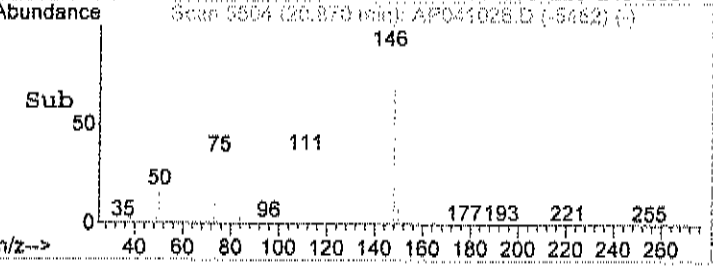
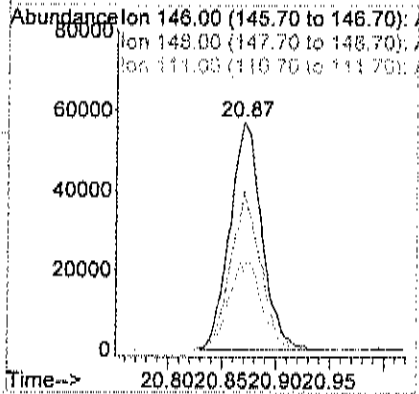
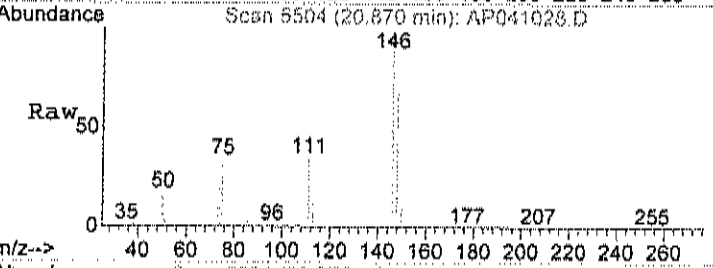
#15  
 Acetone  
 Concen: 1.10 ppb m  
 RT: 6.54 min Scan# 720  
 Delta R.T. 0.01 min  
 Lab File: AP041028.D  
 Acq: 11 Apr 2018 5:17 am

Tgt Ion:	Resp:	Lower	Upper
58	35988		
43	340.2	290.5	350.5



#74  
 1,4-dichlorobenzene  
 Concen: 1.03 ppb  
 RT: 20.87 min Scan# 5504  
 Delta R.T. 0.00 min  
 Lab File: AP041028.D  
 Acq: 11 Apr 2018 5:17 am

Tgt Ion:	Resp:	Lower	Upper
146	118822		
148	65.8	44.5	84.5
111	40.0	20.8	60.8



**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-007A

**Client Sample ID:** Effluent  
**Tag Number:** 243  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>						
Lab Vacuum In	-1			"Hg		4/9/2018
Lab Vacuum Out	-30			"Hg		4/9/2018
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>						
				<b>FLD</b>		<b>Analyst:</b>
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/11/2018 7:12:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,2,4-Trimethylbenzene	0.41	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,3,5-Trimethylbenzene	0.17	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
1,4-Dichlorobenzene	0.10	0.15	J	ppbV	1	4/11/2018 7:12:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/11/2018 7:12:00 AM
2,2,4-trimethylpentane	1.2	0.15		ppbV	1	4/11/2018 7:12:00 AM
4-ethyltoluene	0.12	0.15	J	ppbV	1	4/11/2018 7:12:00 AM
Acetone	4.4	3.0		ppbV	10	4/10/2018 11:31:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Benzene	1.2	0.15		ppbV	1	4/11/2018 7:12:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Bromoform	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Carbon disulfide	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/11/2018 7:12:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Chloroform	1.3	0.15		ppbV	1	4/11/2018 7:12:00 AM
Chloromethane	0.11	0.15	J	ppbV	1	4/11/2018 7:12:00 AM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/11/2018 7:12:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Cyclohexane	0.39	0.15		ppbV	1	4/11/2018 7:12:00 AM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM

<b>Qualifiers:</b>	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-007A

**Client Sample ID:** Effluent  
**Tag Number:** 243  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>						Analyst: RJP
Ethylbenzene	0.27	0.15		ppbV	1	4/11/2018 7:12:00 AM
Freon 11	0.22	0.15		ppbV	1	4/11/2018 7:12:00 AM
Freon 113	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Freon 114	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Freon 12	0.42	0.15		ppbV	1	4/11/2018 7:12:00 AM
Heptane	1.7	0.15		ppbV	1	4/11/2018 7:12:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Hexane	1.6	0.15		ppbV	1	4/11/2018 7:12:00 AM
Isopropyl alcohol	6.1	1.5		ppbV	10	4/10/2018 11:31:00 PM
m&p-Xylene	0.72	0.30		ppbV	1	4/11/2018 7:12:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/11/2018 7:12:00 AM
Methyl Ethyl Ketone	0.47	0.30		ppbV	1	4/11/2018 7:12:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/11/2018 7:12:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Methylene chloride	0.22	0.15		ppbV	1	4/11/2018 7:12:00 AM
o-Xylene	0.23	0.15		ppbV	1	4/11/2018 7:12:00 AM
Propylene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Styrene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Tetrachloroethylene	580	40		ppbV	270	4/11/2018 7:49:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Toluene	0.70	0.15		ppbV	1	4/11/2018 7:12:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Trichloroethene	< 0.030	0.030		ppbV	1	4/11/2018 7:12:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/11/2018 7:12:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/11/2018 7:12:00 AM
Surr: Bromofluorobenzene	98.0	70-130		%REC	1	4/11/2018 7:12:00 AM

**Qualifiers:** \*\* Quantitation Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte, Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-007A

**Client Sample ID:** Effluent  
**Tag Number:** 243  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>		<b>TO-15</b>		<b>Analyst: RJP</b>		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/11/2018 7:12:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/11/2018 7:12:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/11/2018 7:12:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/11/2018 7:12:00 AM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/11/2018 7:12:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/11/2018 7:12:00 AM
1,2,4-Trimethylbenzene	2.0	0.74		ug/m3	1	4/11/2018 7:12:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/11/2018 7:12:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/11/2018 7:12:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/11/2018 7:12:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/11/2018 7:12:00 AM
1,3,5-Trimethylbenzene	0.84	0.74		ug/m3	1	4/11/2018 7:12:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/11/2018 7:12:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/11/2018 7:12:00 AM
1,4-Dichlorobenzene	0.60	0.90	J	ug/m3	1	4/11/2018 7:12:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/11/2018 7:12:00 AM
2,2,4-trimethylpentane	5.6	0.70		ug/m3	1	4/11/2018 7:12:00 AM
4-ethyltoluene	0.59	0.74	J	ug/m3	1	4/11/2018 7:12:00 AM
Acetone	10	7.1		ug/m3	10	4/10/2018 11:31:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/11/2018 7:12:00 AM
Benzene	3.9	0.48		ug/m3	1	4/11/2018 7:12:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/11/2018 7:12:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/11/2018 7:12:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	4/11/2018 7:12:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	4/11/2018 7:12:00 AM
Carbon disulfide	< 0.47	0.47		ug/m3	1	4/11/2018 7:12:00 AM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/11/2018 7:12:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/11/2018 7:12:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/11/2018 7:12:00 AM
Chloroform	6.4	0.73		ug/m3	1	4/11/2018 7:12:00 AM
Chloromethane	0.23	0.31	J	ug/m3	1	4/11/2018 7:12:00 AM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/11/2018 7:12:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/11/2018 7:12:00 AM
Cyclohexane	1.3	0.52		ug/m3	1	4/11/2018 7:12:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/11/2018 7:12:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	4/11/2018 7:12:00 AM
Ethylbenzene	1.2	0.65		ug/m3	1	4/11/2018 7:12:00 AM
Freon 11	1.2	0.84		ug/m3	1	4/11/2018 7:12:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	4/11/2018 7:12:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	4/11/2018 7:12:00 AM

**Qualifiers:** \*\* Quantitation Limit , Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 26-Apr-18

**CLIENT:** FPM Group, Ltd.  
**Lab Order:** C1804013  
**Project:** Cinderella  
**Lab ID:** C1804013-007A

**Client Sample ID:** Effluent  
**Tag Number:** 243  
**Collection Date:** 4/5/2018  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE</b>				<b>TO-15</b>		<b>Analyst: RJP</b>
Freon 12	2.1	0.74		ug/m3	1	4/11/2018 7:12:00 AM
Heptane	7.0	0.61		ug/m3	1	4/11/2018 7:12:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/11/2018 7:12:00 AM
Hexane	5.5	0.53		ug/m3	1	4/11/2018 7:12:00 AM
Isopropyl alcohol	15	3.7		ug/m3	10	4/10/2018 11:31:00 PM
m&p-Xylene	3.1	1.3		ug/m3	1	4/11/2018 7:12:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/11/2018 7:12:00 AM
Methyl Ethyl Ketone	1.4	0.88		ug/m3	1	4/11/2018 7:12:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/11/2018 7:12:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/11/2018 7:12:00 AM
Methylene chloride	0.76	0.52		ug/m3	1	4/11/2018 7:12:00 AM
o-Xylene	1.0	0.65		ug/m3	1	4/11/2018 7:12:00 AM
Propylene	< 0.26	0.26		ug/m3	1	4/11/2018 7:12:00 AM
Styrene	< 0.64	0.64		ug/m3	1	4/11/2018 7:12:00 AM
Tetrachloroethylene	3900	270		ug/m3	270	4/11/2018 7:49:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/11/2018 7:12:00 AM
Toluene	2.6	0.57		ug/m3	1	4/11/2018 7:12:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/11/2018 7:12:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/11/2018 7:12:00 AM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/11/2018 7:12:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/11/2018 7:12:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/11/2018 7:12:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/11/2018 7:12:00 AM

**Qualifiers:** \*\* Quantitation Limit  
 B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 JN Non-routine analyte. Quantitation estimated.  
 S Spike Recovery outside accepted recovery limits  
 . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection



Data File : C:\HPCHEM\1\DATA\AP041031.D  
 Acq On : 11 Apr 2018 7:12 am  
 Sample : C1804013-007A  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 12:24:06 2018

Vial: 21  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	38780	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.71	114	186480	1.00	ppb	0.01
50) Chlorobenzene-d5	17.46	117	183812	1.00	ppb	0.01

#### System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	124473	0.98	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	98.00%

#### Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.61	85	97757	0.42	ppb	98
4) Chloromethane	4.82	50	5978	0.11	ppb	75
14) Freon 11	6.38	101	41164	0.22	ppb	95
15) Acetone	6.54	58	93053	2.67	ppb	99
17) Isopropyl alcohol	6.65	45	376007	5.69	ppb	# 29
21) Methylene chloride	7.65	84	16384	0.22	ppb	# 86
28) Methyl Ethyl Ketone	9.54	72	12587	0.47	ppb	# 100
30) Hexane	9.61	57	125772	1.57	ppb	89
32) Chloroform	10.63	83	185273	1.31	ppb	94
37) Cyclohexane	12.14	56	29372	0.39	ppb	# 67
39) Benzene	12.05	78	189573	1.21	ppb	99
42) 2,2,4-trimethylpentane	12.88	57	273393	1.19	ppb	70
43) Heptane	13.22	43	136847	1.71	ppb	# 74
51) Toluene	15.42	92	93210	0.70	ppb	97
56) Tetrachloroethylene	16.49	164	23195338	255.60	ppb	98
58) Ethylbenzene	17.78	91	82599	0.27	ppb	100
59) m&p-xylene	17.95	91	174996	0.72	ppb	99
63) o-xylene	18.48	91	55843	0.23	ppb	97
69) 4-ethyltoluene	19.83	105	39580	0.12	ppb	99
70) 1,3,5-trimethylbenzene	19.90	105	47822	0.17	ppb	81
71) 1,2,4-trimethylbenzene	20.39	105	113637	0.41	ppb	99
74) 1,4-dichlorobenzene	20.87	146	16501	0.10	ppb	95
75) 1,2,3-trimethylbenzene	20.92	105	29100	0.11	ppb	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP041031.D A408\_1UG.M Thu Apr 26 08:56:06 2018 MSD1

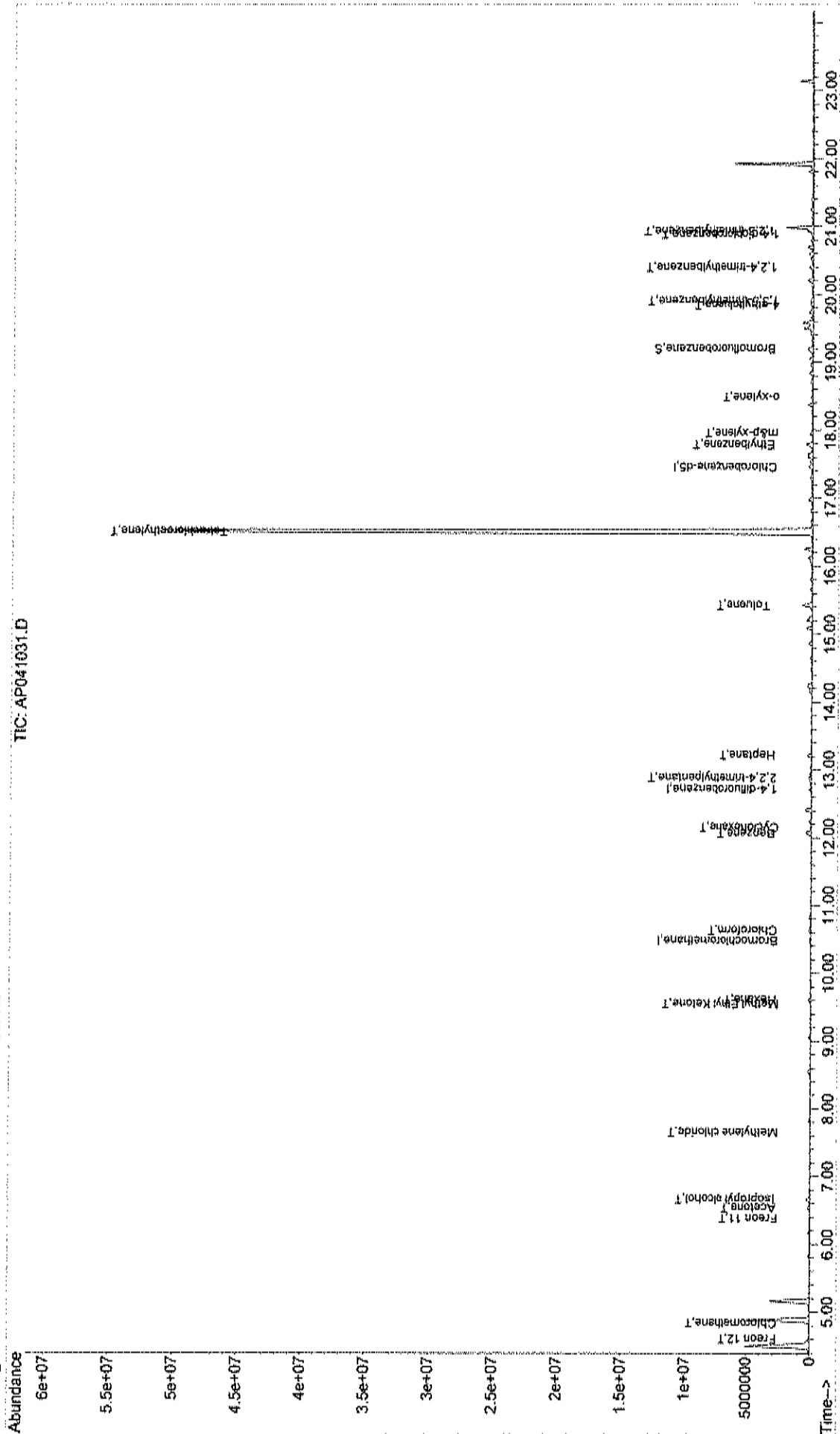
Quantitation Report (QT Reviewed)

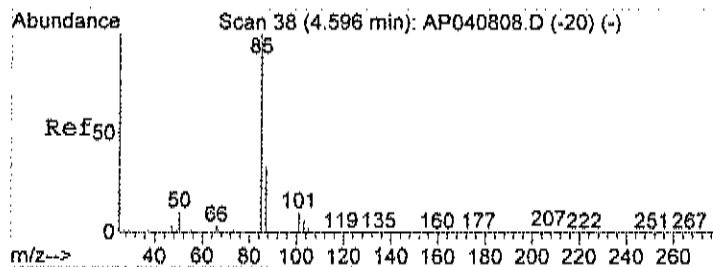
Data File : C:\HPCHEM\1\DATA\AP041031.D  
 Acq On : 11 Apr 2018 7:12 am  
 Sample : C1804013-007A  
 Misc : A408\_IUG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 12:25 2018

Vial: 21  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_IUG.RES

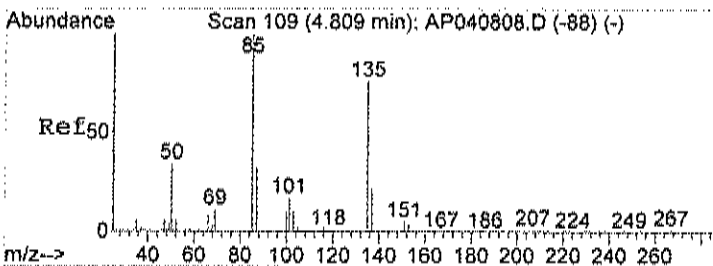
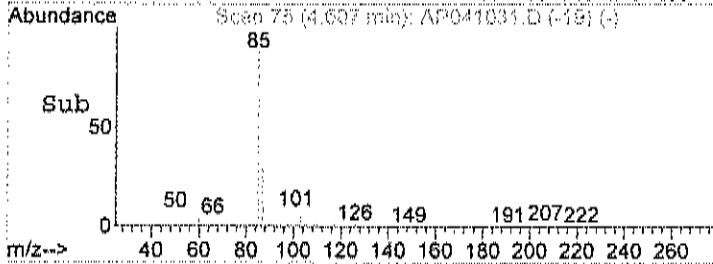
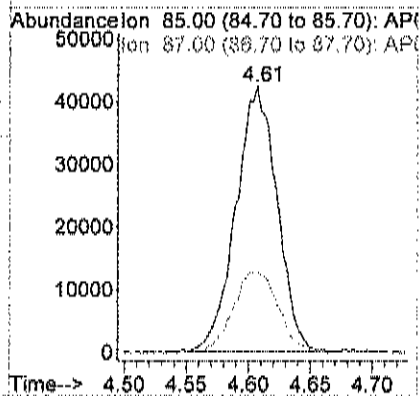
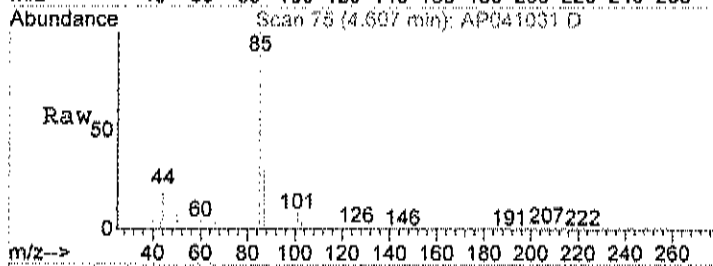
Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration





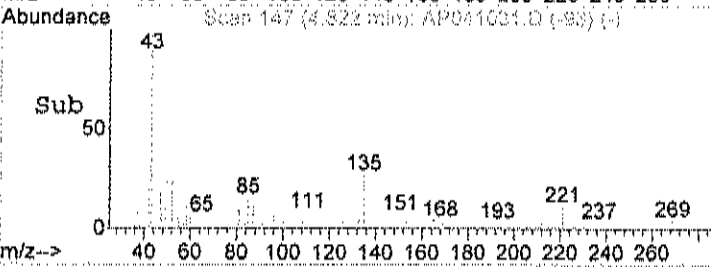
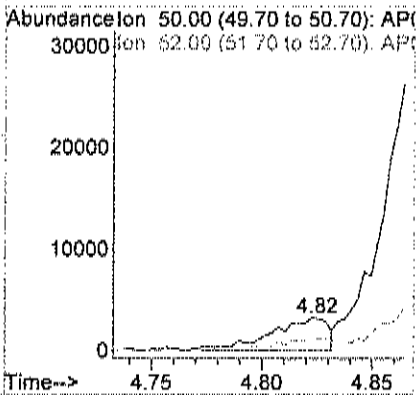
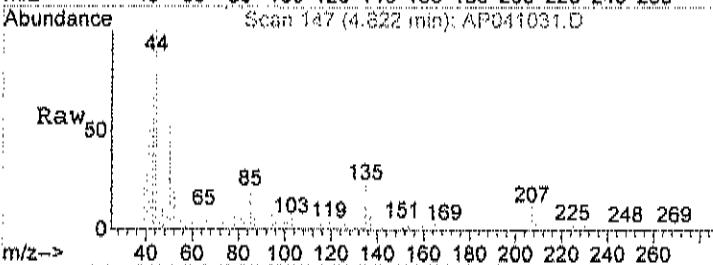
#3  
 Freon 12  
 Concen: 0.42 ppb  
 RT: 4.61 min Scan# 75  
 Delta R.T. 0.02 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

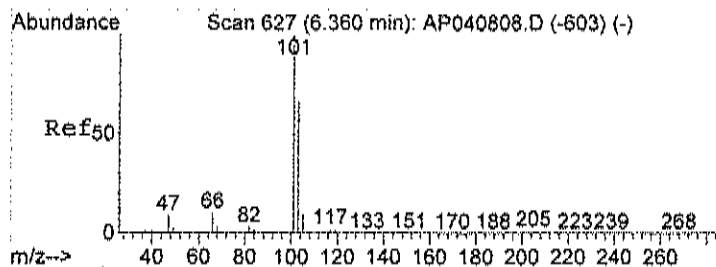
Tgt Ion	Resp	Lower	Upper
85	100		
87	33.0	12.1	52.1



#4  
 Chloromethane  
 Concen: 0.11 ppb  
 RT: 4.82 min Scan# 147  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

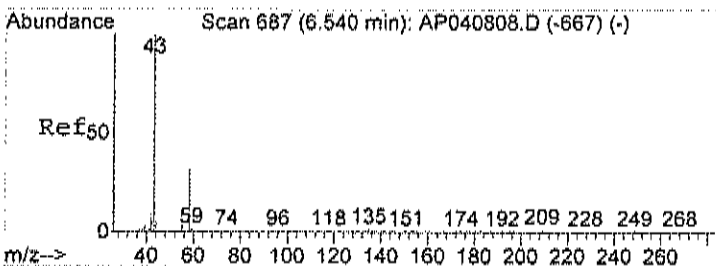
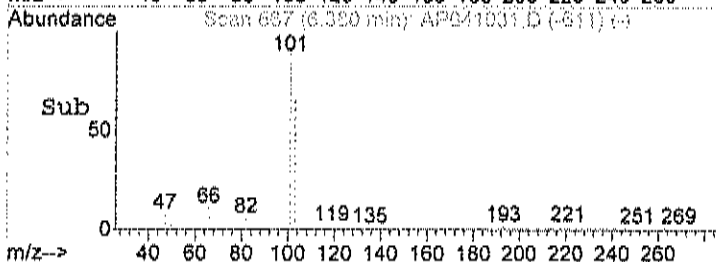
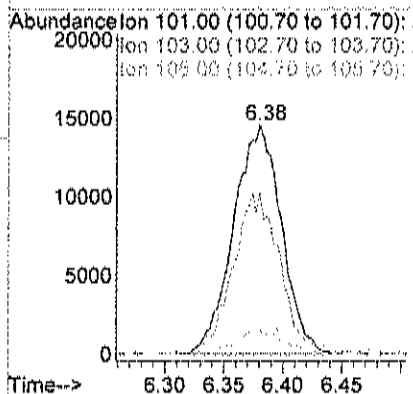
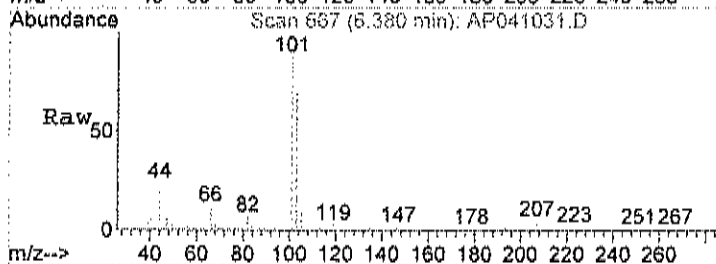
Tgt Ion	Resp	Lower	Upper
50	100		
52	35.8	3.5	43.5





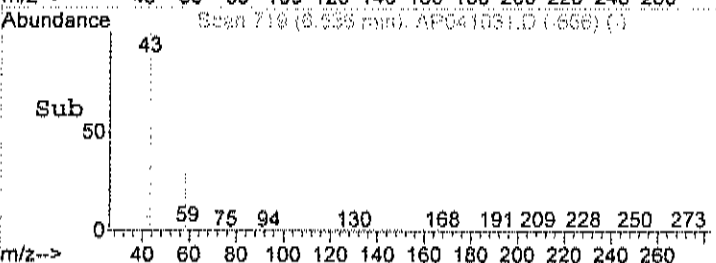
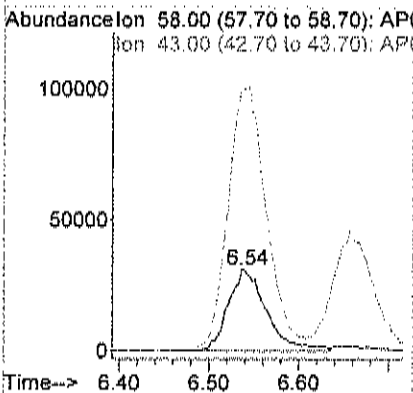
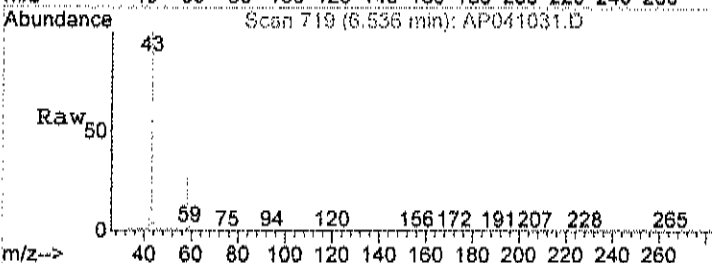
#14  
 Freon 11  
 Concen: 0.22 ppb  
 RT: 6.38 min Scan# 667  
 Delta R.T. 0.02 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

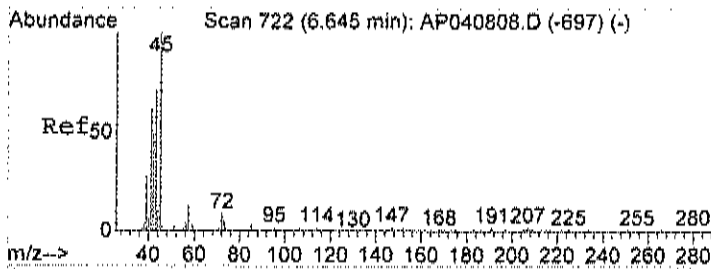
Tgt Ion	Ratio	Lower	Upper
101	100		
103	69.0	44.4	84.4
105	11.1	0.0	30.7



#15  
 Acetone  
 Concen: 2.67 ppb  
 RT: 6.54 min Scan# 719  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

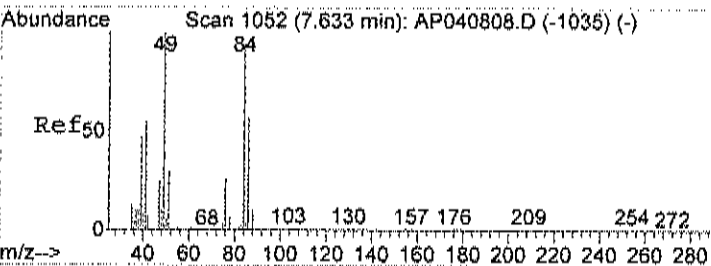
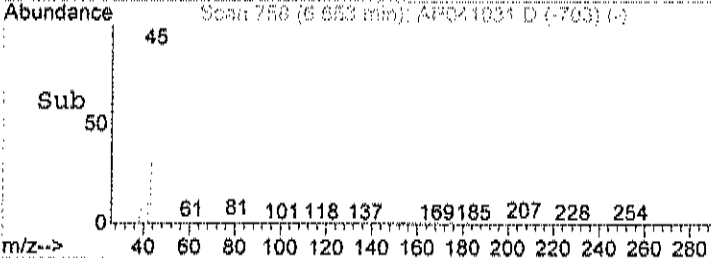
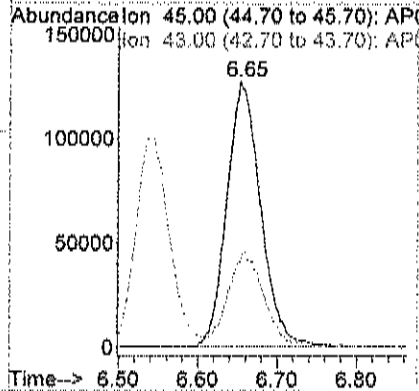
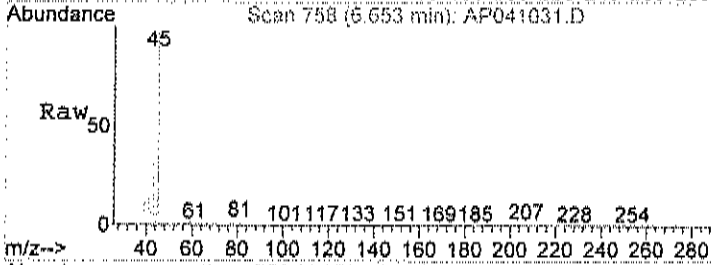
Tgt Ion	Ratio	Lower	Upper
58	100		
43	321.9	290.5	350.5





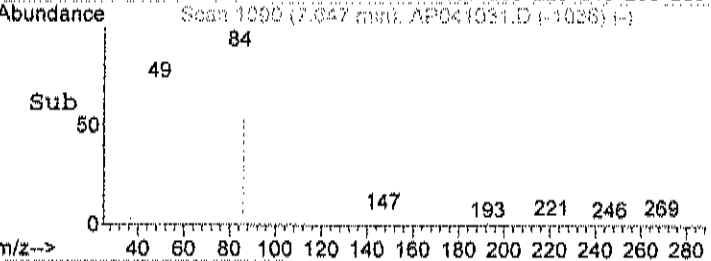
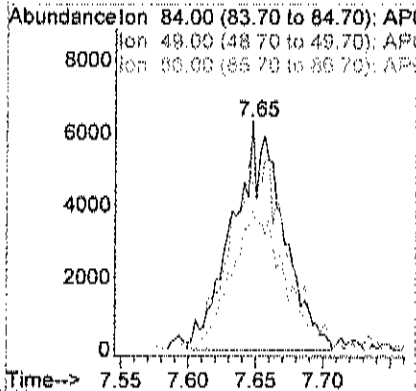
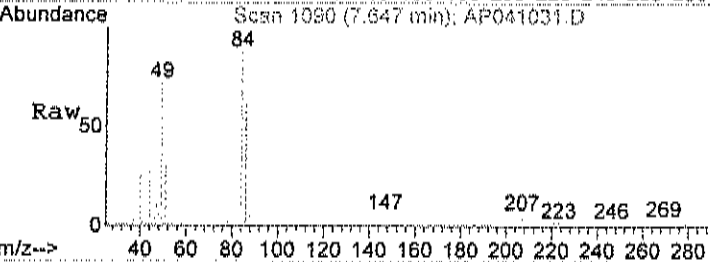
#17  
 Isopropyl alcohol  
 Concen: 5.69 ppb  
 RT: 6.65 min Scan# 758  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

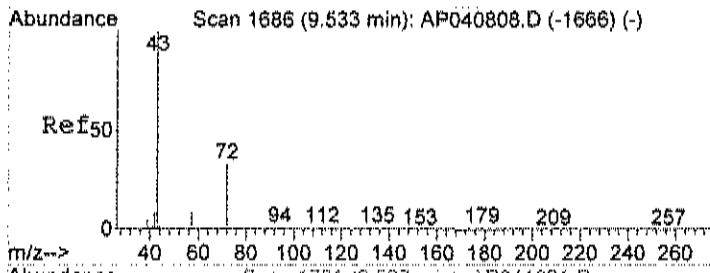
Tgt Ion	Resp	Lower	Upper
45	100		
43	36.6	92.3	132.3#



#21  
 Methylene chloride  
 Concen: 0.22 ppb  
 RT: 7.65 min Scan# 1090  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

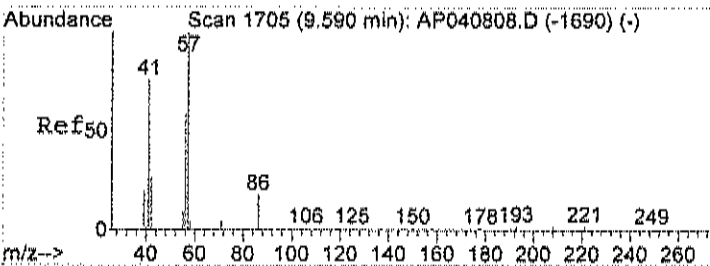
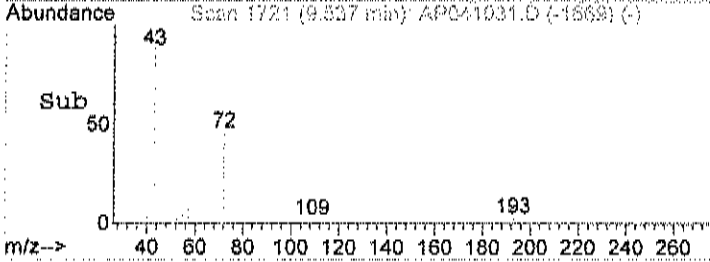
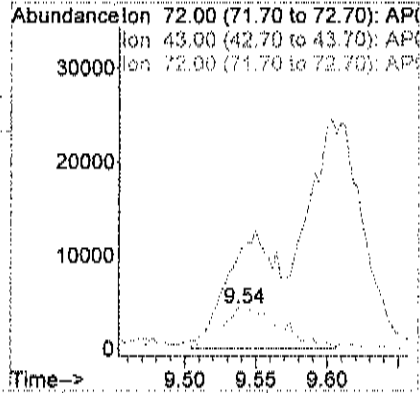
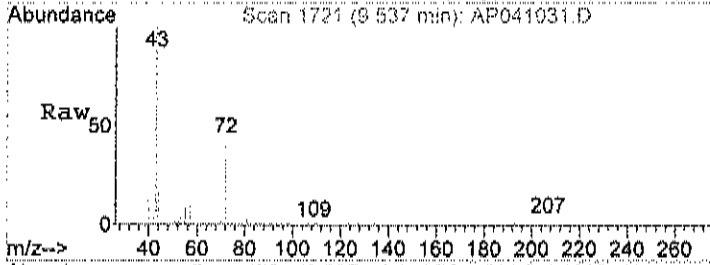
Tgt Ion	Resp	Lower	Upper
84	100		
49	95.5	97.6	137.6#
86	64.2	42.0	82.0





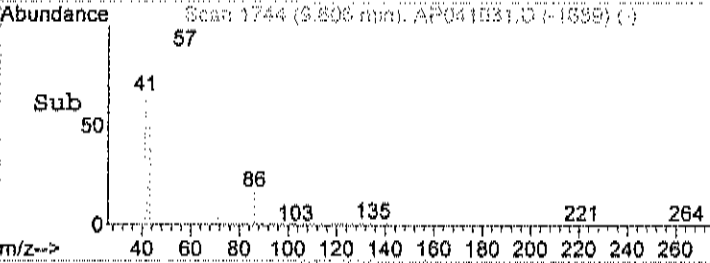
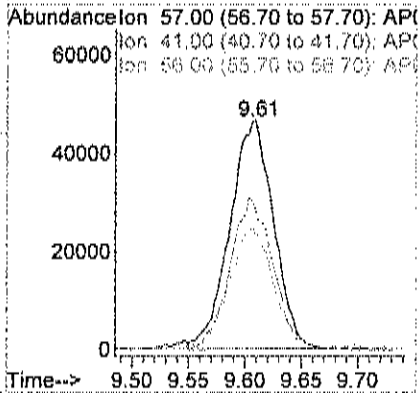
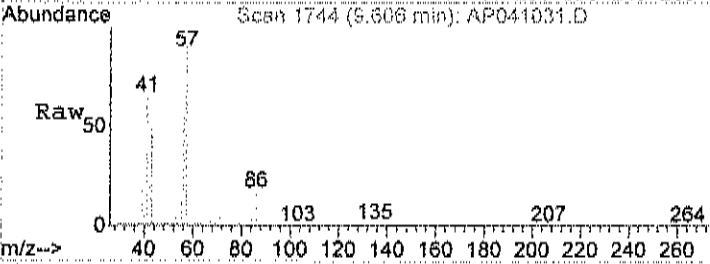
#28  
 Methyl Ethyl Ketone  
 Concen: 0.47 ppb  
 RT: 9.54 min Scan# 1721  
 Delta R.T. 0.00 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

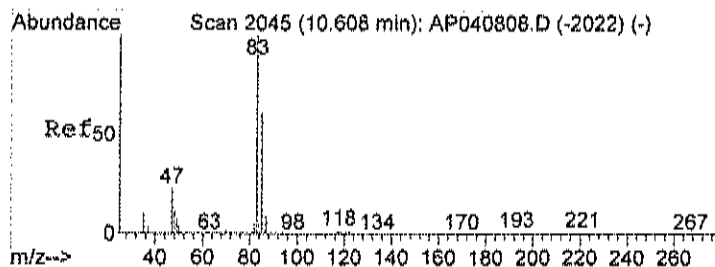
Tgt Ion	Resp	Lower	Upper
72	12587		
43	236.0	0.0	20.0#
72	100.0	80.0	120.0



#30  
 Hexane  
 Concen: 1.57 ppb  
 RT: 9.61 min Scan# 1744  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

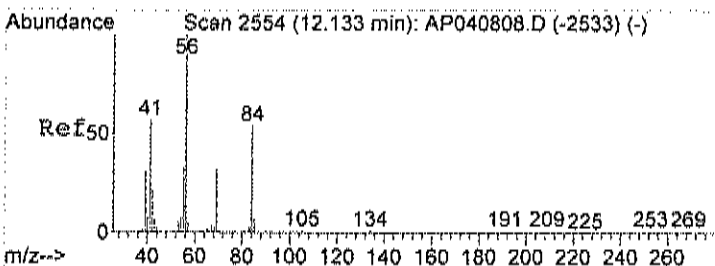
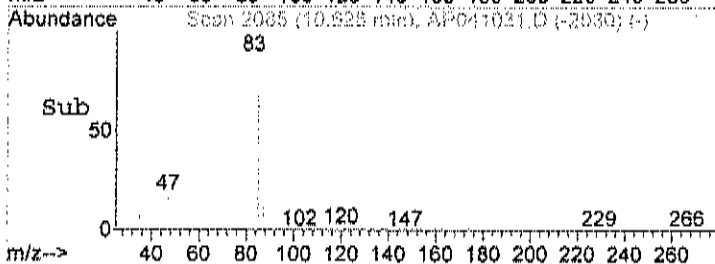
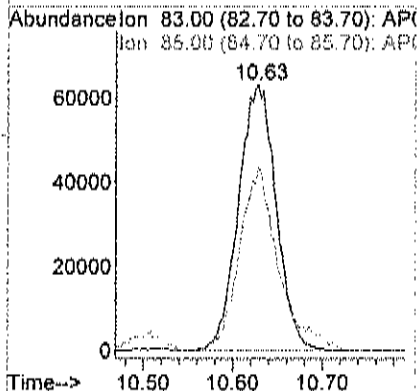
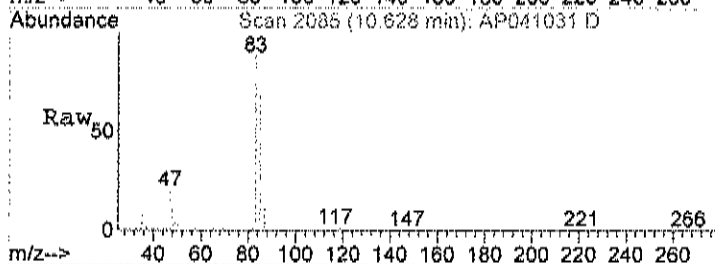
Tgt Ion	Resp	Lower	Upper
57	125772		
41	63.6	56.0	96.0
56	53.8	29.8	69.8





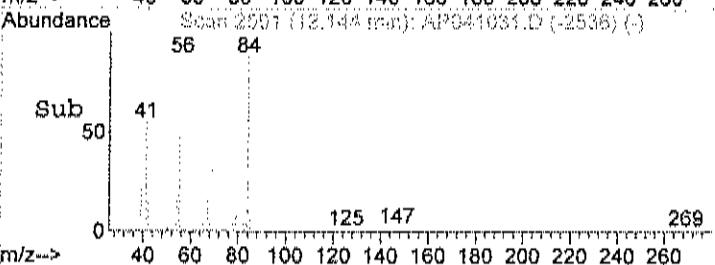
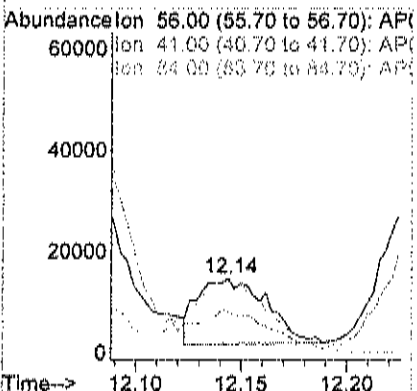
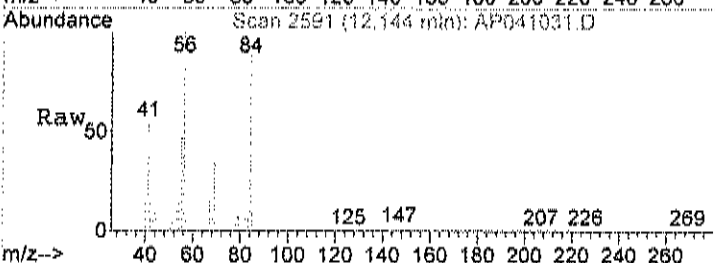
#32  
 Chloroform  
 Concen: 1.31 ppb  
 RT: 10.63 min Scan# 2085  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

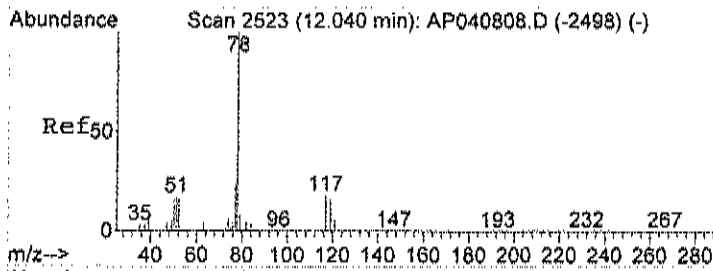
Tgt Ion	Resp	Lower	Upper
83	100		
85	70.4	45.5	85.5



#37  
 Cyclohexane  
 Concen: 0.39 ppb  
 RT: 12.14 min Scan# 2591  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

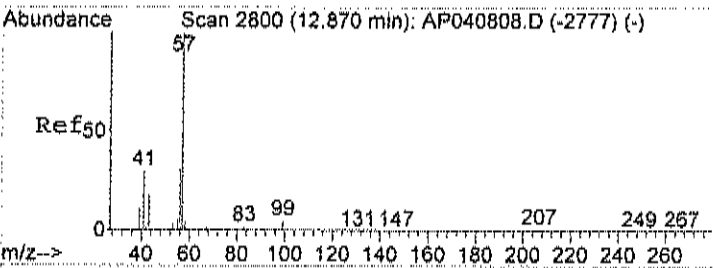
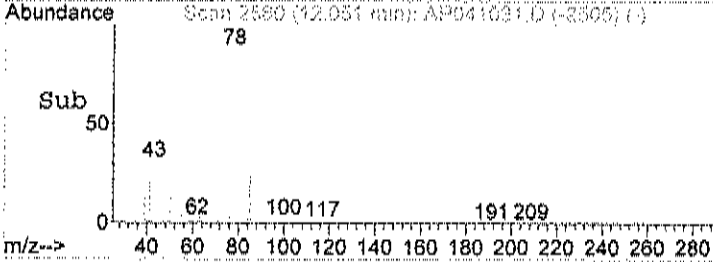
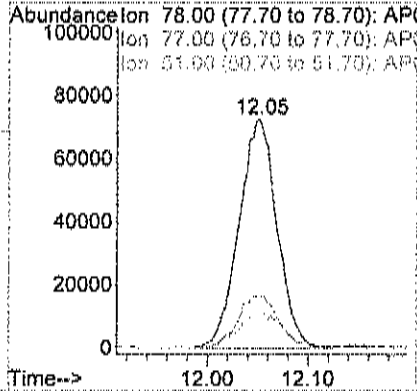
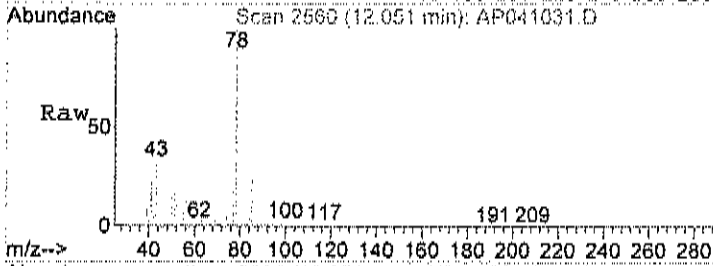
Tgt Ion	Resp	Lower	Upper
56	100		
41	49.5	37.4	77.4
84	130.9	66.2	106.2#





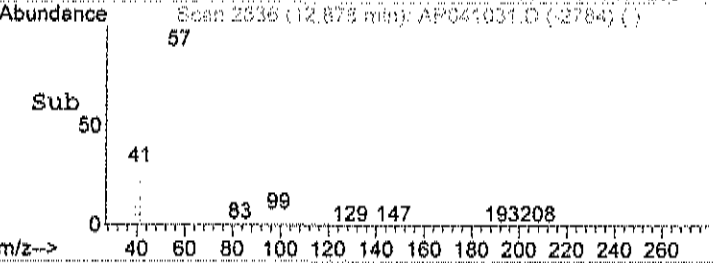
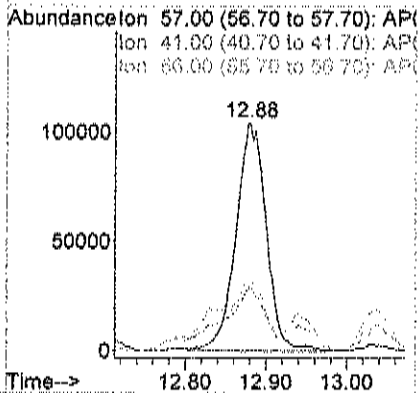
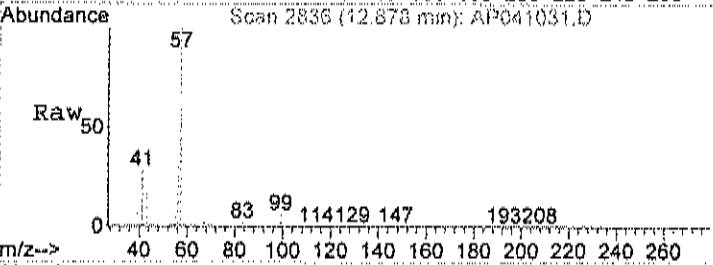
#39  
Benzene  
Concen: 1.21 ppb  
RT: 12.05 min Scan# 2560  
Delta R.T. 0.01 min  
Lab File: AP041031.D  
Acq: 11 Apr 2018 7:12 am

Tgt Ion	Resp	Lower	Upper
78	189573		
77	24.4	3.4	43.4
51	18.0	0.0	37.8

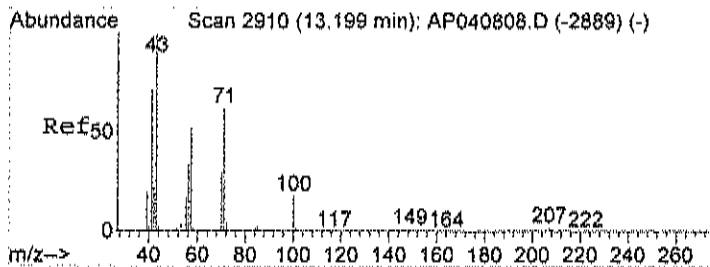


#42  
2,2,4-trimethylpentane  
Concen: 1.19 ppb  
RT: 12.88 min Scan# 2836  
Delta R.T. 0.00 min  
Lab File: AP041031.D  
Acq: 11 Apr 2018 7:12 am

Tgt Ion	Resp	Lower	Upper
57	273393		
41	12.6	9.9	49.9
56	14.8	9.9	49.9

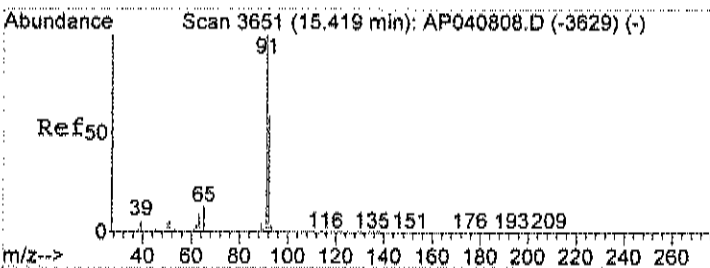
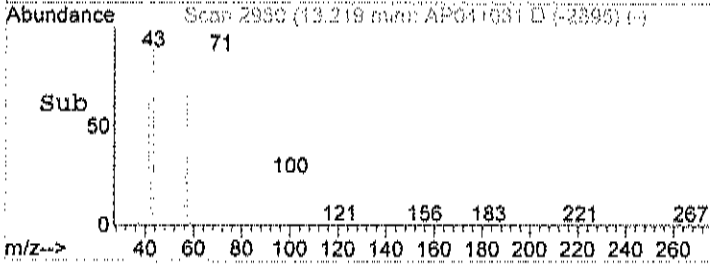
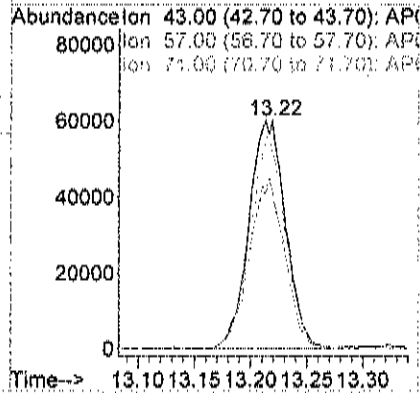
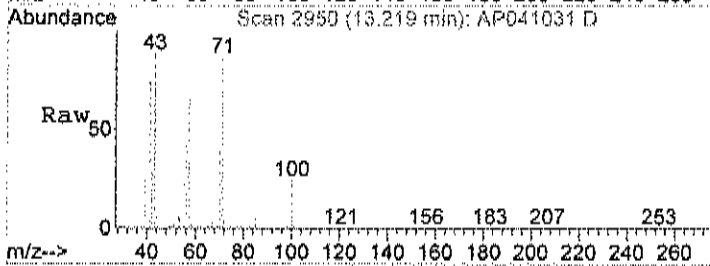






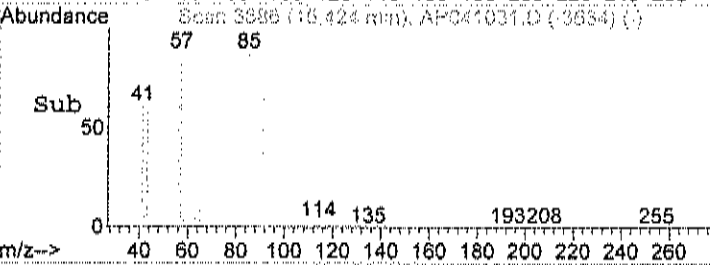
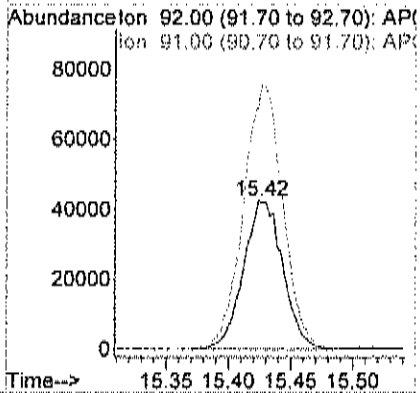
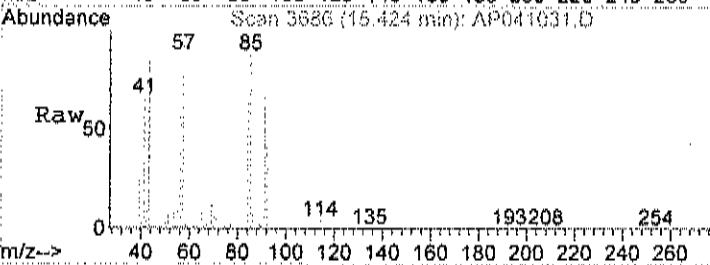
#43  
 Heptane  
 Concen: 1.71 ppb  
 RT: 13.22 min Scan# 2950  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

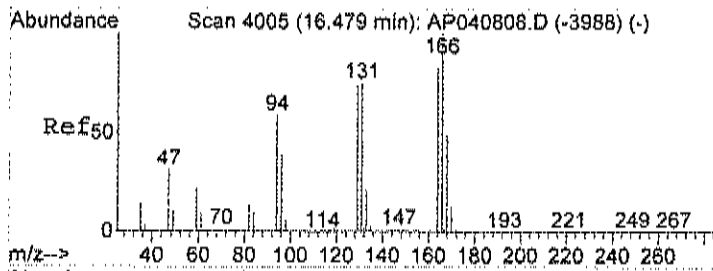
Tgt Ion	Resp	Lower	Upper
43	136847		
43	100		
57	72.3	37.1	77.1
71	88.9	44.4	84.4#



#51  
 Toluene  
 Concen: 0.70 ppb  
 RT: 15.42 min Scan# 3686  
 Delta R.T. 0.00 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

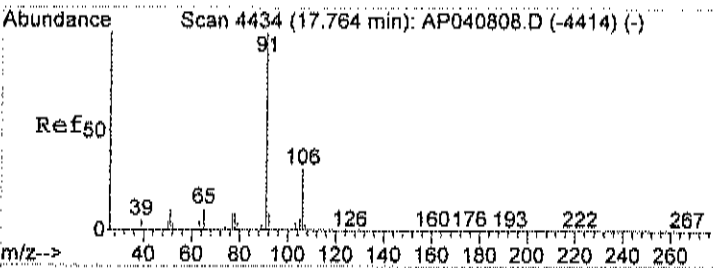
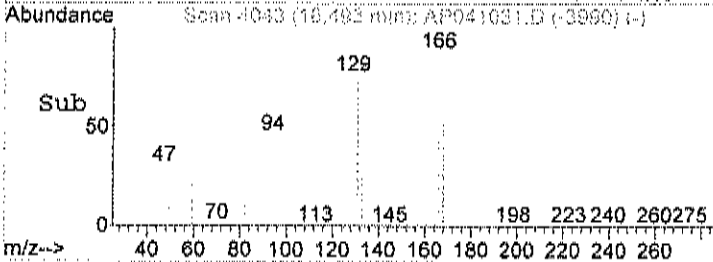
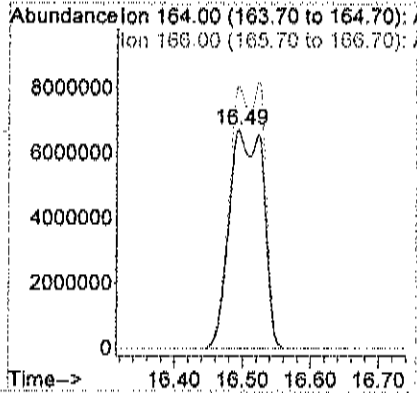
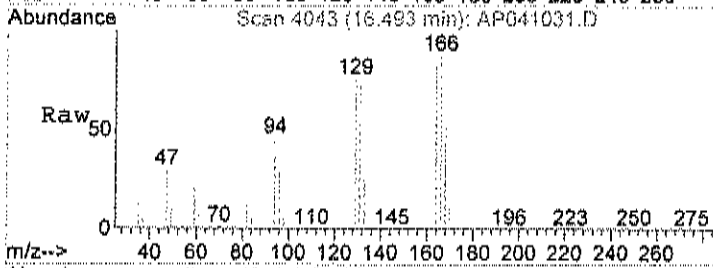
Tgt Ion	Resp	Lower	Upper
92	93210		
92	100		
91	179.5	154.8	194.8





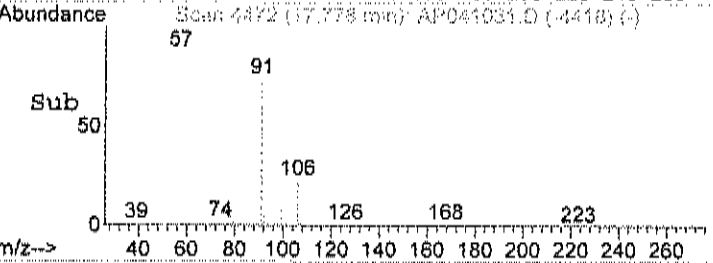
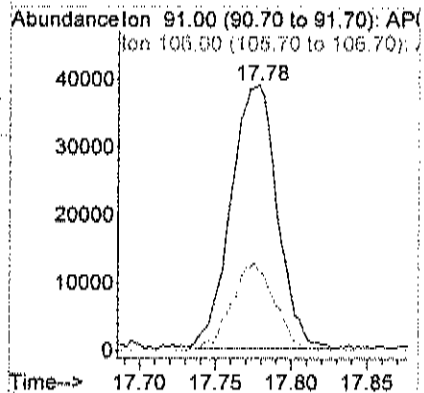
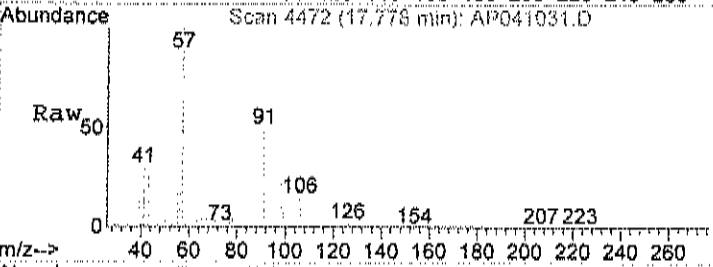
#56  
 Tetrachloroethylene  
 Concen: 255.60 ppb  
 RT: 16.49 min Scan# 4043  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

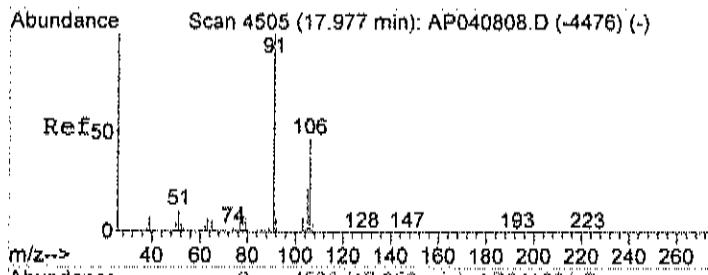
Tgt Ion	Resp	Lower	Upper
164	100		
166	123.8	105.6	145.6



#58  
 Ethylbenzene  
 Concen: 0.27 ppb  
 RT: 17.78 min Scan# 4472  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

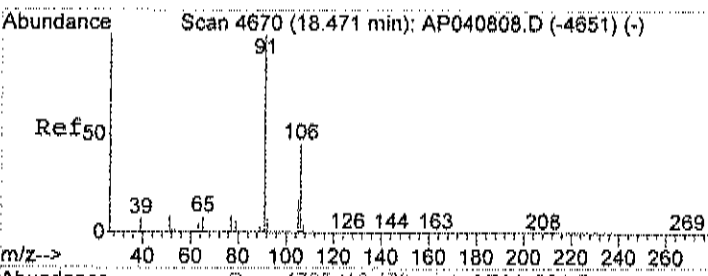
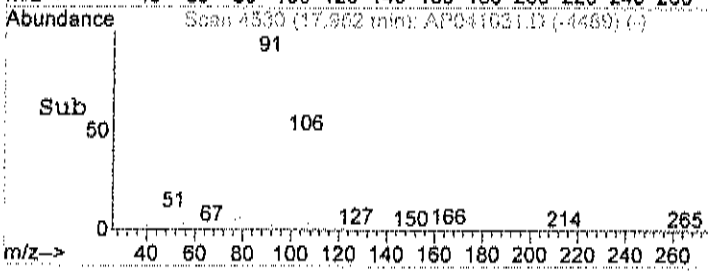
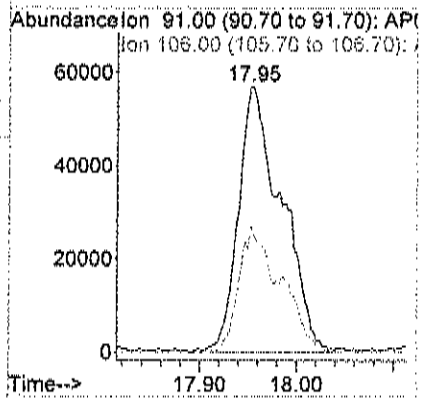
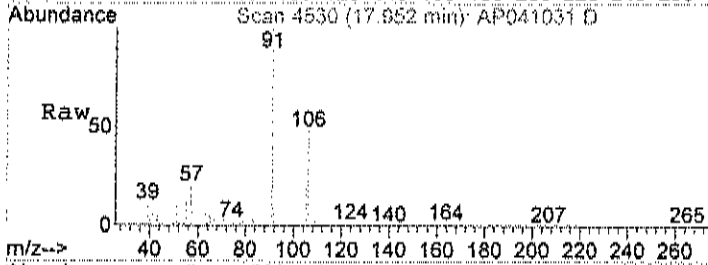
Tgt Ion	Resp	Lower	Upper
91	100		
106	31.2	11.1	51.1





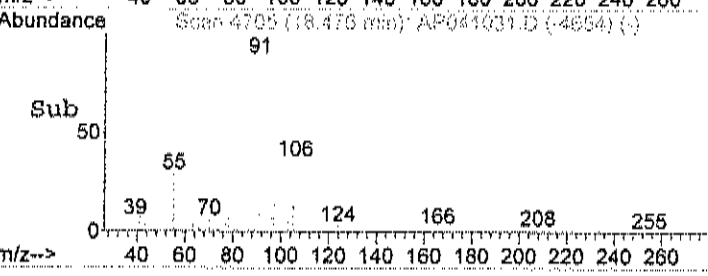
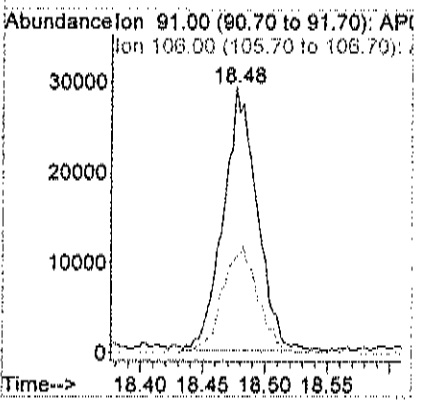
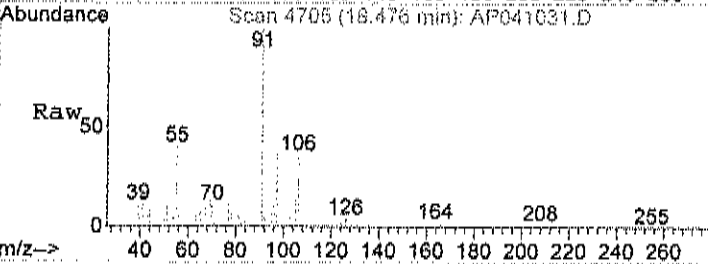
#59  
 m&p-xylene  
 Concen: 0.72 ppb  
 RT: 17.95 min Scan# 4530  
 Delta R.T. -0.03 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

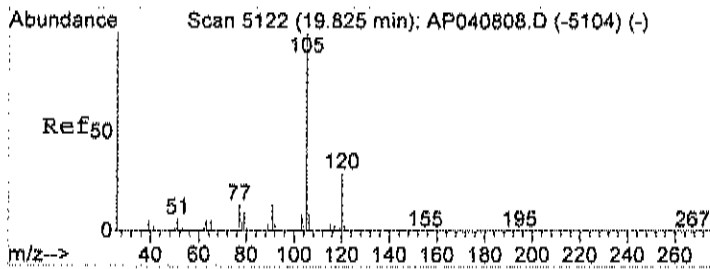
Tgt Ion	Resp	Lower	Upper
91	100		
106	46.5	26.8	66.8



#63  
 o-xylene  
 Concen: 0.23 ppb  
 RT: 18.48 min Scan# 4705  
 Delta R.T. 0.00 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

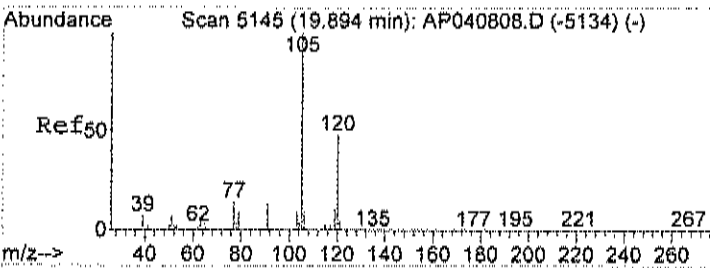
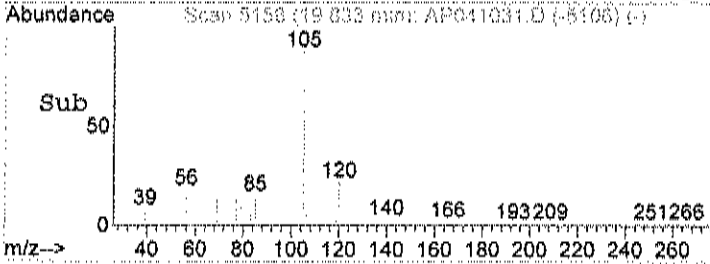
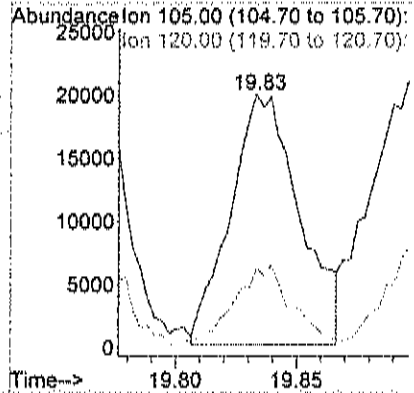
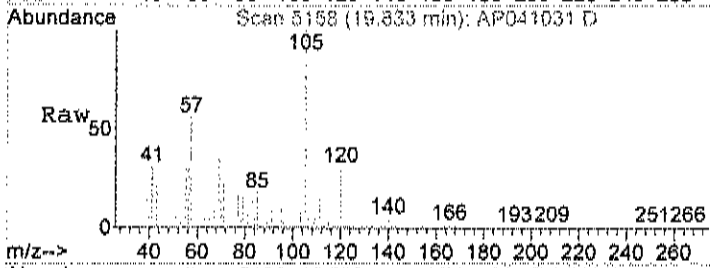
Tgt Ion	Resp	Lower	Upper
91	100		
106	42.3	24.1	64.1





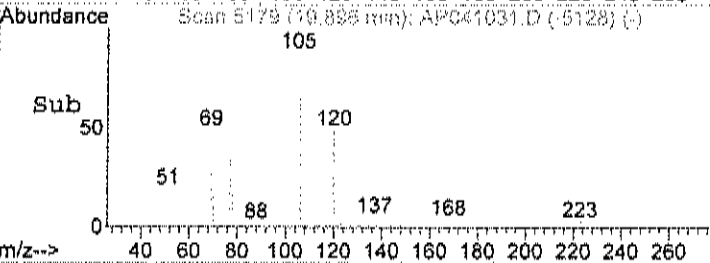
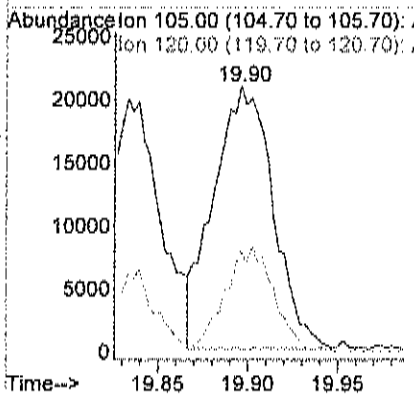
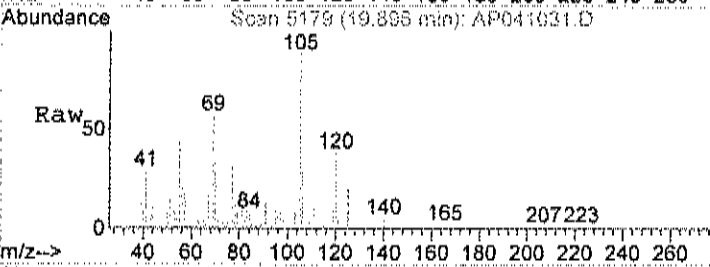
#69  
 4-ethyltoluene  
 Concen: 0.12 ppb  
 RT: 19.83 min Scan# 5158  
 Delta R.T. 0.00 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

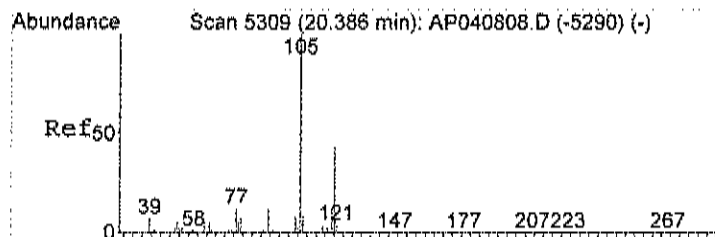
Tgt Ion	Resp	Lower	Upper
105	100		
120	28.8	9.2	49.2



#70  
 1,3,5-trimethylbenzene  
 Concen: 0.17 ppb  
 RT: 19.90 min Scan# 5179  
 Delta R.T. 0.00 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

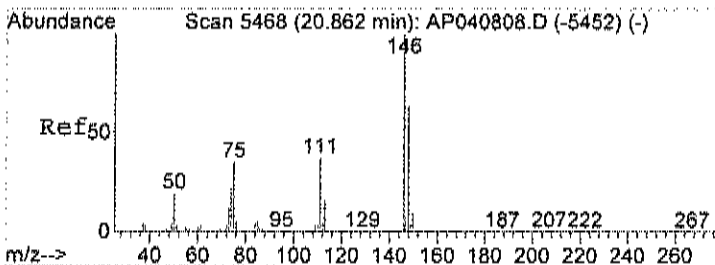
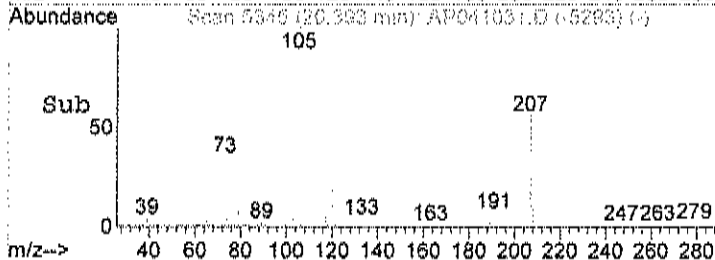
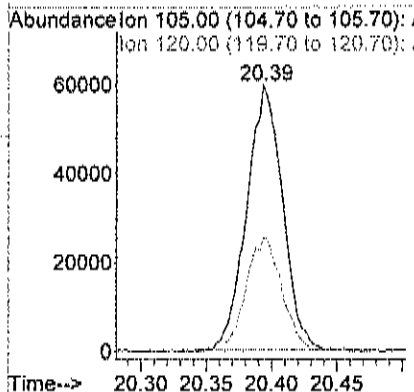
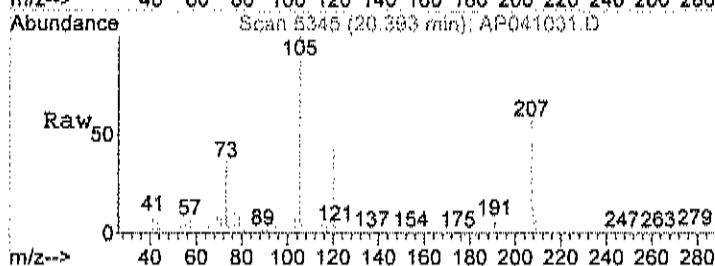
Tgt Ion	Resp	Lower	Upper
105	100		
120	33.1	25.9	65.9





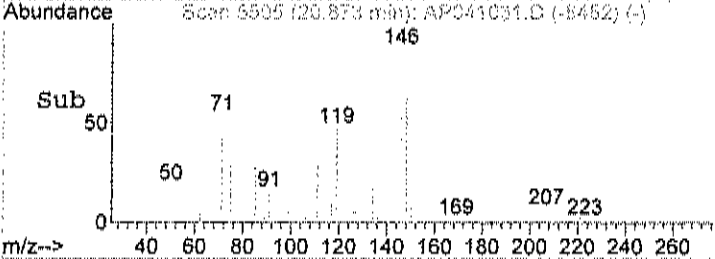
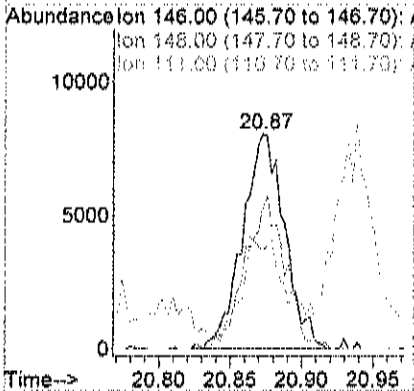
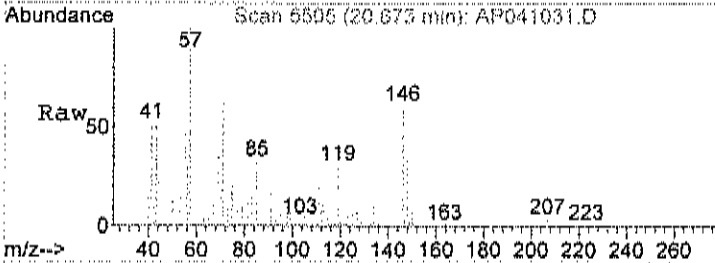
#71  
 1,2,4-trimethylbenzene  
 Concen: 0.41 ppb  
 RT: 20.39 min Scan# 5345  
 Delta R.T. 0.00 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

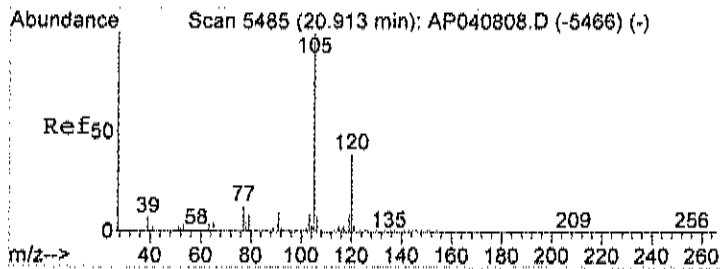
Tgt Ion	Resp	Lower	Upper
105	113637		
105	100		
120	43.6	23.2	63.2



#74  
 1,4-dichlorobenzene  
 Concen: 0.10 ppb  
 RT: 20.87 min Scan# 5505  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

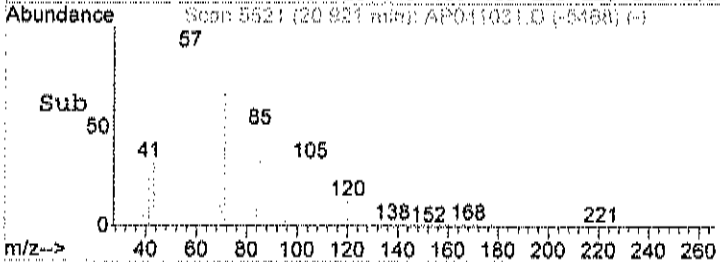
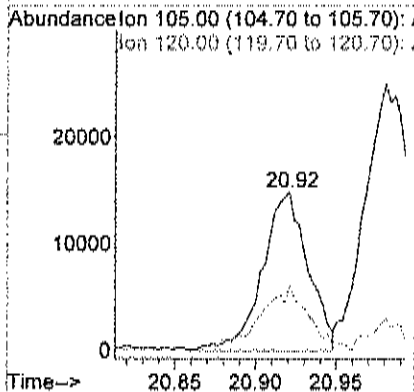
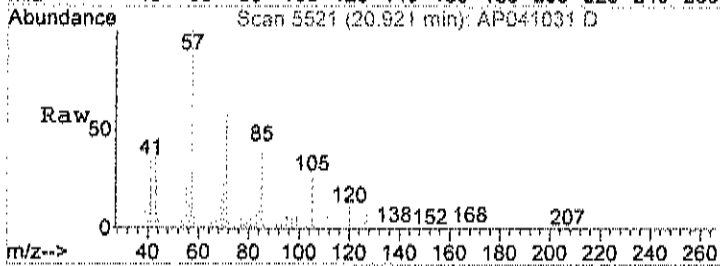
Tgt Ion	Resp	Lower	Upper
146	16501		
146	100		
148	66.9	44.5	84.5
111	46.3	20.8	60.8





#75  
 1,2,3-trimethylbenzene  
 Concen: 0.11 ppb  
 RT: 20.92 min Scan# 5521  
 Delta R.T. 0.01 min  
 Lab File: AP041031.D  
 Acq: 11 Apr 2018 7:12 am

Tgt Ion	Resp	Lower	Upper
105	100		
120	45.0	30.2	50.4



Data File : C:\HPCHEM\1\DATA\AP041019.D Vial: 7  
 Acq On : 10 Apr 2018 11:31 pm Operator: RJP  
 Sample : C1804013-007A 10X Inst : MSD #1  
 Misc : A408\_1UG Multiplr: 1.00  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 07:23:13 2018 Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	35691	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.70	114	179443	1.00	ppb	0.00
50) Chlorobenzene-d5	17.46	117	150277	1.00	ppb	0.01

System Monitoring Compounds  
 65) Bromofluorobenzene 19.19 95 94758 0.91 ppb 0.00  
 Spiked Amount 1.000 Range 70 - 130 Recovery = 91.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
15) Acetone	6.56	58	14067m <sup>4</sup>	0.44	ppb	
17) Isopropyl alcohol	6.67	45	37115	0.61	ppb	# 34
56) Tetrachloroethylene	16.49	164	4275055	57.62	ppb	99

-----  
 (#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP041019.D A408\_1UG.M Thu Apr 26 08:55:38 2018 MSD1

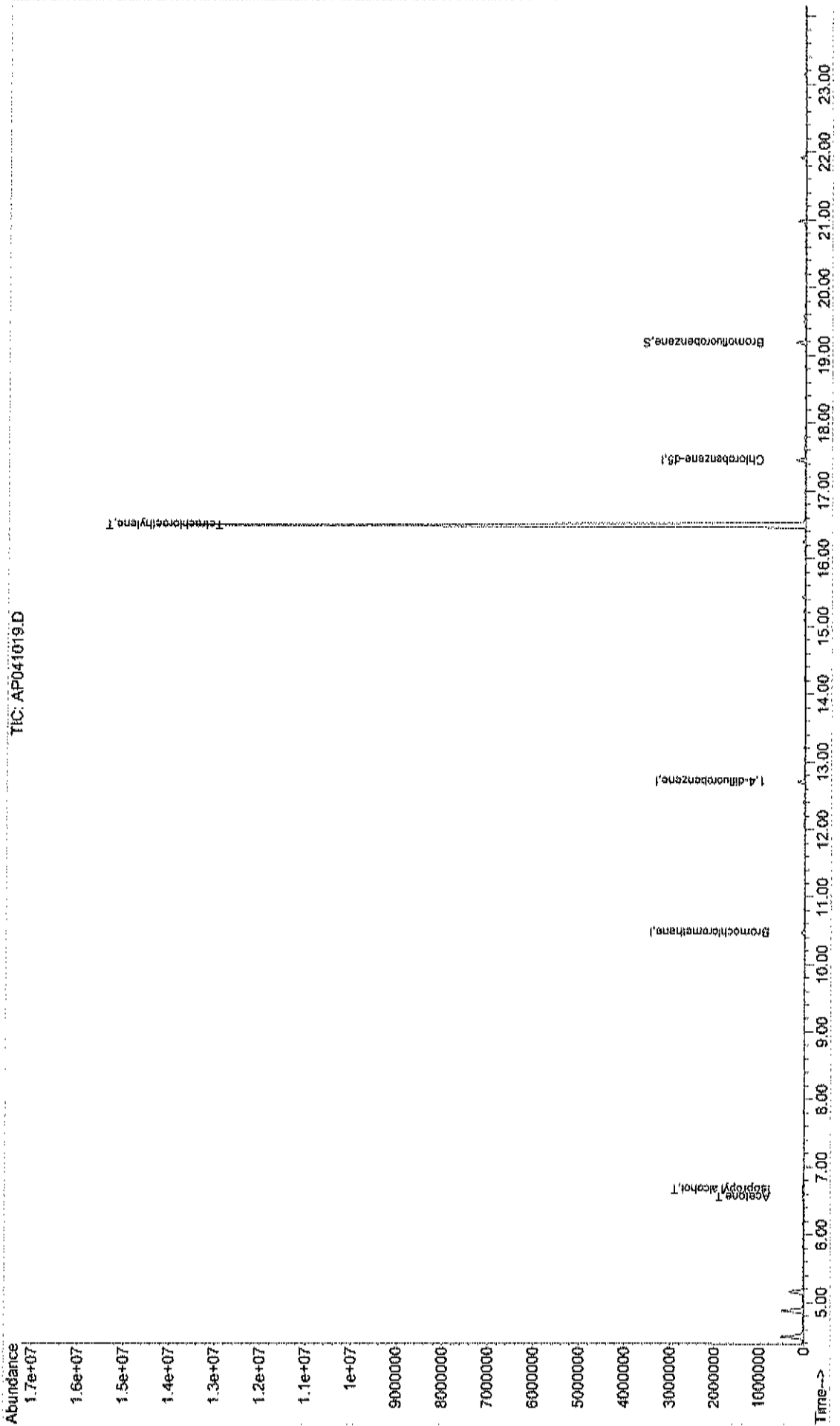
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP041019.D  
Acq On : 10 Apr 2018 11:31 pm  
Sample : C1804013-007A 10X  
Misc : A408\_IUG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 12:38 2018

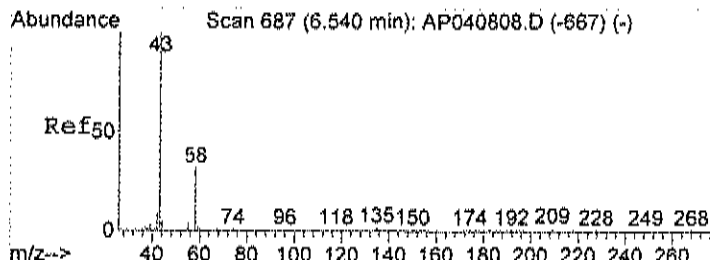
Vial: 7  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_IUG.RES

Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration

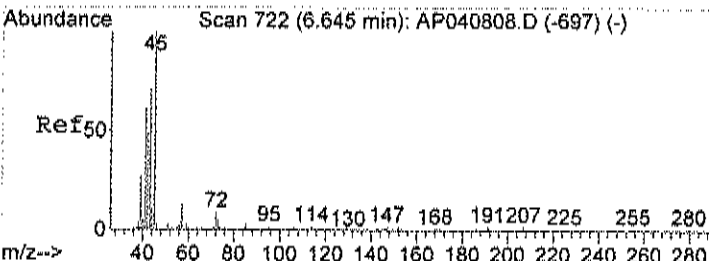
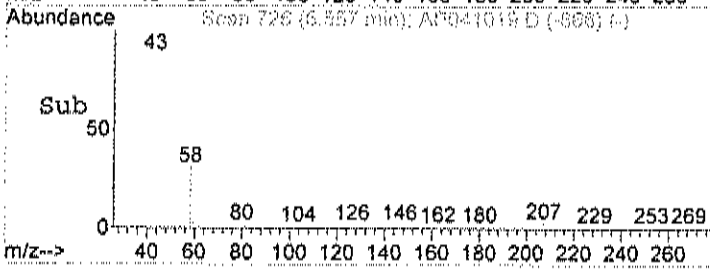
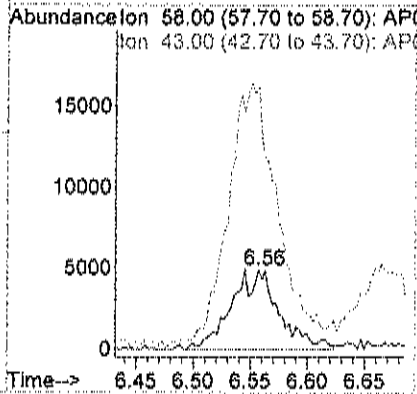
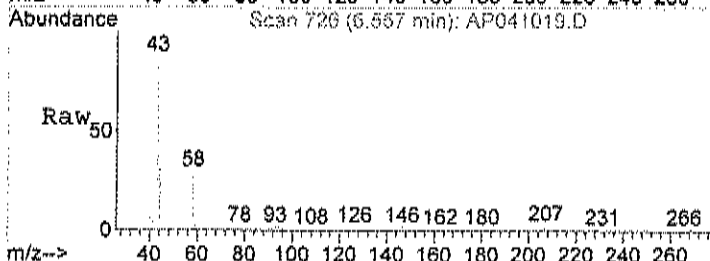






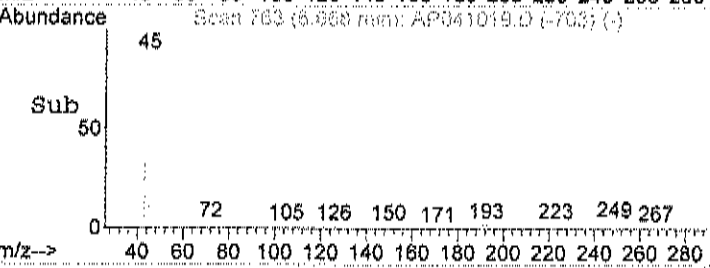
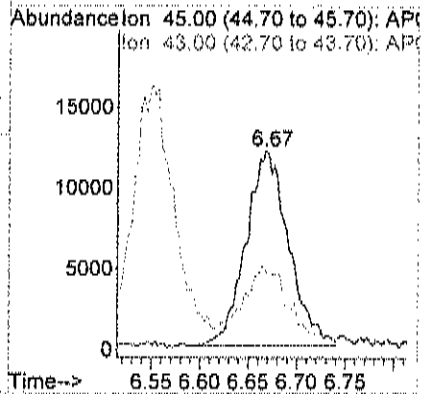
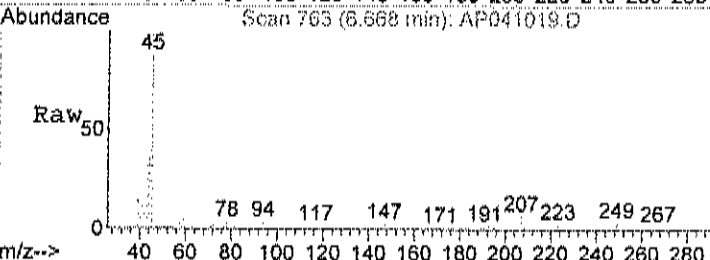
#15  
 Acetone  
 Concen: 0.44 ppb m  
 RT: 6.56 min Scan# 726  
 Delta R.T. 0.03 min  
 Lab File: AP041019.D  
 Acq: 10 Apr 2018 11:31 pm

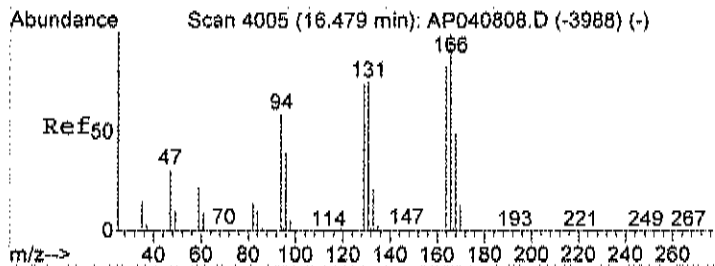
Tgt Ion	Resp	Lower	Upper
58	14067		
58	100		
43	0.0	290.5	350.5#



#17  
 Isopropyl alcohol  
 Concen: 0.61 ppb  
 RT: 6.67 min Scan# 763  
 Delta R.T. 0.03 min  
 Lab File: AP041019.D  
 Acq: 10 Apr 2018 11:31 pm

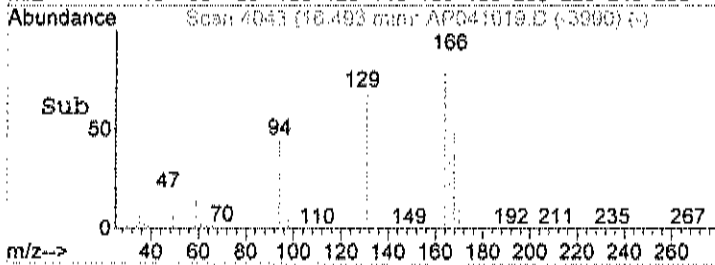
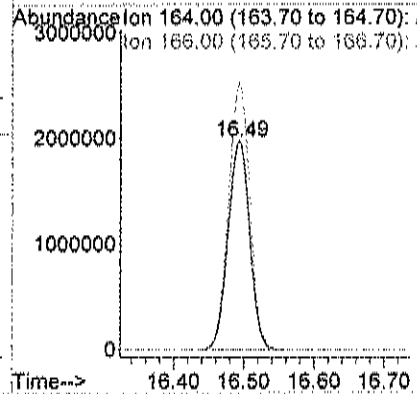
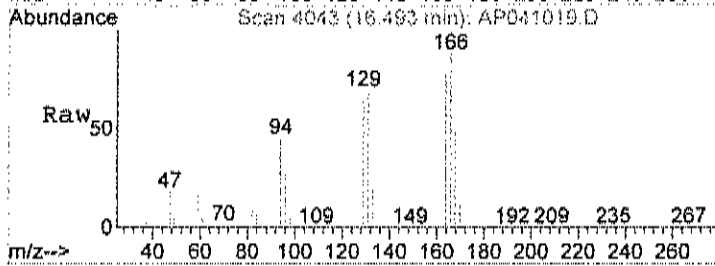
Tgt Ion	Resp	Lower	Upper
45	37115		
45	100		
43	41.9	92.3	132.3#





#56  
 Tetrachloroethylene  
 Concen: 57.62 ppb  
 RT: 16.49 min Scan# 4043  
 Delta R.T. 0.01 min  
 Lab File: AP041019.D  
 Acq: 10 Apr 2018 11:31 pm

Tgt Ion: 164 Resp: 4275055  
 Ion Ratio Lower Upper  
 164 100  
 166 127.0 105.6 145.6



Data File : C:\HPCHEM\1\DATA\AP041032.D  
 Acq On : 11 Apr 2018 7:49 am  
 Sample : C1804013-007A 270x  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 11 12:24:07 2018

Vial: 22  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	38056	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.71	114	182345	1.00	ppb	0.01
50) Chlorobenzene-d5	17.46	117	157472	1.00	ppb	0.01

System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	90840	0.83	ppb	0.00
Spiked Amount	1.000	Range	70 ~ 130	Recovery	=	83.00%

Target Compounds

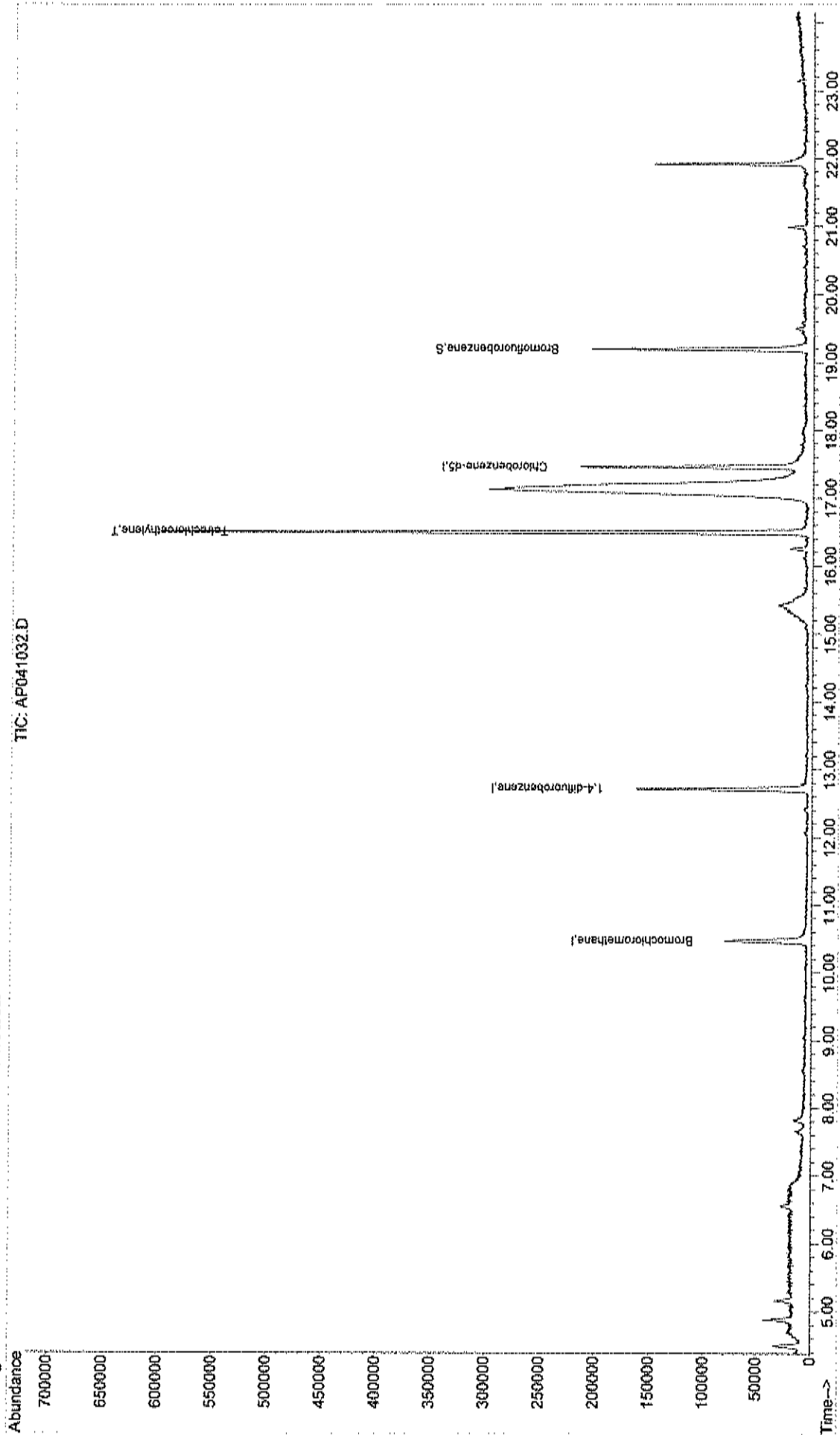
56) Tetrachloroethylene	16.49	164	166429	2.14	ppb	Qvalue 99
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Data File : C:\HPCHEM\1\DATA\AP041032.D  
Acq On : 11 Apr 2018 7:49 am  
Sample : C1804013-007A 270x  
Misc : A408\_1UG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 12:38 2018

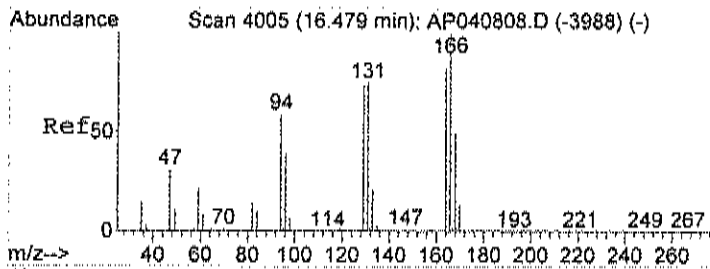
Vial: 22  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration

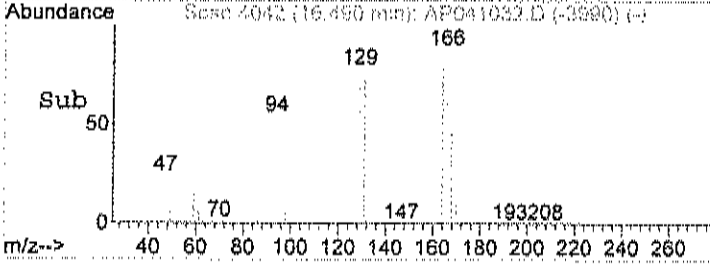
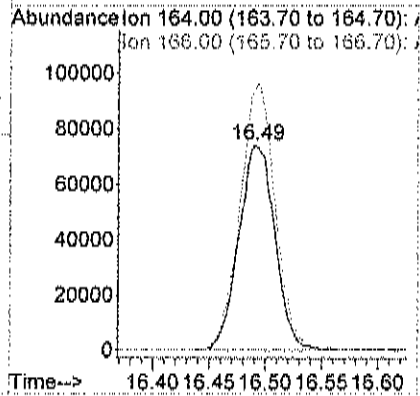
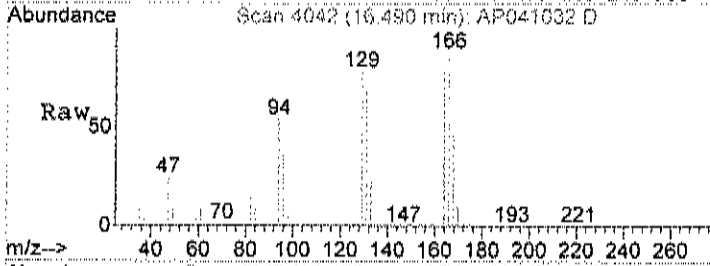


TIC: AP041032.D



#56  
 Tetrachloroethylene  
 Concen: 2.14 ppb  
 RT: 16.49 min Scan# 4042  
 Delta R.T. 0.00 min  
 Lab File: AP041032.D  
 Acq: 11 Apr 2018 7:49 am

Tgt Ion	Resp	Lower	Upper
164	100		
166	126.8	105.6	145.6



**GC/MS VOLATILES-WHOLE AIR**

**METHOD TO-15**

**STANDARDS DATA**

**GC/MS VOLATILES-WHOLE AIR**

**METHOD TO-15**

**INITIAL CALIBRATION**

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration

Calibration Files

2.0 =AP040805.D 1.5 =AP040806.D 1.25 =AP040807.D  
 1.0 =AP040808.D 0.75 =AP040809.D 0.50 =AP040810.D

Compound	2.0	1.5	1.25	1.0	0.75	0.50	Avg	%RSD
1) I Bromochloromethane	-----ISTD-----							
2) T Propylene	1.207	1.261	1.207	1.207	1.082	1.165	1.239	11.30
3) T Freon 12	5.739	6.023	5.747	5.878	5.770	5.809	5.982	6.05
4) T Chloromethane	1.312	1.347	1.323	1.383	1.331	1.326	1.378	5.82
5) T Freon 114	3.981	4.197	4.062	4.117	3.928	3.925	4.122	5.65
6) T Vinyl Chloride	1.208	1.246	1.175	1.275	1.190	1.203	1.310	12.24
7) T Butane	1.757	1.814	1.760	1.793	1.716	1.738	1.842	8.86
8) T 1,3-butadiene	1.116	1.202	1.120	1.262	1.185	1.249	1.247	10.03
9) T Bromomethane	1.257	1.322	1.268	1.320	1.364	1.251	1.338	9.31
10) T Chloroethane	0.530	0.563	0.553	0.555	0.524	0.489	0.534	4.49
11) T Ethanol	0.416	0.405	0.404	0.414	0.379	0.369	0.391	5.22
12) T Acrolein	0.439	0.487	0.461	0.450	0.433	0.504	0.494	12.68
13) T Vinyl Bromide	1.214	1.269	1.224	1.228	1.244	1.183	1.256	6.20
14) T Freon 11	4.569	4.848	4.723	4.830	4.678	4.672	4.795	4.42
15) T Acetone	0.775	0.839	0.733	0.763	0.824	0.884	0.897	20.36
16) T Pentane	0.969	1.012	1.047	1.035	1.036	0.899	1.049	10.04
17) T Isopropyl alcoh	1.690	1.731	1.673	1.709	1.646	1.608	1.704	7.63
18) T 1,1-dichloroeth	1.235	1.328	1.286	1.305	1.231	1.240	1.444	17.09
19) T Freon 113	2.784	2.981	3.331	3.267	3.425	3.308	3.292	8.95
20) t t-Butyl alcohol	2.836	3.069	3.566	3.433	3.432	3.373	3.543	18.04
21) T Methylene chlor	1.643	1.784	1.735	1.688	1.754	1.765	1.928	20.70
22) T Allyl chloride	1.652	1.706	1.626	1.657	1.560	1.745	1.714	8.07
23) T Carbon disulfid	3.135	3.334	3.106	3.294	3.108	2.964	3.253	7.28
24) T trans-1,2-dichl	1.985	2.019	1.941	2.033	1.899	1.860	1.933	5.04
25) T methyl tert-but	4.844	5.046	4.839	4.905	4.709	4.663	4.844	2.83
26) T 1,1-dichloroeth	2.766	2.840	2.741	2.881	2.770	2.683	2.826	4.72
27) T Vinyl acetate	3.403	3.542	3.287	3.382	3.195	3.102	3.284	6.10
28) T Methyl Ethyl Ke	0.734	0.765	0.718	0.747	0.703	0.635	0.685	10.46
29) T cis-1,2-dichlor	2.069	2.124	2.043	2.083	1.993	1.938	2.135	9.43
30) T Hexane	2.061	2.123	1.967	2.087	1.956	1.971	2.072	5.55
31) T Ethyl acetate	2.920	3.067	2.820	2.883	2.606	2.514	2.709	9.07
32) T Chloroform	3.560	3.702	3.548	3.688	3.578	3.579	3.649	2.86
33) T Tetrahydrofuran	1.400	1.480	1.342	1.416	1.373	1.280	1.377	5.16
34) T 1,2-dichloroeth	2.572	2.686	2.575	2.568	2.477	2.466	2.551	2.71
35) I 1,4-difluorobenzene	-----ISTD-----							
36) T 1,1,1-trichloro	0.788	0.780	0.777	0.782	0.773	0.772	0.790	2.81
37) T Cyclohexane	0.405	0.408	0.395	0.392	0.384	0.411	0.404	3.12
38) T Carbon tetrachl	0.798	0.799	0.782	0.802	0.785	0.792	0.857	12.65
39) T Benzene	0.846	0.832	0.816	0.844	0.825	0.823	0.840	3.87
40) T Methyl methacry	0.380	0.383	0.364	0.369	0.354	0.334	0.359	5.17
41) T 1,4-dioxane	0.179	0.180	0.176	0.176	0.176	0.171	0.189	13.84
42) T 2,2,4-trimethyl	1.254	1.248	1.219	1.221	1.190	1.182	1.233	3.95
43) T Heptane	0.438	0.433	0.427	0.430	0.402	0.415	0.430	4.18
44) T Trichloroethene	0.380	0.369	0.378	0.368	0.368	0.373	0.394	9.12
45) T 1,2-dichloropro	0.299	0.294	0.290	0.288	0.277	0.286	0.293	4.67
46) T Bromodichlorome	0.719	0.724	0.718	0.729	0.701	0.701	0.723	2.91
47) T cis-1,3-dichlor	0.498	0.506	0.497	0.484	0.487	0.480	0.490	2.39
48) T trans-1,3-dichl	0.492	0.506	0.481	0.496	0.464	0.458	0.479	4.20
49) T 1,1,2-trichloro	0.330	0.336	0.321	0.332	0.327	0.334	0.331	1.84
50) I Chlorobenzene-d5	-----ISTD-----							
51) T Toluene	0.725	0.714	0.721	0.718	0.718	0.715	0.725	2.02



## Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration

## Calibration Files

2.0 =AP040805.D 1.5 =AP040806.D 1.25 =AP040807.D  
 1.0 =AP040808.D 0.75 =AP040809.D 0.50 =AP040810.D

Compound	2.0	1.5	1.25	1.0	0.75	0.50	Avg	%RSD
52) T Methyl Isobutyl	0.744	0.742	0.742	0.716	0.724	0.690	0.785	15.48
53) T Dibromochlorome	0.861	0.852	0.855	0.868	0.854	0.852	0.863	1.54
54) T Methyl Butyl Ke	0.758	0.721	0.727	0.715	0.721	0.749	0.768	9.29
55) T 1,2-dibromoetha	0.656	0.649	0.652	0.644	0.649	0.636	0.651	1.84
56) T Tetrachloroethy	0.477	0.473	0.487	0.488	0.483	0.482	0.494	5.85
57) T Chlorobenzene	0.976	0.964	0.961	0.968	0.985	0.978	0.977	1.59
58) T Ethylbenzene	1.677	1.651	1.671	1.679	1.705	1.686	1.692	2.21
59) T m&p-xylene	1.330	1.320	1.314	1.331	1.325	1.283	1.324	1.71
60) T Nonane	0.766	0.749	0.754	0.731	0.745	0.739	0.749	2.24
61) T Styrene	0.973	0.954	0.953	0.974	0.952	0.937	0.960	1.85
62) T Bromoform	0.800	0.785	0.791	0.798	0.793	0.785	0.795	1.76
63) T o-xylene	1.331	1.330	1.340	1.345	1.339	1.331	1.349	2.65
64) T Cumene	1.838	1.827	1.809	1.842	1.836	1.800	1.838	1.63
65) S Bromofluorobenz	0.714	0.715	0.708	0.708	0.713	0.668	0.692	2.88
66) T 1,1,2,2-tetrach	0.877	0.864	0.857	0.864	0.859	0.851	0.865	1.95
67) T Propylbenzene	0.491	0.478	0.492	0.483	0.493	0.494	0.486	1.58
68) T 2-Chlorotoluene	0.439	0.430	0.438	0.447	0.451	0.443	0.446	2.42
69) T 4-ethyltoluene	1.845	1.787	1.811	1.844	1.811	1.801	1.807	1.56
70) T 1,3,5-trimethyl	1.553	1.530	1.549	1.567	1.552	1.557	1.549	1.36
71) T 1,2,4-trimethyl	1.518	1.466	1.508	1.536	1.514	1.479	1.499	1.67
72) T 1,3-dichloroben	0.943	0.906	0.919	0.938	0.948	0.901	0.918	2.41
73) T benzyl chloride	1.364	1.263	1.279	1.256	1.219	1.146	1.198	10.12
74) T 1,4-dichloroben	0.915	0.882	0.904	0.901	0.895	0.871	0.883	2.86
75) T 1,2,3-trimethyl	1.425	1.389	1.405	1.437	1.436	1.401	1.397	2.71
76) T 1,2-dichloroben	0.877	0.857	0.871	0.875	0.904	0.846	0.863	2.77
77) T 1,2,4-trichloro	0.489	0.434	0.446	0.433	0.405	0.364	0.406	13.67
78) T Naphthalene	1.200	1.094	1.093	1.048	1.012	0.949	1.120	15.75
79) T Hexachloro-1,3-	0.762	0.725	0.739	0.750	0.766	0.719	0.736	3.02

Data File : C:\HPCHEM\1\DATA\AP040805.D  
 Acq On : 8 Apr 2018 11:36 pm  
 Sample : A1UG\_2.0  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:47 2018

Vial: 3  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.45	128	43205	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.70	114	224734	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	181184	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.18	95	129295	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	104276	2.00	ppb	98
3) Freon 12	4.59	85	495922	1.95	ppb	98
4) Chloromethane	4.81	50	113349	1.90	ppb	99
5) Freon 114	4.82	85	344017	1.93	ppb	93
6) Vinyl Chloride	5.03	62	104368	1.89	ppb	99
7) Butane	5.14	43	151841	1.96	ppb	97
8) 1,3-butadiene	5.14	39	96409	1.77	ppb	98
9) Bromomethane	5.53	94	108628	1.92	ppb	99
10) Chloroethane	5.71	64	45788	1.91	ppb	99
11) Ethanol	5.91	45	35921m <i>β</i>	2.06	ppb	
12) Acrolein	6.42	56	37958	1.85	ppb	95
13) Vinyl Bromide	6.07	106	104923	1.98	ppb	100
14) Freon 11	6.36	101	394789	1.89	ppb	99
15) Acetone	6.53	58	66949m <i>β</i>	2.03	ppb	
16) Pentane	6.65	42	83694	1.87	ppb	95
17) Isopropyl alcohol	6.64	45	146029	1.98	ppb	# 82
18) 1,1-dichloroethene	7.16	96	106744	1.89	ppb	89
19) Freon 113	7.37	101	240584	1.70	ppb	98
20) t-Butyl alcohol	7.39	59	245081m <i>β</i>	1.65	ppb	
21) Methylene chloride	7.64	84	141972m <i>β</i>	1.95	ppb	
22) Allyl chloride	7.62	41	142731	1.99	ppb	96
23) Carbon disulfide	7.81	76	270938	1.90	ppb	98
24) trans-1,2-dichloroethene	8.60	61	171559	1.95	ppb	89
25) methyl tert-butyl ether	8.62	73	418605	1.98	ppb	87
26) 1,1-dichloroethane	9.04	63	239044	1.92	ppb	98
27) Vinyl acetate	9.02	43	294027	2.01	ppb	98
28) Methyl Ethyl Ketone	9.53	72	63462	1.97	ppb	# 100
29) cis-1,2-dichloroethene	10.00	61	178773	1.99	ppb	88
30) Hexane	9.59	57	178085	1.98	ppb	93
31) Ethyl acetate	10.14	43	252277	2.03	ppb	99
32) Chloroform	10.61	83	307640	1.93	ppb	100
33) Tetrahydrofuran	10.78	42	120988	1.98	ppb	99
34) 1,2-dichloroethane	11.72	62	222257	2.00	ppb	99
36) 1,1,1-trichloroethane	11.45	97	353974	2.01	ppb	99
37) Cyclohexane	12.13	56	182060	2.07	ppb	95
38) Carbon tetrachloride	12.08	117	358458	1.99	ppb	99
39) Benzene	12.04	78	380166	2.00	ppb	98
40) Methyl methacrylate	13.55	41	170625	2.06	ppb	90
41) 1,4-dioxane	13.58	88	80477	2.03	ppb	95
42) 2,2,4-trimethylpentane	12.87	57	563749	2.05	ppb	96
43) Heptane	13.21	43	196886	2.04	ppb	96
44) Trichloroethene	13.34	130	170910	2.07	ppb	94
45) 1,2-dichloropropane	13.44	63	134238	2.08	ppb	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\AP040805.D

Vial: 3

Acq On : 8 Apr 2018 11:36 pm

Operator: RJP

Sample : A1UG\_2.0

Inst : MSD #1

Misc : A408\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 09 06:51:47 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 06:50:59 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D

DataAcq Meth : 1UG\_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.77	83	323148	1.97	ppb	100
47) cis-1,3-dichloropropene	14.58	75	223694	2.06	ppb	97
48) trans-1,3-dichloropropene	15.33	75	221128	1.99	ppb	98
49) 1,1,2-trichloroethane	15.66	97	148136	1.99	ppb	99
51) Toluene	15.42	92	262630	2.01	ppb	98
52) Methyl Isobutyl Ketone	14.48	43	269505	2.07	ppb	97
53) Dibromochloromethane	16.39	129	311880	1.97	ppb	99
54) Methyl Butyl Ketone	15.83	43	274639	2.11	ppb	98
55) 1,2-dibromoethane	16.66	107	237857	2.03	ppb	100
56) Tetrachloroethylene	16.49	164	172775	1.94	ppb	99
57) Chlorobenzene	17.50	112	353693	2.01	ppb	92
58) Ethylbenzene	17.77	91	607811	1.99	ppb	99
59) m&p-xylene	17.98	91	963654	3.98	ppb	97
60) Nonane	18.36	43	277534	2.08	ppb	96
61) Styrene	18.44	104	352628	1.99	ppb	91
62) Bromoform	18.57	173	289791	1.99	ppb	99
63) o-xylene	18.47	91	482336	1.97	ppb	97
64) Cumene	19.06	105	665987	1.98	ppb	99
66) 1,1,2,2-tetrachloroethane	18.94	83	317746	2.02	ppb	99
67) Propylbenzene	19.65	120	178020	2.02	ppb	93
68) 2-Chlorotoluene	19.70	126	159217	1.96	ppb #	85
69) 4-ethyltoluene	19.83	105	668665	1.99	ppb	99
70) 1,3,5-trimethylbenzene	19.89	105	562656	1.97	ppb	96
71) 1,2,4-trimethylbenzene	20.39	105	550041	1.97	ppb	96
72) 1,3-dichlorobenzene	20.72	146	341740	2.00	ppb	97
73) benzyl chloride	20.79	91	494304	2.16	ppb	94
74) 1,4-dichlorobenzene	20.86	146	331641	2.02	ppb	97
75) 1,2,3-trimethylbenzene	20.91	105	516253	1.97	ppb	96
76) 1,2-dichlorobenzene	21.23	146	317733	1.99	ppb	97
77) 1,2,4-trichlorobenzene	23.35	180	177357	2.25	ppb	98
78) Naphthalene	23.56	128	434777	2.28	ppb	96
79) Hexachloro-1,3-butadiene	23.68	225	276272	2.02	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP040805.D A408\_1UG.M Thu Apr 26 08:37:35 2018 MSD1

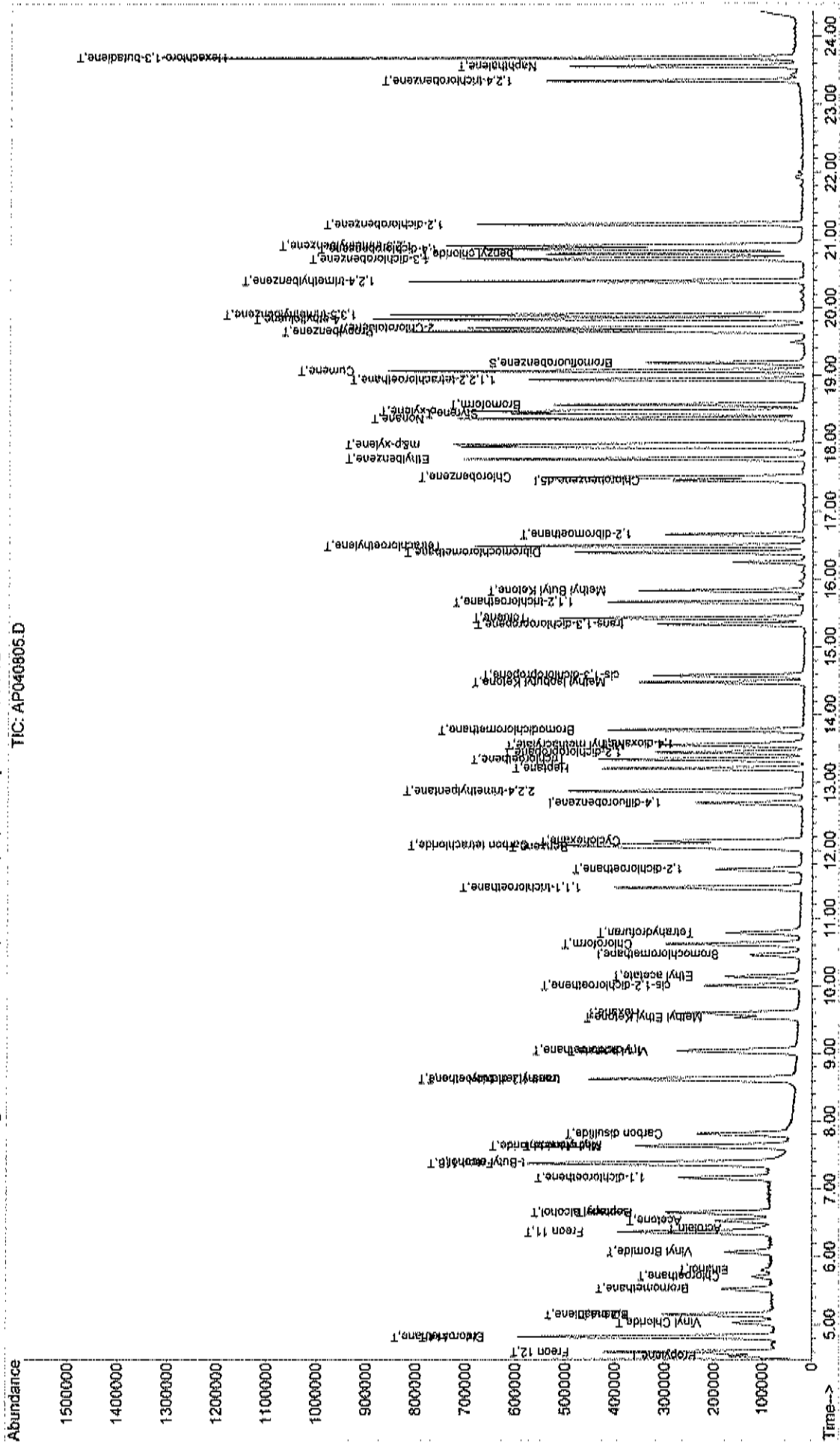
Data File : C:\HPCHEM\1\DATA\AP040805.D  
Acq On : 8 Apr 2018 11:36 pm  
Sample : A408\_2.0  
Misc : A408\_IUG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 9 9:00 2018

Vial: 3  
Operator: FJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_IUG.RES

Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D

TIC: AP040805.D



Data File : C:\HPCHEM\1\DATA\AP040806.D

Vial: 4

Acq On : 9 Apr 2018 12:17 am

Operator: RJP

Sample : A1UG\_1.50

Inst : MSD #1

Misc : A408\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 09 06:51:48 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 06:50:59 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D

DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	40404	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.70	114	220451	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	180498	1.00	ppb	0.00

## System Monitoring Compounds

65) Bromofluorobenzene	19.18	95	129064	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	76432	1.57	ppb	98
3) Freon 12	4.59	85	365008	1.54	ppb	100
4) Chloromethane	4.81	50	81617	1.46	ppb	99
5) Freon 114	4.82	85	254372	1.53	ppb	93
6) Vinyl Chloride	5.03	62	75500	1.47	ppb	99
7) Butane	5.14	43	109929	1.52	ppb	98
8) 1,3-butadiene	5.15	39	72841	1.43	ppb	97
9) Bromomethane	5.52	94	80149	1.52	ppb	100
10) Chloroethane	5.71	64	34135	1.52	ppb	99
11) Ethanol	5.80	45	24538	1.51	ppb	# 52
12) Acrolein	6.43	56	29534	1.54	ppb	98
13) Vinyl Bromide	6.07	106	76894	1.55	ppb	99
14) Freon 11	6.37	101	293799	1.51	ppb	99
15) Acetone	6.53	58	50839m	1.65	ppb	
16) Pentane	6.65	42	61306	1.47	ppb	95
17) Isopropyl alcohol	6.65	45	104937	1.52	ppb	84
18) 1,1-dichloroethene	7.16	96	80462	1.53	ppb	90
19) Freon 113	7.37	101	180684	1.37	ppb	98
20) t-Butyl alcohol	7.39	59	186021	1.34	ppb	# 88
21) Methylene chloride	7.64	84	108133m	1.59	ppb	
22) Allyl chloride	7.62	41	103388	1.54	ppb	94
23) Carbon disulfide	7.81	76	202035	1.52	ppb	100
24) trans-1,2-dichloroethene	8.61	61	122334	1.49	ppb	91
25) methyl tert-butyl ether	8.63	73	305800	1.54	ppb	87
26) 1,1-dichloroethane	9.05	63	172144	1.48	ppb	99
27) Vinyl acetate	9.02	43	214692	1.57	ppb	97
28) Methyl Ethyl Ketone	9.52	72	46364	1.54	ppb	# 100
29) cis-1,2-dichloroethene	10.00	61	128747	1.53	ppb	89
30) Hexane	9.59	57	128683	1.53	ppb	95
31) Ethyl acetate	10.14	43	185861	1.60	ppb	98
32) Chloroform	10.61	83	224356	1.51	ppb	99
33) Tetrahydrofuran	10.78	42	89709	1.57	ppb	95
34) 1,2-dichloroethane	11.72	62	162797	1.57	ppb	99
36) 1,1,1-trichloroethane	11.44	97	258034	1.50	ppb	99
37) Cyclohexane	12.13	56	134971	1.56	ppb	93
38) Carbon tetrachloride	12.07	117	264364	1.49	ppb	100
39) Benzene	12.04	78	275072	1.48	ppb	98
40) Methyl methacrylate	13.54	41	126571	1.56	ppb	# 87
41) 1,4-dioxane	13.58	88	59671	1.54	ppb	94
42) 2,2,4-trimethylpentane	12.87	57	412605	1.53	ppb	97
43) Heptane	13.21	43	143066	1.51	ppb	94
44) Trichloroethene	13.34	130	122178	1.51	ppb	92
45) 1,2-dichloropropane	13.44	63	97383	1.54	ppb	99

(# ) = qualifier out of range (m) = manual integration

AP040806.D A408\_1UG.M

Thu Apr 26 08:37:38 2018

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AP040806.D

Vial: 4

Acq On : 9 Apr 2018 12:17 am

Operator: RJP

Sample : A1UG\_1.50

Inst : MSD #1

Misc : A408\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 09 06:51:48 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 06:50:59 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D

DataAcq Meth : 1UG\_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.77	83	239454	1.49	ppb	99
47) cis-1,3-dichloropropene	14.57	75	167218	1.57	ppb	96
48) trans-1,3-dichloropropene	15.33	75	167462	1.54	ppb	99
49) 1,1,2-trichloroethane	15.66	97	111076	1.52	ppb	100
51) Toluene	15.42	92	193231	1.48	ppb	97
52) Methyl Isobutyl Ketone	14.48	43	200855	1.55	ppb	98
53) Dibromochloromethane	16.39	129	230659	1.46	ppb	99
54) Methyl Butyl Ketone	15.82	43	195206	1.51	ppb	99
55) 1,2-dibromoethane	16.65	107	175632	1.50	ppb	100
56) Tetrachloroethylene	16.49	164	127980	1.44	ppb	100
57) Chlorobenzene	17.50	112	260987	1.49	ppb	90
58) Ethylbenzene	17.77	91	447128	1.47	ppb	98
59) m&p-xylene	17.98	91	714573	2.96	ppb	97
60) Nonane	18.36	43	202835	1.53	ppb	98
61) Styrene	18.44	104	258427	1.46	ppb	91
62) Bromoform	18.56	173	212438	1.47	ppb	100
63) o-xylene	18.47	91	360172	1.48	ppb	97
64) Cumene	19.06	105	494558	1.48	ppb	99
66) 1,1,2,2-tetrachloroethane	18.94	83	234035	1.49	ppb	99
67) Propylbenzene	19.65	120	129334	1.48	ppb	94
68) 2-Chlorotoluene	19.70	126	116525	1.44	ppb	89
69) 4-ethyltoluene	19.83	105	483736	1.45	ppb	100
70) 1,3,5-trimethylbenzene	19.89	105	414349	1.46	ppb	96
71) 1,2,4-trimethylbenzene	20.39	105	396948	1.42	ppb	96
72) 1,3-dichlorobenzene	20.72	146	245173	1.44	ppb	97
73) benzyl chloride	20.79	91	341846	1.50	ppb	95
74) 1,4-dichlorobenzene	20.86	146	238882	1.46	ppb	97
75) 1,2,3-trimethylbenzene	20.91	105	375998	1.44	ppb	96
76) 1,2-dichlorobenzene	21.23	146	231982	1.46	ppb	97
77) 1,2,4-trichlorobenzene	23.35	180	117562	1.50	ppb	98
78) Naphthalene	23.56	128	296298	1.56	ppb	96
79) Hexachloro-1,3-butadiene	23.68	225	196369	1.44	ppb	100

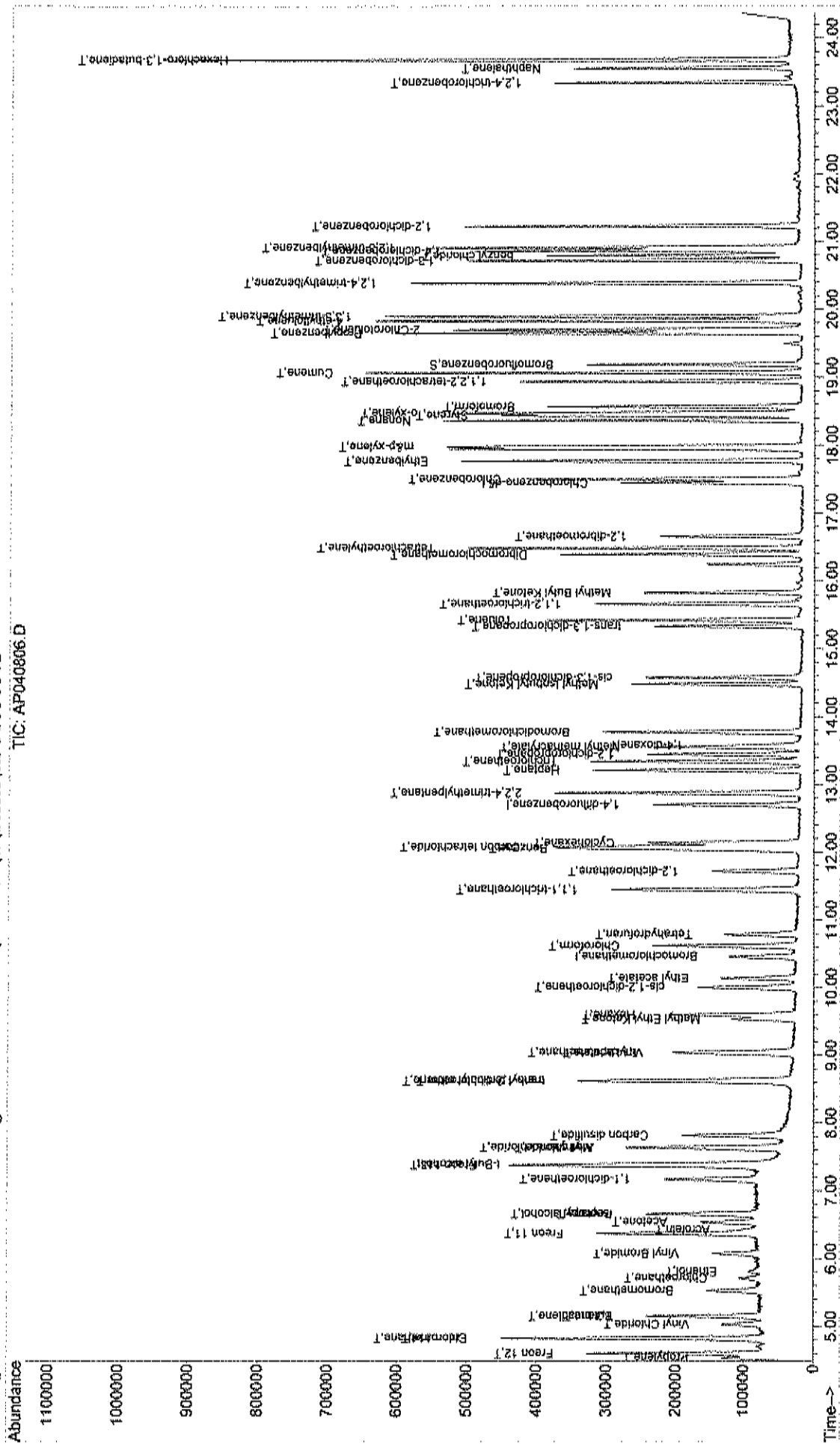
(#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP040806.D A408\_1UG.M Thu Apr 26 08:37:39 2018 MSD1

Data File : C:\HPCHEM\1\DATA\AP040806.D  
 Acq On : 9 Apr 2018 12:17 am  
 Sample : ALUG\_1.50  
 Misc : A408\_IUG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 9 9:00 2018  
 Quant Results File: A408\_IUG.RES

Vial: 4  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D

TIC: AP040806.D



Data File : C:\HPCHEM\1\DATA\AP040807.D  
 Acq On : 9 Apr 2018 12:58 am  
 Sample : A1UG\_1.25  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:49 2018

Vial: 5  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	41576	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.70	114	220726	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	173753	1.00	ppb	0.00

#### System Monitoring Compounds

65) Bromofluorobenzene	19.18	95	122931	0.99	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	99.00%

#### Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.54	41	62724	1.25	ppb	97
3) Freon 12	4.60	85	298668	1.22	ppb	98
4) Chloromethane	4.82	50	68775	1.20	ppb	100
5) Freon 114	4.82	85	211115	1.23	ppb	93
6) Vinyl Chloride	5.03	62	61063	1.15	ppb	96
7) Butane	5.15	43	91466	1.23	ppb	97
8) 1,3-butadiene	5.15	39	58219	1.11	ppb	96
9) Bromomethane	5.52	94	65885	1.21	ppb	98
10) Chloroethane	5.71	64	28758	1.25	ppb	99
11) Ethanol	5.81	45	20974	1.25	ppb	90
12) Acrolein	6.42	56	23983	1.21	ppb	88
13) Vinyl Bromide	6.07	106	63587	1.25	ppb	98
14) Freon 11	6.37	101	245444	1.22	ppb	99
15) Acetone	6.54	58	38080	1.20	ppb	92
16) Pentane	6.65	42	54411	1.26	ppb	94
17) Isopropyl alcohol	6.64	45	86922	1.22	ppb	# 82
18) 1,1-dichloroethene	7.16	96	66832	1.23	ppb	91
19) Freon 113	7.37	101	173087	1.27	ppb	96
20) t-Butyl alcohol	7.39	59	185313	1.30	ppb	# 85
21) Methylene chloride	7.63	84	90145m/hj	1.28	ppb	
22) Allyl chloride	7.62	41	84487	1.23	ppb	95
23) Carbon disulfide	7.81	76	161438	1.18	ppb	96
24) trans-1,2-dichloroethene	8.61	61	100876	1.19	ppb	89
25) methyl tert-butyl ether	8.62	73	251507	1.23	ppb	86
26) 1,1-dichloroethane	9.05	63	142429	1.19	ppb	99
27) Vinyl acetate	9.02	43	170833	1.21	ppb	99
28) Methyl Ethyl Ketone	9.53	72	37301	1.20	ppb	# 100
29) cis-1,2-dichloroethene	10.00	61	106151	1.23	ppb	88
30) Hexane	9.60	57	102211	1.18	ppb	98
31) Ethyl acetate	10.14	43	146580	1.22	ppb	98
32) Chloroform	10.61	83	184383	1.20	ppb	99
33) Tetrahydrofuran	10.78	42	69729	1.18	ppb	99
34) 1,2-dichloroethane	11.72	62	133847	1.25	ppb	99
36) 1,1,1-trichloroethane	11.45	97	214260	1.24	ppb	99
37) Cyclohexane	12.13	56	109062	1.26	ppb	93
38) Carbon tetrachloride	12.07	117	215736	1.22	ppb	99
39) Benzene	12.04	78	225085	1.21	ppb	97
40) Methyl methacrylate	13.55	41	100530	1.23	ppb	90
41) 1,4-dioxane	13.58	88	48663	1.25	ppb	89
42) 2,2,4-trimethylpentane	12.87	57	336224	1.25	ppb	97
43) Heptane	13.21	43	117878	1.24	ppb	95
44) Trichloroethene	13.34	130	104239	1.28	ppb	95
45) 1,2-dichloropropane	13.44	63	80084	1.26	ppb	99

(#) = qualifier out of range (m) = manual integration



Data File : C:\HPCHEM\1\DATA\AP040807.D

Vial: 5

Acq On : 9 Apr 2018 12:58 am

Operator: RJP

Sample : A4UG\_1.25

Inst : MSD #1

Misc : A408\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 09 06:51:49 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 06:50:59 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D

DataAcq Meth : 1UG\_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.77	83	198223	1.23	ppb	98
47) cis-1,3-dichloropropene	14.57	75	137097	1.28	ppb	96
48) trans-1,3-dichloropropene	15.33	75	132624	1.22	ppb	99
49) 1,1,2-trichloroethane	15.66	97	88655	1.21	ppb	100
51) Toluene	15.42	92	156661	1.25	ppb	97
52) Methyl Isobutyl Ketone	14.48	43	161122	1.29	ppb	98
53) Dibromochloromethane	16.39	129	185670	1.22	ppb	100
54) Methyl Butyl Ketone	15.83	43	157813	1.26	ppb	99
55) 1,2-dibromoethane	16.66	107	141501	1.26	ppb	100
56) Tetrachloroethylene	16.48	164	105831	1.24	ppb	100
57) Chlorobenzene	17.50	112	208639	1.23	ppb	92
58) Ethylbenzene	17.77	91	362840	1.24	ppb	99
59) m&p-xylene	17.98	91	570881	2.46	ppb	97
60) Nonane	18.36	43	163676	1.28	ppb	94
61) Styrene	18.44	104	207057	1.22	ppb	90
62) Bromoform	18.56	173	171735	1.23	ppb	100
63) o-xylene	18.47	91	290966	1.24	ppb	97
64) Cumene	19.06	105	392862	1.22	ppb	99
66) 1,1,2,2-tetrachloroethane	18.94	83	186127	1.23	ppb	100
67) Propylbenzene	19.65	120	106898	1.27	ppb	94
68) 2-Chlorotoluene	19.70	126	95129	1.22	ppb	# 88
69) 4-ethyltoluene	19.83	105	393338	1.22	ppb	100
70) 1,3,5-trimethylbenzene	19.89	105	336385	1.23	ppb	96
71) 1,2,4-trimethylbenzene	20.38	105	327452	1.22	ppb	96
72) 1,3-dichlorobenzene	20.72	146	199650	1.22	ppb	96
73) benzyl chloride	20.79	91	277723	1.27	ppb	95
74) 1,4-dichlorobenzene	20.86	146	196404	1.25	ppb	98
75) 1,2,3-trimethylbenzene	20.91	105	305075	1.22	ppb	97
76) 1,2-dichlorobenzene	21.23	146	189141	1.24	ppb	97
77) 1,2,4-trichlorobenzene	23.35	180	96889	1.28	ppb	99
78) Naphthalene	23.56	128	237429	1.30	ppb	96
79) Hexachloro-1,3-butadiene	23.68	225	160588	1.23	ppb	99

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 (#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP040807.D A408\_1UG.M Thu Apr 26 08:37:43 2018 MSD1

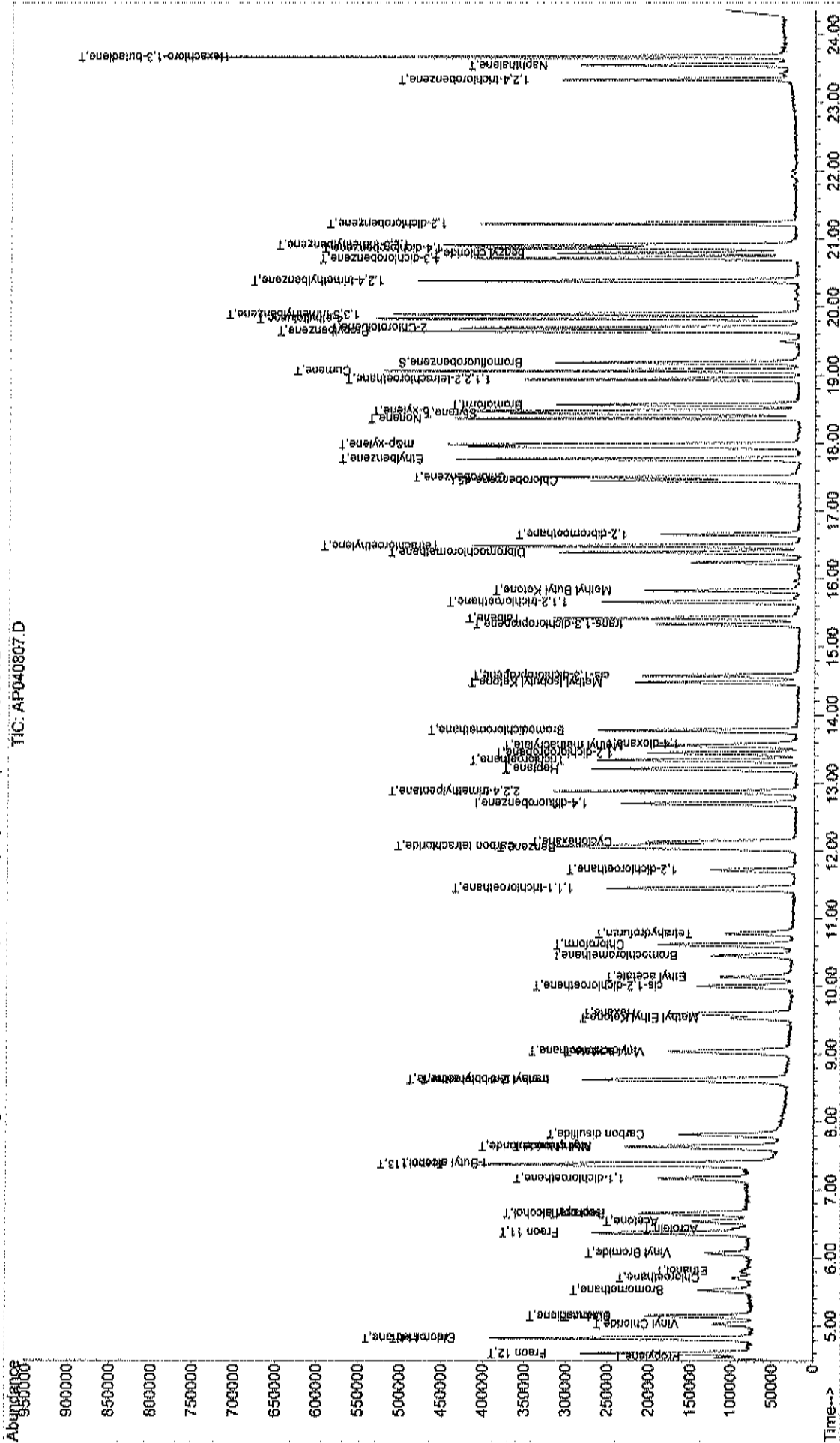
Data File : C:\HPCHEM\1\DATA\AP040807.D  
 Acq On : 9 Apr 2018 12:58 am  
 Sample : AIUG\_1.25  
 Misc : A408\_IUG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 9 8:40 2018

Vial: 5  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_IUG.RES

Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D

TIC: AP040807.D



Data File : C:\HPCHEM\1\DATA\AP040808.D  
 Acq On : 9 Apr 2018 1:37 am  
 Sample : A1UG\_1.0  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:50 2018

Vial: 6  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.45	128	40178	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.70	114	214337	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	172777	1.00	ppb	0.00

## System Monitoring Compounds

65) Bromofluorobenzene	19.18	95	122323	0.99	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	99.00%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.54	41	48511	1.00	ppb	97
3) Freon 12	4.60	85	236184	1.00	ppb	99
4) Chloromethane	4.81	50	55564	1.00	ppb	98
5) Freon 114	4.82	85	165397	1.00	ppb	94
6) Vinyl Chloride	5.03	62	51235	1.00	ppb	99
7) Butane	5.14	43	72049	1.00	ppb	97
8) 1,3-butadiene	5.15	39	50723	1.00	ppb	93
9) Bromomethane	5.52	94	53044	1.01	ppb	99
10) Chloroethane	5.70	64	22282	1.00	ppb	99
11) Ethanol	5.80	45	16616m	1.03	ppb	
12) Acrolein	6.43	56	18082	0.95	ppb	95
13) Vinyl Bromide	6.07	106	49340	1.00	ppb	96
14) Freon 11	6.36	101	194055	1.00	ppb	99
15) Acetone	6.54	58	30640	1.00	ppb	89
16) Pentane	6.65	42	41593	1.00	ppb	98
17) Isopropyl alcohol	6.64	45	68657	1.00	ppb	86
18) 1,1-dichloroethene	7.16	96	52446	1.00	ppb	89
19) Freon 113	7.37	101	131280	1.00	ppb	96
20) t-Butyl alcohol	7.40	59	137912	1.00	ppb	# 86
21) Methylene chloride	7.63	84	67806	1.00	ppb	91
22) Allyl chloride	7.62	41	66562	1.00	ppb	95
23) Carbon disulfide	7.81	76	132337	1.00	ppb	96
24) trans-1,2-dichloroethene	8.61	61	81675	1.00	ppb	87
25) methyl tert-butyl ether	8.62	73	197074	1.00	ppb	88
26) 1,1-dichloroethane	9.04	63	115747	1.00	ppb	97
27) Vinyl acetate	9.02	43	135879	1.00	ppb	100
28) Methyl Ethyl Ketone	9.53	72	29999	1.00	ppb	# 100
29) cis-1,2-dichloroethene	10.00	61	83698	1.00	ppb	90
30) Hexane	9.59	57	83850	1.00	ppb	96
31) Ethyl acetate	10.13	43	115833	1.00	ppb	100
32) Chloroform	10.61	83	148194	1.00	ppb	100
33) Tetrahydrofuran	10.78	42	56895	1.00	ppb	97
34) 1,2-dichloroethane	11.72	62	103166	1.00	ppb	99
36) 1,1,1-trichloroethane	11.45	97	167637	1.00	ppb	100
37) Cyclohexane	12.13	56	84061	1.00	ppb	96
38) Carbon tetrachloride	12.07	117	172000	1.00	ppb	99
39) Benzene	12.04	78	180950	1.00	ppb	98
40) Methyl methacrylate	13.55	41	79057	1.00	ppb	88
41) 1,4-dioxane	13.58	88	37754	1.00	ppb	97
42) 2,2,4-trimethylpentane	12.87	57	261746	1.00	ppb	98
43) Heptane	13.20	43	92076	1.00	ppb	95
44) Trichloroethene	13.34	130	78809	1.00	ppb	91
45) 1,2-dichloropropane	13.44	63	61670	1.00	ppb	96

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\AP040808.D  
 Acq On : 9 Apr 2018 1:37 am  
 Sample : A1UG\_1.0  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:50 2018

Vial: 6  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

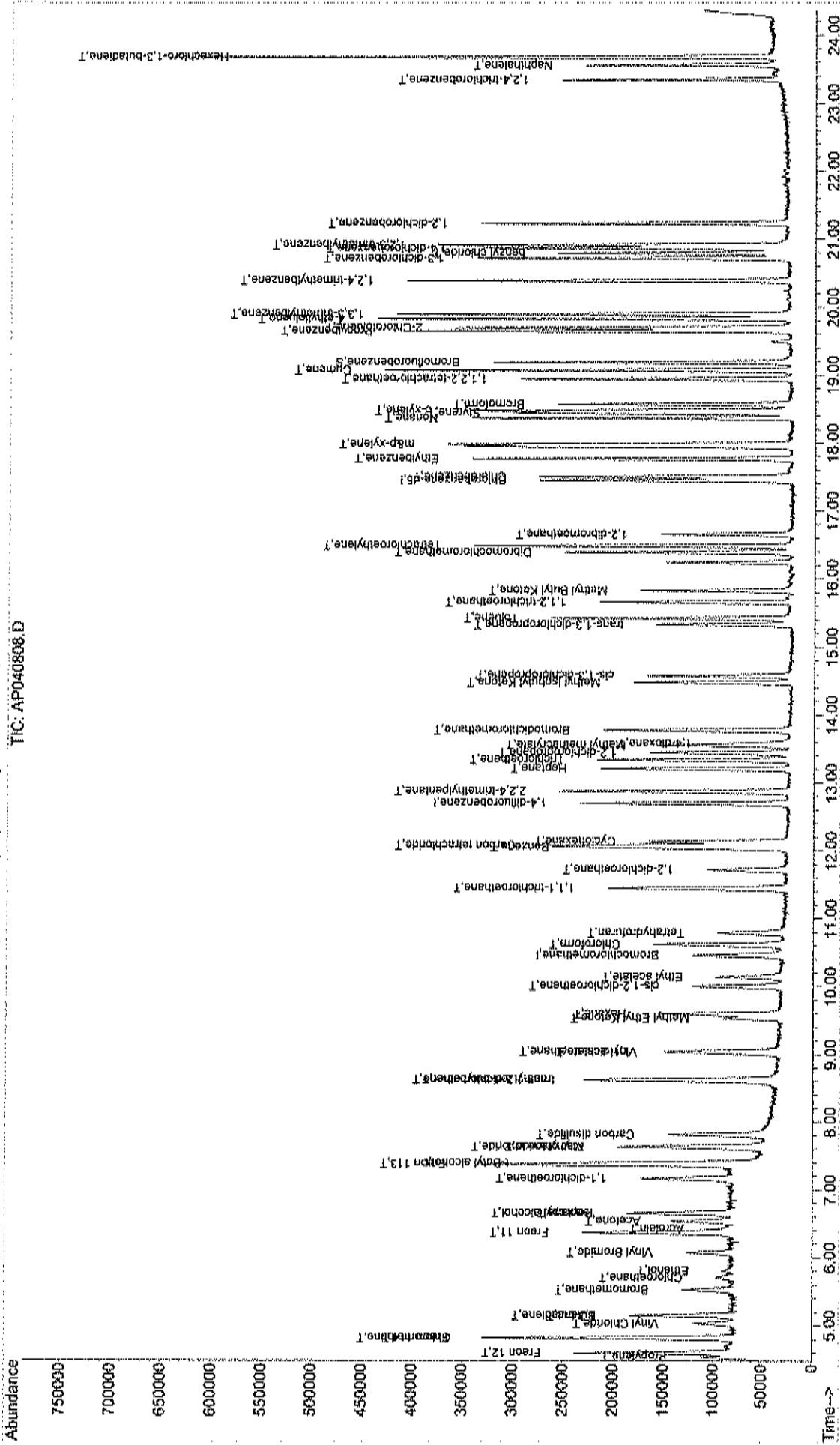
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.77	83	156348	1.00	ppb	98
47) cis-1,3-dichloropropene	14.57	75	103754	1.00	ppb	97
48) trans-1,3-dichloropropene	15.33	75	106394	1.01	ppb	100
49) 1,1,2-trichloroethane	15.66	97	71067	1.00	ppb	100
51) Toluene	15.42	92	124025	0.99	ppb	97
52) Methyl Isobutyl Ketone	14.48	43	123673	0.99	ppb	99
53) Dibromochloromethane	16.39	129	149968	0.99	ppb	100
54) Methyl Butyl Ketone	15.83	43	123472	0.99	ppb	98
55) 1,2-dibromoethane	16.65	107	111212	0.99	ppb	99
56) Tetrachloroethylene	16.48	164	84399	0.99	ppb	99
57) Chlorobenzene	17.50	112	167213	0.99	ppb	91
58) Ethylbenzene	17.76	91	290168	0.99	ppb	99
59) m&p-xylene	17.98	91	459993	1.99	ppb	97
60) Nonane	18.36	43	126374	0.99	ppb	98
61) Styrene	18.44	104	168363	0.99	ppb	92
62) Bromoform	18.56	173	137820	0.99	ppb	98
63) o-xylene	18.47	91	232388	0.99	ppb	98
64) Cumene	19.06	105	318315	0.99	ppb	99
66) 1,1,2,2-tetrachloroethane	18.94	83	149201	0.99	ppb	99
67) Propylbenzene	19.65	120	83427	0.99	ppb	93
68) 2-Chlorotoluene	19.70	126	77163	0.99	ppb #	83
69) 4-ethyltoluene	19.83	105	318517	0.99	ppb	100
70) 1,3,5-trimethylbenzene	19.89	105	270725	0.99	ppb	96
71) 1,2,4-trimethylbenzene	20.39	105	265458	0.99	ppb	96
72) 1,3-dichlorobenzene	20.72	146	162039	0.99	ppb	98
73) benzyl chloride	20.79	91	216956	0.99	ppb	95
74) 1,4-dichlorobenzene	20.86	146	155693	0.99	ppb	97
75) 1,2,3-trimethylbenzene	20.91	105	248234	0.99	ppb	96
76) 1,2-dichlorobenzene	21.23	146	151149	0.99	ppb	95
77) 1,2,4-trichlorobenzene	23.35	180	74792	0.99	ppb	99
78) Naphthalene	23.56	128	181076	0.99	ppb	96
79) Hexachloro-1,3-butadiene	23.68	225	129660	0.99	ppb	99

Data File : C:\HPCHEM\1\DATA\AP040808.D  
 Acq On : 9 Apr 2018 1:37 am  
 Sample : A408\_1.0  
 Misc : A408\_IUG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 9 8:41 2018

Vial: 6  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_IUG.RES

Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D



Data File : C:\HPCHEM\1\DATA\AP040809.D

Vial: 7

Acq On : 9 Apr 2018 2:16 am

Operator: RJP

Sample : A1UG\_0.75

Inst : MSD #1

Misc : A408\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 09 06:51:51 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 06:50:59 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D

DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	40806	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.69	114	217406	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	173705	1.00	ppb	0.00

## System Monitoring Compounds

65) Bromofluorobenzene	19.18	95	123788	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	33116	0.67	ppb	98
3) Freon 12	4.60	85	176590	0.74	ppb	100
4) Chloromethane	4.82	50	40748	0.72	ppb	100
5) Freon 114	4.82	85	120217	0.72	ppb	96
6) Vinyl Chloride	5.03	62	36405	0.70	ppb	99
7) Butane	5.15	43	52521	0.72	ppb	# 90
8) 1,3-butadiene	5.15	39	36277	0.70	ppb	99
9) Bromomethane	5.52	94	41758	0.78	ppb	92
10) Chloroethane	5.71	64	16025	0.71	ppb	# 87
11) Ethanol	5.80	45	11595	0.71	ppb	94
12) Acrolein	6.42	56	13253m <i>M</i>	0.68	ppb	
13) Vinyl Bromide	6.07	106	38060	0.76	ppb	96
14) Freon 11	6.37	101	143175	0.73	ppb	99
15) Acetone	6.54	58	25206	0.81	ppb	98
16) Pentane	6.65	42	31702	0.75	ppb	97
17) Isopropyl alcohol	6.65	45	50380	0.72	ppb	87
18) 1,1-dichloroethene	7.16	96	37671	0.71	ppb	# 86
19) Freon 113	7.37	101	104810	0.79	ppb	94
20) t-Butyl alcohol	7.40	59	105020	0.75	ppb	90
21) Methylene chloride	7.64	84	53689	0.78	ppb	97
22) Allyl chloride	7.62	41	47736	0.71	ppb	99
23) Carbon disulfide	7.81	76	95125	0.71	ppb	97
24) trans-1,2-dichloroethene	8.60	61	58107	0.70	ppb	92
25) methyl tert-butyl ether	8.62	73	144114	0.72	ppb	89
26) 1,1-dichloroethane	9.04	63	84787	0.72	ppb	99
27) Vinyl acetate	9.02	43	97792	0.71	ppb	100
28) Methyl Ethyl Ketone	9.53	72	21527	0.71	ppb	# 100
29) cis-1,2-dichloroethene	10.00	61	61003	0.72	ppb	91
30) Hexane	9.59	57	59857	0.70	ppb	97
31) Ethyl acetate	10.13	43	79770	0.68	ppb	98
32) Chloroform	10.62	83	109507	0.73	ppb	100
33) Tetrahydrofuran	10.79	42	42022	0.73	ppb	97
34) 1,2-dichloroethane	11.72	62	75814	0.72	ppb	99
36) 1,1,1-trichloroethane	11.44	97	126015	0.74	ppb	100
37) Cyclohexane	12.13	56	62577	0.73	ppb	95
38) Carbon tetrachloride	12.07	117	127979	0.73	ppb	100
39) Benzene	12.03	78	134458	0.73	ppb	97
40) Methyl methacrylate	13.55	41	57688	0.72	ppb	89
41) 1,4-dioxane	13.59	88	28639	0.75	ppb	95
42) 2,2,4-trimethylpentane	12.87	57	194056	0.73	ppb	98
43) Heptane	13.21	43	65525	0.70	ppb	99
44) Trichloroethene	13.34	130	59989	0.75	ppb	93
45) 1,2-dichloropropane	13.44	63	45176	0.72	ppb	98

(#)= qualifier out of range (m) = manual integration

AP040809.D A408\_1UG.M

Thu Apr 26 08:37:50 2018

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AP040809.D  
 Acq On : 9 Apr 2018 2:16 am  
 Sample : A1UG\_0.75  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:51 2018

Vial: 7  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

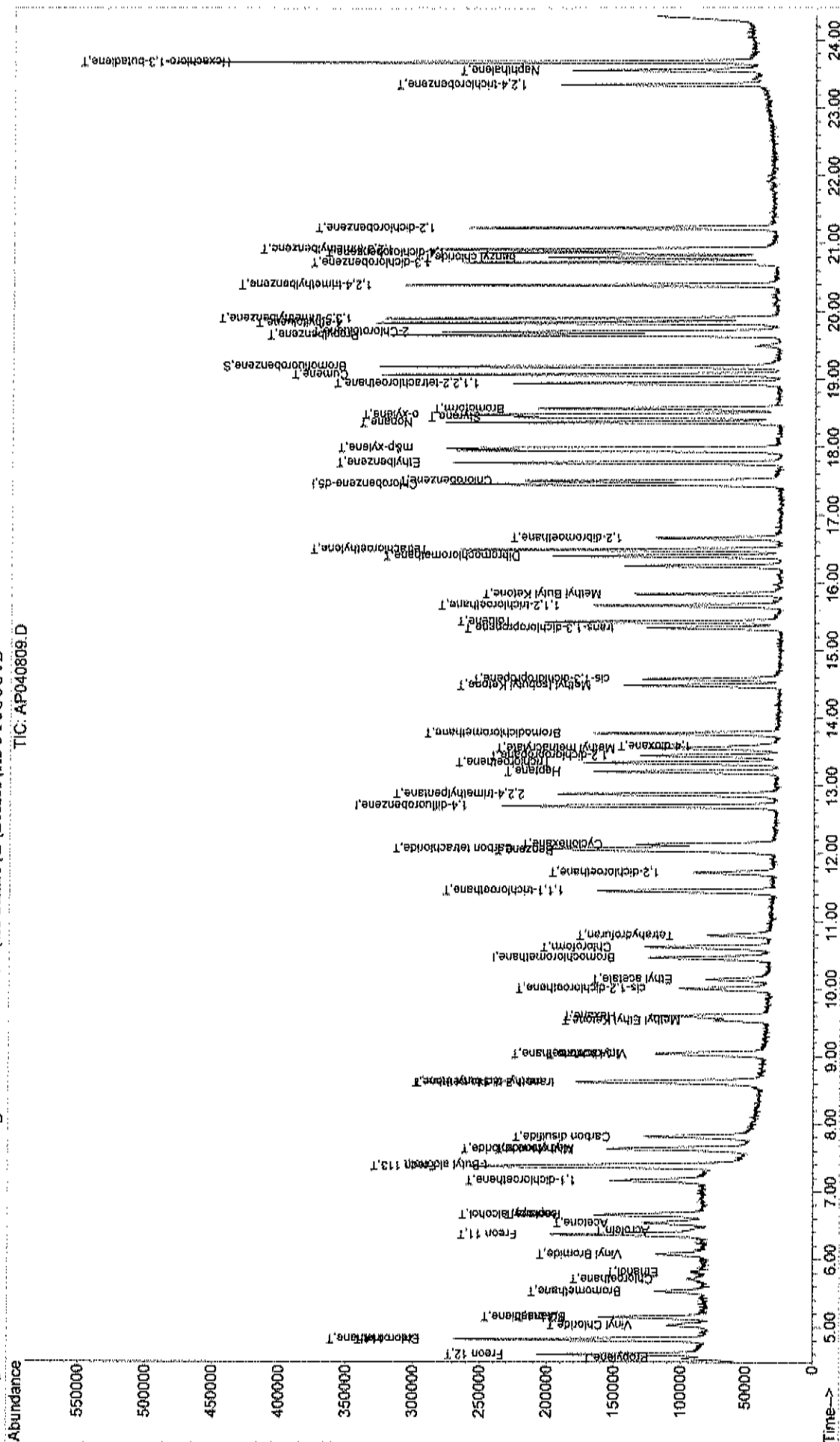
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.77	83	114257	0.72	ppb	98
47) cis-1,3-dichloropropene	14.57	75	79358	0.75	ppb	97
48) trans-1,3-dichloropropene	15.33	75	75619	0.70	ppb	96
49) 1,1,2-trichloroethane	15.66	97	53366	0.74	ppb	98
51) Toluene	15.42	92	93512	0.75	ppb	98
52) Methyl Isobutyl Ketone	14.48	43	94350	0.75	ppb	97
53) Dibromochloromethane	16.39	129	111233	0.73	ppb	99
54) Methyl Butyl Ketone	15.83	43	93959	0.75	ppb	97
55) 1,2-dibromoethane	16.66	107	84554	0.75	ppb	99
56) Tetrachloroethylene	16.48	164	62926	0.74	ppb	98
57) Chlorobenzene	17.50	112	128310	0.76	ppb	93
58) Ethylbenzene	17.76	91	222092	0.76	ppb	98
59) m&p-xylene	17.98	91	345283	1.49	ppb	97
60) Nonane	18.36	43	97045	0.76	ppb	96
61) Styrene	18.44	104	124009	0.73	ppb	91
62) Bromoform	18.56	173	103346	0.74	ppb	98
63) o-xylene	18.47	91	174477	0.74	ppb	98
64) Cumene	19.06	105	239224	0.74	ppb	100
66) 1,1,2,2-tetrachloroethane	18.94	83	111868	0.74	ppb	98
67) Propylbenzene	19.65	120	64201	0.76	ppb	99
68) 2-Chlorotoluene	19.69	126	58817	0.75	ppb #	85
69) 4-ethyltoluene	19.83	105	235920	0.73	ppb	99
70) 1,3,5-trimethylbenzene	19.89	105	202160	0.74	ppb	98
71) 1,2,4-trimethylbenzene	20.39	105	197280	0.74	ppb	99
72) 1,3-dichlorobenzene	20.72	146	123552	0.75	ppb	97
73) benzyl chloride	20.79	91	158789	0.72	ppb	97
74) 1,4-dichlorobenzene	20.86	146	116629	0.74	ppb	98
75) 1,2,3-trimethylbenzene	20.91	105	187141	0.75	ppb	96
76) 1,2-dichlorobenzene	21.22	146	117746	0.77	ppb	98
77) 1,2,4-trichlorobenzene	23.34	180	52773	0.70	ppb	97
78) Naphthalene	23.55	128	131784	0.72	ppb	97
79) Hexachloro-1,3-butadiene	23.68	225	99843	0.76	ppb	99

Data File : C:\HPCHEM\1\DATA\AP040809.D  
Acq On : 9 Apr 2018 2:16 am  
Sample : A1UG.0.75  
Misc : A408\_IUG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 9 8:41 2018

Vial: 7  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_IUG.RES

Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D



TIC: AP040809.D



Data File : C:\HPCHEM\1\DATA\AP040810.D  
 Acq On : 9 Apr 2018 2:54 am  
 Sample : A408\_1UG  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:52 2018

Vial: 8  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	41870	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.69	114	219021	1.00	ppb	0.00
50) Chlorobenzene-d5	17.44	117	177190	1.00	ppb	0.00

## System Monitoring Compounds

65) Bromofluorobenzene	19.18	95	118374	0.94	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	94.00%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.54	41	24384	0.48	ppb	96
3) Freon 12	4.60	85	121610	0.49	ppb	96
4) Chloromethane	4.81	50	27753	0.48	ppb	99
5) Freon 114	4.82	85	82175	0.48	ppb	93
6) Vinyl Chloride	5.04	62	25185	0.47	ppb	95
7) Butane	5.14	43	36385	0.48	ppb	# 96
8) 1,3-butadiene	5.14	39	26155	0.49	ppb	90
9) Bromomethane	5.53	94	26197	0.48	ppb	99
10) Chloroethane	5.71	64	10229	0.44	ppb	99
11) Ethanol	5.81	45	7716	0.46	ppb	93
12) Acrolein	6.42	56	10546m	0.53	ppb	
13) Vinyl Bromide	6.07	106	24773	0.48	ppb	92
14) Freon 11	6.36	101	97815	0.48	ppb	99
15) Acetone	6.53	58	18512	0.58	ppb	91
16) Pentane	6.65	42	18818	0.43	ppb	87
17) Isopropyl alcohol	6.65	45	33671	0.47	ppb	88
18) 1,1-dichloroethene	7.17	96	25967	0.48	ppb	89
19) Freon 113	7.37	101	69251	0.51	ppb	96
20) t-Butyl alcohol	7.40	59	70608	0.49	ppb	# 88
21) Methylene chloride	7.64	84	36950	0.52	ppb	90
22) Allyl chloride	7.61	41	36536	0.53	ppb	90
23) Carbon disulfide	7.81	76	62056	0.45	ppb	92
24) trans-1,2-dichloroethene	8.60	61	38945	0.46	ppb	88
25) methyl tert-butyl ether	8.63	73	97611	0.48	ppb	88
26) 1,1-dichloroethane	9.05	63	56165	0.47	ppb	98
27) Vinyl acetate	9.02	43	64935	0.46	ppb	98
28) Methyl Ethyl Ketone	9.53	72	13295	0.43	ppb	# 100
29) cis-1,2-dichloroethene	10.00	61	40569	0.47	ppb	92
30) Hexane	9.59	57	41265	0.47	ppb	97
31) Ethyl acetate	10.13	43	52622	0.44	ppb	97
32) Chloroform	10.61	83	74932	0.49	ppb	98
33) Tetrahydrofuran	10.78	42	26798	0.45	ppb	98
34) 1,2-dichloroethane	11.72	62	51630	0.48	ppb	99
36) 1,1,1-trichloroethane	11.45	97	84593	0.49	ppb	100
37) Cyclohexane	12.13	56	44984	0.52	ppb	93
38) Carbon tetrachloride	12.07	117	86775	0.49	ppb	99
39) Benzene	12.04	78	90159	0.49	ppb	97
40) Methyl methacrylate	13.54	41	36566	0.45	ppb	89
41) 1,4-dioxane	13.59	88	18744	0.49	ppb	97
42) 2,2,4-trimethylpentane	12.87	57	129471	0.48	ppb	97
43) Heptane	13.20	43	45469	0.48	ppb	97
44) Trichloroethene	13.33	130	40868	0.51	ppb	95
45) 1,2-dichloropropane	13.44	63	31306	0.50	ppb	97

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\AP040810.D  
 Acq On : 9 Apr 2018 2:54 am  
 Sample : A1UG\_0.50  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:52 2018

Vial: 8  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.77	83	76795	0.48	ppb	96
47) cis-1,3-dichloropropene	14.57	75	52568	0.50	ppb	97
48) trans-1,3-dichloropropene	15.33	75	50183	0.46	ppb	99
49) 1,1,2-trichloroethane	15.66	97	36575	0.50	ppb	96
51) Toluene	15.42	92	63307	0.50	ppb	98
52) Methyl Isobutyl Ketone	14.48	43	61173	0.48	ppb	98
53) Dibromochloromethane	16.39	129	75513	0.49	ppb	100
54) Methyl Butyl Ketone	15.83	43	66338	0.52	ppb	96
55) 1,2-dibromoethane	16.66	107	56371	0.49	ppb	99
56) Tetrachloroethylene	16.49	164	42668	0.49	ppb	97
57) Chlorobenzene	17.50	112	86640	0.50	ppb	94
58) Ethylbenzene	17.76	91	149347	0.50	ppb	98
59) m&p-xylene	17.98	91	227300	0.96	ppb	100
60) Nonane	18.36	43	65456	0.50	ppb	96
61) Styrene	18.44	104	83036	0.48	ppb	90
62) Bromoform	18.56	173	69504	0.49	ppb	99
63) o-xylene	18.47	91	117928	0.49	ppb	98
64) Cumene	19.06	105	159469	0.49	ppb	99
66) 1,1,2,2-tetrachloroethane	18.94	83	75355	0.49	ppb	99
67) Propylbenzene	19.65	120	43776	0.51	ppb	100
68) 2-Chlorotoluene	19.69	126	39283	0.49	ppb	91
69) 4-ethyltoluene	19.83	105	159569	0.49	ppb	98
70) 1,3,5-trimethylbenzene	19.89	105	137904	0.49	ppb	94
71) 1,2,4-trimethylbenzene	20.38	105	131067	0.48	ppb	99
72) 1,3-dichlorobenzene	20.72	146	79834	0.48	ppb	97
73) benzyl chloride	20.79	91	101514	0.45	ppb	95
74) 1,4-dichlorobenzene	20.87	146	77200	0.48	ppb	98
75) 1,2,3-trimethylbenzene	20.91	105	124112	0.49	ppb	95
76) 1,2-dichlorobenzene	21.22	146	74964	0.48	ppb	95
77) 1,2,4-trichlorobenzene	23.35	180	32251	0.42	ppb	99
78) Naphthalene	23.56	128	84090	0.45	ppb	97
79) Hexachloro-1,3-butadiene	23.68	225	63660	0.48	ppb	99

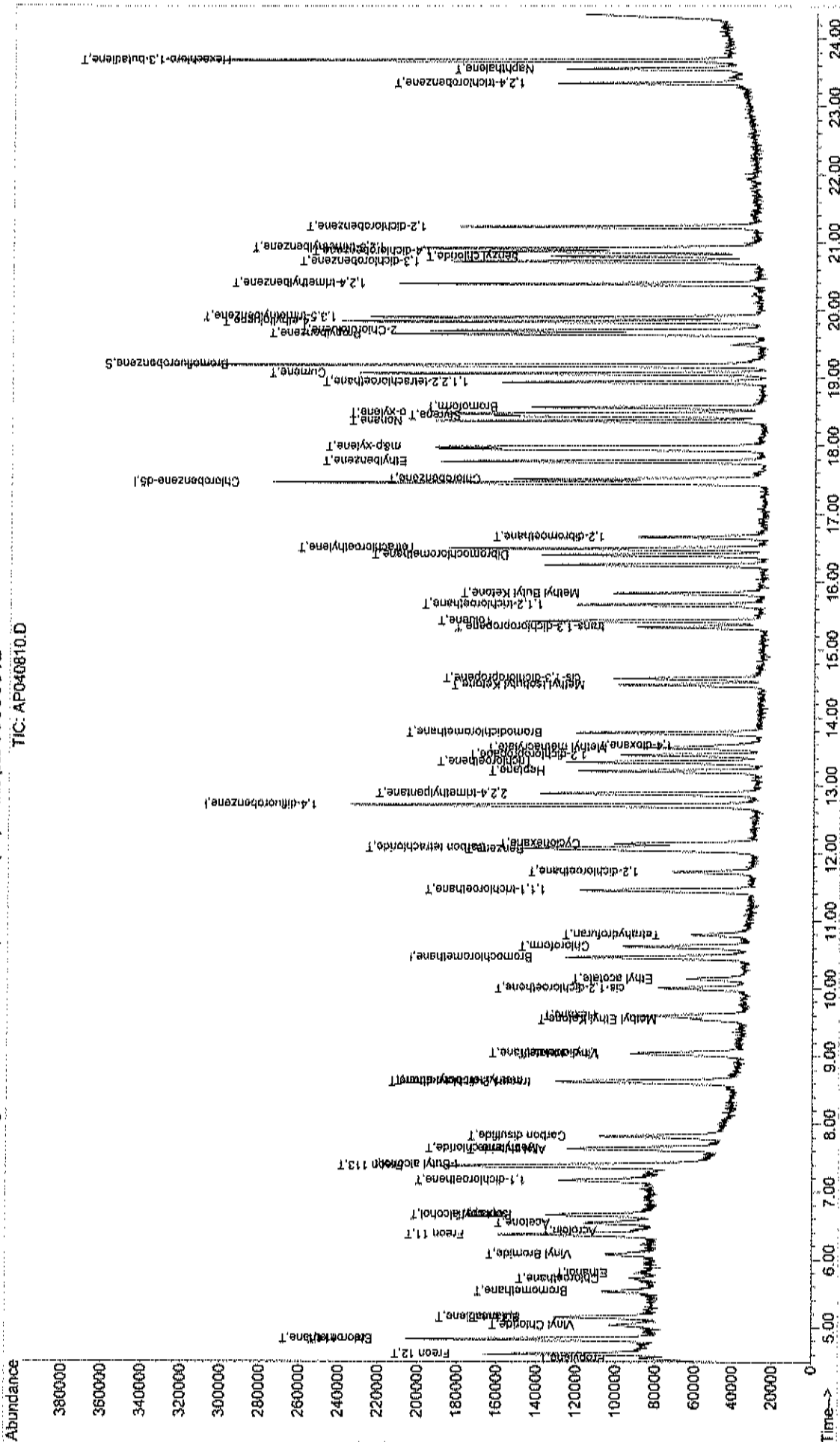
(#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP040810.D A408\_1UG.M Thu Apr 26 08:37:55 2018 MSD1

Data File : C:\HPCHEM\1\DATA\AP040810.D  
 Acq On : 9 Apr 2018 2:54 am  
 Sample : A1UG\_0.50  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 9 8:42 2018

Vial: 8  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D



Data File : C:\HPCHEM\1\DATA\AP040811.D Vial: 9  
 Acq On : 9 Apr 2018 3:31 am Operator: RJP  
 Sample : A4UG\_0.30 Inst : MSD #1  
 Misc : A408\_1UG Multiplr: 1.00  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:53 2018 Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	40488	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.70	114	213668	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	172675	1.00	ppb	0.00

System Monitoring Compounds  
 65) Bromofluorobenzene 19.18 95 119919 0.98 ppb 0.00  
 Spiked Amount 1.000 Range 70 - 130 Recovery = 98.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.55	41	14844	0.30	ppb	86
3) Freon 12	4.60	85	73709	0.31	ppb	97
4) Chloromethane	4.82	50	17817	0.32	ppb	84
5) Freon 114	4.82	85	50085	0.30	ppb	93
6) Vinyl Chloride	5.03	62	15050	0.29	ppb	99
7) Butane	5.14	43	23704	0.33	ppb	98
8) 1,3-butadiene	5.15	39	16384	0.32	ppb	90
9) Bromomethane	5.52	94	15698	0.30	ppb	97
10) Chloroethane	5.71	64	6333m	0.28	ppb	
11) Ethanol	5.81	45	4436	0.27	ppb	# 50
12) Acrolein	6.44	56	7023m	0.36	ppb	
13) Vinyl Bromide	6.08	106	15130	0.30	ppb	90
14) Freon 11	6.36	101	57917	0.30	ppb	96
15) Acetone	6.53	58	14890	0.48	ppb	# 85
16) Pentane	6.66	42	14158	0.34	ppb	97
17) Isopropyl alcohol	6.66	45	19140	0.28	ppb	96
18) 1,1-dichloroethene	7.16	96	16894	0.32	ppb	95
19) Freon 113	7.36	101	42830	0.32	ppb	92
20) t-Butyl alcohol	7.40	59	44431	0.32	ppb	# 88
21) Methylene chloride	7.65	84	27433	0.40	ppb	97
22) Allyl chloride	7.62	41	24519	0.37	ppb	83
23) Carbon disulfide	7.81	76	40627	0.30	ppb	92
24) trans-1,2-dichloroethene	8.60	61	21147	0.26	ppb	94
25) methyl tert-butyl ether	8.63	73	57593	0.29	ppb	# 52
26) 1,1-dichloroethane	9.04	63	34103	0.29	ppb	95
27) Vinyl acetate	9.02	43	35564	0.26	ppb	90
28) Methyl Ethyl Ketone	9.54	72	7051	0.23	ppb	# 100
29) cis-1,2-dichloroethene	10.00	61	24057	0.29	ppb	93
30) Hexane	9.59	57	25578	0.30	ppb	98
31) Ethyl acetate	10.14	43	30197	0.26	ppb	99
32) Chloroform	10.61	83	44655	0.30	ppb	99
33) Tetrahydrofuran	10.79	42	15612	0.27	ppb	95
34) 1,2-dichloroethane	11.72	62	30568	0.29	ppb	99
36) 1,1,1-trichloroethane	11.45	97	51804	0.31	ppb	98
37) Cyclohexane	12.14	56	27098	0.32	ppb	96
38) Carbon tetrachloride	12.07	117	52557	0.31	ppb	98
39) Benzene	12.04	78	52486	0.29	ppb	93
40) Methyl methacrylate	13.55	41	21500	0.27	ppb	87
41) 1,4-dioxane	13.59	88	13041	0.35	ppb	92
42) 2,2,4-trimethylpentane	12.87	57	77571	0.30	ppb	99
43) Heptane	13.21	43	27415	0.30	ppb	98
44) Trichloroethene	13.33	130	24982	0.32	ppb	96
45) 1,2-dichloropropane	13.44	63	18526	0.30	ppb	93

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\AP040811.D  
 Acq On : 9 Apr 2018 3:31 am  
 Sample : A1UG\_0.30  
 Misc : A408\_1UG

Vial: 9  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:53 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.77	83	46250	0.30	ppb	98
47) cis-1,3-dichloropropene	14.57	75	30200	0.29	ppb	99
48) trans-1,3-dichloropropene	15.33	75	28759	0.27	ppb	93
49) 1,1,2-trichloroethane	15.66	97	21170	0.30	ppb	95
51) Toluene	15.42	92	38032	0.31	ppb	97
52) Methyl Isobutyl Ketone	14.48	43	44741	0.36	ppb	99
53) Dibromochloromethane	16.39	129	45361	0.30	ppb	99
54) Methyl Butyl Ketone	15.83	43	43272	0.35	ppb	97
55) 1,2-dibromoethane	16.66	107	33509	0.30	ppb	99
56) Tetrachloroethylene	16.48	164	25745	0.30	ppb	97
57) Chlorobenzene	17.50	112	50668	0.30	ppb	92
58) Ethylbenzene	17.77	91	87456	0.30	ppb	98
59) m&p-xylene	17.95	91	136906	0.59	ppb	97
60) Nonane	18.36	43	37916	0.30	ppb	96
61) Styrene	18.44	104	48821	0.29	ppb	92
62) Bromoform	18.57	173	40736	0.29	ppb	97
63) o-xylene	18.47	91	69207	0.30	ppb	97
64) Cumene	19.07	105	95911	0.30	ppb	98
66) 1,1,2,2-tetrachloroethane	18.94	83	43839	0.29	ppb	97
67) Propylbenzene	19.65	120	24631	0.29	ppb	93
68) 2-Chlorotoluene	19.70	126	23611	0.30	ppb	90
69) 4-ethyltoluene	19.83	105	91193	0.29	ppb	100
70) 1,3,5-trimethylbenzene	19.89	105	78125	0.29	ppb	97
71) 1,2,4-trimethylbenzene	20.39	105	77761	0.29	ppb	95
72) 1,3-dichlorobenzene	20.72	146	46553	0.29	ppb	97
73) benzyl chloride	20.79	91	54065	0.25	ppb	94
74) 1,4-dichlorobenzene	20.86	146	44299	0.28	ppb	96
75) 1,2,3-trimethylbenzene	20.92	105	70101	0.28	ppb	100
76) 1,2-dichlorobenzene	21.23	146	43763	0.29	ppb	97
77) 1,2,4-trichlorobenzene	23.34	180	17904	0.24	ppb	99
78) Naphthalene	23.56	128	47273	0.26	ppb	99
79) Hexachloro-1,3-butadiene	23.68	225	36647	0.28	ppb	98

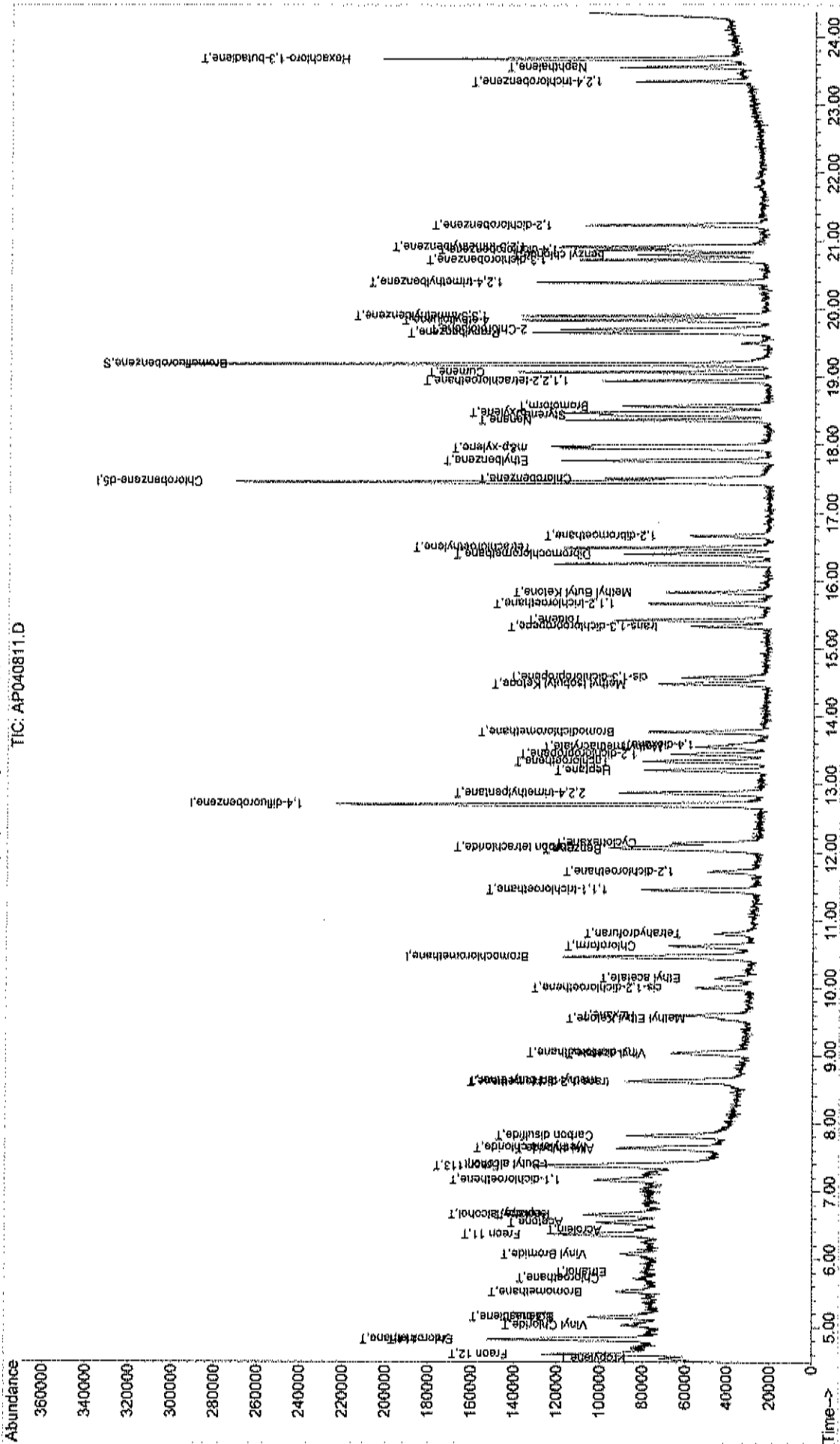
(#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP040811.D A408\_1UG.M Thu Apr 26 08:37:59 2018 MSD1

Data File : C:\HPCHEM\1\DATA\AP040811.D  
 Acq On : 9 Apr 2018 3:31 am  
 Sample : A408\_IUG.30  
 Misc : A408\_IUG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 9 8:43 2018

Vial: 9  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_IUG.RES

Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D



Data File : C:\HPCHEM\1\DATA\AP040812.D  
 Acq On : 9 Apr 2018 4:08 am  
 Sample : A1UG\_0.15  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:54 2018

Vial: 10  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	39621	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.70	114	212180	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	166066	1.00	ppb	0.00

## System Monitoring Compounds

65) Bromofluorobenzene	19.18	95	111947	0.95	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	95.00%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.54	41	9274m <sup>p</sup>	0.19	ppb	
3) Freon 12	4.61	85	40553	0.17	ppb	95
4) Chloromethane	4.82	50	9108	0.17	ppb	70
5) Freon 114	4.82	85	27610	0.17	ppb	95
6) Vinyl Chloride	5.04	62	7771	0.15	ppb	89
7) Butane	5.14	43	13095	0.18	ppb	96
8) 1,3-butadiene	5.15	39	8864	0.18	ppb	92
9) Bromomethane	5.52	94	9699	0.19	ppb	87
10) Chloroethane	5.71	64	3209	0.15	ppb	# 70
11) Ethanol	5.83	45	2256	0.14	ppb	# 61
12) Acrolein	6.41	56	3545m <sup>#</sup>	0.19	ppb	
13) Vinyl Bromide	6.08	106	8546	0.18	ppb	97
14) Freon 11	6.37	101	31313	0.16	ppb	93
15) Acetone	6.54	58	6744m <sup>v</sup>	0.22	ppb	
16) Pentane	6.66	42	7318	0.18	ppb	99
17) Isopropyl alcohol	6.65	45	11883	0.18	ppb	88
18) 1,1-dichloroethene	7.17	96	8645	0.17	ppb	# 80
19) Freon 113	7.37	101	22073	0.17	ppb	95
20) t-Butyl alcohol	7.41	59	29605	0.22	ppb	# 58
21) Methylene chloride	7.65	84	16612	0.25	ppb	92
22) Allyl chloride	7.62	41	10396	0.16	ppb	92
23) Carbon disulfide	7.82	76	22221	0.17	ppb	98
24) trans-1,2-dichloroethene	8.60	61	11812	0.15	ppb	93
25) methyl tert-butyl ether	8.63	73	29740	0.15	ppb	81
26) 1,1-dichloroethane	9.04	63	18543	0.16	ppb	99
27) Vinyl acetate	9.03	43	20418	0.15	ppb	100
28) Methyl Ethyl Ketone	9.55	72	3526	0.12	ppb	# 100
29) cis-1,2-dichloroethene	9.99	61	12590	0.15	ppb	94
30) Hexane	9.60	57	13689	0.17	ppb	91
31) Ethyl acetate	10.14	43	14135	0.12	ppb	97
32) Chloroform	10.61	83	22920	0.16	ppb	99
33) Tetrahydrofuran	10.80	42	8540	0.15	ppb	88
34) 1,2-dichloroethane	11.72	62	15144	0.15	ppb	77
36) 1,1,1-trichloroethane	11.45	97	26625	0.16	ppb	99
37) Cyclohexane	12.14	56	13127	0.16	ppb	93
38) Carbon tetrachloride	12.08	117	26068	0.15	ppb	98
39) Benzene	12.04	78	29143	0.16	ppb	97
40) Methyl methacrylate	13.55	41	11140m <sup>p</sup>	0.14	ppb	
41) 1,4-dioxane	13.60	88	7921	0.21	ppb	88
42) 2,2,4-trimethylpentane	12.88	57	42524	0.16	ppb	97
43) Heptane	13.21	43	14772	0.16	ppb	93
44) Trichloroethene	13.34	130	12531	0.16	ppb	94
45) 1,2-dichloropropane	13.44	63	10292	0.17	ppb	91

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\AP040812.D

Vial: 10

Acq On : 9 Apr 2018 4:08 am

Operator: RJP

Sample : A1UG\_0.15

Inst : MSD #1

Misc : A408\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 09 06:51:54 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 06:50:59 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D

DataAcq Meth : 1UG\_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.77	83	24452	0.16	ppb	95
47) cis-1,3-dichloropropene	14.57	75	15932	0.16	ppb	90
48) trans-1,3-dichloropropene	15.34	75	15401	0.15	ppb	97
49) 1,1,2-trichloroethane	15.66	97	10883	0.15	ppb	98
51) Toluene	15.43	92	18872	0.16	ppb	96
52) Methyl Isobutyl Ketone	14.48	43	26344	0.22	ppb	95
53) Dibromochloromethane	16.39	129	22140	0.15	ppb	99
54) Methyl Butyl Ketone	15.83	43	22795	0.19	ppb	96
55) 1,2-dibromoethane	16.65	107	16864	0.16	ppb	97
56) Tetrachloroethylene	16.48	164	14019	0.17	ppb	97
57) Chlorobenzene	17.50	112	25161	0.16	ppb	87
58) Ethylbenzene	17.76	91	44249	0.16	ppb	99
59) m&p-xylene	17.98	91	68006	0.31	ppb	97
60) Nonane	18.36	43	19423	0.16	ppb	97
61) Styrene	18.44	104	24644	0.15	ppb	94
62) Bromoform	18.56	173	20603	0.15	ppb	96
63) o-xylene	18.47	91	35770	0.16	ppb	95
64) Cumene	19.07	105	47284	0.15	ppb	98
66) 1,1,2,2-tetrachloroethane	18.94	83	22407	0.16	ppb	97
67) Propylbenzene	19.65	120	11937	0.15	ppb	99
68) 2-Chlorotoluene	19.70	126	11565	0.16	ppb	# 85
69) 4-ethyltoluene	19.83	105	44753	0.15	ppb	99
70) 1,3,5-trimethylbenzene	19.90	105	39250	0.15	ppb	94
71) 1,2,4-trimethylbenzene	20.39	105	36615	0.14	ppb	92
72) 1,3-dichlorobenzene	20.72	146	22230	0.14	ppb	96
73) benzyl chloride	20.80	91	25232m	0.12	ppb	
74) 1,4-dichlorobenzene	20.87	146	21006	0.14	ppb	97
75) 1,2,3-trimethylbenzene	20.91	105	33211	0.14	ppb	99
76) 1,2-dichlorobenzene	21.23	146	20607	0.14	ppb	97
77) 1,2,4-trichlorobenzene	23.34	180	8179	0.11	ppb	92
78) Naphthalene	23.56	128	26385	0.15	ppb	100
79) Hexachloro-1,3-butadiene	23.68	225	17843	0.14	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP040812.D A408\_1UG.M Thu Apr 26 08:38:03 2018 MSD1



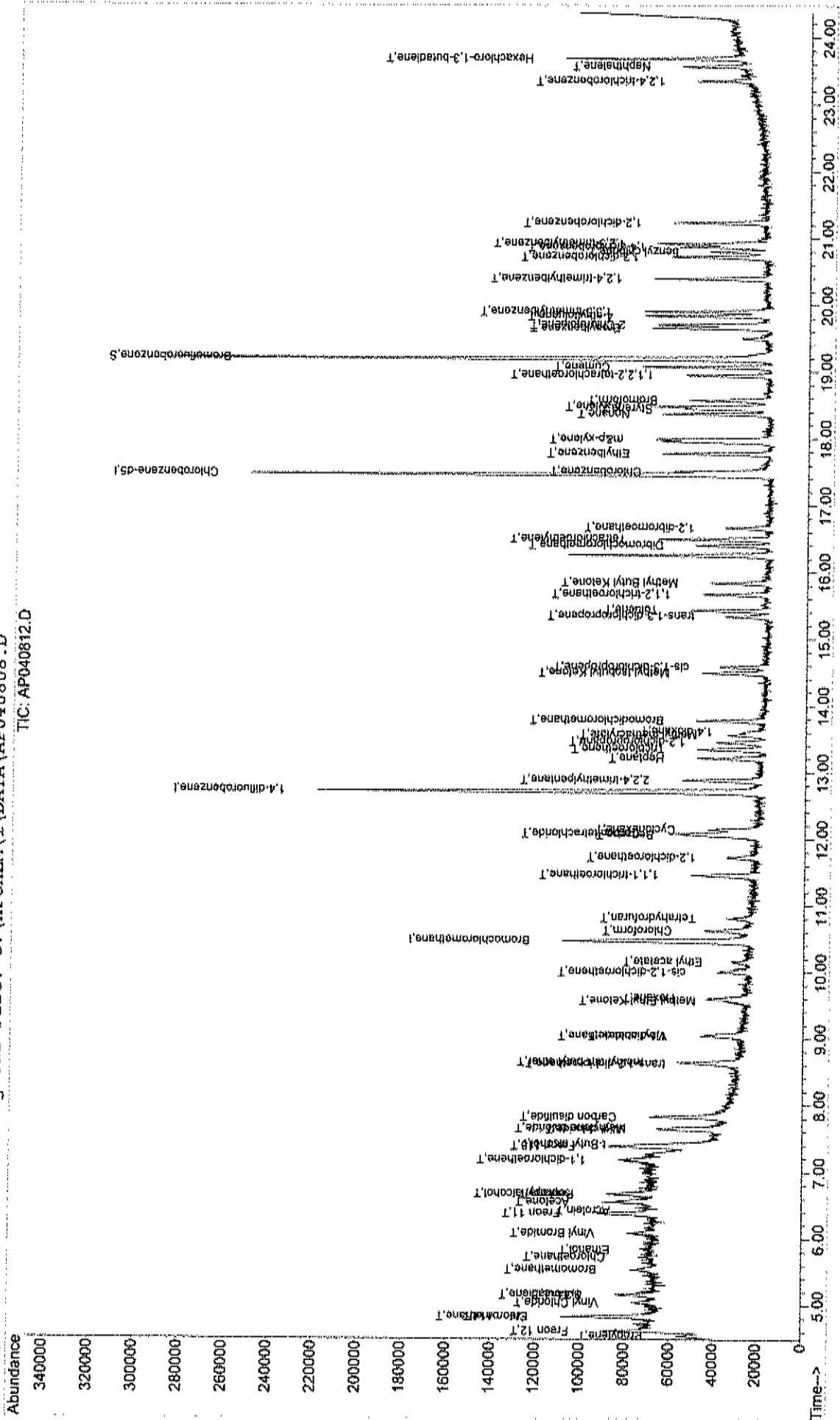
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP040812.D  
 Acq On : 9 Apr 2018 4:08 am  
 Sample : A1UG\_0.15  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 9 8:45 2018

Vial: 10  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D



Data File : C:\HPCHEM\1\DATA\AP040813.D  
 Acq On : 9 Apr 2018 4:44 am  
 Sample : A1UG\_0.10  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:55 2018

Vial: 11  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	39129	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.70	114	203437	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	162268	1.00	ppb	0.00

System Monitoring Compounds  
 65) Bromofluorobenzene 19.19 95 107778 0.93 ppb 0.00  
 Spiked Amount 1.000 Range 70 - 130 Recovery = 93.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) Vinyl Chloride	5.04	62	5202	0.10	ppb	70
18) 1,1-dichloroethene	7.18	96	6761m	0.13	ppb	
29) cis-1,2-dichloroethene	10.01	61	8475m	0.10	ppb	
38) Carbon tetrachloride	12.08	117	18283	0.11	ppb	98
44) Trichloroethene	13.34	130	8112	0.11	ppb	96
78) Naphthalene	23.56	128	17467	0.10	ppb	98

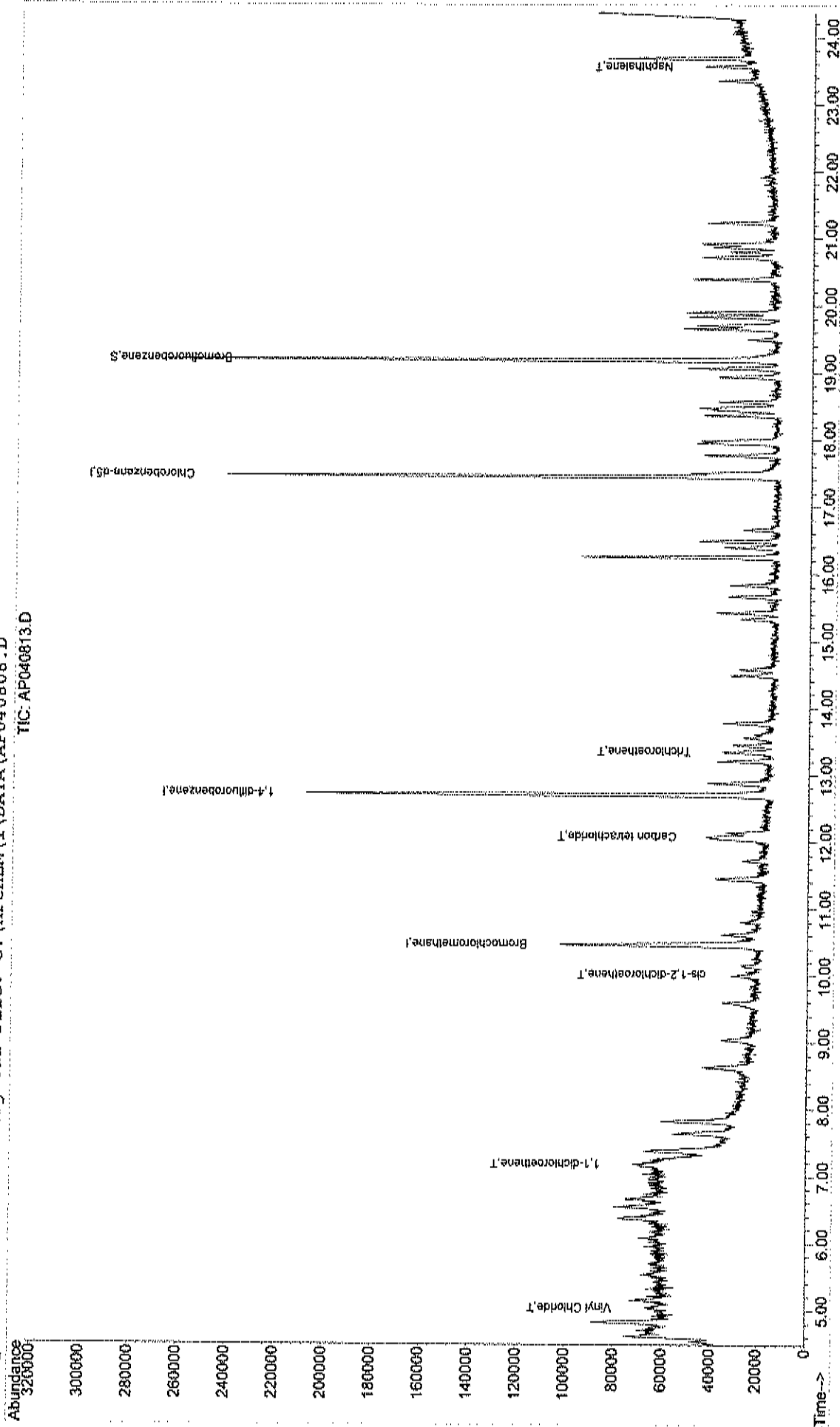
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP040813.D  
Acq On : 9 Apr 2018 4:44 am  
Sample : A1UG\_0.10  
Misc : A408\_1UG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 9 8:47 2018  
Quant Results File: A408\_1UG.RES

Vial: 11  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D

TIC: AP040813.D



Data File : C:\HPCHEM\1\DATA\AP040814.D  
 Acq On : 9 Apr 2018 5:20 am  
 Sample : A1UG\_0.04  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:56 2018

Vial: 12  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	36802	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.70	114	197826	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	152999	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.18	95	104290	0.96	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	96.00%

Target Compounds

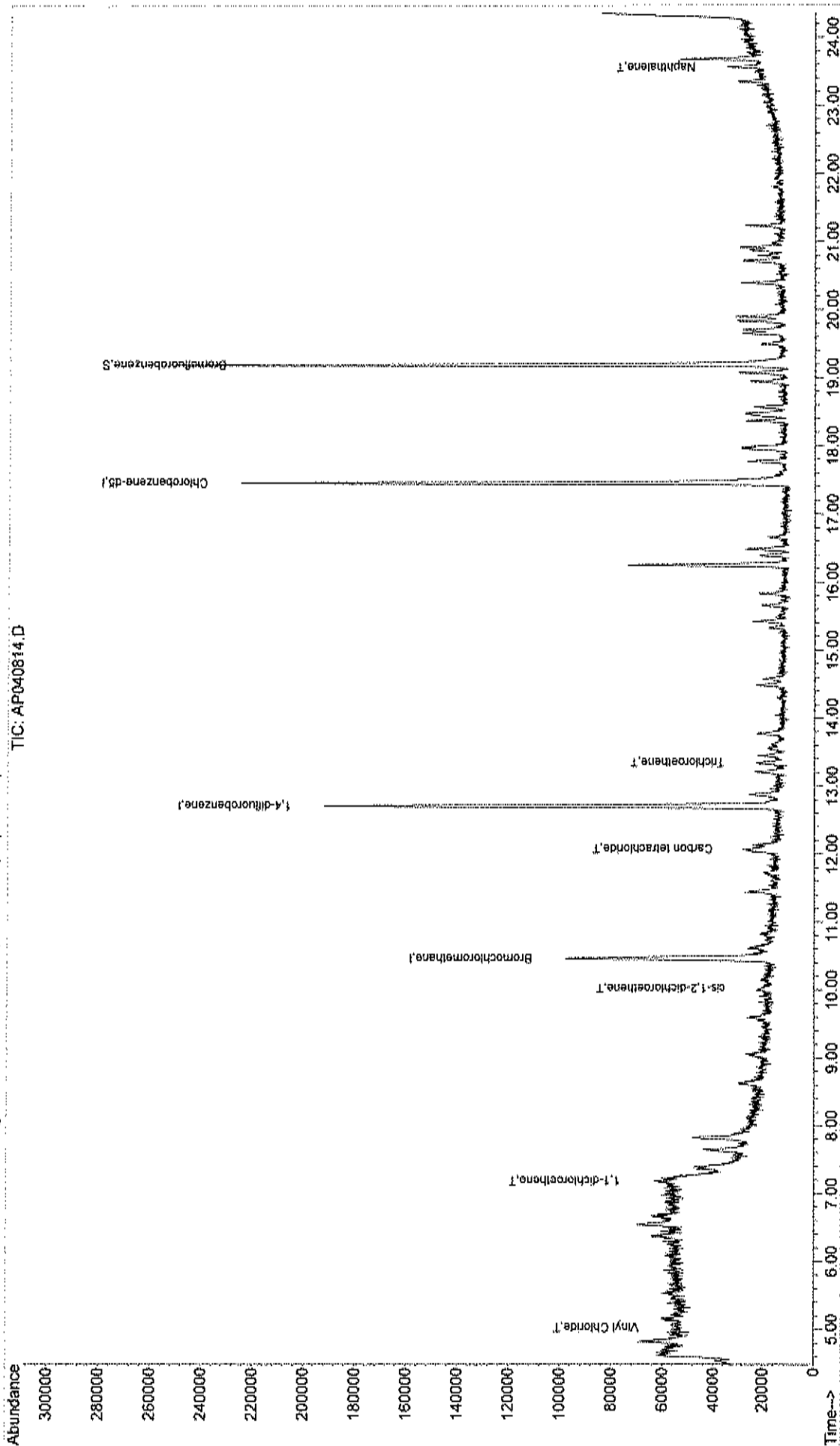
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) Vinyl Chloride	5.03	62	2396m	0.05	ppb	
18) 1,1-dichloroethene	7.17	96	2867	0.06	ppb	# 74
29) cis-1,2-dichloroethene	10.02	61	3917m	0.05	ppb	
38) Carbon tetrachloride	12.06	117	8559	0.05	ppb	95
44) Trichloroethene	13.34	130	3881	0.05	ppb	86
78) Naphthalene	23.56	128	9129	0.06	ppb	# 75

Data File : C:\HPCHEM\1\DATA\AP040814.D  
Acq On : 9 Apr 2018 5:20 am  
Sample : A1UG\_0.04  
Misc : A408\_1UG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 9 8:49 2018

Vial: 12  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D



Data File : C:\HPCHEM\1\DATA\AP040815.D  
 Acq On : 9 Apr 2018 5:57 am  
 Sample : A1UG\_0.03  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P  
 Quant Time: Apr 09 06:51:57 2018

Vial: 13  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 06:50:59 2018  
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	37163	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.70	114	186787	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	147801	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.18	95	99852	0.95	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	95.00%

Target Compounds

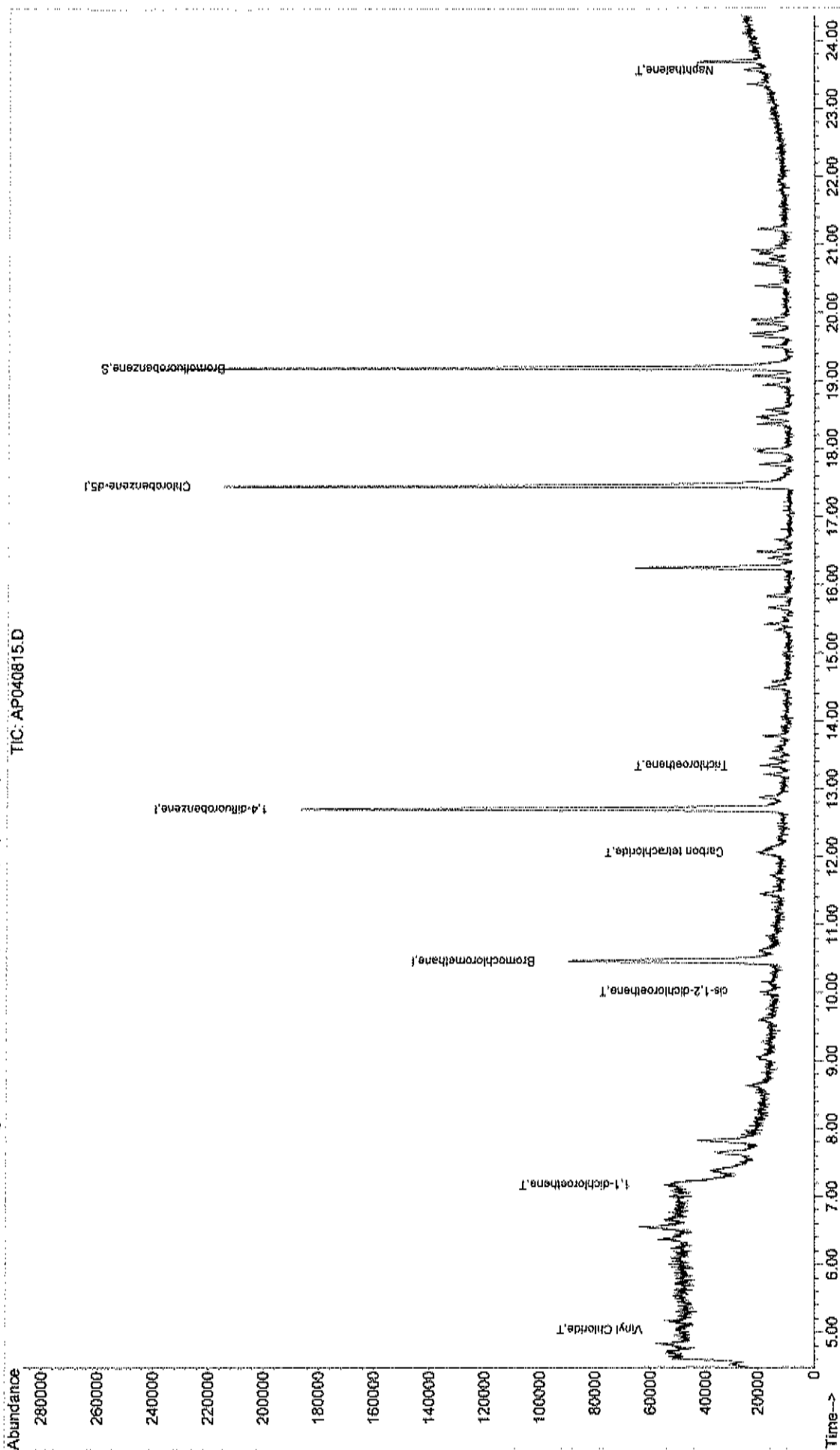
	R.T.	QIon	Response	Conc	Units	Qvalue
6) Vinyl Chloride	5.04	62	1797m <i>f</i>	0.04	ppb	
18) 1,1-dichloroethene	7.16	96	1932m <i>f</i>	0.04	ppb	
29) cis-1,2-dichloroethene	10.01	61	2571	0.03	ppb	# 25
38) Carbon tetrachloride	12.07	117	5891	0.04	ppb	# 97
44) Trichloroethene	13.34	130	2353	0.03	ppb	# 80
78) Naphthalene	23.56	128	6146	0.04	ppb	# 70

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 (#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP040815.D A408\_1UG.M Thu Apr 26 08:38:13 2018 MSD1

Data File : C:\HPCHEM\1\DATA\AP040815.D  
Acq On : 9 Apr 2018 5:57 am  
Sample : A1UG\_0.03  
Misc : A408\_1UG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 9 8:51 2018  
Quant Results File: A408\_1UG.RES

Vial: 13  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP040808.D



**GC/MS VOLATILES-WHOLE AIR**

**METHOD TO-15**

**CALIBRATION VERIFICATION**



Data File : C:\HPCHEM\1\DATA\AP041004.D  
 Acq On : 10 Apr 2018 11:52 am  
 Sample : A408\_1UG  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P

Vial: 4  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	90	0.00
2 T	Propylene	1.239	0.880	29.0	66	0.02
3 T	Freon 12	5.982	6.186	-3.4	95	0.02
4 T	Chloromethane	1.378	1.239	10.1	81	0.01
5 T	Freon 114	4.122	4.437	-7.6	97	0.00
6 T	Vinyl Chloride	1.310	1.151	12.1	82	0.01
7 T	Butane	1.842	1.537	16.6	77	0.02
8 T	1,3-butadiene	1.247	1.016	18.5	73	0.01
9 T	Bromomethane	1.338	1.499	-12.0	103	0.00
10 T	Chloroethane	0.534	0.535	-0.2	87	0.00
11 T	Ethanol	0.391	0.345	11.8	75	0.00
12 T	Acrolein	0.494	0.433	12.3	87	0.02
13 T	Vinyl Bromide	1.256	1.393	-10.9	103	0.00
14 T	Freon 11	4.795	5.635	-17.5	105	0.00
15 T	Acetone	0.897	0.756	15.7	90	0.00
16 T	Pentane	1.049	0.896	14.6	78	0.01
17 T	Isopropyl alcohol	1.704	1.602	6.0	85	0.01
18 T	1,1-dichloroethene	1.444	1.418	1.8	98	0.01
19 T	Freon 113	3.292	4.020	-22.1	111	0.01
20 t	t-Butyl alcohol	3.543	3.184	10.1	84	0.01
21 T	Methylene chloride	1.928	1.742	9.6	93	0.01
22 T	Allyl chloride	1.714	1.302	24.0	71	0.01
23 T	Carbon disulfide	3.253	3.317	-2.0	91	0.02
24 T	trans-1,2-dichloroethene	1.933	1.867	3.4	83	0.01
25 T	methyl tert-butyl ether	4.844	4.575	5.6	84	0.01
26 T	1,1-dichloroethane	2.826	2.687	4.9	84	0.01
27 T	Vinyl acetate	3.284	2.329	29.1	62	0.02
28 T	Methyl Ethyl Ketone	0.685	0.675	1.5	82	0.01
29 T	cis-1,2-dichloroethene	2.135	1.897	11.1	82	0.02
30 T	Hexane	2.072	1.797	13.3	78	0.00
31 T	Ethyl acetate	2.709	2.006	26.0	63	0.01
32 T	Chloroform	3.649	3.724	-2.1	91	0.01
33 T	Tetrahydrofuran	1.377	0.986	28.4	63	0.02
34 T	1,2-dichloroethane	2.551	2.530	0.8	89	0.00
35 I	1,4-difluorobenzene	1.000	1.000	0.0	83	0.00
36 T	1,1,1-trichloroethane	0.790	0.755	4.4	80	0.00
37 T	Cyclohexane	0.404	0.346	14.4	73	0.00
38 T	Carbon tetrachloride	0.857	0.662	22.8	69	0.00
39 T	Benzene	0.840	0.887	-5.6	87	0.00
40 T	Methyl methacrylate	0.359	0.264	26.5	59	0.01
41 T	1,4-dioxane	0.189	0.188	0.5	89	0.02
42 T	2,2,4-trimethylpentane	1.233	1.095	11.2	75	0.00
43 T	Heptane	0.430	0.321	25.3	62	0.00
44 T	Trichloroethene	0.394	0.434	-10.2	98	0.00
45 T	1,2-dichloropropane	0.293	0.272	7.2	79	0.00
46 T	Bromodichloromethane	0.723	0.717	0.8	82	0.00
47 T	cis-1,3-dichloropropene	0.490	0.437	10.8	75	0.00
48 T	trans-1,3-dichloropropene	0.479	0.348	27.3	58	0.00
49 T	1,1,2-trichloroethane	0.331	0.370	-11.8	93	0.00

(#) = Out of Range

AP041004.D A408\_1UG.M

Thu Apr 26 08:57:58 2018

MSD1

Page 1

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AP041004.D  
 Acq On : 10 Apr 2018 11:52 am  
 Sample : A1UG\_1.0  
 Misc : A408\_1UG  
 MS Integration Params: RTEINT.P

Vial: 4  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51 T	Toluene	0.725	0.762	-5.1	88	0.00
52 T	Methyl Isobutyl Ketone	0.785	0.559	28.8	65	0.00
53 T	Dibromochloromethane	0.863	0.845	2.1	81	0.00
54 T	Methyl Butyl Ketone	0.768	0.544	29.2	63	0.00
55 T	1,2-dibromoethane	0.651	0.661	-1.5	85	0.00
56 T	Tetrachloroethylene	0.494	0.572	-15.8	97	0.00
57 T	Chlorobenzene	0.977	1.106	-13.2	95	0.00
58 T	Ethylbenzene	1.692	1.774	-4.8	87	0.00
59 T	m&p-xylene	1.324	1.422	-7.4	88	0.00
60 T	Nonane	0.749	0.555	25.9	63	0.00
61 T	Styrene	0.960	1.049	-9.3	89	0.01
62 T	Bromoform	0.795	0.765	3.8	79	0.00
63 T	o-xylene	1.349	1.523	-12.9	94	0.00
64 T	Cumene	1.838	1.993	-8.4	89	0.00
65 S	Bromofluorobenzene	0.692	0.663	4.2	77	0.00
66 T	1,1,2,2-tetrachloroethane	0.865	0.897	-3.7	86	0.00
67 T	Propylbenzene	0.486	0.536	-10.3	92	0.00
68 T	2-Chlorotoluene	0.446	0.509	-14.1	94	0.00
69 T	4-ethyltoluene	1.807	2.030	-12.3	91	0.00
70 T	1,3,5-trimethylbenzene	1.549	1.750	-13.0	92	0.00
71 T	1,2,4-trimethylbenzene	1.499	1.635	-9.1	88	0.00
72 T	1,3-dichlorobenzene	0.918	1.077	-17.3	95	0.00
73 T	benzyl chloride	1.198	1.027	14.3	68	0.00
74 T	1,4-dichlorobenzene	0.883	1.046	-18.5	96	0.00
75 T	1,2,3-trimethylbenzene	1.397	1.586	-13.5	91	0.00
76 T	1,2-dichlorobenzene	0.863	1.028	-19.1	97	0.00
77 T	1,2,4-trichlorobenzene	0.406	0.461	-13.5	88	0.00
78 T	Naphthalene	1.120	1.056	5.7	83	0.01
79 T	Hexachloro-1,3-butadiene	0.736	0.917	-24.6	101	0.01

Data File : C:\HPCHEM\1\DATA\AP041004.D

Vial: 4

Acq On : 10 Apr 2018 11:52 am

Operator: RJP

Sample : A1UG\_1.0

Inst : MSD #1

Misc : A408\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 10 12:21:38 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 09:00:44 2018

Response via : Initial Calibration

DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane	10.46	128	36302	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.70	114	178220	1.00	ppb	0.00
50) Chlorobenzene-d5	17.46	117	142901	1.00	ppb	0.01

## System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	94795	0.96	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	96.00%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.55	41	31955m <sup>?</sup>	0.71	ppb	
3) Freon 12	4.61	85	224549	1.03	ppb	99
4) Chloromethane	4.83	50	44965	0.90	ppb	97
5) Freon 114	4.82	85	161062	1.08	ppb	92
6) Vinyl Chloride	5.04	62	41773	0.88	ppb	97
7) Butane	5.16	43	55789	0.83	ppb	100
8) 1,3-butadiene	5.16	39	36900	0.82	ppb	96
9) Bromomethane	5.53	94	54415	1.12	ppb	99
10) Chloroethane	5.72	64	19439	1.00	ppb	98
11) Ethanol	5.81	45	12526	0.88	ppb	# 54
12) Acrolein	6.44	56	15711	0.88	ppb	96
13) Vinyl Bromide	6.08	106	50586	1.11	ppb	94
14) Freon 11	6.37	101	204574	1.18	ppb	98
15) Acetone	6.54	58	27441	0.84	ppb	96
16) Pentane	6.66	42	32544	0.85	ppb	96
17) Isopropyl alcohol	6.65	45	58142	0.94	ppb	98
18) 1,1-dichloroethene	7.17	96	51459	0.98	ppb	94
19) Freon 113	7.38	101	145926	1.22	ppb	96
20) t-Butyl alcohol	7.41	59	115602	0.90	ppb	94
21) Methylene chloride	7.65	84	63223	0.90	ppb	89
22) Allyl chloride	7.63	41	47283m <sup>?</sup>	0.76	ppb	
23) Carbon disulfide	7.82	76	120405	1.02	ppb	99
24) trans-1,2-dichloroethene	8.61	61	67780	0.97	ppb	90
25) methyl tert-butyl ether	8.64	73	166087	0.94	ppb	95
26) 1,1-dichloroethane	9.06	63	97556	0.95	ppb	97
27) Vinyl acetate	9.04	43	84532m <sup>?</sup>	0.71	ppb	
28) Methyl Ethyl Ketone	9.54	72	24515	0.99	ppb	# 100
29) cis-1,2-dichloroethene	10.02	61	68875	0.89	ppb	88
30) Hexane	9.60	57	65248	0.87	ppb	92
31) Ethyl acetate	10.15	43	72804	0.74	ppb	93
32) Chloroform	10.63	83	135184	1.02	ppb	100
33) Tetrahydrofuran	10.80	42	35778m <sup>?</sup>	0.72	ppb	
34) 1,2-dichloroethane	11.73	62	91830	0.99	ppb	98
36) 1,1,1-trichloroethane	11.45	97	134504	0.96	ppb	99
37) Cyclohexane	12.14	56	61647	0.86	ppb	# 85
38) Carbon tetrachloride	12.08	117	117914	0.77	ppb	100
39) Benzene	12.04	78	158165	1.06	ppb	97
40) Methyl methacrylate	13.56	41	46988	0.74	ppb	# 78
41) 1,4-dioxane	13.59	88	33482	0.99	ppb	89
42) 2,2,4-trimethylpentane	12.88	57	195167	0.89	ppb	99
43) Heptane	13.21	43	57234	0.75	ppb	80
44) Trichloroethene	13.34	130	77394	1.10	ppb	98
45) 1,2-dichloropropane	13.45	63	48544	0.93	ppb	100

(#)= qualifier out of range (m) = manual integration

AP041004.D A408\_1UG.M

Thu Apr 26 08:58:04 2018

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AP041004.D  
 Acq On : 10 Apr 2018 11:52 am  
 Sample : A1UG\_1.0  
 Misc : A408\_1UG

Vial: 4  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 10 12:21:38 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 09:00:44 2018

Response via : Initial Calibration

DataAcq Meth : 1UG\_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.78	83	127747	0.99	ppb	99
47) cis-1,3-dichloropropene	14.58	75	77902	0.89	ppb	96
48) trans-1,3-dichloropropene	15.34	75	62097	0.73	ppb	99
49) 1,1,2-trichloroethane	15.67	97	65908	1.12	ppb	97
51) Toluene	15.42	92	108916	1.05	ppb	100
52) Methyl Isobutyl Ketone	14.48	43	79891m <sup>g</sup>	0.71	ppb	
53) Dibromochloromethane	16.40	129	120742	0.98	ppb	96
54) Methyl Butyl Ketone	15.83	43	77668m <sup>g</sup>	0.71	ppb	
55) 1,2-dibromoethane	16.66	107	94474	1.02	ppb	99
56) Tetrachloroethylene	16.49	164	81709	1.16	ppb	98
57) Chlorobenzene	17.51	112	158096	1.13	ppb	95
58) Ethylbenzene	17.78	91	253502	1.05	ppb	100
59) m&p-xylene	17.99	91	406310	2.15	ppb	98
60) Nonane	18.37	43	79291	0.74	ppb	# 82
61) Styrene	18.45	104	149905	1.09	ppb	98
62) Bromoform	18.57	173	109265	0.96	ppb	99
63) o-xylene	18.48	91	217575	1.13	ppb	98
64) Cumene	19.07	105	284785	1.08	ppb	99
66) 1,1,2,2-tetrachloroethane	18.94	83	128188	1.04	ppb	98
67) Propylbenzene	19.66	120	76534	1.10	ppb	93
68) 2-Chlorotoluene	19.70	126	72716	1.14	ppb	92
69) 4-ethyltoluene	19.83	105	290100	1.12	ppb	98
70) 1,3,5-trimethylbenzene	19.90	105	250098	1.13	ppb	99
71) 1,2,4-trimethylbenzene	20.39	105	233647	1.09	ppb	98
72) 1,3-dichlorobenzene	20.72	146	153892	1.17	ppb	99
73) benzyl chloride	20.80	91	146716m <sup>g</sup>	0.86	ppb	
74) 1,4-dichlorobenzene	20.87	146	149527	1.18	ppb	99
75) 1,2,3-trimethylbenzene	20.92	105	226644	1.14	ppb	98
76) 1,2-dichlorobenzene	21.23	146	146962	1.19	ppb	99
77) 1,2,4-trichlorobenzene	23.36	180	65909	1.14	ppb	98
78) Naphthalene	23.57	128	150879	0.94	ppb	99
79) Hexachloro-1,3-butadiene	23.69	225	131007	1.25	ppb	99

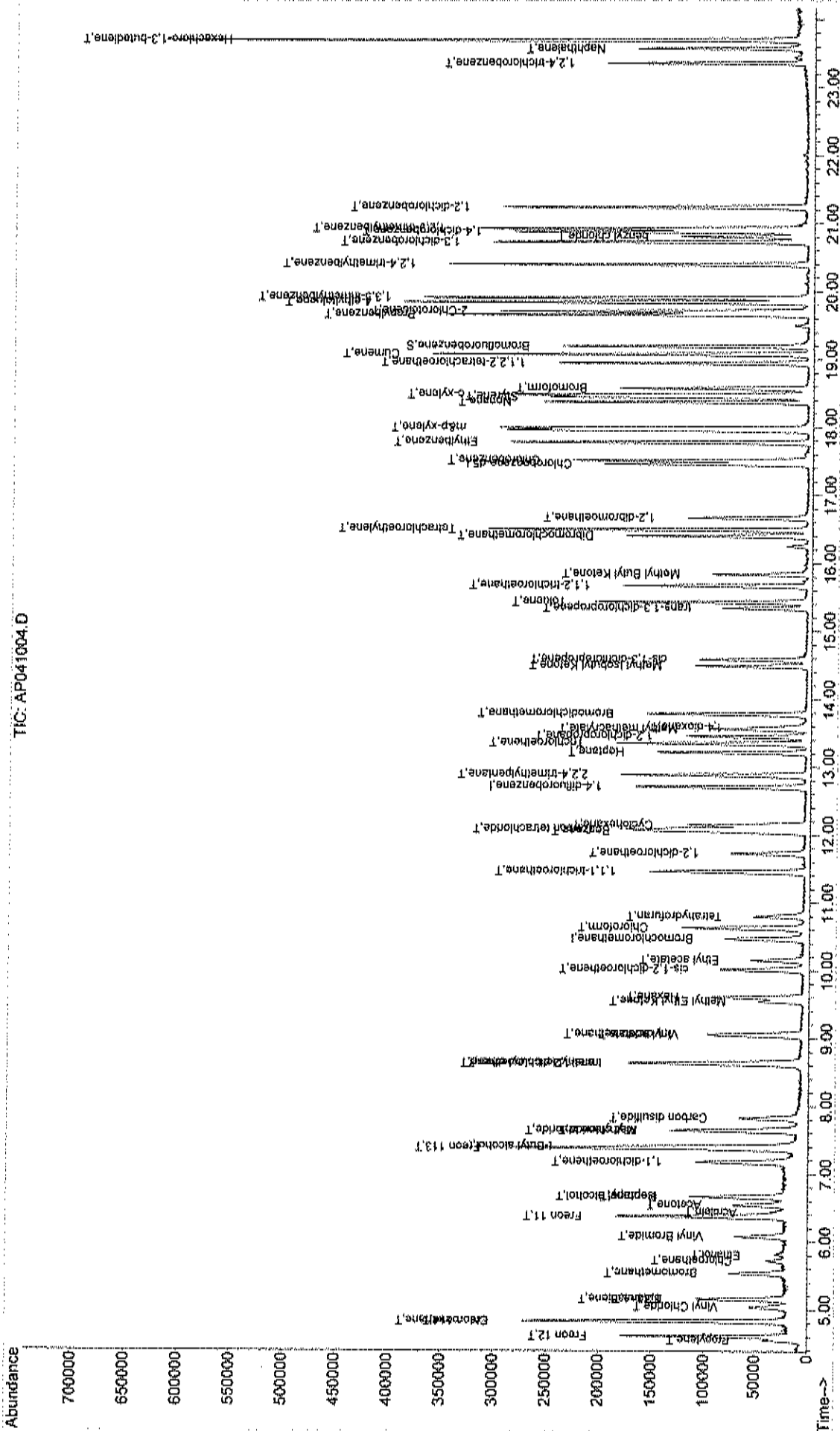
(#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP041004.D A408\_1UG.M Thu Apr 26 08:58:04 2018 MSD1

Data File : C:\HPCHEM\1\DATA\AP041004.D  
Acq On : 10 Apr 2018 11:52 am  
Sample : A408\_1.0  
Misc : A408\_IUG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 10 12:22 2018

Vial: 4  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_IUG.RES

Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration



TIC: AP041004.D

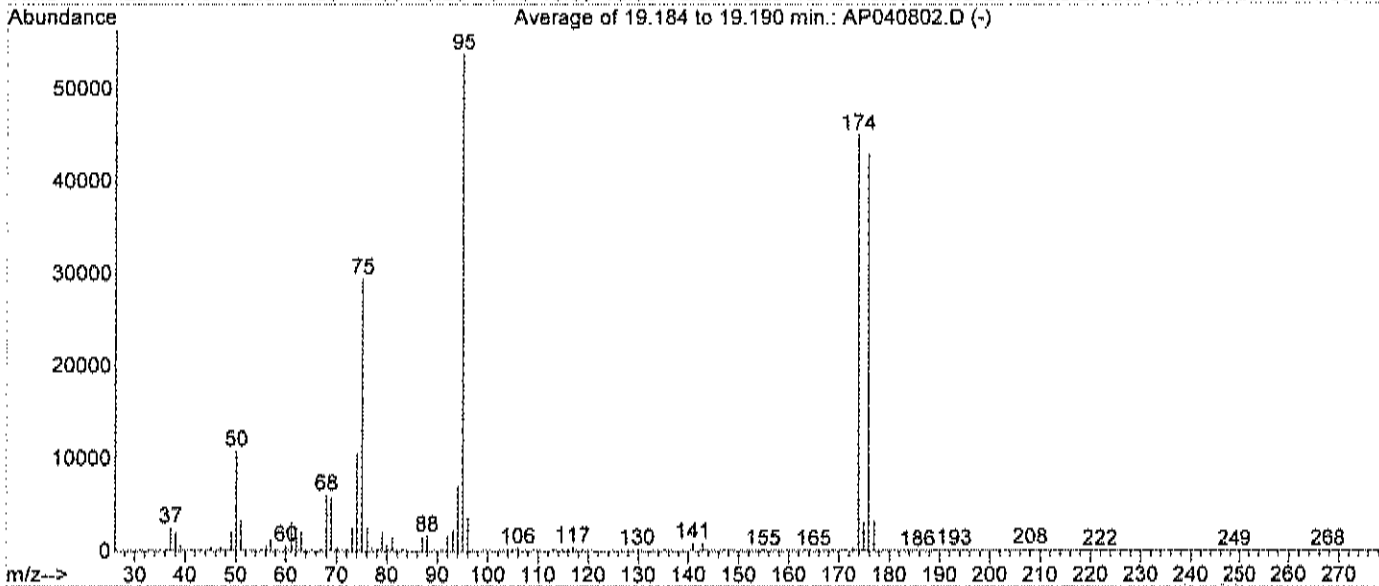
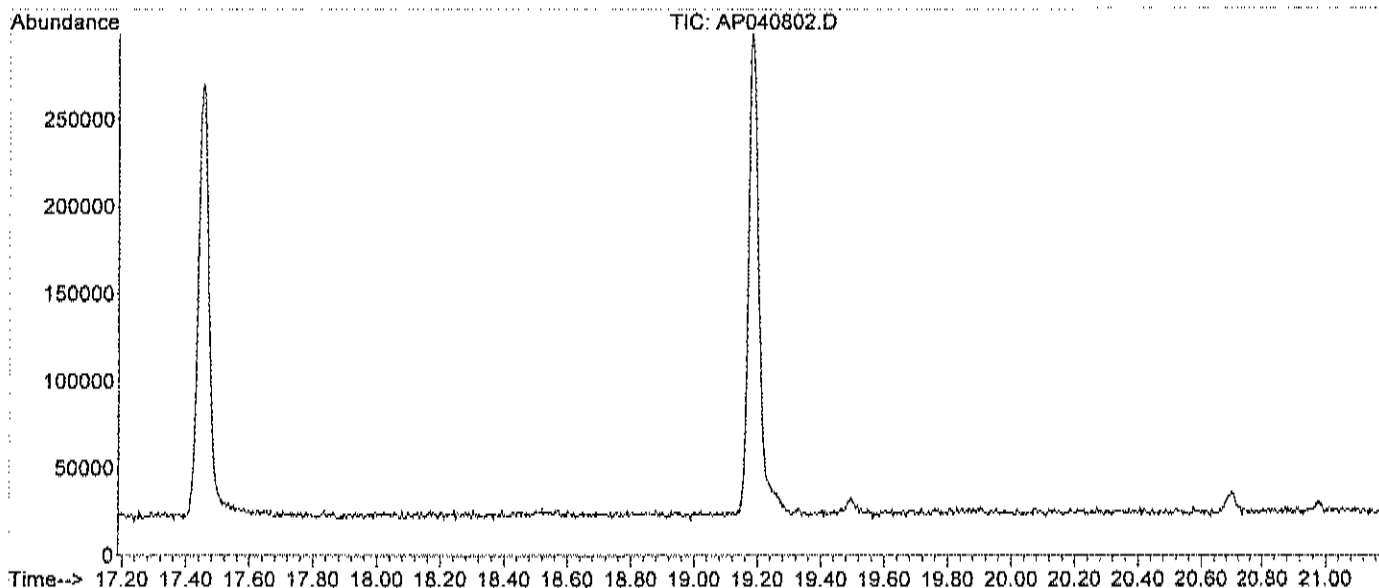
**GC/MS VOLATILES-WHOLE AIR**

**METHOD TO-15**

**RAW DATA**

BFB

Data File : C:\HPCHEM\1\DATA\AP040802.D Vial: 3  
 Acq On : 8 Apr 2018 9:28 pm Operator: RJP  
 Sample : BFB1UG Inst : MSD #1  
 Misc : A408\_1UG Multiplr: 1.00  
 MS Integration Params: RTEINT.P  
 Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration

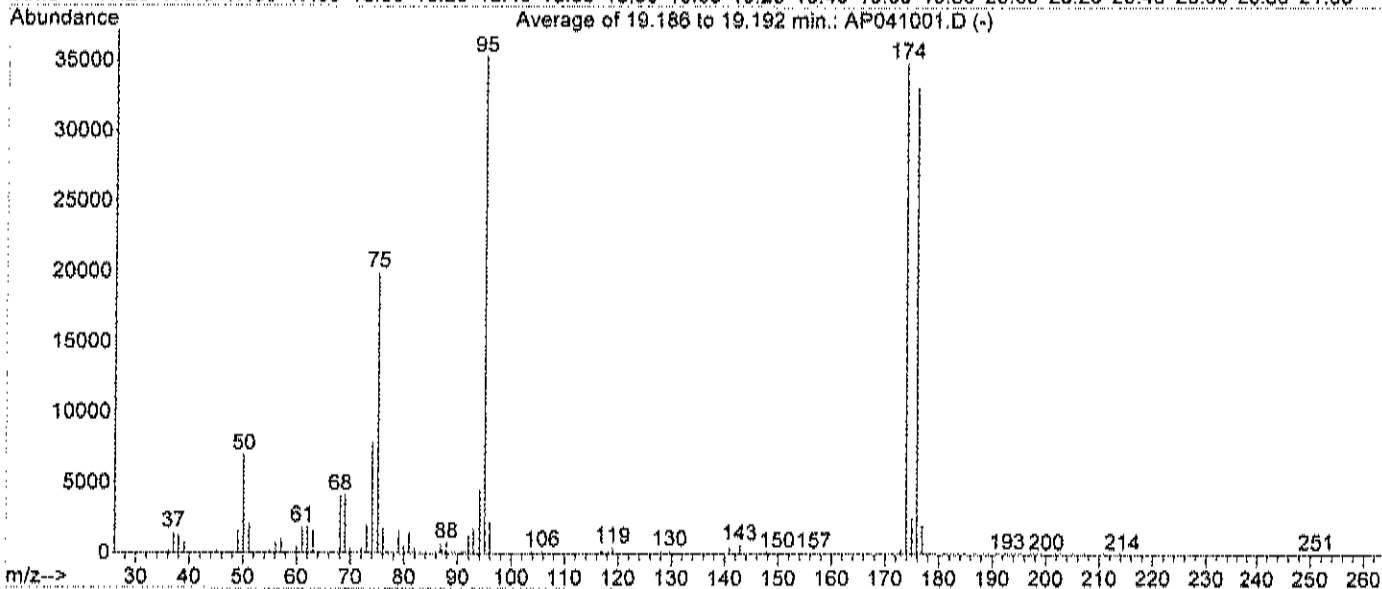
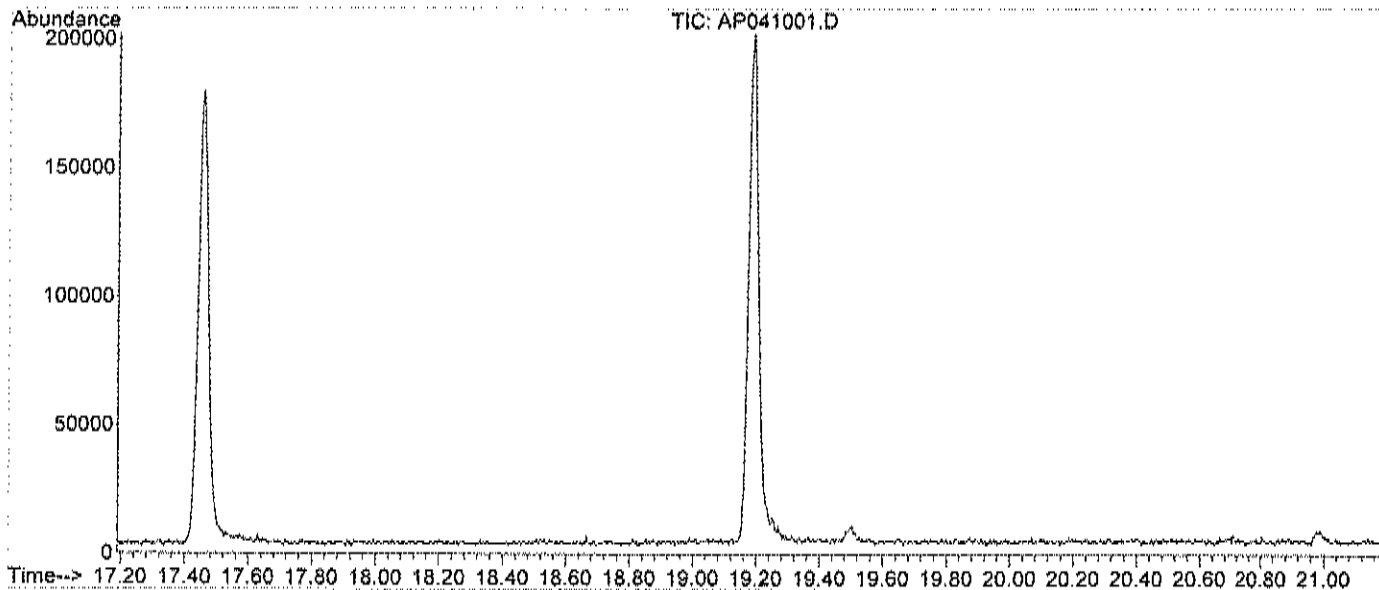


Spectrum Information: Average of 19.184 to 19.190 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	20.0	10770	PASS
75	95	30	66	54.8	29488	PASS
95	95	100	100	100.0	53771	PASS
96	95	5	9	6.7	3612	PASS
173	174	0.00	2	0.8	378	PASS
174	95	50	120	83.7	45024	PASS
175	174	4	9	6.8	3080	PASS
176	174	95	101	95.4	42957	PASS
177	176	5	9	7.7	3320	PASS

BFB

Data File : C:\HPCHEM\1\DATA\AP041001.D Vial: 1  
 Acq On : 10 Apr 2018 9:33 am Operator: RJP  
 Sample : BFB1UG Inst : MSD #1  
 Misc : A408\_1UG Multiplr: 1.00  
 MS Integration Params: RTEINT.P  
 Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration



Spectrum Information: Average of 19.186 to 19.192 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.7	6967	PASS
75	95	30	66	56.5	19970	PASS
95	95	100	100	100.0	35373	PASS
96	95	5	9	6.4	2261	PASS
173	174	0.00	2	1.0	343	PASS
174	95	50	120	98.8	34965	PASS
175	174	4	9	7.7	2701	PASS
176	174	95	101	95.0	33234	PASS
177	176	5	9	6.2	2070	PASS



**GC/MS VOLATILES-WHOLE AIR**

**METHOD TO-15**

**RAW QC DATA**

Date: 26-Apr-18



ANALYTICAL QC SUMMARY REPORT

CLIENT: FPM Group, Ltd.  
 Work Order: C1804013  
 Project: Cinderella

TestCode: 0.20\_NYS

Sample ID: AMBTUG-041018	SampType: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 13517						
Client ID: ZZZZ	Batch ID: R13517	TestNo: TO-15		Analysis Date: 4/10/2018	SeqNo: 156542						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	< 0.15	0.15									
1,1,2,2-Tetrachloroethane	< 0.15	0.15									
1,1,2-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.040	0.040									
1,2,4-Trichlorobenzene	< 0.15	0.15									
1,2,4-Trimethylbenzene	< 0.15	0.15									
1,2-Dibromoethane	< 0.15	0.15									
1,2-Dichlorobenzene	< 0.15	0.15									
1,2-Dichloroethane	< 0.15	0.15									
1,2-Dichloropropane	< 0.15	0.15									
1,3,5-Trimethylbenzene	< 0.15	0.15									
1,3-butadiene	< 0.15	0.15									
1,3-Dichlorobenzene	< 0.15	0.15									
1,4-Dichlorobenzene	< 0.15	0.15									
1,4-Dioxane	< 0.30	0.30									
2,2,4-trimethylpentane	< 0.15	0.15									
4-ethyltoluene	< 0.15	0.15									
Acetone	< 0.30	0.30									
Allyl chloride	< 0.15	0.15									
Benzene	< 0.15	0.15									
Benzyl chloride	< 0.15	0.15									
Bromodichloromethane	< 0.15	0.15									
Bromoform	< 0.15	0.15									
Bromomethane	< 0.15	0.15									

Qualifiers: - Results reported are not blank corrected  
 J Analyte detected below quantitation limit  
 S Spike Recovery outside accepted recovery limits  
 E Estimated Value above quantitation range  
 NID Not Detected at the Limit of Detection  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits

**CLIENT:** FPM Group, Ltd.  
**Work Order:** C1804013  
**Project:** Cinderella

**TestCode:** 0.20\_NYS

Sample ID: AMB1UG-041018	Sample Type: MBLK	TestCode: 0.20_NYS	Units: ppbv	Prep Date:	RunNo: 13517
Client ID: ZZZZZ	Batch ID: R13517	TestNo: TO-15		Analysis Date: 4/10/2018	SeqNo: 156542

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.030	0.030									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.040	0.040									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									
Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
Isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									
Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									

**Qualifiers:**

- Results reported are not blank corrected
- J Analyte detected below quantitation limit
- S Spike Recovery outside accepted recovery limits
- E Estimated Value above quantitation range
- ND Not Detected at the Limit of Detection
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

**CLIENT:** FPM Group, Ltd.  
**Work Order:** C1804013  
**Project:** Cindereilla

**TestCode:** 0.20\_NYS

Sample ID: AMB1UG-041018    SampType: MBLK    TestCode: 0.20\_NYS    Units: ppbv    Prep Date:    RunNo: 13517  
 Client ID: ZZZZZ    Batch ID: R13517    TestNo: TO-15    Analysis Date: 4/10/2018    SeqNo: 156542

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropene	< 0.15	0.15									
Trichloroethene	< 0.030	0.030									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.040	0.040									

**Qualifiers:**

- J Results reported are not blank corrected
- S Analyte detected below quantitation limit
- S Spike Recovery outside accepted recovery limits
- E Estimated Value above quantitation range
- ND Not Detected at the Limit of Detection
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Data File : C:\HPCHEM\1\DATA\AP041006.D

Vial: 6

Acq On : 10 Apr 2018 1:20 pm

Operator: RJP

Sample : AMB1UG-041018

Inst : MSD #1

Misc : A408\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 11 07:23:00 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 09:00:44 2018

Response via : Initial Calibration

DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	32801	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.71	114	165465	1.00	ppb	0.01
50) Chlorobenzene-d5	17.46	117	130691	1.00	ppb	0.01

## System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	79487	0.88	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	88.00%

## Target Compounds

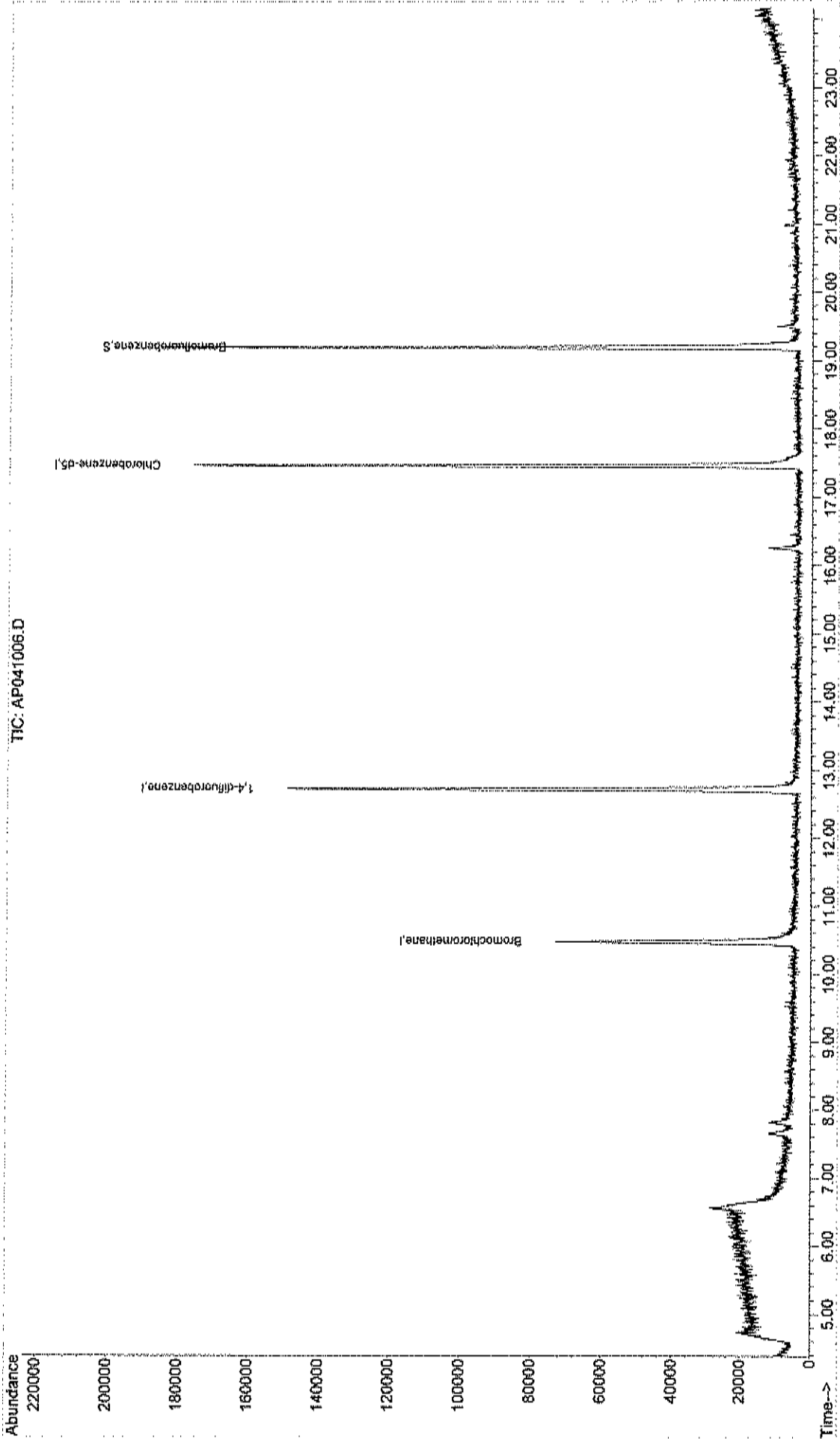
Qvalue

Data File : C:\HPCHEM\1\DATA\AP041006.D  
Acq On : 10 Apr 2018 1:20 pm  
Sample : AMBIUG-041018  
Misc : A408\_IUG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 7:23 2018

Vial: 6  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_IUG.RES

Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration



Date: 26-Apr-18

**CENTEK LABORATORIES, LLC**

**ANALYTICAL QC SUMMARY REPORT**

**CLIENT:** FPM Group, Ltd.  
**Work Order:** C1804013  
**Project:** Cinderella

**TestCode:** 0.20\_NYS

**Sample ID:** ALCS1UG-041018    **SampType:** LCS    **TestCode:** 0.20\_NYS    **Units:** ppbv    **Prep Date:**    **RunNo:** 13517  
**Client ID:** ZZZZZ    **Batch ID:** RT3517    **TestNo:** TO-15    **Analysis Date:** 4/10/2018    **SeqNo:** 156543

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.9500	0.15	1	0	95.0	70	130				
1,1,2,2-Tetrachloroethane	1.050	0.15	1	0	105	70	130				
1,1,2-Trichloroethane	1.090	0.15	1	0	109	70	130				
1,1-Dichloroethane	0.9700	0.15	1	0	97.0	70	130				
1,1-Dichloroethene	1.250	0.040	1	0	125	70	130				
1,2,4-Trichlorobenzene	1.250	0.15	1	0	125	70	130				
1,2,4-Trimethylbenzene	1.090	0.15	1	0	109	70	130				
1,2-Dibromoethane	1.030	0.15	1	0	103	70	130				
1,2-Dichlorobenzene	1.190	0.15	1	0	119	70	130				
1,2-Dichloroethane	1.030	0.15	1	0	103	70	130				
1,2-Dichloropropane	0.9400	0.15	1	0	94.0	70	130				
1,3,5-Trimethylbenzene	1.100	0.15	1	0	110	70	130				
1,3-butadiene	0.8700	0.15	1	0	87.0	70	130				
1,3-Dichlorobenzene	1.170	0.15	1	0	117	70	130				
1,4-Dichlorobenzene	1.190	0.15	1	0	119	70	130				
1,4-Dioxane	1.050	0.30	1	0	105	70	130				
2,2,4-trimethylpentane	0.8900	0.15	1	0	89.0	70	130				
4-ethyltoluene	1.130	0.15	1	0	113	70	130				
Acetone	0.8400	0.30	1	0	84.0	70	130				
Allyl chloride	0.7700	0.15	1	0	77.0	70	130				
Benzene	1.040	0.15	1	0	104	70	130				
Benzyl chloride	0.8600	0.15	1	0	86.0	70	130				
Bromodichloromethane	0.9800	0.15	1	0	98.0	70	130				
Bromoform	0.9500	0.15	1	0	95.0	70	130				
Bromomethane	1.140	0.15	1	0	114	70	130				

**Qualifiers:**    -    Results reported are not blank corrected    E    Estimated Value above quantitation range    JH    Holding times for preparation or analysis exceeded  
                          J    Analyte detected below quantitation limit    ND    Not Detected at the Limit of Detection    R    RPD outside accepted recovery limits  
                          S    Spike Recovery outside accepted recovery limits

**CLIENT:** FPM Group, Ltd.  
**Work Order:** C1804013  
**Project:** Cinderella

**TestCode:** 0.20\_NYS

Sample ID: ALCS1UG-041018    SampType: LCS    TestCode: 0.20\_NYS    Units: ppbv    Prep Date:    RunNo: 13517  
 Client ID: ZZZZ    Batch ID: R13517    TestNo: TO-15    Analysis Date: 4/10/2018    SeqNo: 156543

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	1.070	0.15	1	0	107	70	130				
Carbon tetrachloride	0.7600	0.030	1	0	76.0	70	130				
Chlorobenzene	1.120	0.15	1	0	112	70	130				
Chloroethane	1.050	0.15	1	0	105	70	130				
Chloroform	1.070	0.15	1	0	107	70	130				
Chloromethane	0.9500	0.15	1	0	95.0	70	130				
cis-1,2-Dichloroethene	0.9100	0.040	1	0	91.0	70	130				
cis-1,3-Dichloropropene	0.8800	0.15	1	0	88.0	70	130				
Cyclohexane	0.8800	0.15	1	0	88.0	70	130				
Dibromochloromethane	0.9300	0.15	1	0	93.0	70	130				
Ethyl acetate	0.7800	0.15	1	0	78.0	70	130				
Ethylbenzene	1.030	0.15	1	0	103	70	130				
Freon 11	1.220	0.15	1	0	122	70	130				
Freon 113	1.220	0.15	1	0	122	70	130				
Freon 114	1.130	0.15	1	0	113	70	130				
Freon 12	1.080	0.15	1	0	108	70	130				
Heptane	0.7400	0.15	1	0	74.0	70	130				
Hexachloro-1,3-butadiene	1.260	0.15	1	0	126	70	130				
Hexane	0.8500	0.15	1	0	85.0	70	130				
Isopropyl alcohol	0.9600	0.15	1	0	96.0	70	130				
m&p-Xylene	2.150	0.30	2	0	108	70	130				S
Methyl Butyl Ketone	0.6500	0.30	1	0	65.0	70	130				
Methyl Ethyl Ketone	1.050	0.30	1	0	105	70	130				
Methyl Isobutyl Ketone	0.7200	0.30	1	0	72.0	70	130				
Methyl tert-butyl ether	0.9500	0.15	1	0	95.0	70	130				
Methylene chloride	0.9400	0.15	1	0	94.0	70	130				
o-Xylene	1.110	0.15	1	0	111	70	130				
Propylene	0.7300	0.15	1	0	73.0	70	130				
Styrene	1.080	0.15	1	0	108	70	130				
Tetrachloroethylene	1.120	0.15	1	0	112	70	130				
Tetrahydrofuran	0.7300	0.15	1	0	73.0	70	130				

**Qualifiers:**  
 J Results reported are not blank corrected  
 S Analyte detected below quantitation limit  
 E Estimated Value above quantitation range  
 ND Not Detected at the Limit of Detection  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits



**CLIENT:** FPM Group, Ltd.  
**Work Order:** C1804013  
**Project:** Cindere/la

**TestCode:** 0.20\_NYS

Sample ID: ALCS1UG-041018	Sample Type: LCS	TestCode: 0.20_NYS	Units: ppbv	Prep Date:	RunNo: 13517
Client ID: ZZZZ	Batch ID: R13517	TestNo: TO-15		Analysis Date: 4/10/2018	SeqNo: 156543

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	1.060	0.15	1	0	106	70	130				
trans-1,2-Dichloroethene	0.9900	0.15	1	0	99.0	70	130				
trans-1,3-Dichloropropene	0.7200	0.15	1	0	72.0	70	130				
Trichloroethene	1.100	0.030	1	0	110	70	130				
Vinyl acetate	0.7200	0.15	1	0	72.0	70	130				
Vinyl Bromide	1.190	0.15	1	0	119	70	130				
Vinyl chloride	0.9500	0.040	1	0	95.0	70	130				

Sample ID: ALCS1UGD-041017	Sample Type: LCSD	TestCode: 0.20_NYS	Units: ppbv	Prep Date:	RunNo: 13517
Client ID: ZZZZ	Batch ID: R13517	TestNo: TO-15		Analysis Date: 4/11/2018	SeqNo: 156544

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.9200	0.15	1	0	92.0	70	130	0.95	3.21	30	
1,1,2,2-Tetrachloroethane	1.230	0.15	1	0	123	70	130	1.05	15.8	30	
1,1,2-Trichloroethane	1.190	0.15	1	0	119	70	130	1.09	8.77	30	
1,1-Dichloroethane	0.9700	0.15	1	0	97.0	70	130	0.97	0	30	
1,1-Dichloroethene	0.9300	0.040	1	0	93.0	70	130	1.25	29.4	30	
1,2,4-Trichlorobenzene	1.110	0.15	1	0	111	70	130	1.25	11.9	30	
1,2,4-Trimethylbenzene	1.160	0.15	1	0	116	70	130	1.09	6.22	30	
1,2-Dibromoethane	1.120	0.15	1	0	112	70	130	1.03	8.37	30	
1,2-Dichlorobenzene	1.290	0.15	1	0	129	70	130	1.19	8.05	30	
1,2-Dichloroethane	0.9700	0.15	1	0	97.0	70	130	1.03	6.00	30	
1,2-Dichloropropane	1.020	0.15	1	0	102	70	130	0.94	8.16	30	
1,3,5-Trimethylbenzene	1.230	0.15	1	0	123	70	130	1.1	11.2	30	
1,3-butadiene	0.7900	0.15	1	0	79.0	70	130	0.87	9.64	30	
1,3-Dichlorobenzene	1.250	0.15	1	0	125	70	130	1.17	6.61	30	
1,4-Dichlorobenzene	1.240	0.15	1	0	124	70	130	1.19	4.12	30	
1,4-Dioxane	1.000	0.30	1	0	100	70	130	1.05	4.88	30	
2,2,4-trimethylpentane	0.9400	0.15	1	0	94.0	70	130	0.89	5.46	30	
4-ethyltoluene	1.190	0.15	1	0	119	70	130	1.13	5.17	30	

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

**CLIENT:** FPM Group, Ltd.  
**Work Order:** CI804013  
**Project:** Cinderella

**TestCode:** 0.20\_NYS

Analyte	Result	PQL	SPK value	SPK Ref Val	Units: ppbV	TestCode: 0.20_NYS	Prep Date:		RunNo: 13517	SeqNo: 156544		
							Batch ID: R13517	Analysis Date: 4/11/2018				
							LowLimit	HightLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	0.7700	0.30	1	0			70	130	0.84	8.70	30	
Allyl chloride	0.7300	0.15	1	0			70	130	0.77	5.33	30	
Benzene	1.130	0.15	1	0			70	130	1.04	8.29	30	
Benzyl chloride	0.8300	0.15	1	0			70	130	0.86	3.55	30	
Bromodichloromethane	1.040	0.15	1	0			70	130	0.98	5.94	30	
Bromoform	1.010	0.15	1	0			70	130	0.95	6.12	30	
Bromomethane	1.070	0.15	1	0			70	130	1.14	6.33	30	
Carbon disulfide	1.060	0.15	1	0			70	130	1.07	0.939	30	
Carbon tetrachloride	0.7600	0.030	1	0			70	130	0.76	0	30	
Chlorobenzene	1.200	0.15	1	0			70	130	1.12	6.90	30	
Chloroethane	0.9800	0.15	1	0			70	130	1.05	6.90	30	
Chloroform	1.070	0.15	1	0			70	130	1.07	0	30	
Chloromethane	0.8900	0.15	1	0			70	130	0.95	6.52	30	
cis-1,2-Dichloroethene	0.8700	0.040	1	0			70	130	0.91	4.49	30	
cis-1,3-Dichloropropene	0.8900	0.15	1	0			70	130	0.88	1.13	30	
Cyclohexane	0.9000	0.15	1	0			70	130	0.88	2.25	30	
Dibromochloromethane	1.040	0.15	1	0			70	130	0.93	11.2	30	
Ethyl acetate	0.7500	0.15	1	0			70	130	0.78	3.92	30	
Ethylbenzene	1.100	0.15	1	0			70	130	1.03	6.57	30	
Freon 11	1.100	0.15	1	0			70	130	1.22	10.3	30	
Freon 113	1.220	0.15	1	0			70	130	1.22	0	30	
Freon 114	1.080	0.15	1	0			70	130	1.13	4.52	30	
Freon 12	1.090	0.15	1	0			70	130	1.08	0.922	30	
Heptane	0.7400	0.15	1	0			70	130	0.74	0	30	
Hexachloro-1,3-butadiene	1.270	0.15	1	0			70	130	1.26	0.791	30	
Hexane	0.8500	0.15	1	0			70	130	0.85	0	30	
Isopropyl alcohol	0.9200	0.15	1	0			70	130	0.96	4.26	30	
m&p-Xylene	2.320	0.30	2	0			70	130	2.15	7.61	30	
Methyl Butyl Ketone	0.5800	0.30	1	0			70	130	0.65	11.4	30	S
Methyl Ethyl Ketone	1.060	0.30	1	0			70	130	1.05	0.948	30	
Methyl Isobutyl Ketone	0.6600	0.30	1	0			70	130	0.72	8.70	30	S

**Qualifiers:**  
 J Results reported are not blank corrected  
 S Analyte detected below quantitation limit  
 E Estimated Value above quantitation range  
 ND Not Detected at the Limit of Detection  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits

**CLIENT:** FPM Group, Ltd.  
**Work Order:** C1804013  
**Project:** Cinderella

**TestCode:** 0.20\_NYS

Sample ID: ALCSTUGD-041017    SampType: LCSD    TestCode: 0.20\_NYS    Units: ppbV    Prep Date:    RunNo: 13517  
 Client ID: ZZZZ    Batch ID: R13517    TestNo: TC-15    Analysis Date: 4/11/2018    SeqNo: 156544

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.8400	0.15	1	0	84.0	70	130	0.95	12.3	30	
Methylene chloride	0.9100	0.15	1	0	91.0	70	130	0.94	3.24	30	
o-Xylene	1.230	0.15	1	0	123	70	130	1.11	10.3	30	
Propylene	0.7300	0.15	1	0	73.0	70	130	0.73	0	30	
Styrene	1.180	0.15	1	0	118	70	130	1.08	8.85	30	
Tetrachloroethylene	1.240	0.15	1	0	124	70	130	1.12	10.2	30	
Tetrahydrofuran	0.7300	0.15	1	0	73.0	70	130	0.73	0	30	
Toluene	1.120	0.15	1	0	112	70	130	1.06	5.50	30	
trans-1,2-Dichloroethene	0.9400	0.15	1	0	94.0	70	130	0.99	5.18	30	
trans-1,3-Dichloropropene	0.7500	0.15	1	0	75.0	70	130	0.72	4.08	30	
Trichloroethene	1.130	0.030	1	0	113	70	130	1.1	2.69	30	
Vinyl acetate	0.6700	0.15	1	0	67.0	70	130	0.72	7.19	30	S
Vinyl Bromide	1.110	0.15	1	0	111	70	130	1.19	6.96	30	
Vinyl chloride	0.9200	0.040	1	0	92.0	70	130	0.95	3.21	30	

**Qualifiers:**    J    Results reported are not blank corrected    E    Estimated Value above quantitation range    H    Holding times for preparation or analysis exceeded  
                   S    Analyte detected below quantitation limit    ND    Not Detected at the Limit of Detection    R    RPD outside accepted recovery limits  
                   S    Spike Recovery outside accepted recovery limits

Data File : C:\HPCHEM\1\DATA\AP041005.D

Vial: 5

Acq On : 10 Apr 2018 12:43 pm

Operator: RJP

Sample : ALCS1UG-041018

Inst : MSD #1

Misc : A408 1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 10 13:43:47 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 09:00:44 2018

Response via : Initial Calibration

DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	Qion	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	35510	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.71	114	180352	1.00	ppb	0.01
50) Chlorobenzene-d5	17.45	117	145756	1.00	ppb	0.00

## System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	98030	0.97	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	97.00%

## Target Compounds

Target Compounds	R.T.	Qion	Response	Conc	Units	Qvalue
2) Propylene	4.54	41	32193m	0.73	ppb	
3) Freon 12	4.60	85	230425	1.08	ppb	98
4) Chloromethane	4.82	50	46261	0.95	ppb	97
5) Freon 114	4.83	85	165247	1.13	ppb	92
6) Vinyl Chloride	5.03	62	44421	0.95	ppb	99
7) Butane	5.15	43	54371	0.83	ppb	92
8) 1,3-butadiene	5.15	39	38404	0.87	ppb	96
9) Bromomethane	5.52	94	54268	1.14	ppb	100
10) Chloroethane	5.72	64	19928	1.05	ppb	97
11) Ethanol	5.82	45	12709	0.91	ppb	85
12) Acrolein	6.42	56	17508m	1.00	ppb	
13) Vinyl Bromide	6.08	106	52971	1.19	ppb	99
14) Freon 11	6.37	101	207180	1.22	ppb	99
15) Acetone	6.54	58	26871	0.84	ppb	89
16) Pentane	6.66	42	34659	0.93	ppb	97
17) Isopropyl alcohol	6.66	45	58292	0.96	ppb	99
18) 1,1-dichloroethene	7.17	96	64089	1.25	ppb	91
19) Freon 113	7.38	101	142153	1.22	ppb	98
20) t-Butyl alcohol	7.40	59	116095	0.92	ppb	95
21) Methylene chloride	7.65	84	64104	0.94	ppb	88
22) Allyl chloride	7.63	41	47019m	0.77	ppb	
23) Carbon disulfide	7.82	76	123598	1.07	ppb	95
24) trans-1,2-dichloroethene	8.61	61	68228	0.99	ppb	88
25) methyl tert-butyl ether	8.63	73	163994	0.95	ppb	96
26) 1,1-dichloroethane	9.06	63	97623	0.97	ppb	99
27) Vinyl acetate	9.03	43	84438m	0.72	ppb	
28) Methyl Ethyl Ketone	9.54	72	25490	1.05	ppb	# 100
29) cis-1,2-dichloroethene	10.00	61	68822	0.91	ppb	88
30) Hexane	9.61	57	62409	0.85	ppb	94
31) Ethyl acetate	10.14	43	74958	0.78	ppb	96
32) Chloroform	10.63	83	138894	1.07	ppb	100
33) Tetrahydrofuran	10.79	42	35582	0.73	ppb	79
34) 1,2-dichloroethane	11.72	62	93481	1.03	ppb	99
36) 1,1,1-trichloroethane	11.45	97	135098	0.95	ppb	99
37) Cyclohexane	12.14	56	64263	0.88	ppb	87
38) Carbon tetrachloride	12.08	117	117989	0.76	ppb	99
39) Benzene	12.05	78	158057	1.04	ppb	97
40) Methyl methacrylate	13.56	41	46440	0.72	ppb	# 73
41) 1,4-dioxane	13.59	88	35716	1.05	ppb	90
42) 2,2,4-trimethylpentane	12.88	57	196885	0.89	ppb	99
43) Heptane	13.21	43	57530	0.74	ppb	81
44) Trichloroethene	13.34	130	77814	1.10	ppb	97
45) 1,2-dichloropropane	13.45	63	49511	0.94	ppb	99

(#)= qualifier out of range (m) = manual integration

AP041005.D A408\_1UG.M

Thu Apr 26 08:57:14 2018

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AP041005.D  
 Acq On : 10 Apr 2018 12:43 pm  
 Sample : ALCS1UG-041018  
 Misc : A408\_1UG

Vial: 5  
 Operator: RJP  
 Inst : MSD #1  
 Multiplr: 1.00

MS Integration Params: RTEINT.P  
 Quant Time: Apr 10 13:43:47 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Mon Apr 09 09:00:44 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.78	83	128347	0.98	ppb	100
47) cis-1,3-dichloropropene	14.58	75	78045	0.88	ppb	97
48) trans-1,3-dichloropropene	15.34	75	62161	0.72	ppb	95
49) 1,1,2-trichloroethane	15.67	97	65118	1.09	ppb	96
51) Toluene	15.43	92	112243	1.06	ppb	100
52) Methyl Isobutyl Ketone	14.49	43	82486m <sup>f</sup>	0.72	ppb	
53) Dibromochloromethane	16.40	129	116996	0.93	ppb	99
54) Methyl Butyl Ketone	15.83	43	72514	0.65	ppb	92
55) 1,2-dibromoethane	16.67	107	97317	1.03	ppb	98
56) Tetrachloroethylene	16.49	164	80795	1.12	ppb	98
57) Chlorobenzene	17.51	112	159991	1.12	ppb	96
58) Ethylbenzene	17.78	91	253692	1.03	ppb	99
59) m&p-xylene	17.98	91	414152	2.15	ppb	99
60) Nonane	18.37	43	81497	0.75	ppb #	83
61) Styrene	18.44	104	151628	1.08	ppb	98
62) Bromoform	18.57	173	110119	0.95	ppb	98
63) o-xylene	18.48	91	218027	1.11	ppb	99
64) Cumene	19.08	105	288104	1.08	ppb	99
66) 1,1,2,2-tetrachloroethane	18.95	83	132714	1.05	ppb	98
67) Propylbenzene	19.66	120	78185	1.10	ppb	95
68) 2-Chlorotoluene	19.71	126	74144	1.14	ppb #	89
69) 4-ethyltoluene	19.84	105	297545	1.13	ppb	99
70) 1,3,5-trimethylbenzene	19.90	105	247732	1.10	ppb	99
71) 1,2,4-trimethylbenzene	20.39	105	238546	1.09	ppb	98
72) 1,3-dichlorobenzene	20.72	146	156153	1.17	ppb	99
73) benzyl chloride	20.80	91	149431m <sup>f</sup>	0.86	ppb	
74) 1,4-dichlorobenzene	20.88	146	153362	1.19	ppb	98
75) 1,2,3-trimethylbenzene	20.92	105	227563	1.12	ppb	97
76) 1,2-dichlorobenzene	21.23	146	149553	1.19	ppb	99
77) 1,2,4-trichlorobenzene	23.35	180	73624	1.25	ppb	97
78) Naphthalene	23.56	128	164199	1.01	ppb	100
79) Hexachloro-1,3-butadiene	23.69	225	134830	1.26	ppb	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed  
 AP041005.D A408\_1UG.M Thu Apr 26 08:57:14 2018 MSD1

Quantitation Report (QT Reviewed)

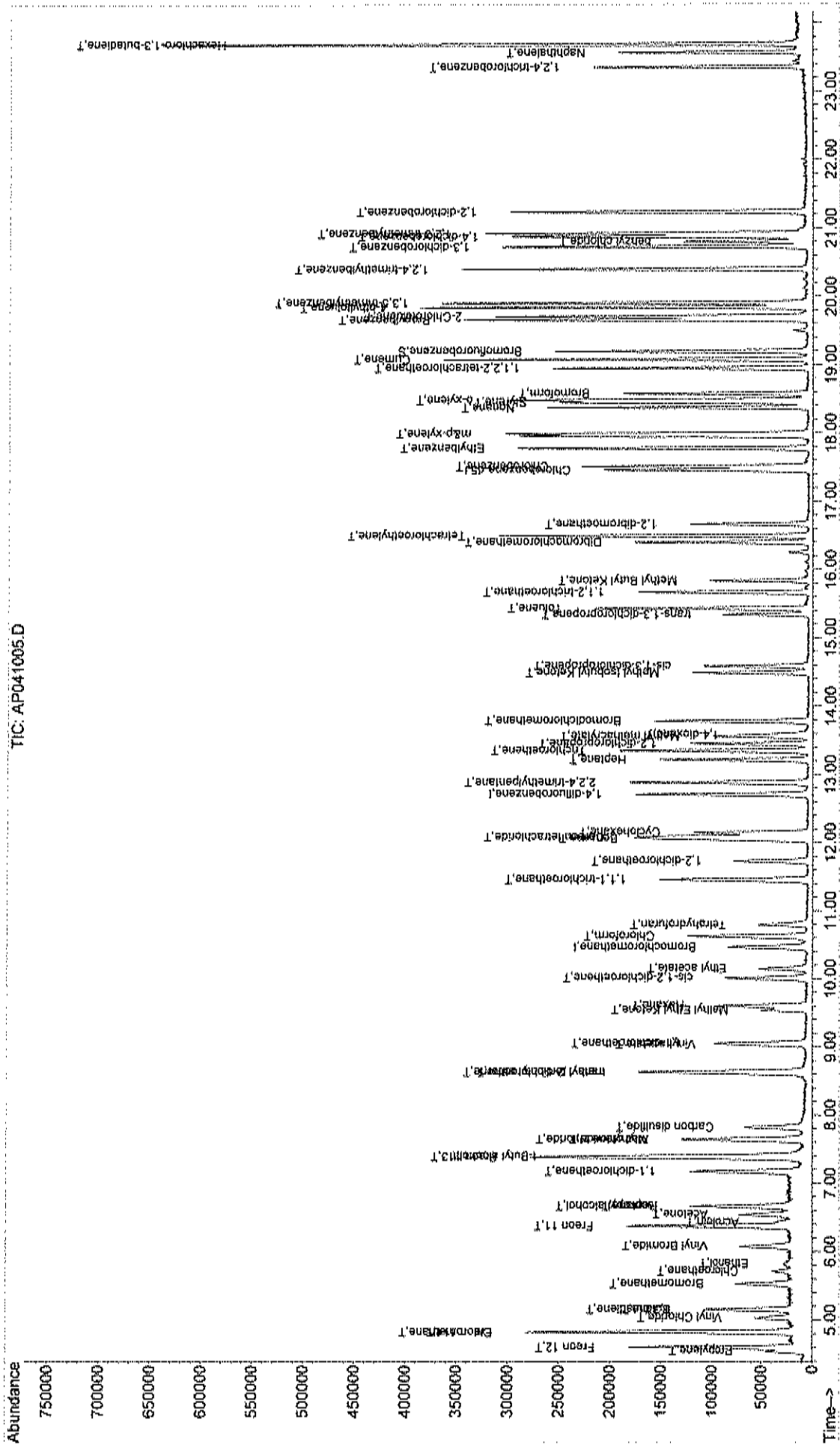
Data File : C:\HPCHEM\1\DATA\AP041005.D  
Acq On : 10 Apr 2018 12:43 pm  
Sample : ALC5IUG-041018  
Misc : A408 IUG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 7:22 2018

Vial: 5  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_IUG.RBS

Method : C:\HPCHEM\1\METHODS\A408\_IUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration

TIC: AP041005.D



Data File : C:\HPCHEM\1\DATA\AP041022.D

Vial: 10

Acq On : 11 Apr 2018 1:34 am

Operator: RJP

Sample : ALCS1UGD-041017

Inst : MSD #1

Misc : A408\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 11 07:23:16 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 09:00:44 2018

Response via : Initial Calibration

DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	Qion	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	41170	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.70	114	196782	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	153210	1.00	ppb	0.00

## System Monitoring Compounds

65) Bromofluorobenzene	19.19	95	111425	1.05	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	105.00%

## Target Compounds

Target Compounds	R.T.	Qion	Response	Conc	Units	Qvalue
2) Propylene	4.55	41	37300	0.73	ppb	98
3) Freon 12	4.60	85	267811	1.09	ppb	99
4) Chloromethane	4.82	50	50503	0.89	ppb	97
5) Freon 114	4.83	85	183144	1.08	ppb	94
6) Vinyl Chloride	5.04	62	49662	0.92	ppb	99
7) Butane	5.15	43	63229	0.83	ppb	99
8) 1,3-butadiene	5.15	39	40568	0.79	ppb	90
9) Bromomethane	5.53	94	58968	1.07	ppb	99
10) Chloroethane	5.72	64	21624	0.98	ppb	99
11) Ethanol	5.82	45	16940	1.05	ppb	91
12) Acrolein	6.44	56	16404	0.81	ppb	97
13) Vinyl Bromide	6.08	106	57511	1.11	ppb	100
14) Freon 11	6.37	101	216791	1.10	ppb	99
15) Acetone	6.53	58	28551	0.77	ppb	# 81
16) Pentane	6.66	42	37020	0.86	ppb	99
17) Isopropyl alcohol	6.65	45	64223	0.92	ppb	100
18) 1,1-dichloroethene	7.17	96	55368	0.93	ppb	96
19) Freon 113	7.37	101	165655	1.22	ppb	98
20) t-Butyl alcohol	7.41	59	104115	0.71	ppb	98
21) Methylene chloride	7.64	84	71969	0.91	ppb	88
22) Allyl chloride	7.63	41	51411m <sup>f</sup>	0.73	ppb	
23) Carbon disulfide	7.82	76	141525	1.06	ppb	96
24) trans-1,2-dichloroethene	8.61	61	75147	0.94	ppb	86
25) methyl tert-butyl ether	8.63	73	166711	0.84	ppb	99
26) 1,1-dichloroethane	9.05	63	112979	0.97	ppb	99
27) Vinyl acetate	9.03	43	90670m <sup>f</sup>	0.67	ppb	
28) Methyl Ethyl Ketone	9.54	72	29796	1.06	ppb	# 100
29) cis-1,2-dichloroethene	10.01	61	76595	0.87	ppb	86
30) Hexane	9.60	57	72170	0.85	ppb	89
31) Ethyl acetate	10.15	43	83121	0.75	ppb	95
32) Chloroform	10.62	83	160499	1.07	ppb	99
33) Tetrahydrofuran	10.79	42	41302m <sup>f</sup>	0.73	ppb	
34) 1,2-dichloroethane	11.73	62	102059	0.97	ppb	99
36) 1,1,1-trichloroethane	11.45	97	142336	0.92	ppb	99
37) Cyclohexane	12.14	56	71267	0.90	ppb	87
38) Carbon tetrachloride	12.08	117	128580	0.76	ppb	98
39) Benzene	12.04	78	187431	1.13	ppb	97
40) Methyl methacrylate	13.56	41	49583	0.70	ppb	# 65
41) 1,4-dioxane	13.59	88	37191	1.00	ppb	91
42) 2,2,4-trimethylpentane	12.88	57	227063	0.94	ppb	97
43) Heptane	13.21	43	62152	0.74	ppb	# 76
44) Trichloroethene	13.34	130	87795	1.13	ppb	98
45) 1,2-dichloropropane	13.45	63	59098	1.02	ppb	98

(#)= qualifier out of range (m) = manual integration

AP041022.D A408\_1UG.M

Thu Apr 26 08:57:21 2018

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AP041022.D

Vial: 10

Acq On : 11 Apr 2018 1:34 am

Operator: RJP

Sample : ALCS1UGD-041017

Inst : MSD #1

Misc : A408\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 11 07:23:16 2018

Quant Results File: A408\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Apr 09 09:00:44 2018

Response via : Initial Calibration

DataAcq Meth : 1UG\_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.78	83	148478	1.04	ppb	99
47) cis-1,3-dichloropropene	14.58	75	86257	0.89	ppb	97
48) trans-1,3-dichloropropene	15.34	75	70357m <sup>#</sup>	0.75	ppb	
49) 1,1,2-trichloroethane	15.66	97	77485	1.19	ppb	98
51) Toluene	15.42	92	123993	1.12	ppb	98
52) Methyl Isobutyl Ketone	14.48	43	79203m <sup>#</sup>	0.66	ppb	
53) Dibromochloromethane	16.40	129	137110	1.04	ppb	99
54) Methyl Butyl Ketone	15.83	43	67838	0.58	ppb	84
55) 1,2-dibromoethane	16.66	107	111425	1.12	ppb	100
56) Tetrachloroethylene	16.49	164	93609	1.24	ppb	100
57) Chlorobenzene	17.51	112	179121	1.20	ppb	95
58) Ethylbenzene	17.77	91	286330	1.10	ppb	99
59) m&p-xylene	17.99	91	470152	2.32	ppb	99
60) Nonane	18.37	43	94149	0.82	ppb	# 81
61) Styrene	18.44	104	173440	1.18	ppb	97
62) Bromoform	18.57	173	122718	1.01	ppb	99
63) o-xylene	18.48	91	254295	1.23	ppb	98
64) Cumene	19.07	105	325497	1.16	ppb	100
66) 1,1,2,2-tetrachloroethane	18.94	83	162541	1.23	ppb	100
67) Propylbenzene	19.65	120	87575	1.18	ppb	98
68) 2-Chlorotoluene	19.70	126	85715	1.25	ppb	92
69) 4-ethyltoluene	19.83	105	330614	1.19	ppb	98
70) 1,3,5-trimethylbenzene	19.90	105	291650	1.23	ppb	99
71) 1,2,4-trimethylbenzene	20.39	105	266639	1.16	ppb	98
72) 1,3-dichlorobenzene	20.72	146	175693	1.25	ppb	99
73) benzyl chloride	20.80	91	151762m <sup>#</sup>	0.83	ppb	
74) 1,4-dichlorobenzene	20.87	146	168491	1.24	ppb	99
75) 1,2,3-trimethylbenzene	20.91	105	268016	1.25	ppb	99
76) 1,2-dichlorobenzene	21.23	146	170823	1.29	ppb	99
77) 1,2,4-trichlorobenzene	23.35	180	68845	1.11	ppb	99
78) Naphthalene	23.56	128	150015	0.87	ppb	99
79) Hexachloro-1,3-butadiene	23.69	225	142864	1.27	ppb	97

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

AP041022.D A408\_1UG.M

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MSD1

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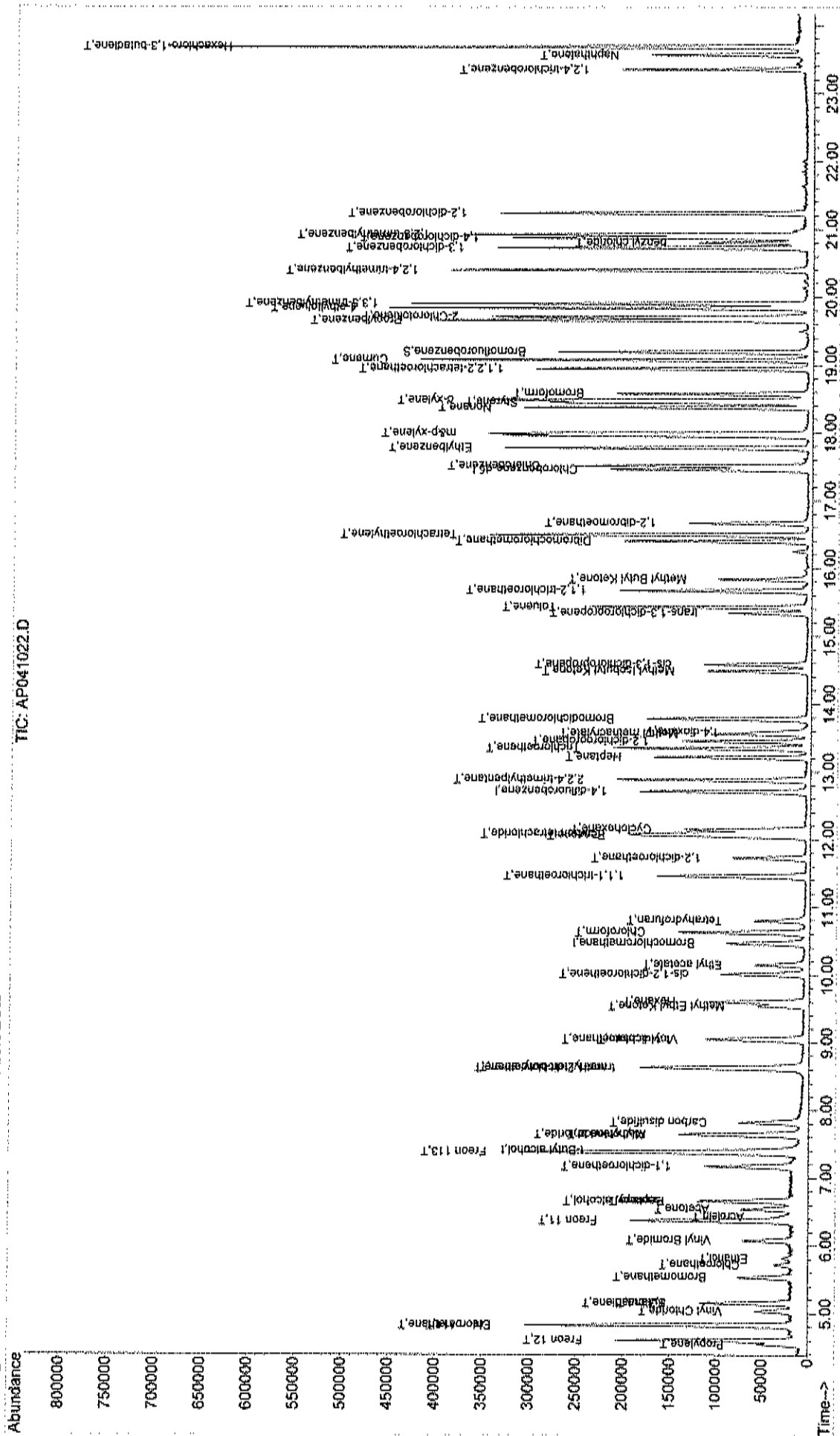
Data File : C:\HPCHEM\1\DATA\AP041022.D  
Acq On : 11 Apr 2018 1:34 am  
Sample : ALCS1UGD-041017  
Misc : A408\_1UG  
MS Integration Params: RTEINT.P  
Quant Time: Apr 11 12:31 2018

Vial: 10  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A408\_1UG.RES

Method : C:\HPCHEM\1\METHODS\A408\_1UG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Mon Apr 09 09:00:44 2018  
Response via : Initial Calibration

TIC: AP041022.D



**GC/MS VOLATILES-WHOLE AIR**

**METHOD TO-15**

**INJECTION LOG**

## Injection Log

Directory: C:\HPCHEM1\DATA

 Instrument # 1  
 Internal Standard Stock # A2485  
 Standard Stock # A2486  
 LCS Stock # A2487  
 Method Ref: EPA TO-15 / Jan 1999  
 Injected

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Ref: EPA TO-15 / Jan 1999	Injected
221	33	Ap040710.d	1.	C1804012	A318_1UG -004A 5X		7 Apr 2018 16:36
222	34	Ap040711.d	1.	C1804012-005A 9X	A318_1UG		7 Apr 2018 17:16
223	35	Ap040712.d	1.	C1804012-005A 90X	A318_1UG		7 Apr 2018 17:53
224	36	Ap040713.d	1.	C1804012	A318_1UG -005A 180X		7 Apr 2018 18:35
225	37	Ap040714.d	1.	ALCS1UGD-040718	A318_1UG		7 Apr 2018 19:14
226	38	Ap040715.d	1.	C1804012	A318_1UG -005A 180X		7 Apr 2018 19:51
227		Ap040716.d	1.	No MS or GC data present			
228	2	Ap040801.d	1.	BFB1UG	A408_1UG		8 Apr 2018 20:51
229	3	Ap040802.d	1.	BFB1UG	A408_1UG		8 Apr 2018 21:28
230	1	Ap040803.d	1.	A1UG	A408_1UG		8 Apr 2018 22:14
231	2	Ap040804.d	1.	A1UG	A408_1UG		8 Apr 2018 22:53
232	3	Ap040805.d	1.	A1UG_2.0	A408_1UG		8 Apr 2018 23:36
233	4	Ap040806.d	1.	A1UG_1.50	A408_1UG		9 Apr 2018 00:17
234	5	Ap040807.d	1.	A1UG_1.25	A408_1UG		9 Apr 2018 00:58
235	6	Ap040808.d	1.	A1UG_1.0	A408_1UG		9 Apr 2018 01:37
236	7	Ap040809.d	1.	A1UG_0.75	A408_1UG		9 Apr 2018 02:16
237	8	Ap040810.d	1.	A1UG_0.50	A408_1UG		9 Apr 2018 02:54
238	9	Ap040811.d	1.	A1UG_0.30	A408_1UG		9 Apr 2018 03:31
239	10	Ap040812.d	1.	A1UG_0.15	A408_1UG		9 Apr 2018 04:08
240	11	Ap040813.d	1.	A1UG_0.10	A408_1UG		9 Apr 2018 04:44
241	12	Ap040814.d	1.	A1UG_0.04	A408_1UG		9 Apr 2018 05:20
242	13	Ap040815.d	1.	A1UG_0.03	A408_1UG		9 Apr 2018 05:57
243		Ap040816.d	1.	No MS or GC data present			
244	1	Ap040901.d	1.	BFB1UG	A408_1UG		9 Apr 2018 09:07
245	2	Ap040902.d	1.	A1UG_1.0	A408_1UG		9 Apr 2018 11:23
246	3	Ap040903.d	1.	ALCS1UG-040917	A408_1UG		9 Apr 2018 12:06
247	4	Ap040904.d	1.	AMB1UG-040917	A408_1UG		9 Apr 2018 12:43
248	5	Ap040905.d	1.	IDL #1 0.15ppb	A408_1UG		9 Apr 2018 13:46
249	6	Ap040906.d	1.	IDL #1 0.1ppb	A408_1UG		9 Apr 2018 14:23
250	7	Ap040907.d	1.	C1804014-001A	A408_1UG		9 Apr 2018 16:56
251	8	Ap040908.d	1.	C1804014-002A	A408_1UG		9 Apr 2018 17:37
252	9	Ap040909.d	1.	blk	A408_1UG		9 Apr 2018 21:09
253	10	Ap040910.d	1.	IDL#1 0.30ppb	A408_1UG		10 Apr 2018 06:48
254	11	Ap040911.d	1.	C1804015-001A	A408_1UG		10 Apr 2018 07:33
255	12	Ap040912.d	1.	C1804015-001A 10x	A408_1UG		10 Apr 2018 08:10
256	13	Ap040913.d	1.	C1804015-001A 270x	A408_1UG		10 Apr 2018 08:47
257		Ap040914.d	1.	No MS or GC data present			
258	1	Ap041001.d	1.	BFB1UG	A408_1UG		10 Apr 2018 09:33
259	2	Ap041002.d	1.	A1UG	A408_1UG		10 Apr 2018 10:32
260	3	Ap041003.d	1.	A1UG	A408_1UG		10 Apr 2018 11:12
261	4	Ap041004.d	1.	A1UG_1.0	A408_1UG		10 Apr 2018 11:52
262	5	Ap041005.d	1.	ALCS1UG-041018	A408_1UG		10 Apr 2018 12:43
263	6	Ap041006.d	1.	AMB1UG-041018	A408_1UG		10 Apr 2018 13:20
264	21	Ap041007.d	1.	WAC041018A	A408_1UG		10 Apr 2018 15:29
265	22	Ap041008.d	1.	WAC041018B	A408_1UG		10 Apr 2018 16:07
266	23	Ap041009.d	1.	WAC041018C	A408_1UG		10 Apr 2018 16:45
267	24	Ap041010.d	1.	WAC041018D	A408_1UG		10 Apr 2018 17:23
268	25	Ap041011.d	1.	WAC041018E	A408_1UG		10 Apr 2018 18:01
269	26	Ap041012.d	1.	WAC041018F	A408_1UG		10 Apr 2018 18:39
270	1	Ap041013.d	1.	C1804013-001A	A408_1UG		10 Apr 2018 19:21
271	2	Ap041014.d	1.	C1804013-002A	A408_1UG		10 Apr 2018 20:04
272	3	Ap041015.d	1.	C1804013-003A	A408_1UG		10 Apr 2018 20:46
273	4	Ap041016.d	1.	C1804013-004A	A408_1UG		10 Apr 2018 21:29
274	5	Ap041017.d	1.	C1804013-005A	A408_1UG		10 Apr 2018 22:11
275	6	Ap041018.d	1.	C1804013-006A	A408_1UG		10 Apr 2018 22:54

## Injection Log

Directory: C:\HPCHEM\1\DATA

 Instrument # 1  
 Internal Standard Stock # A2457  
 Standard Stock # A2498  
 LCS Stock # A2498  
 Method Ref: EPA TO-15/Jan. 1999

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Time
276	7	Ap041019.d	1.	C1804013-007A 10X	A408_1UG	10 Apr 2018 23:31
277	8	Ap041020.d	1.	C1804017-001A	A408_1UG	11 Apr 2018 00:12
278	9	Ap041021.d	1.	C1804017-002A	A408_1UG	11 Apr 2018 00:54
279	10	Ap041022.d	1.	ALCS1UGD-041017	A408_1UG	11 Apr 2018 01:34
280	11	Ap041023.d	1.	C1804013-001A 10X	A408_1UG	11 Apr 2018 02:11
281	12	Ap041024.d	1.	C1804013-001A 40X	A408_1UG	11 Apr 2018 02:47
282	13	Ap041025.d	1.	C1804013-002A 10X	A408_1UG	11 Apr 2018 03:25
283	14	Ap041026.d	1.	C1804013-002A 40X	A408_1UG	11 Apr 2018 04:02
284	14	Ap041027.d	1.	C1804013	A408_1UG -003A 10X	11 Apr 2018 04:39
285	17	Ap041028.d	1.	C1804013-006A 10X	A408_1UG	11 Apr 2018 05:17
286	18	Ap041029.d	1.	C1804017-001A 10X	A408_1UG	11 Apr 2018 05:54
287	20	Ap041030.d	1.	C1804017-002A 10X	A408_1UG	11 Apr 2018 06:31
288	21	Ap041031.d	1.	C1804013-007A	A408_1UG	11 Apr 2018 07:12
289	22	Ap041032.d	1.	C1804013-007A 270x	A408_1UG	11 Apr 2018 07:49
290		Ap041033.d	1.	No MS or GC data present		
291	1	Ap041101.d	1.	BFB1UG	A408_1UG	11 Apr 2018 08:36
292	2	Ap041102.d	1.	A1UG	A408_1UG	11 Apr 2018 09:20
293	3	Ap041103.d	1.	A1UG_1.0	A408_1UG	11 Apr 2018 10:00
294	4	Ap041104.d	1.	ALCS1UG-041118	A408_1UG	11 Apr 2018 10:41
295	5	Ap041105.d	1.	AMB1UG-041118	A408_1UG	11 Apr 2018 11:18
296	6	Ap041106.d	1.	WAC041118A	A408_1UG	11 Apr 2018 11:55
297	7	Ap041107.d	1.	WAC041118B	A408_1UG	11 Apr 2018 12:33
298	21	Ap041108.d	1.	C1804016-005A	A408_1UG	11 Apr 2018 13:14
299	22	Ap041109.d	1.	C1804016-001A	A408_1UG	11 Apr 2018 13:54
300	23	Ap041110.d	1.	C1804016-002A	A408_1UG	11 Apr 2018 14:35
301	24	Ap041111.d	1.	C1804016-003A	A408_1UG	11 Apr 2018 15:15
302	25	Ap041112.d	1.	C1804016-004A	A408_1UG	11 Apr 2018 15:57
303	26	Ap041113.d	1.	C1804016-005A 10X	A408_1UG	11 Apr 2018 16:34
304	27	Ap041114.d	1.	C1804016-001A 10X	A408_1UG	11 Apr 2018 17:11
305	28	Ap041115.d	1.	C1804016-001A 40X	A408_1UG	11 Apr 2018 17:48
306	29	Ap041116.d	1.	C1804016-002A 10X	A408_1UG	11 Apr 2018 18:26
307	30	Ap041117.d	1.	C1804016-002A 40X	A408_1UG	11 Apr 2018 19:03
308	31	Ap041118.d	1.	C1804016-003A 10X	A408_1UG	11 Apr 2018 19:40
309	32	Ap041119.d	1.	C1804016-003A 40X	A408_1UG	11 Apr 2018 20:17
310	33	Ap041120.d	1.	C1804016-004A 20X	A408_1UG	11 Apr 2018 20:55
311	35	Ap041121.d	1.	ALCS1UGD-041118	A408_1UG	11 Apr 2018 21:52
312	36	Ap041122.d	1.	C1804016-001A 540X	A408_1UG	11 Apr 2018 22:29
313	37	Ap041123.d	1.	C1804016-002A 2430X	A408_1UG	11 Apr 2018 23:06
314	38	Ap041124.d	1.	C1804016-003A 7290X	A408_1UG	11 Apr 2018 23:43
315	39	Ap041125.d	1.	C1804016	A408_1UG -003A 14...	12 Apr 2018 00:20
316	40	Ap041126.d	1.	C1804016-004A 810X	A408_1UG	12 Apr 2018 00:57
317	41	Ap041127.d	1.		A408_1UG	12 Apr 2018 06:49
318	1	Ap041201.d	1.	BFB1UG	A408_1UG	12 Apr 2018 08:34
319	2	Ap041202.d	1.	A1UG_2.0	A412_1UG	12 Apr 2018 09:54
320	3	Ap041203.d	1.	A1UG_1.0	A412_1UG	12 Apr 2018 10:34
321	1	Ap041204.d	1.	A1UG_1.5	A412_1UG	12 Apr 2018 11:16
322	2	Ap041205.d	1.	A1UG_1.25	A412_1UG	12 Apr 2018 11:57
323	3	Ap041206.d	1.	A1UG_0.75	A412_1UG	12 Apr 2018 12:36
324	4	Ap041207.d	1.	A1UG_0.50	A412_1UG	12 Apr 2018 13:14
325	5	Ap041208.d	1.	A1UG_0.30	A412_1UG	12 Apr 2018 13:51
326	6	Ap041209.d	1.	A1UG_0.15	A412_1UG	12 Apr 2018 14:32
327	7	Ap041210.d	1.	A1UG_0.10	A412_1UG	12 Apr 2018 15:09
328	8	Ap041211.d	1.	A1UG_0.04	A412_1UG	12 Apr 2018 15:46
329	9	Ap041212.d	1.	A1UG_0.03	A412_1UG	12 Apr 2018 16:23
330	1	Ap041213.d	1.	ALCS1UG-041218	A412_1UG	12 Apr 2018 17:18

**GC/MS VOLATILES-WHOLE AIR**

**METHOD TO-15**

**STANDARDS LOG**

Centek Laboratories, LLC

GC/MS Calibration Standards Logbook

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-2311	12/08/17	12/15/17	TO15 SULF	A0270	1 ppm	1.5	30	50	Z.Z.	
A-2312			H2S	A0269	10 ppm	↓	↓	500		
A-2313			TO15 IUG IS	A2304	50 ppb	0.9	45	1.0		
A-2314			STD	A2305	↓	↓	↓	↓		
A-2315			LCS	A2306	↓	↓	↓	↓		
A-2316	12/04/17	12/04/18	TO15 IS	FF-8482	LINDE	2000 psig	16	PPM	Z.Z.	
A-2317	12/13/17	12/12/18	STOCK TO15 STD	FF-47281	LINDE	2200 psig	16	PPM	Z.Z.	
A-2318	12/18/17	12/18/18	TO15 LCS	A1807	1 ppm	A1807	STD IS NOW	LCS	Z.Z.	
A-2319	12/16/17	12/21/17	TO15 IS	A2316	1 ppm	1.5	30	50	M	
A-2320			STD	A2317	↓	↓	↓	↓		
A-2321			LCS	A2318	↓	↓	↓	↓		
A-2322			4 PCA	9519	1 ppm	1.5	↓	50		
A-2323			4 PCA	A2322	50 ppb	3.0	↓	5		
A-2324			FORM	A0974	11.5 ppm	0.20	45	50		
A-2325			SILOX	A1018/208	500 ppb	3.0	30	↓		
A-2326			SULF	A1018/208	1 ppm	1.5	↓	↓		
A-2327			H2S	A0269	10 ppm	↓	↓	500		
A-2328			TO15 IUG IS	A2315	50 ppb	0.9	45	1.0		
A-2329			STD	A2320	↓	↓	↓	↓		
A-2330			LCS	A2321	↓	↓	↓	↓		
A-2331			M							

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psia)	Final Conc (ppb)	Prep by	Chkd
A-2457	3/20/18	3/27/18	TO15 FOLM	A2331	11.9 ppm	0.19	45	50	WD	
A-2458			SILOX	<del>A1088</del> A1089	500ppb	3.0	30	50		
A-2459			SOLF	A0270	1ppm	1.5	30	50		
A-2460			H2S	A0269	10 ppm	1.5	30	500		
A-2461			TO15 IUG IS	A2452	50 ppb	0.9	45	1		
A-2462			STD	A2453						
A-2463			LCS	A2454						
A-2464	3/27/18	4/3/18	TO15 IS	A246	1ppm	1.5	30	50	WD	
A-2465			STD	A2317						
A-2466			LCS	A2318						
A-2467			4PCH	9519						
A-2468			4PCHS	A2467	50 ppb	3.0	30	5		
A-2469			FOLM	A2331	11.9 ppm	0.19	45	50		
A-2470			SILOX	<del>A1088</del> A1089	500ppb	3.0	30	50		
A-2471			SOLF	A0270	1ppm	1.5	30	50		
A-2472			H2S	A0269	10 ppm	1.5	30	500		
A-2473			TO15 IUG IS	A2464	50 ppb	0.9	45	1		
A-2474			STD	A2465						
A-2475			LCS	A2466						
A-2476	4/13/18	4/10/18	TO15 IS	A2316	1ppm	1.5	30	50	WD	
A-2477			STD	A2317						

GC/MS Calibration Standards Logbook

Centek Laboratories, LLC

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-2478	4/3/18	4/10/18	TO15 LCS	A2318	1 ppm	1.5	30	50	WJD	
A-2479			4PCH	9519	↓	↓	↓	↓		
A-2480			4PCHS	A2479	50 ppb	3.0	30	5		
A-2481			FORM	A2331	119 ppm	0.19	45	50		
A-2482			SULOX	<del>A1088</del> A1089	500 ppb	3.0	30	50		
A-2483			SULF	A0270	11 ppm	1.5	30	50		
A-2484			H2S	A0269	10 ppm	1.5	30	500		
A-2485			TO15 IUG IS	A2476	50 ppb	0.9	45	1		
A-2486			STD	A2477	↓	↓	↓	↓		
A-2487			LCS	A2478	↓	↓	↓	↓		
A-2488	4/10/18	4/17/18	TO15 IS	A2316	1 ppm	1.5	30	50	ZZL	
A-2489			STD	A2317	↓	↓	↓	↓		
A-2490			LCS	A2318	↓	↓	↓	↓		
A-2491			4PCH	9519	↓	↓	↓	↓		
A-2492			4PCHS	A2491	50 ppb	3.0	↓	5		
A-2493			FORM	A2331	119 ppm	0.19	45	50		
A-2494			STLX	<del>A1088</del> A1089	500 ppb	3.0	30	50		
A-2495			SULF	A0270	1 ppm	1.5	↓	↓		
A-2496			H2S	A0269	10 ppm	↓	↓	500		
A-2497			TO15 WIGTS	A2488	50 ppb	0.9	45	1		
A-2498			STD	A2489	↓	↓	↓	↓		



Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psia)	Final Conc (ppb)	Prep by	Chk
A-2499	4/10/18	4/17/18	TO15 IUG LCS	A2490	50 ppb	0.9	45	1	LL	
A-2500	4/17/18	4/24/18	TO15 IS	A2316	1 ppm	1.5	30	50		
A-2501			STD	A2317						
A-2502			LCS	A2318						
A-2503			4PCH	9519						
A-2504			4PCH	A2503	50 ppb	3.0		5		
A-2505			FORM	A2331	11.9 ppm	0.19	45	50		
A-2506			SILOX	A1088 A1089	500 ppb	3.0	30	50		
A-2507			SULF	A0270	1 ppm	1.5	30	50		
A-2508			H2S	A0269	10 ppm	1.5	30	500		
A-2509			TO15 IUG IS	A2500	50 ppb	0.9	45	1		
A-2510			STD	A2501						
A-2511			LCS	A2502						
A-2512	4/24/18	5/1/18	TO15 IS	A2316	1 ppm	1.5	30	50		
A-2513			STD	A2317						
A-2514			LCS	A2318						
A-2515			4PCH	9519						
A-2516			4PCH	A2515	50 ppb	3.0	30	5		
A-2517			FORM	A2331	11.9 ppm	0.19	45	50		
A-2518			SILOX	A1088 A1089	500 ppb	3.0	30	50		
A-2519			SULF	A0270	1 ppm	1.5	30	50		

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

CANISTER CLEANING LOG

**Centek Laboratories, LLC**

Instrument: Entech 3100

**QC Canister Cleaning Logbook**

Canister Number	Canister Size	QC Can Number	# of Cycles	Int & Date Cleaned	QC Batch Number	Detection Limits	Leak Test 24hr Int & Date
1191	1L	1173	20	3/22/18	WAC032218C	1ug/m <sup>3</sup> to 20	+30 3/22
288							+30
320							+30
368							+30
1173							+30
243		564			WAC032218D		+30
207							+30
1317							+30
422							+30
564		365					+30
131		365					+30
88					WAC032218E		+30
133							+30
1186							+30
365							+30
89		290					+30
539					WAC032218F		+30
287							+30
188							+30
290							+30
170		1181					+30
92					WAC032218G		+30
324							+30
189							+30
1181							+30
							+30

Data File : C:\HPCHEM\1\DATA2\2018MAR\AP032208.D

Vial: 1

Acq On : 22 Mar 2018 3:58 pm

Operator: RJP

Sample : WAC032218C

Inst : MSD #1

Misc : A318\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 22 21:35:01 2018

Quant Results File: A318\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A318\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Mar 21 12:56:38 2018

Response via : Initial Calibration

DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.49	128	41126	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.73	114	157554	1.00	ppb	0.00
50) Chlorobenzene-d5	17.48	117	101760	1.00	ppb	0.00

## System Monitoring Compounds

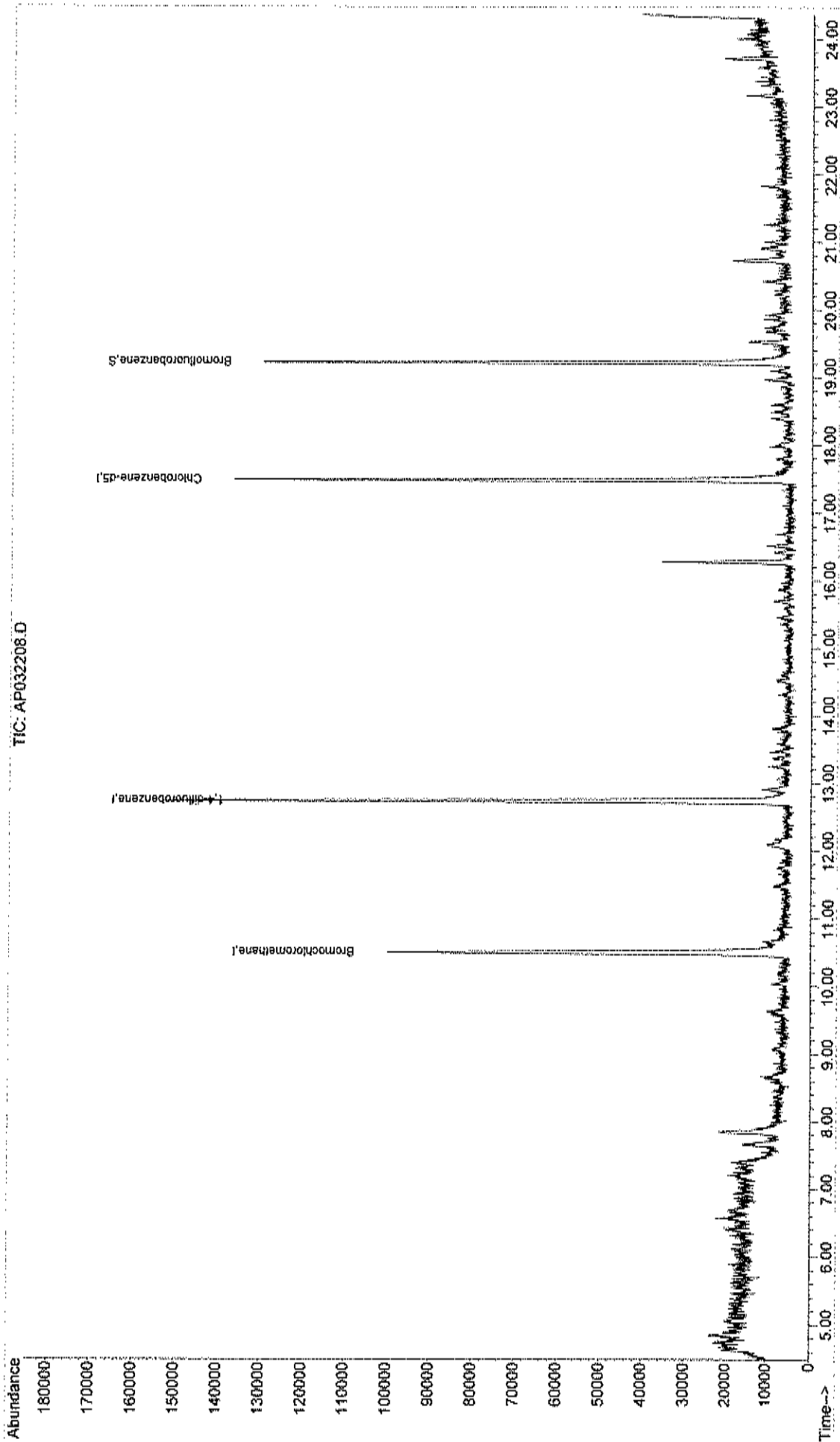
65) Bromofluorobenzene	19.22	95	53241	0.76	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	76.00%

Target Compounds

Qvalue

Data File : C:\HPCHEM\1\DATA2\2018MAR\AP032208.D  
Acq On : 22 Mar 2018 3:58 pm Vial: 1  
Sample : WAC032218C Operator: RJP  
Misc : A318\_IUG Inst : MSD #1  
MS Integration Params: RTEINT.P Multiplr: 1.00  
Quant Time: Mar 22 21:35 2018 Quant Results File: A318\_IUG.RES

Method : C:\HPCHEM\1\METHODS\A318\_IUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Wed Mar 21 12:56:38 2018  
Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA2\2018MAR\AP032209.D Vial: 2  
 Acq On : 22 Mar 2018 4:36 pm Operator: RJP  
 Sample : WAC032218D Inst : MSD #1  
 Misc : A318\_1UG Multiplr: 1.00  
 MS Integration Params: RTEINT.P  
 Quant Time: Mar 22 21:35:02 2018 Quant Results File: A318\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A318\_1UG.M (RTE Integrator)  
 Title : TO-15 VOA Standards for 5 point calibration  
 Last Update : Wed Mar 21 12:56:38 2018  
 Response via : Initial Calibration  
 DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.51	128	39278	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.73	114	147860	1.00	ppb	0.00
50) Chlorobenzene-d5	17.48	117	97975	1.00	ppb	0.00

System Monitoring Compounds

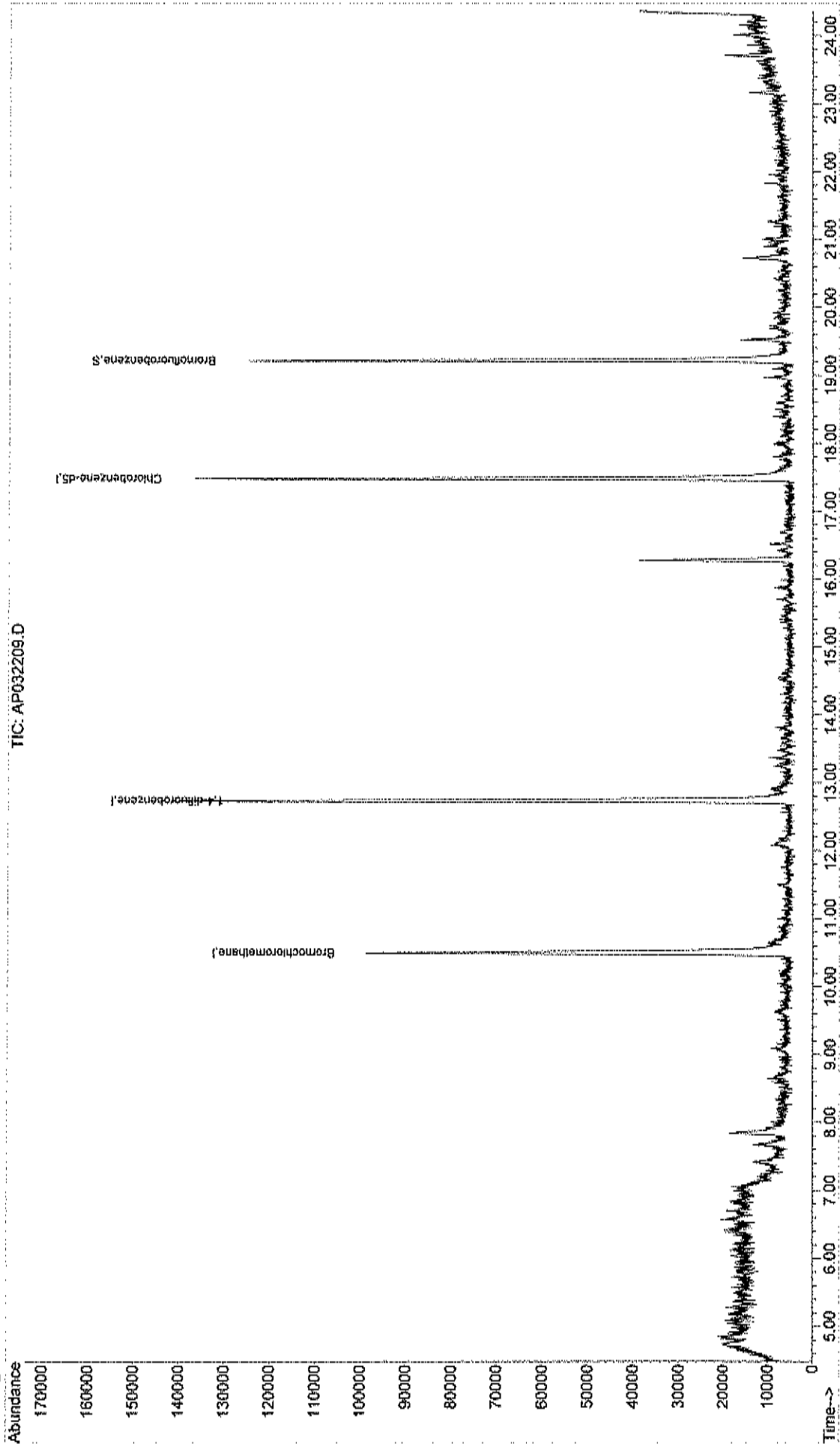
65) Bromofluorobenzene	19.21	95	47912m <sup>g</sup>	0.71	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	71.00%

Target Compounds Qvalue

Data File : C:\HPCHEM\1\DATA2\2018MAR\AP032209.D Vial: 2  
Acq On : 22 Mar 2018 4:36 pm Operator: RJP  
Sample : WAC032218D Inst : MSD #1  
Misc : A318 IUG Multiplr: 1.00  
MS Integration Params: RTEINT.P  
Quant Time: Mar 26 10:00 2018 Quant Results File: A318\_IUG.RES

Method : C:\HPCHEM\1\METHODS\A318\_IUG.M (RTE Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Wed Mar 21 12:56:38 2018  
Response via : Initial Calibration

Abundance TIC: AP032209.D



Data File : C:\HPCHEM\1\DATA2\2018MAR\AP032210.D

Vial: 3

Acq On : 22 Mar 2018 5:13 pm

Operator: RJP

Sample : WAC032218E

Inst : MSD #1

Misc : A318\_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 22 21:35:03 2018

Quant Results File: A318\_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A318\_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Mar 21 12:56:38 2018

Response via : Initial Calibration

DataAcq Meth : 1UG\_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.50	128	40684	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.74	114	146807	1.00	ppb	0.00
50) Chlorobenzene-d5	17.49	117	98156	1.00	ppb	0.00

## System Monitoring Compounds

65) Bromofluorobenzene	19.21	95	49357	0.73	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	73.00%

## Target Compounds

Qvalue



Quantitation Report (QF Reviewed)

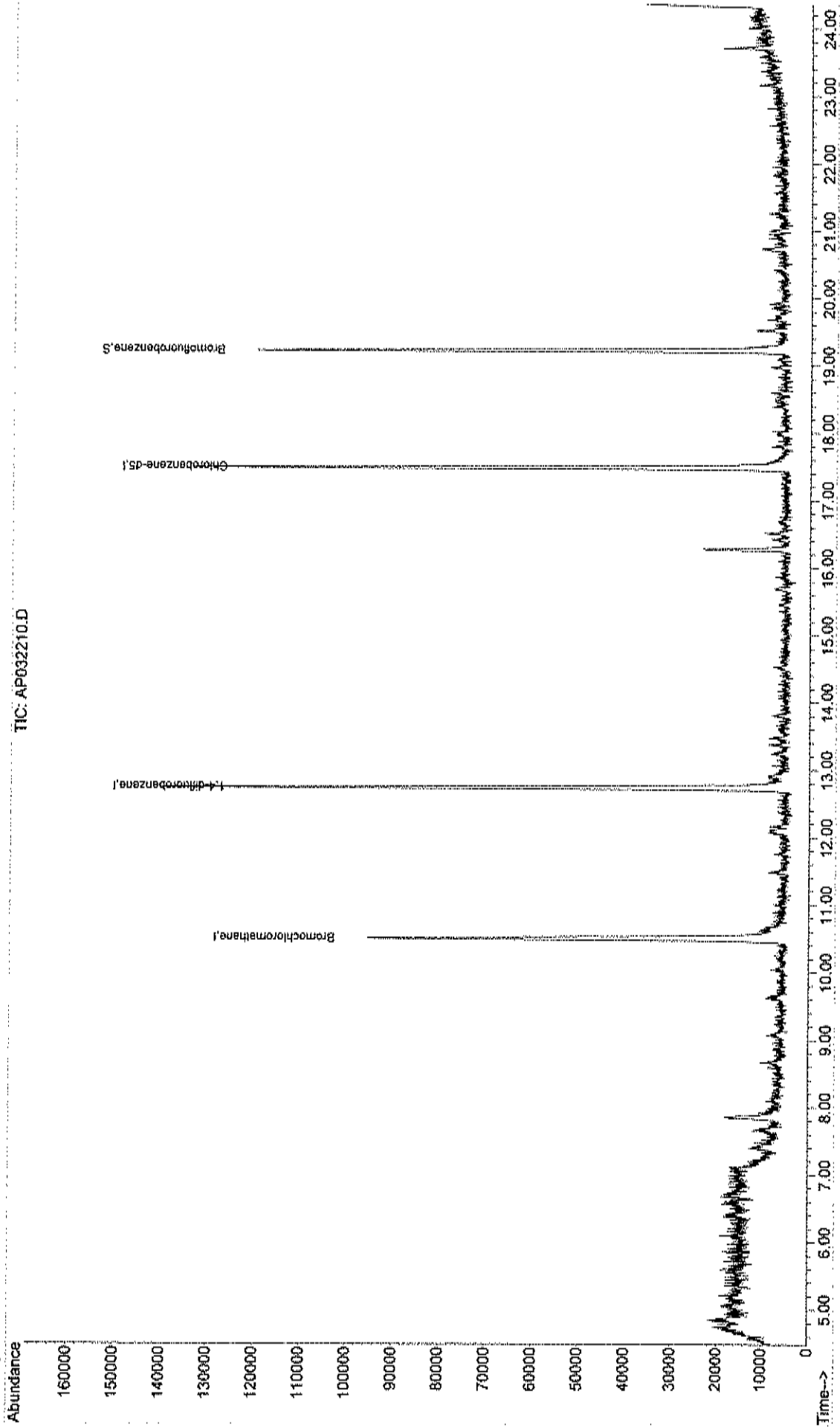
Data File : C:\HPCHEM\1\DATA2\2018MAR\AP032210.D  
Acq On : 22 Mar 2018 5:13 pm  
Sample : WAC032218E  
Misc : A318\_1UG  
MS Integration Params: RTEINT.P  
Quant Time: Mar 22 21:35 2018

Vial: 3  
Operator: RJP  
Inst : MSD #1  
Multiplr: 1.00

Quant Results File: A318\_1UG.RES

Method : C:\HPCHEM\1\METHODS\A318\_1UG.M (RTB Integrator)  
Title : TO-15 VOA Standards for 5 point calibration  
Last Update : Wed Mar 21 12:56:38 2018  
Response via : Initial Calibration

Abundance  
TIC: AP032210.D



**DATA USABILITY SUMMARY REPORT  
FOR APRIL 2018 AIR SAMPLING  
CINDERELLA 248, LLC SITE, BROOKLYN, NY  
SAMPLE DELIVERY GROUP # C1804013**

This DUSR was prepared using the entire original laboratory report, including the sample data summary report and the extended data package. The sampling event included four indoor air sample, one outdoor air sample and one effluent sample. Primary environmental sample numbers include the indoor air samples (IA-1 through IA-4) and the ambient sample (Ambient). The duplicate and associated parent sample are IA-1D and IA-1, respectively. The effluent sample was collected from the sub-slab depressurization system at the request of the NYSDEC project manager for information purposes.

### **Sample Collection Procedures**

The samples were collected in laboratory-provided batch-certified one-liter Summa canisters equipped with laboratory calibrated flow controllers. Collection of each sample was performed over an approximate eight-hour period, with the exception of the effluent sample which was collected as a grab sample. Each of the flow controllers for the primary samples was closed when the vacuum in the canister was nearly depleted but some vacuum remained. Chain-of-custody documentation was present and complete.

### **Sample Analyses**

The samples were transported to the laboratory and analyzed by Centek Laboratories, LLC at their Syracuse, New York facility, which is NYSDOH-certified for the analyses performed. The samples were analyzed for volatile organic compounds (VOCs) using Method TO-15, with low-level analyses for the indoor air and ambient samples. The analytical methods and analytes are appropriate for the intended use of the data. The sample holding times were met and no problems with sample receipt or handling were reported by the laboratory. The samples were logged in by the lab based on the sample IDs on the tags and the correct can numbers printed on the canisters themselves were used.

Surrogate recoveries were complete and within limits. Internal standards were also noted to be complete and within limits.

A blind duplicate sample was collected and utilized to evaluate the precision of the laboratory analyses. The results from the duplicate sample (IA-1D) and the associated parent sample (IA-1) are very similar. Based on the blind duplicate sample results, the laboratory results are likely to be precise.

A duplicate sample analysis was also performed by the laboratory and utilized to evaluate the precision of the laboratory analyses. The results from the laboratory duplicate sample and the associated parent sample are very similar. Based on the laboratory's duplicate sample results, the laboratory results are likely to be precise.

Method blank (MB) samples were analyzed by the laboratory to evaluate the potential for cross-contamination associated with the sample preparation and analysis. The MB results did not show detectable concentrations of VOCs and, therefore, cross-contamination associated with sample preparation or analysis does not appear to affect the sample data.

Air canister cleanings logs are maintained by the laboratory to evaluate the potential for cross-contamination associated with the sample containers. The air canister cleanings logs show that cleaning measures are taken to prevent cross-contamination associated with sample containers.

Laboratory control sample (LCS) and Laboratory control sample duplicate (LCSD) were used by the laboratory to verify the accuracy and precision of the analyses. The LCS/LCSD percent recoveries (%REC) and relative percent differences (RPDs) were within established guidelines, with the following exceptions:

- The %REC for methyl butyl ketone, was slightly below its limit for the LCS and LCSD samples for batch R13517. The %REC for methyl isobutyl ketone and vinyl acetate were also slightly below their limits for the LCSD sample for batch R13517. The associated sample results may be biased slightly low. This does not present a concern as these VOCs were not detected in any of the associated primary samples and they are not VOC of concern for this site;

Based on this information, the analytical results for the VOCs of concern are anticipated to be precise and accurate.

### **Questions and Responses**

1. Is the data package complete as defined under the current requirements for the NYSDEC ASP Category B or USEPA CLP deliverables?

The data package is complete. The external and internal chain of custody forms are present and complete. The case narrative and sample analysis summaries are present and complete. The analytical QA/QC summary forms, including surrogate recovery forms, LCS forms, IDL forms, initial and continuing calibration summary forms, standards raw data, tuning criteria report, and MB data are all present and complete. The data report forms, including sample prep logs, injection logs, canister cleaning logs, and examples of the calculations used to determine the sample concentrations are all present and complete. The raw data used to identify and quantify the contract-specified analytes are present and complete.

Data completeness for the field program was also verified. The numbers and types of samples collected are in agreement with the work plan.

2. Have all holding times been met?

All samples were received and analyzed within the EPA-recommended holding times for the analyses performed.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data, fall within the protocol-required limits and specifications?

No – One to three VOCs in the LCSs were detected outside their respective %REC criteria. These VOCs were not detected in the primary samples and are not VOCs of concern for this site. Therefore, these issues do not appear to affect the sample data for the VOCs of concern for this site.

4. Have all of the data been generated using established and agreed-upon analytical protocols?

Yes – all of the data were generated using the Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?

Yes – a representative number of raw data results were compared with the reported data results to confirm that the reported analytical results (identification and quantification) are substantiated by the raw data.

6. Have the correct data qualifiers been used?

Yes

7. Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data package been attached to the DUSR?

Yes – The affected QC summary sheets are attached to this DUSR.

## Conclusions

The indoor/outdoor air samples were collected in accordance with NYSDOH guidance. No field or laboratory conditions occurred that would result in non-valid analytical data for the VOCs of concern at this site. The data appear to be adequate for their intended purpose.

## Attachments

S:\Rigano LLC\Cinderella 248 LLC\Air Sampling\April 2018\DUSR IA.Docx



## CEN TEK LABORATORIES, LLC

143 Midler Park Drive • Syracuse, NY 13206

Phone (315) 431-9730 • Emergency 24/7 (315) 416-2752

NYSDOH ELAP Certificate No. 11830

### Analytical Report

Chris Linkletter  
FPM Group, Ltd.  
909 Marconi Avenue  
Ronkonkoma, NY 11779

Wednesday, April 11, 2018

Order No.: C1804013

TEL: (631) 737-6200

FAX

RE: Cinderella

Dear Chris Linkletter:

Centek Laboratories, LLC received 7 sample(s) on 4/9/2018 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

Centek Laboratories SOP TS-80

Analytical results relate to samples as received at laboratory. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Please contact your client service representative at (315) 431-9730 or myself, if you would like any additional information regarding this report.

This report cannot be reproduced except in its entirety, without prior written authorization.

Sincerely,



William Dobbin  
Lead Technical Director

Disclaimer: The test results and procedures utilized, and laboratory interpretations of the data obtained by Centek as contained in this report are believed by Centek to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of Centek for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages. ELAP does not offer certification for the following parameters by this method at present time, they are: 4-ethyltoluene, ethyl acetate, propylene, tetrahydrofuran, 4-PCH, sulfur derived and silicon series compounds.

#### Centek Laboratories, LLC Terms and Conditions

##### Sample Submission

All samples sent to Centek Laboratories should be accompanied by our Request for Analysis Form or Chain of Custody Form. A Chain of Custody will be provided with each order shipped for all sampling events, or if needed, one is available at our website [www.CentekLabs.com](http://www.CentekLabs.com). Samples received after 3:00pm are considered to be a part of the next day's business.

##### Sample Media

Samples can be collected in an canister or a Tedlar bag. Depending on your analytical needs, Centek Laboratories may receive a bulk, liquid, soil or other matrix sample for headspace analysis.

##### Blanks

Every sample is run with a surrogate or tracer compound at a pre-established concentration. The surrogate compound run with each sample is used as a standard to measure the performance of each run of the instrument. If required, a Minican can be provided containing nitrogen to be run as a trip blank with your samples.

##### Sampling Equipment

Centek Laboratories will be happy to provide the canisters to carry-out your sampling event at no charge. The necessary accessories, such as regulators, tubing or personal sampling belts, are also provided to meet your sampling needs. The customer is responsible for all shipping charges to the client's destination and return shipping to the laboratory. Client assumes all responsibility for lost, stolen and any damages of equipment.

##### Turn Around time (TAT)

Centek Laboratories will provide results to its clients in one business-week by 6:00pm EST after receipt of samples. For example, if samples are received on a Monday they are due on the following Monday by 6:00pm EST. Results are faxed or emailed to the requested location indicated on the Chain of Custody. Non-routine analysis may require more than the one business-week turnaround time. Please confirm non-routine sample turnaround times.

#### Reporting

Results are emailed or faxed at no additional charge. A hard copy of the result report is mailed within 24 hours of the faxing or emailing of your results. Cat "B" like packages are within 3-4 weeks from time of analysis. Standard Electronic Disk Deliverables (EDD) is also available at no additional charge.

#### Payment Terms

Payment for all purchases shall be due within 30 days from date of invoice. The client agrees to pay a finance charge of 1.5% per month on the overdue balance and cost of collection, including attorney fees, if collection proceedings are necessary. You must have a completed credit application on file to extend credit. Purchase orders or checks information must be submitted for us to release results

#### Rush Turnaround Samples

Expedited turn around times is available. Please confirm rush turnaround times with Client Services before submitting samples.

Applicable Surcharges for Rush Turnaround Samples:

Same day TAT = 200%

Next business day TAT by Noon = 150%

Next business day TAT by 6:00pm = 100%

Second business day TAT by 6:00pm = 75%

Third business day TAT by 6:00pm = 50%

Fourth business day TAT by 6:00pm = 35%

Fifth business day = Standard

#### Statement of Confidentiality

Centek Laboratories, LLC is aware of the importance of the confidentiality of results to many of our clients. Your name and data will be held in the strictest of confidence. We will not accept business that may constitute a conflict of interest. We commonly sign Confidential Nondisclosure Agreements with clients prior to beginning work. All research, results and reports will be kept strictly confidential. Secrecy Agreements and Disclosure Statements will be signed for the client if so specified. Results will be provided only to the addressee specified on the Chain of Custody Form submitted with the samples unless law requires release. Written permission is required from the addressee to release results to any other party.

#### Limitation on Liability

Centek Laboratories, LLC warrants the test results to be accurate to the methodology and sample type for each sample submitted to Centek Laboratories, LLC. In no event shall Centek Laboratories, LLC be liable for direct, indirect, special, punitive, incidental, exemplary or consequential damages, or any damages whatsoever, even if Centek Laboratories, LLC has been previously advised of the possibility of such damages whether in an action under contract, negligence, or any other theory, arising out of or in connection with the use, inability to use or performance of the information, services, products and materials available from the laboratory or this site. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. Because some jurisdictions do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of liability for consequential or incidental damages, the above limitations may not apply to you. This is a comprehensive limitation of

liability that applies to all damages of any kind, including (without limitation) compensatory, direct, indirect or consequential damages, loss of data, income or profit and or loss of or damage to property and claims of third parties.





**CENTEK LABORATORIES, LLC**

Date: 16-May-18

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**CLIENT:** FPM Group, Ltd.  
**Project:** Cinderella  
**Lab Order:** C1804013

## CASE NARRATIVE

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Samples were analyzed using the methods outlined in the following references:

Centek Laboratories, LLC SOP TS-80  
Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the corrective action report(s). All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

### NYSDEC ASP samples:

Canisters should be evacuated to a reading of less than or equal to 50 millitorr prior to shipment to sampling personnel. The vacuum in the canister will be field checked prior to sampling, and must read 28" of Hg ( $\pm 2"$ , vacuum, absolute) before a sample can be collected. After the sample has been collected, the pressure of the canister will be read and recorded again, and must be 5" of Hg ( $\pm 1"$ , vacuum, absolute) for the sample to be valid. Once received at the laboratory, the canister vacuum should be confirmed to be 5" of Hg,  $\pm 1"$ . Please record and report the pressure/vacuum of received canisters on the sample receipt paperwork. A pressure/vacuum reading should also be taken just prior to the withdrawal of sample from the canister, and recorded on the sample preparation log sheet. All regulators are calibrated to meet these requirements before they leave the laboratory. However, due to environmental conditions and use of the equipment Centek can not guarantee that this criteria can always be achieved.

Lab Order: C1804013  
 Client: FPM Group, Ltd.  
 Project: Cinderella

**DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TC:P Date	Prep Date	Analysis Date
C1804013-001A	IA-1	4/5/2018	Air	1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
C1804013-002A	IA-1D			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
C1804013-003A	IA-2			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
C1804013-004A	IA-3			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
C1804013-005A	IA-4			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
C1804013-006A	Ambient			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
C1804013-007A	Effluent			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2018
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/11/2018

CLIENT: FPM Group, Ltd.  
 Work Order: C1804013  
 Project: Cinderella

TestCode: 0.20\_NYS

Sample ID: ALCS1UG-041018	SampType: LCS	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 13517						
Client ID: ZZZZZ	Batch ID: R13517	TestNo: TO-15		Analysis Date: 4/10/2018	SeqNo: 156543						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	1.070	0.15	1	0	107	70	130				
Carbon tetrachloride	0.7600	0.030	1	0	76.0	70	130				
Chlorobenzene	1.120	0.15	1	0	112	70	130				
Chloroethane	1.050	0.15	1	0	105	70	130				
Chloroform	1.070	0.15	1	0	107	70	130				
Chloromethane	0.9500	0.15	1	0	95.0	70	130				
cis-1,2-Dichloroethene	0.9100	0.040	1	0	91.0	70	130				
cis-1,3-Dichloropropene	0.8800	0.15	1	0	88.0	70	130				
Cyclohexane	0.8800	0.15	1	0	88.0	70	130				
Dibromochloromethane	0.9300	0.15	1	0	93.0	70	130				
Ethyl acetate	0.7800	0.15	1	0	78.0	70	130				
Ethylbenzene	1.030	0.15	1	0	103	70	130				
Freon 11	1.220	0.15	1	0	122	70	130				
Freon 113	1.220	0.15	1	0	122	70	130				
Freon 114	1.130	0.15	1	0	113	70	130				
Freon 12	1.080	0.15	1	0	108	70	130				
Heptane	0.7400	0.15	1	0	74.0	70	130				
Hexachloro-1,3-butadiene	1.260	0.15	1	0	126	70	130				
Hexane	0.8500	0.15	1	0	85.0	70	130				
Isopropyl alcohol	0.9600	0.15	1	0	96.0	70	130				
m&p-Xylene	2.150	0.30	2	0	108	70	130				
Methyl Butyl Ketone	0.6500	0.30	1	0	65.0	70	130				S
Methyl Ethyl Ketone	1.050	0.30	1	0	105	70	130				
Methyl Isobutyl Ketone	0.7200	0.30	1	0	72.0	70	130				
Methyl tert-butyl ether	0.9500	0.15	1	0	95.0	70	130				
Methylene chloride	0.9400	0.15	1	0	94.0	70	130				
o-Xylene	1.110	0.15	1	0	111	70	130				
Propylene	0.7300	0.15	1	0	73.0	70	130				
Styrene	1.080	0.15	1	0	108	70	130				
Tetrachloroethyane	1.120	0.15	1	0	112	70	130				
Tetrahydrofuran	0.7300	0.15	1	0	73.0	70	130				

Qualifiers: - Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 J Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection  
 S Spike Recovery outside accepted recovery limits  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits

CLIENT: FPM Group, Ltd.  
 Work Order: C1804013  
 Project: Cinderella

TestCode: 0.20\_NYS

Sample ID: ALCS1UGD-041017	SampType: LCSD	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 13517						
Client ID: ZZZZ	Batch ID: R13517	TestNo: TO-15		Analysis Date: 4/11/2018	SeqNo: 156544						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	0.7700	0.30	1	0	77.0	70	130	0.84	8.70	30	
Allyl chloride	0.7300	0.15	1	0	73.0	70	130	0.77	5.33	30	
Benzene	1.130	0.15	1	0	113	70	130	1.04	8.29	30	
Benzyl chloride	0.8300	0.15	1	0	83.0	70	130	0.86	3.55	30	
Bromodichloromethane	1.040	0.15	1	0	104	70	130	0.98	5.94	30	
Bromoform	1.010	0.15	1	0	101	70	130	0.95	6.12	30	
Bromomethane	1.070	0.15	1	0	107	70	130	1.14	6.33	30	
Carbon disulfide	1.060	0.15	1	0	106	70	130	1.07	0.939	30	
Carbon tetrachloride	0.7600	0.030	1	0	76.0	70	130	0.76	0	30	
Chlorobenzene	1.200	0.15	1	0	120	70	130	1.12	6.90	30	
Chloroethane	0.9800	0.15	1	0	98.0	70	130	1.05	6.90	30	
Chloroform	1.070	0.15	1	0	107	70	130	1.07	0	30	
Chloromethane	0.8900	0.15	1	0	89.0	70	130	0.95	6.52	30	
cis-1,2-Dichloroethene	0.8700	0.040	1	0	87.0	70	130	0.91	4.49	30	
cis-1,3-Dichloropropene	0.8900	0.15	1	0	89.0	70	130	0.88	1.13	30	
Cyclohexane	0.9000	0.15	1	0	90.0	70	130	0.88	2.25	30	
Dibromochloromethane	1.040	0.15	1	0	104	70	130	0.93	11.2	30	
Ethyl acetate	0.7500	0.15	1	0	75.0	70	130	0.78	3.92	30	
Ethylbenzene	1.100	0.15	1	0	110	70	130	1.03	6.57	30	
Freon 11	1.100	0.15	1	0	110	70	130	1.22	10.3	30	
Freon 113	1.220	0.15	1	0	122	70	130	1.22	0	30	
Freon 114	1.080	0.15	1	0	108	70	130	1.13	4.52	30	
Freon 12	1.090	0.15	1	0	109	70	130	1.08	0.922	30	
Heptane	0.7400	0.15	1	0	74.0	70	130	0.74	0	30	
Hexachloro-1,3-butadiene	1.270	0.15	1	0	127	70	130	1.26	0.791	30	
Hexane	0.8500	0.15	1	0	85.0	70	130	0.85	0	30	
Isopropyl alcohol	0.9200	0.15	1	0	92.0	70	130	0.96	4.26	30	
m&p-Xylene	2.320	0.30	2	0	116	70	130	2.15	7.51	30	
Methyl Butyl Ketone	0.5800	0.30	1	0	58.0	70	130	0.65	11.4	30	S
Methyl Ethyl Ketone	1.080	0.30	1	0	106	70	130	1.05	0.948	30	
Methyl Isobutyl Ketone	0.6600	0.30	1	0	66.0	70	130	0.72	8.70	30	S

Qualifiers: . Results reported are not blank corrected  
 E Estimated Value above quantitation range  
 H Holding times for preparation or analysis exceeded  
 ‡ Analyte detected below quantitation limit  
 ND Not Detected at the Limit of Detection  
 R RPD outside accepted recovery limits  
 S Spike Recovery outside accepted recovery limits

CLIENT: FPM Group, Ltd.  
 Work Order: C1804013  
 Project: Cinderella

TestCode: 0.20\_NYS

Sample ID: ALCS1UGD-041017	SampType: LCSD	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 13517						
Client ID: ZZZZ	Batch ID: R13517	TestNo: TO-15		Analysis Date: 4/11/2018	SeqNo: 156544						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.8400	0.15	1	0	84.0	70	130	0.95	12.3	30	
Methylene chloride	0.9100	0.15	1	0	91.0	70	130	0.94	3.24	30	
o-Xylene	1.230	0.15	1	0	123	70	130	1.11	10.3	30	
Propylene	0.7300	0.15	1	0	73.0	70	130	0.73	0	30	
Styrene	1.180	0.15	1	0	118	70	130	1.08	8.85	30	
Tetrachloroethylene	1.240	0.15	1	0	124	70	130	1.12	10.2	30	
Tetrahydrofuran	0.7300	0.15	1	0	73.0	70	130	0.73	0	30	
Toluene	1.120	0.15	1	0	112	70	130	1.06	6.50	30	
trans-1,2-Dichloroethene	0.9400	0.15	1	0	94.0	70	130	0.99	5.18	30	
trans-1,3-Dichloropropene	0.7500	0.15	1	0	75.0	70	130	0.72	4.08	30	
Trichloroethene	1.130	0.030	1	0	113	70	130	1.1	2.69	30	
Vinyl acetate	0.6700	0.15	1	0	67.0	70	130	0.72	7.19	30	S
Vinyl Bromide	1.110	0.15	1	0	111	70	130	1.19	6.96	30	
Vinyl chloride	0.9200	0.040	1	0	92.0	70	130	0.95	3.21	30	

Qualifiers: . Results reported are not blank corrected E Estimated Value above quantitation range H Holding times for preparation or analysis exceeded  
 J Analyte detected below quantitation limit ND Not Detected at the Limit of Detection R RPD outside accepted recovery limits  
 S Spike Recovery outside accepted recovery limits

**ATTACHMENT B**

**CANISTER SAMPLING FORMS  
BUILDING INVENTORY FORM**

CANISTER FIELD SAMPLING RECORD

Project: Cinderella

Site Location: 248 Flatbush Avenue

Sample ID IA-1 Canister ID 368  
Sampler CL Canister Volume 1L  
Location Basement Flow Controller ID 693  
Height Approx. 4 ft Flow Controller Setting 8hr  
Sample Type (sub-slab, soil gas, amb, indoor) \_\_\_\_\_

Reading	Date	Time	Vacuum
Initial Canister Vacuum	4/5/18	6:30	-30
Final Canister Vacuum	4/5/18	2:30	-8

Weather or Ambient Conditions: Partly Cloudy, 45°F

Purge Data: NA

Helium Check Data: NA

Comments: \_\_\_\_\_

**CANISTER FIELD SAMPLING RECORD**

**Project:** Cinderella

**Site Location:** 248 Flatbush Avenue

Sample ID IA-10 Canister ID 1186

Sampler CL Canister Volume 1L

Location Basement Flow Controller ID 513

Height Approx. 4 ft Flow Controller Setting 8 hr

Sample Type (sub-slab, soil gas, amb, indoor) \_\_\_\_\_

Reading	Date	Time	Vacuum
Initial Canister Vacuum	4/5/18	6:35	-30
Final Canister Vacuum	4/5/18	2:30	-9

Weather or Ambient Conditions: Partly Cloudy, 45°F

Purge Data: NA

Helium Check Data: NA

Comments: DUPLICATE OF IA-1



### CANISTER FIELD SAMPLING RECORD

Project: Cinderella

Site Location: 250 Flatbush Avenue

Sample ID IA-2 Canister ID 368

Sampler CL Canister Volume 1L

Location Basement Flow Controller ID 1343

Height Approx. 4 ft Flow Controller Setting 8hr

Sample Type (sub-slab, soil gas, amb, indoor) \_\_\_\_\_

Reading	Date	Time	Vacuum
Initial Canister Vacuum	4/5/18	7:15	-30
Final Canister Vacuum	4/5/18	3:00	-12

Weather or Ambient Conditions: Partly Cloudy, 45°F

Purge Data: NA

Helium Check Data: NA

Comments: \_\_\_\_\_

CANISTER FIELD SAMPLING RECORD

Project: Cinderella

Site Location: 252 Flatbush Avenue

Sample ID IA-3 Canister ID 365

Sampler CL Canister Volume 1L

Location Basement Flow Controller ID 535

Height Approx. 5 ft Flow Controller Setting 8hr

Sample Type (sub-slab, soil gas, amb, indoor) \_\_\_\_\_

Reading	Date	Time	Vacuum
Initial Canister Vacuum	4/5/18	7:45	-30
Final Canister Vacuum	4/5/18	3:30	-15

Weather or Ambient Conditions: Partly Cloudy, 45°F

Purge Data: NA

Helium Check Data: NA

Comments: \_\_\_\_\_

### CANISTER FIELD SAMPLING RECORD

Project: Cinderella

Site Location: 254 Flatbush Avenue

Sample ID <u>IA-4</u>	Canister ID <u>88</u>
Sampler <u>CL</u>	Canister Volume <u>1L</u>
Location <u>Basement</u>	Flow Controller ID <u>711</u>
Height <u>Approx. 5 ft</u>	Flow Controller Setting <u>8 hr</u>
Sample Type (sub-slab, soil gas, amb, <u>indoor</u> ) _____	

Reading	Date	Time	Vacuum
Initial Canister Vacuum	4/5/18	<del>7:00</del>	-30
Final Canister Vacuum	4/5/18	2:55	-7

Weather or Ambient Conditions: Partly Cloudy, 45° F

Purge Data: NA

Helium Check Data: NA

Comments: \_\_\_\_\_

CANISTER FIELD SAMPLING RECORD

Project: Cinderella

Site Location: 254 Flatbush Avenue

Sample ID Ambient Canister ID 207  
Sampler CL Canister Volume 1 LRS  
Location Outside Flow Controller ID 1420  
Height Approx. 4 ft Flow Controller Setting 8 hr  
Sample Type (sub-slab, soil gas, amb, indoor) Ambient

Reading	Date	Time	Vacuum
Initial Canister Vacuum	4/5/18	6:45	-30
Final Canister Vacuum	4/5/18	2:45	-12

Weather or Ambient Conditions: Partly Cloudy, 45°F

Purge Data: NA

Helium Check Data: NA

Comments: \_\_\_\_\_



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Site Name: Cinderella 248 LLC Site Code: \_\_\_\_\_ Operable Unit: \_\_\_\_\_  
Building Code: \_\_\_\_\_ Building Name: \_\_\_\_\_  
Address: 254 Flatbush Avenue Apt/Suite No: \_\_\_\_\_  
City: Brooklyn State: NY Zip: 11217 County: Kings

## Contact Information

Preparer's Name: Chris Linkletter Phone No: (631) 737-6200  
Preparer's Affiliation: FPM Group Company Code: \_\_\_\_\_  
Purpose of Investigation: \_\_\_\_\_ Date of Inspection: Apr 5, 2018  
Contact Name: \_\_\_\_\_ Affiliation: \_\_\_\_\_  
Phone No: \_\_\_\_\_ Alt. Phone No: \_\_\_\_\_ Email: \_\_\_\_\_  
Number of Occupants (total): \_\_\_\_\_ Number of Children: \_\_\_\_\_  
 Occupant Interviewed?  Owner Occupied?  Owner Interviewed?  
Owner Name (if different): \_\_\_\_\_ Owner Phone: \_\_\_\_\_  
Owner Mailing Address: \_\_\_\_\_

## Building Details

Bldg Type (Res/Com/Ind/Mixed): COMMERCIAL/MIXED Bldg Size (S/M/L): SMALL  
If Commercial or Industrial Facility, Select Operations: OTHER If Residential Select Structure Type: \_\_\_\_\_  
Number of Floors: 1 Approx. Year Construction: \_\_\_\_\_  Building Insulated?  Attached Garage?  
Describe Overall Building 'Tightness' and Airflows(e.g., results of smoke tests):  
\_\_\_\_\_

## Foundation Description

Foundation Type: BASEMENT Foundation Depth (bgs): \_\_\_\_\_ Unit: FEET  
Foundation Floor Material: POURED CONCRETE Foundation Floor Thickness: \_\_\_\_\_ Unit: INCHES  
Foundation Wall Material: \_\_\_\_\_ Foundation Wall Thickness: \_\_\_\_\_  
 Floor penetrations? Describe Floor Penetrations: Utilities  
 Wall penetrations? Describe Wall Penetrations: Utilities  
Basement is: PARTIALLY FINISHED Basement is: \_\_\_\_\_  Sumps/Drains? Water In Sump?: \_\_\_\_\_  
Describe Foundation Condition (cracks, seepage, etc.) : \_\_\_\_\_  
 Radon Mitigation System Installed?  VOC Mitigation System Installed?  Mitigation System On?

## Heating/Cooling/Ventilation Systems

Heating System: FORCED AIR Heat Fuel Type: GAS  Central A/C Present?

## Vented Appliances

Water Heater Fuel Type: \_\_\_\_\_ Clothes Dryer Fuel Type: \_\_\_\_\_  
Water Htr Vent Location: \_\_\_\_\_ Dryer Vent Location: \_\_\_\_\_



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

## PRODUCT INVENTORY

Building Name: \_\_\_\_\_ Bldg Code: \_\_\_\_\_ Date: Apr 5, 2018

Bldg Address: 254 Flatbush Avenue Apt/Suite No: \_\_\_\_\_

Bldg City/State/Zip: Brooklyn NY, 11217

Make and Model of PID: \_\_\_\_\_ Date of Calibration: \_\_\_\_\_

Location	Product Name/Description	Size (oz)	Condition *	Chemical Ingredients	PID Reading	COC Y/N?
Basement	All purpose joint compound	5.0 gal	UO			<input type="checkbox"/>
Basement	Condenser coil cleaner	1.0 gal	UO			<input type="checkbox"/>
Basement	Latex paint	5.0 gal	UO			<input type="checkbox"/>
Basement	Semigloss enamel	1.0 gal	UO			<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
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						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

\* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

\*\* Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Product Inventory Complete?  Yes  No      Were there any elevated PID readings taken on site?  Yes  No       Products with COC?



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Site Name: Cinderella 248 LLC Site Code: \_\_\_\_\_ Operable Unit: \_\_\_\_\_

Building Code: \_\_\_\_\_ Building Name: \_\_\_\_\_

Address: 254 Flatbush Avenue Apt/Suite No: \_\_\_\_\_

City: Brooklyn State: NY Zip: 11217 County: Kings

## Factors Affecting Indoor Air Quality

Frequency Basement/Lowest Level is Occupied?: SELDOM Floor Material: CEMENT

Inhabited?  HVAC System On?  Bathroom Exhaust Fan?  Kitchen Exhaust Fan?

Alternate Heat Source: \_\_\_\_\_  Is there smoking in the building?

Air Fresheners? Description/Location of Air Freshener: \_\_\_\_\_

Cleaning Products Used Recently?: Description of Cleaning Products: \_\_\_\_\_

Cosmetic Products Used Recently?: Description of Cosmetic Products: \_\_\_\_\_

New Carpet or Furniture? Location of New Carpet/Furniture: \_\_\_\_\_

Recent Dry Cleaning? Location of Recently Dry Cleaned Fabrics: \_\_\_\_\_

Recent Painting/Staining? Location of New Painting: \_\_\_\_\_

Solvent or Chemical Odors? Describe Odors (if any): \_\_\_\_\_

Do Any Occupants Use Solvents At Work? If So, List Solvents Used: \_\_\_\_\_

Recent Pesticide/Rodenticide? Description of Last Use: \_\_\_\_\_

Describe Any Household Activities (chemical use,/storage, unvented appliances, hobbies, etc.) That May Affect Indoor Air Quality:

Any Prior Testing For Radon? If So, When?: \_\_\_\_\_

Any Prior Testing For VOCs? If So, When?: \_\_\_\_\_

## Sampling Conditions

Weather Conditions: PARTLY CLOUDY Outdoor Temperature: 45 °F

Current Building Use: OTHER Barometric Pressure: \_\_\_\_\_ in(hg)

Product Inventory Complete?  Yes  Building Questionnaire Completed?



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Building Code: \_\_\_\_\_ Address: 252 Flatbush Avenue Brooklyn, NY 11217

## Sampling Information

Sampler Name(s): Chris Linkletter Sampler Company Code: FPM Group

Sample Collection Date: Apr 5, 2018 Date Samples Sent To Lab: \_\_\_\_\_

Sample Chain of Custody Number: \_\_\_\_\_ Outdoor Air Sample Location ID: \_\_\_\_\_

## SUMMA Canister Information

Sample ID: IA-4

Location Code: \_\_\_\_\_

Location Type: BASEMENT

Canister ID: 88

Regulator ID: 711

Matrix: Indoor Air

Sampling Method: SUMMA AIR SAMPLI

## Sampling Area Info

Slab Thickness (inches): \_\_\_\_\_

Sub-Slab Material: \_\_\_\_\_

Sub-Slab Moisture: \_\_\_\_\_

Seal Type: \_\_\_\_\_

Seal Adequate?:

## Sample Times and Vacuum Readings

Sample Start Date/Time: 04/05/2018 7:00

Vacuum Gauge Start: -30

Sample End Date/Time: 04/05/2018 14:00

Vacuum Gauge End: -7

Sample Duration (hrs): 8

Vacuum Gauge Unit: in (hg)

## Sample QA/QC Readings

Vapor Port Purge:

Purge PID Reading: \_\_\_\_\_

Purge PID Unit: \_\_\_\_\_

Tracer Test Pass:

Sample start and end times should be entered using the following format: MM/DD/YYYY HH:MM





# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Site Name: Cinderella 248 LLC Site Code: \_\_\_\_\_ Operable Unit: \_\_\_\_\_  
Building Code: \_\_\_\_\_ Building Name: \_\_\_\_\_  
Address: 252 Flatbush Avenue Apt/Suite No: \_\_\_\_\_  
City: Brooklyn State: NY Zip: 11217 County: Kings

## Contact Information

Preparer's Name: Chris Linkletter Phone No: (631) 737-6200  
Preparer's Affiliation: FPM Group Company Code: \_\_\_\_\_  
Purpose of Investigation: \_\_\_\_\_ Date of Inspection: Apr 5, 2018  
Contact Name: \_\_\_\_\_ Affiliation: \_\_\_\_\_  
Phone No: \_\_\_\_\_ Alt. Phone No: \_\_\_\_\_ Email: \_\_\_\_\_  
Number of Occupants (total): \_\_\_\_\_ Number of Children: \_\_\_\_\_  
 Occupant Interviewed?  Owner Occupied?  Owner Interviewed?  
Owner Name (if different): \_\_\_\_\_ Owner Phone: \_\_\_\_\_  
Owner Mailing Address: \_\_\_\_\_

## Building Details

Bldg Type (Res/Com/Ind/Mixed): COMMERCIAL/MIXED Bldg Size (S/M/L): SMALL  
If Commercial or Industrial Facility, Select Operations: OTHER If Residential Select Structure Type: \_\_\_\_\_  
Number of Floors: 1 Approx. Year Construction: \_\_\_\_\_  Building Insulated?  Attached Garage?  
Describe Overall Building 'Tightness' and Airflows(e.g., results of smoke tests):  
\_\_\_\_\_

## Foundation Description

Foundation Type: BASEMENT Foundation Depth (bgs): \_\_\_\_\_ Unit: FEET  
Foundation Floor Material: POURED CONCRETE Foundation Floor Thickness: \_\_\_\_\_ Unit: INCHES  
Foundation Wall Material: \_\_\_\_\_ Foundation Wall Thickness: \_\_\_\_\_  
 Floor penetrations? Describe Floor Penetrations: Utilities  
 Wall penetrations? Describe Wall Penetrations: Utilities  
Basement is: PARTIALLY FINISHED Basement is: \_\_\_\_\_  Sumps/Drains? Water In Sump?: \_\_\_\_\_  
Describe Foundation Condition (cracks, seepage, etc.) : \_\_\_\_\_  
 Radon Mitigation System Installed?  VOC Mitigation System Installed?  Mitigation System On?

## Heating/Cooling/Ventilation Systems

Heating System: FORCED AIR Heat Fuel Type: GAS  Central A/C Present?

## Vented Appliances

Water Heater Fuel Type: \_\_\_\_\_ Clothes Dryer Fuel Type: \_\_\_\_\_  
Water Htr Vent Location: \_\_\_\_\_ Dryer Vent Location: \_\_\_\_\_



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

## PRODUCT INVENTORY

Building Name: \_\_\_\_\_ Bldg Code: \_\_\_\_\_ Date: Apr 5, 2018

Bldg Address: 252 Flatbush Avenue Apt/Suite No: \_\_\_\_\_

Bldg City/State/Zip: Brooklyn NY, 11217

Make and Model of PID: \_\_\_\_\_ Date of Calibration: \_\_\_\_\_

Location	Product Name/Description	Size (oz)	Condition *	Chemical Ingredients	PID Reading	COC Y/N?
Basement	Interior paint	1.0 gal	UO			<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

\* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

\*\* Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Product Inventory Complete?  Yes  No Were there any elevated PID readings taken on site?  No  Yes  Products with COC?



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Site Name: Cinderella 248 LLC Site Code: \_\_\_\_\_ Operable Unit: \_\_\_\_\_

Building Code: \_\_\_\_\_ Building Name: \_\_\_\_\_

Address: 252 Flatbush Avenue Apt/Suite No: \_\_\_\_\_

City: Brooklyn State: NY Zip: 11217 County: Kings

## Factors Affecting Indoor Air Quality

Frequency Basement/Lowest Level is Occupied?: SELDOM Floor Material: CEMENT

Inhabited?  HVAC System On?  Bathroom Exhaust Fan?  Kitchen Exhaust Fan?

Alternate Heat Source: \_\_\_\_\_  Is there smoking in the building?

Air Fresheners? Description/Location of Air Freshener: \_\_\_\_\_

Cleaning Products Used Recently?: Description of Cleaning Products: \_\_\_\_\_

Cosmetic Products Used Recently?: Description of Cosmetic Products: \_\_\_\_\_

New Carpet or Furniture? Location of New Carpet/Furniture: \_\_\_\_\_

Recent Dry Cleaning? Location of Recently Dry Cleaned Fabrics: \_\_\_\_\_

Recent Painting/Staining? Location of New Painting: \_\_\_\_\_

Solvent or Chemical Odors? Describe Odors (if any): \_\_\_\_\_

Do Any Occupants Use Solvents At Work? If So, List Solvents Used: \_\_\_\_\_

Recent Pesticide/Rodenticide? Description of Last Use: \_\_\_\_\_

Describe Any Household Activities (chemical use,/storage, unvented appliances, hobbies, etc.) That May Affect Indoor Air Quality:

Any Prior Testing For Radon? If So, When?: \_\_\_\_\_

Any Prior Testing For VOCs? If So, When?: \_\_\_\_\_

## Sampling Conditions

Weather Conditions: PARTLY CLOUDY Outdoor Temperature: 45 °F

Current Building Use: OTHER Barometric Pressure: \_\_\_\_\_ in(hg)

Product Inventory Complete?  Yes  Building Questionnaire Completed?



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Building Code: \_\_\_\_\_ Address: 250 Flatbush Avenue Brooklyn, NY 11217

## Sampling Information

Sampler Name(s): Chris Linkletter Sampler Company Code: FPM Group

Sample Collection Date: Apr 5, 2018 Date Samples Sent To Lab: \_\_\_\_\_

Sample Chain of Custody Number: \_\_\_\_\_ Outdoor Air Sample Location ID: \_\_\_\_\_

## SUMMA Canister Information

Sample ID:	IA-3				
Location Code:					
Location Type:	BASEMENT				
Canister ID:	365				
Regulator ID:	535				
Matrix:	Indoor Air				
Sampling Method:	SUMMA AIR SAMPLI				

## Sampling Area Info

Slab Thickness (inches):					
Sub-Slab Material:					
Sub-Slab Moisture:					
Seal Type:					
Seal Adequate?:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Sample Times and Vacuum Readings

Sample Start Date/Time:	04/05/2018 7:45				
Vacuum Gauge Start:	-30				
Sample End Date/Time:	04/05/2018 15:00				
Vacuum Gauge End:	-15				
Sample Duration (hrs):	8				
Vacuum Gauge Unit:	in (hg)				

## Sample QA/QC Readings

Vapor Port Purge:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Purge PID Reading:					
Purge PID Unit:					
Tracer Test Pass:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sample start and end times should be entered using the following format: MM/DD/YYYY HH:MM



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Site Name: Cinderella 248 LLC Site Code: \_\_\_\_\_ Operable Unit: \_\_\_\_\_

Building Code: \_\_\_\_\_ Building Name: \_\_\_\_\_

Address: 250 Flatbush Avenue Apt/Suite No: \_\_\_\_\_

City: Brooklyn State: NY Zip: 11217 County: Kings

## Contact Information

Preparer's Name: Chris Linkletter Phone No: (631) 737-6200

Preparer's Affiliation: FPM Group Company Code: \_\_\_\_\_

Purpose of Investigation: \_\_\_\_\_ Date of Inspection: Apr 5, 2018

Contact Name: \_\_\_\_\_ Affiliation: \_\_\_\_\_

Phone No: \_\_\_\_\_ Alt. Phone No: \_\_\_\_\_ Email: \_\_\_\_\_

Number of Occupants (total): \_\_\_\_\_ Number of Children: \_\_\_\_\_

Occupant Interviewed?  Owner Occupied?  Owner Interviewed?

Owner Name (if different): \_\_\_\_\_ Owner Phone: \_\_\_\_\_

Owner Mailing Address: \_\_\_\_\_

## Building Details

Bldg Type (Res/Com/Ind/Mixed): COMMERCIAL/MIXED Bldg Size (S/M/L): SMALL

If Commercial or Industrial Facility, Select Operations:  
OTHER

If Residential Select Structure Type: \_\_\_\_\_

Number of Floors: 1 Approx. Year Construction: \_\_\_\_\_  Building Insulated?  Attached Garage?

Describe Overall Building 'Tightness' and Airflows(e.g., results of smoke tests):  
\_\_\_\_\_

## Foundation Description

Foundation Type: BASEMENT Foundation Depth (bgs): \_\_\_\_\_ Unit: FEET

Foundation Floor Material: POURED CONCRETE Foundation Floor Thickness: \_\_\_\_\_ Unit: INCHES

Foundation Wall Material: \_\_\_\_\_ Foundation Wall Thickness: \_\_\_\_\_

Floor penetrations? Describe Floor Penetrations: Utilities

Wall penetrations? Describe Wall Penetrations: Utilities

Basement is: PARTIALLY FINISHED Basement is: \_\_\_\_\_  Sumps/Drains? Water In Sump?: \_\_\_\_\_

Describe Foundation Condition (cracks, seepage, etc.) : \_\_\_\_\_

Radon Mitigation System Installed?  VOC Mitigation System Installed?  Mitigation System On?

## Heating/Cooling/Ventilation Systems

Heating System: FORCED AIR Heat Fuel Type: GAS  Central A/C Present?

## Vented Appliances

Water Heater Fuel Type: \_\_\_\_\_ Clothes Dryer Fuel Type: \_\_\_\_\_

Water Htr Vent Location: \_\_\_\_\_ Dryer Vent Location: \_\_\_\_\_



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

## PRODUCT INVENTORY

Building Name: \_\_\_\_\_ Bldg Code: \_\_\_\_\_ Date: Apr 5, 2018

Bldg Address: 250 Flatbush Avenue Apt/Suite No: \_\_\_\_\_

Bldg City/State/Zip: Brooklyn NY, 11217

Make and Model of PID: \_\_\_\_\_ Date of Calibration: \_\_\_\_\_

Location	Product Name/Description	Size (oz)	Condition *	Chemical Ingredients	PID Reading	COC Y/N?
Basement	Floor finsh	5.0 gal	UO			<input type="checkbox"/>
Basement	Heavy duty stripper	2.5 oz	U			<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
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						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

\* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

\*\* Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Product Inventory Complete?  Yes  No      Were there any elevated PID readings taken on site?  No  Yes       Products with COC?



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Site Name: Cinderella 248 LLC Site Code: \_\_\_\_\_ Operable Unit: \_\_\_\_\_

Building Code: \_\_\_\_\_ Building Name: \_\_\_\_\_

Address: 250 Flatbush Avenue Apt/Suite No: \_\_\_\_\_

City: Brooklyn State: NY Zip: 11217 County: Kings

## Factors Affecting Indoor Air Quality

Frequency Basement/Lowest Level is Occupied?: ALMOST NEVER Floor Material: CEMENT

Inhabited?  HVAC System On?  Bathroom Exhaust Fan?  Kitchen Exhaust Fan?

Alternate Heat Source: \_\_\_\_\_  Is there smoking in the building?

Air Fresheners? Description/Location of Air Freshener: \_\_\_\_\_

Cleaning Products Used Recently?: Description of Cleaning Products: \_\_\_\_\_

Cosmetic Products Used Recently?: Description of Cosmetic Products: \_\_\_\_\_

New Carpet or Furniture? Location of New Carpet/Furniture: \_\_\_\_\_

Recent Dry Cleaning? Location of Recently Dry Cleaned Fabrics: \_\_\_\_\_

Recent Painting/Staining? Location of New Painting: \_\_\_\_\_

Solvent or Chemical Odors? Describe Odors (if any): \_\_\_\_\_

Do Any Occupants Use Solvents At Work? If So, List Solvents Used: \_\_\_\_\_

Recent Pesticide/Rodenticide? Description of Last Use: \_\_\_\_\_

Describe Any Household Activities (chemical use,/storage, unvented appliances, hobbies, etc.) That May Affect Indoor Air Quality:

Any Prior Testing For Radon? If So, When?: \_\_\_\_\_

Any Prior Testing For VOCs? If So, When?: \_\_\_\_\_

## Sampling Conditions

Weather Conditions: PARTLY CLOUDY Outdoor Temperature: 45 °F

Current Building Use: OTHER Barometric Pressure: \_\_\_\_\_ in(hg)

Product Inventory Complete?  Yes  Building Questionnaire Completed?



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Building Code: \_\_\_\_\_ Address: 248 Flatbush Avenue Brooklyn, NY 11217

## Sampling Information

Sampler Name(s): Chris Linkletter Sampler Company Code: FPM Group

Sample Collection Date: Apr 5, 2018 Date Samples Sent To Lab: \_\_\_\_\_

Sample Chain of Custody Number: \_\_\_\_\_ Outdoor Air Sample Location ID: \_\_\_\_\_

## SUMMA Canister Information

Sample ID: IA-2

Location Code:

Location Type: BASEMENT

Canister ID: 368

Regulator ID: 1343

Matrix: Indoor Air

Sampling Method: SUMMA AIR SAMPLI

## Sampling Area Info

Slab Thickness (inches):

Sub-Slab Material:

Sub-Slab Moisture:

Seal Type:

Seal Adequate?:

## Sample Times and Vacuum Readings

Sample Start Date/Time: 04/05/2018 7:15

Vacuum Gauge Start: -30

Sample End Date/Time: 04/05/2018 15:00

Vacuum Gauge End: -12

Sample Duration (hrs): 8

Vacuum Gauge Unit: in (hg)

## Sample QA/QC Readings

Vapor Port Purge:

Purge PID Reading:

Purge PID Unit:

Tracer Test Pass:

Sample start and end times should be entered using the following format: MM/DD/YYYY HH:MM





# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Site Name: Cinderella 248 LLC Site Code: C224160 Operable Unit: \_\_\_\_\_  
Building Code: \_\_\_\_\_ Building Name: \_\_\_\_\_  
Address: 248 Flatbush Avenue Apt/Suite No: \_\_\_\_\_  
City: Brooklyn State: NY Zip: 11217 County: Kings

## Contact Information

Preparer's Name: Chris Linkletter Phone No: (631) 737-6200  
Preparer's Affiliation: FPM Group Company Code: \_\_\_\_\_  
Purpose of Investigation: \_\_\_\_\_ Date of Inspection: Apr 5, 2018  
Contact Name: \_\_\_\_\_ Affiliation: \_\_\_\_\_  
Phone No: \_\_\_\_\_ Alt. Phone No: \_\_\_\_\_ Email: \_\_\_\_\_  
Number of Occupants (total): \_\_\_\_\_ Number of Children: \_\_\_\_\_  
 Occupant Interviewed?  Owner Occupied?  Owner Interviewed?  
Owner Name (if different): \_\_\_\_\_ Owner Phone: \_\_\_\_\_  
Owner Mailing Address: \_\_\_\_\_

## Building Details

Bldg Type (Res/Com/Ind/Mixed): COMMERCIAL/MIXED Bldg Size (S/M/L): SMALL  
If Commercial or Industrial Facility, Select Operations: OTHER If Residential Select Structure Type: \_\_\_\_\_  
Number of Floors: 1 Approx. Year Construction: \_\_\_\_\_  Building Insulated?  Attached Garage?  
Describe Overall Building 'Tightness' and Airflows(e.g., results of smoke tests):  
\_\_\_\_\_

## Foundation Description

Foundation Type: BASEMENT Foundation Depth (bgs): \_\_\_\_\_ Unit: FEET  
Foundation Floor Material: POURED CONCRETE Foundation Floor Thickness: \_\_\_\_\_ Unit: INCHES  
Foundation Wall Material: \_\_\_\_\_ Foundation Wall Thickness: \_\_\_\_\_  
 Floor penetrations? Describe Floor Penetrations: Utilities  
 Wall penetrations? Describe Wall Penetrations: Utilities  
Basement is: FINISHED Basement is: \_\_\_\_\_  Sumps/Drains? Water In Sump?: \_\_\_\_\_  
Describe Foundation Condition (cracks, seepage, etc.) : \_\_\_\_\_  
 Radon Mitigation System Installed?  VOC Mitigation System Installed?  Mitigation System On?

## Heating/Cooling/Ventilation Systems

Heating System: FORCED AIR Heat Fuel Type: GAS  Central A/C Present?

## Vented Appliances

Water Heater Fuel Type: \_\_\_\_\_ Clothes Dryer Fuel Type: \_\_\_\_\_  
Water Htr Vent Location: \_\_\_\_\_ Dryer Vent Location: \_\_\_\_\_



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

## PRODUCT INVENTORY

Building Name: \_\_\_\_\_ Bldg Code: \_\_\_\_\_ Date: Apr 5, 2018

Bldg Address: 248 Flatbush Avenue Apt/Suite No: \_\_\_\_\_

Bldg City/State/Zip: Brooklyn NY, 11217

Make and Model of PID: \_\_\_\_\_ Date of Calibration: \_\_\_\_\_

Location	Product Name/Description	Size (oz)	Condition *	Chemical Ingredients	PID Reading	COC Y/N?
Basement	All purpose joint compund	5.0 gal	UO			<input type="checkbox"/>
Basement	Chalkboard latex paint	30 oz	U			<input type="checkbox"/>
Basement	Chalkboard finish spray	12 oz	U			<input type="checkbox"/>
Basement	Spackling compound	8 oz	UO			<input type="checkbox"/>
Basement	70% Isopropyl Alcohol	128 oz	U			<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

\* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

\*\* Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Product Inventory Complete?  Yes  No      Were there any elevated PID readings taken on site?  Yes  No       Products with COC?



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Site Name: Cinderella 248 LLC Site Code: C224160 Operable Unit: \_\_\_\_\_

Building Code: \_\_\_\_\_ Building Name: \_\_\_\_\_

Address: 248 Flatbush Avenue Apt/Suite No: \_\_\_\_\_

City: Brooklyn State: NY Zip: 11217 County: Kings

## Factors Affecting Indoor Air Quality

Frequency Basement/Lowest Level is Occupied?: OCCASIONALLY Floor Material: CEMENT

Inhabited?  HVAC System On?  Bathroom Exhaust Fan?  Kitchen Exhaust Fan?

Alternate Heat Source: \_\_\_\_\_  Is there smoking in the building?

Air Fresheners? Description/Location of Air Freshener: \_\_\_\_\_

Cleaning Products Used Recently?: Description of Cleaning Products: Cleaning disinfectant

Cosmetic Products Used Recently?: Description of Cosmetic Products: \_\_\_\_\_

New Carpet or Furniture? Location of New Carpet/Furniture: \_\_\_\_\_

Recent Dry Cleaning? Location of Recently Dry Cleaned Fabrics: \_\_\_\_\_

Recent Painting/Staining? Location of New Painting: \_\_\_\_\_

Solvent or Chemical Odors? Describe Odors (if any): \_\_\_\_\_

Do Any Occupants Use Solvents At Work? If So, List Solvents Used: \_\_\_\_\_

Recent Pesticide/Rodenticide? Description of Last Use: \_\_\_\_\_

Describe Any Household Activities (chemical use,/storage, unvented appliances, hobbies, etc.) That May Affect Indoor Air Quality:

Any Prior Testing For Radon? If So, When?: \_\_\_\_\_

Any Prior Testing For VOCs? If So, When?: July 2016

## Sampling Conditions

Weather Conditions: PARTLY CLOUDY Outdoor Temperature: 45 °F

Current Building Use: OTHER Barometric Pressure: \_\_\_\_\_ in(hg)

Product Inventory Complete?  Yes  Building Questionnaire Completed?



# Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Building Code: \_\_\_\_\_ Address: 248 Flatbush Avenue Brooklyn, NY 11217

## Sampling Information

Sampler Name(s): Chris Linkletter Sampler Company Code: FPM Group

Sample Collection Date: Apr 5, 2018 Date Samples Sent To Lab: \_\_\_\_\_

Sample Chain of Custody Number: \_\_\_\_\_ Outdoor Air Sample Location ID: \_\_\_\_\_

## SUMMA Canister Information

Sample ID:	IA-1	IA-1D	Ambient		
Location Code:					
Location Type:	BASEMENT	BASEMENT	OUTDOOR		
Canister ID:	368	1186	207		
Regulator ID:	693	513	1420		
Matrix:	Indoor Air	Indoor Air	Ambient Outd		
Sampling Method:	SUMMA AIR SAMPLI	SUMMA AIR SA	SUMMA AIR SA		

## Sampling Area Info

Slab Thickness (inches):					
Sub-Slab Material:					
Sub-Slab Moisture:					
Seal Type:					
Seal Adequate?:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Sample Times and Vacuum Readings

Sample Start Date/Time:	04/05/2018 6:30	04/05/2018	04/05/2018		
Vacuum Gauge Start:	-30	-30	-30		
Sample End Date/Time:	04/05/2018 14:	04/05/2018	04/05/2018		
Vacuum Gauge End:	-8	-9	-12		
Sample Duration (hrs):	8	8	8		
Vacuum Gauge Unit:	in (hg)	in (hg)	in (hg)		

## Sample QA/QC Readings

Vapor Port Purge:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Purge PID Reading:					
Purge PID Unit:					
Tracer Test Pass:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sample start and end times should be entered using the following format: MM/DD/YYYY HH:MM

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation

625 Broadway, 11<sup>th</sup> Floor, Albany, NY 12233-7020

P: (518)402-9543 | F: (518)402-9547

[www.dec.ny.gov](http://www.dec.ny.gov)

2/12/2019

Michael Pintchik  
Cinderella 248 LLC  
254 Flatbush Avenue  
Brooklyn, NY 11217

## Re: Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal

**Site Name:** Cinderella 248 LLC

**Site No.:** C224160

**Site Address:** 248 Flatbush Avenue  
Brooklyn, NY 11217

Dear Michael Pintchik:

This letter serves as a reminder that sites in active Site Management (SM) require the submittal of a periodic progress report. This report, referred to as the Periodic Review Report (PRR), must document the implementation of, and compliance with, site-specific SM requirements. Section 6.3(b) of DER-10 *Technical Guidance for Site Investigation and Remediation* (available online at <http://www.dec.ny.gov/regulations/67386.html>) provides guidance regarding the information that must be included in the PRR. Further, if the site is comprised of multiple parcels, then you as the Certifying Party must arrange to submit one PRR for all parcels that comprise the site. The PRR must be received by the Department no later than **April 26, 2019**. Guidance on the content of a PRR is enclosed.

Site Management is defined in regulation (6 NYCRR 375-1.2(at)) and in Chapter 6 of DER-10. Depending on when the remedial program for your site was completed, SM may be governed by multiple documents (e.g., Operation, Maintenance, and Monitoring Plan; Soil Management Plan) or one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional controls and/or engineering controls (“IC/EC Plan”); a plan for monitoring the performance and effectiveness of the selected remedy (“Monitoring Plan”); and/or a plan for the operation and maintenance of the selected remedy (“O&M Plan”). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you submit the PRR (by the due date above), include the enclosed forms documenting that all SM requirements are being met. The Institutional Controls (ICs) portion of the form (Box 6) must be signed by you or your designated representative. The Engineering Controls (ECs) portion of the form (Box 7) must be signed by a Professional Engineer (PE). If you cannot certify that all SM requirements are being met, you must submit a Corrective Measures Work Plan that identifies the actions to be taken to restore compliance. The work plan must include a schedule to be approved by the Department. The Periodic Review process will not be considered complete until all necessary corrective measures are completed and all required controls are certified. Instructions for completing the certifications are enclosed.



Department of  
Environmental  
Conservation

All site-related documents and data, including the PRR, must be submitted in electronic format to the Department of Environmental Conservation. The required format for documents is an Adobe PDF file with optical character recognition and no password protection. Data must be submitted as an electronic data deliverable (EDD) according to the instructions on the following webpage:

<https://www.dec.ny.gov/chemical/62440.html>

Documents may be submitted to the project manager either through electronic mail or by using the Department's file transfer service at the following webpage:

<https://fts.dec.state.ny.us/fts/>

The Department will not approve the PRR unless all documents and data generated in support of the PRR have been submitted using the required formats and protocols.

You may contact Alicia Barraza, the Project Manager, at 518-402-9690 or [alicia.barraza@dec.ny.gov](mailto:alicia.barraza@dec.ny.gov) with any questions or concerns about the site. Please notify the project manager before conducting inspections or field work. You may also write to the project manager at the following address:

New York State Department of Environmental Conservation  
Division of Environmental Remediation, BURB  
625 Broadway  
Albany, NY 12233-7016

#### Enclosures

PRR General Guidance  
Certification Form Instructions  
Certification Forms

cc: w/ enclosures

Alicia Barraza, Project Manager

Michael Komoroske, Section Chief

Jane O'Connell, Hazardous Waste Remediation Supervisor, Region 2

FPM Group - Ben Cancemi - [b.cancemi@fpm-group.com](mailto:b.cancemi@fpm-group.com)

## Enclosure 1

### Certification Instructions

#### I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

#### II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

#### III. IC/EC Certification by Signature (Box 6 and Box 7):

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.
- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.



**Enclosure 2**  
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**Site Management Periodic Review Report Notice**  
**Institutional and Engineering Controls Certification Form**



	Site Details	Box 1	
<b>Site No.</b>	<b>C224160</b>		
<b>Site Name Cinderella 248 LLC</b>			
Site Address: 248 Flatbush Avenue		Zip Code: 11217	
City/Town: Brooklyn			
County: Kings			
Site Acreage: 0.050			
Reporting Period: November 27, 2017 to March 27, 2019			
		YES	NO
1.	Is the information above correct?	<input type="checkbox"/>	<input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.			
2.	Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	<input type="checkbox"/>	<input type="checkbox"/>
3.	Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	<input type="checkbox"/>	<input type="checkbox"/>
4.	Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	<input type="checkbox"/>	<input type="checkbox"/>
<b>If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.</b>			
5.	Is the site currently undergoing development?	<input type="checkbox"/>	<input type="checkbox"/>
		<b>Box 2</b>	
		YES	NO
6.	Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial	<input type="checkbox"/>	<input type="checkbox"/>
7.	Are all ICs/ECs in place and functioning as designed?	<input type="checkbox"/>	<input type="checkbox"/>
<b>IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.</b>			
<b>A Corrective Measures Work Plan must be submitted along with this form to address these issues.</b>			
_____ Signature of Owner, Remedial Party or Designated Representative		_____ Date	



**Box 2A**

YES NO

8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?

**If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.**

9. Are the assumptions in the Qualitative Exposure Assessment still valid?    
(The Qualitative Exposure Assessment must be certified every five years)

**If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.**

SITE NO. C224160

**Box 3****Description of Institutional Controls**ParcelOwnerInstitutional Control**936-12**

Cinderella 248 LLC

Ground Water Use Restriction  
Landuse Restriction  
Monitoring Plan  
Site Management Plan  
O&M Plan  
IC/EC Plan

1. Requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
2. Allows the use and development of the controlled property for restricted-residential use, which allows for commercial use and industrial use, as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
3. Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
4. Requires compliance with the Department approved Site Management Plan.

**Box 4****Description of Engineering Controls**ParcelEngineering Control**936-12**

Vapor Mitigation

Operation and maintenance of a sub-slab depressurization system (SSDS) to mitigate soil vapor intrusion at the site building and adjacent buildings.

**Periodic Review Report (PRR) Certification Statements**

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

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES    NO  
   

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

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES    NO  
   

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

\_\_\_\_\_  
 Signature of Owner, Remedial Party or Designated Representative

\_\_\_\_\_  
 Date

**IC CERTIFICATIONS  
SITE NO. C224160**

**Box 6**

**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I \_\_\_\_\_ at \_\_\_\_\_,  
print name print business address

am certifying as \_\_\_\_\_ (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

\_\_\_\_\_  
Signature of Owner, Remedial Party, or Designated Representative  
Rendering Certification

\_\_\_\_\_  
Date

**IC/EC CERTIFICATIONS**

**Box 7**

**Professional Engineer Signature**

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I \_\_\_\_\_ at \_\_\_\_\_,  
print name print business address

am certifying as a Professional Engineer for the \_\_\_\_\_  
(Owner or Remedial Party)

\_\_\_\_\_  
Signature of Professional Engineer, for the Owner or  
Remedial Party, Rendering Certification

\_\_\_\_\_  
Stamp  
(Required for PE)

\_\_\_\_\_  
Date

**Enclosure 3**  
**Periodic Review Report (PRR) General Guidance**

- I. Executive Summary: (1/2-page or less)
  - A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
  - B. Effectiveness of the Remedial Program - Provide overall conclusions regarding:
    1. progress made during the reporting period toward meeting the remedial objectives for the site
    2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
  - C. Compliance
    1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
    2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
  - D. Recommendations
    1. recommend whether any changes to the SMP are needed
    2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
    3. recommend whether the requirements for discontinuing site management have been met.
  
- II. Site Overview (one page or less)
  - A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
  - B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.
  
- III. Evaluate Remedy Performance, Effectiveness, and Protectiveness  
Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.
  
- IV. IC/EC Plan Compliance Report (if applicable)
  - A. IC/EC Requirements and Compliance
    1. Describe each control, its objective, and how performance of the control is evaluated.
    2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
    3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
    4. Conclusions and recommendations for changes.
  - B. IC/EC Certification
    1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).
  
- V. Monitoring Plan Compliance Report (if applicable)
  - A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
  - B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
  - C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
  - D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
  - E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.
  
- VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
  - A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
  - B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
  - C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated

the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.

- D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.
- E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

#### VII. Overall PRR Conclusions and Recommendations

- A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
  - 1. whether all requirements of each plan were met during the reporting period
  - 2. any requirements not met
  - 3. proposed plans and a schedule for coming into full compliance.
- B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.
- C. Future PRR Submittals
  - 1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
  - 2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

#### VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

**APPENDIX B**

**RESUMES OF ENVIRONMENTAL PROFESSIONALS**



Mr. Cancemi has diversified experience in geology and hydrogeology. His professional experience includes groundwater and soil investigations, design and management of soil remediation projects, installation and maintenance of groundwater containment and remediation systems, aquifer testing and interpretation, geotechnical studies, evaluation of site compliance with environmental regulations and environmental permitting.

Functional Role	Title	Years of Experience
Senior Hydrogeologist	Department Manager - Hydrogeology	22

**Personal Data**

**Education**

M.S./2001/Hydrogeology/SUNY Stony Brook  
 B.S./1995/Geology/SUNY Stony Brook

**Registration and Certifications**

New York State Professional Geologist, #7051  
 Certified Professional Geologist – American Institute of Professional Geologists  
 NYC Office of Environmental Remediation – Gold Certified Professional  
 OSHA 40-hour HAZWOPER and Current 8-hour Health and Safety Training and Current Annual Physical  
 OSHA 8-hour HAZWOPER Supervisor  
 OSHA 10-hour Construction Safety and Health  
 OSHA Permit-Required Confined Space Training  
 Long Island Geologists  
 National Groundwater Association

**Employment History**

2001-Present FPM Group  
 1998-2001 Burns & McDonnell Engineering Company  
 1997-1998 Groundwater and Environmental Services  
 1996-1997 Advanced Cleanup Technologies

**Detailed Experience**

**Hydrogeologic Evaluations**

- **Project Manager, Lower Manhattan, NY. NYCT.** Coordinated and performed constant head hydraulic conductivity (packer) testing in boreholes located in fractured bedrock in lower Manhattan, NY to evaluate fracture connectivity with the nearby Hudson and East Rivers and determine hydraulic conductivity and related parameters such that water management procedures could be implemented for redevelopment of the New South Ferry Subway Station.

- **Project Manager, Manhattan, NY. NYCT** Coordinated and performed a hydrogeologic investigation, including utility clearing, soil borings, rock coring, packer testing, aquifer pumping testing, data collection, and interpretation, to evaluate subsurface conditions and determine geologic parameters for a proposed subway extension of the NYC Transit No.7 Subway Line.
- **Project Manager, Various Sites Long Island, NYC, and Westchester County, NY** Performed aquifer pumping and slug tests and evaluated hydrologic properties using the computer program AQTESOLV.

**Site Investigations**

- **Program Manager** for ongoing investigation and remedial projects at several New York State Inactive Hazardous Waste Disposal sites, Voluntary Cleanup Program (VCP) sites, and NYC OER e-designated sites. Investigations have included site characterization, Remedial Investigations/Feasibility Studies (RI/FS), and Resource Conservation and Recovery Act (RCRA) facility investigations and closures. Remedial services have included contaminated soil removal; design, installation, and operation of air sparge/soil vapor extraction (AS/SVE) systems and sub-slab depressurization systems (SSDS), capping, and other remedial services.
- **Program Manager NYSDEC BCP Site, Brooklyn, NY** Coordinated and performed an investigation, implemented remedial measures and regulatory reporting at a former dry-cleaning facility in Brooklyn, NY, including soil, groundwater and soil vapor sampling to assess onsite chlorinated solvent impacts. Remedial actions included conducting pilot testing for installation of a sub-slab depressurization system (SSDS), coordinating the installation of vapor barrier and SSDS. Prepared a Final Engineering Report documenting remedial activities and a Site Management Plan for continued site monitoring.



- **Program Manager NYSDEC Inactive Hazardous Waste Site, Garden City, NY** Coordinated and performed an investigation, implemented remedial measures and regulatory reporting for a former printing facility in Garden City, NY, including soil, groundwater and soil vapor sampling to assess onsite chlorinated solvent impacts. Remedial actions included pilot testing and installation of an air sparge/soil vapor extraction (AS/SVE) system and SSDS, coordinating the installation of an SSDS, removal of contaminated soils from two areas and removal of impacted sediments from twelve leaching structures. Prepared a Final Engineering Report documenting remedial activities.
- **Program Manager, NYC Redevelopment Site, Queens NY.** Program Manager for environmental activities at a NYC Voluntary Cleanup Program Site. Environmental activities included preparation of a Phase I report, completion of a remedial investigation, preparation of associated work plans, implementation of a community air monitoring program for site activities, excavation and disposal of impacted soils, management and disposal of clean soils, and regulatory reporting.
- **Project Manager Remedial Investigation NYSDEC BCP Site, Queens, NY** Coordinated and performed an investigation at a vacant commercial property Far Rockaway, NY, including soil, groundwater and soil vapor sampling to assess onsite chlorinated solvent impacts from an adjoining offsite source. Prepared Remedial Work Plan and Report and provided monthly updates.
- **Project Manager, Site Investigation, Former Aerospace Facilities, Long Island, NY** Coordinated and performed soil and groundwater sampling and soil vapor studies at several aerospace manufacturing facilities on Long Island, NY. Assessments included an evaluation of past manufacturing and facility operations, storage and use of solvents, petroleum and manufacturing-derived wastes, and impacts to soils, soil vapor, and groundwater. Areas of concern were identified for further evaluation and/or corrective action.
- **Project Manager, Municipal Landfill Monitoring, Town of East Hampton, NY** Coordinated and performed long term groundwater monitoring at two closed Town of East Hampton, NY municipal landfills, including the sampling a multi-depth monitoring well network, analysis and interpretation of analytical and hydrogeologic data, and regulatory reporting in accordance with NYSDEC Part 360 requirements.
- **Project Manager, Site Investigation, Former agricultural facilities, Long Island, NY** Coordinated and performed soil and groundwater investigations at various agricultural and horticultural properties to evaluate impacts of past herbicide and pesticide usage on the underlying soil and groundwater.
- **Program Manager, Municipal Landfill Gas Monitoring, Town of East Hampton, NY** Managed and performed routine methane monitoring at two Town of East Hampton landfills for compliance with NYSDEC requirements and to evaluate potential offsite migration to the surrounding community. Monitored indoor air with a flame ionization detector (FID) to evaluate impacts to buildings.
- **Hydrogeologist, Groundwater Modeling, Town of East Hampton, NY** Assisted with groundwater flow modeling for the Springs-Fireplace Road Landfill to evaluate the nature and extent of the landfill plume, its likely downgradient extent, and its fate.
- **Program Manager, Petroleum Release Sites, Various NYC, Long Island and Westchester County** Coordinated and performed onsite and offsite monitoring at petroleum release sites on Long Island, the New York metropolitan area, and in Westchester County in accordance with NYSDEC Spill program requirements. The monitoring programs generally included sampling multi-depth monitoring well networks utilizing low-flow sampling techniques, analysis/interpretation of analytical and hydrogeologic data, and regulatory reporting.
- **Project Manager, Site Investigation, Logan International Airport, Boston, MA.** Coordinated a soil and groundwater sampling program to evaluate environmental conditions at Terminal A, Logan International Airport, East Boston, Massachusetts. The program included an assessment of the current fuel hydrant system and other locations of potential environmental concern using non-destructive air vacuum extraction-clearing techniques combined with direct-push sampling.

- **Project Manager, Site Investigation, Pyrotechnics Facility, Suffolk County, NY.** Managed and performed a soil and groundwater investigation, a remedial soil excavation, and groundwater monitoring at a pyrotechnics manufacturing facility in Suffolk County, NY. The work was performed under the direction of the Suffolk County Department of Health Services (SCDHS) to investigate and remediate contamination from historic use of perchlorate-containing materials at the facility.
- **Project Manager, Site Investigation, Automobile Franchise, Westchester County, NY.** Coordinated and performed soil, groundwater and soil vapor investigations at several automobile dealerships in Westchester County, NY to evaluate potential impacts from petroleum and chemical solvent storage and usage and onsite waste water disposal systems.
- **Project Manager, Site, Investigation, Former mercury thermometer manufacturing facility, NYC, NY.** Coordinated and performed soil and soil vapor intrusion study at a former mercury thermometer manufacturing facility in NYC. Assessments included an evaluation of past manufacturing and facility operations, storage and use of mercury, manufacturing-derived wastes, and impacts to soils and soil vapor Areas of concern were identified for further evaluation and remedial action.

#### Phase I Environmental Site Assessments

- **Project Manager, Various Northeastern and Mid-Atlantic States.** Performed numerous Phase I Environmental Site Assessments (ESAs) for commercial and industrial properties throughout the Northeastern and Mid-Atlantic States for various clients including trucking companies, major airlines, telecommunication companies, chemical/ petroleum storage facilities, aerospace manufacturing facilities, machine shops, retail shopping centers, auto dealerships and service stations.

#### Remediation

- **Project Manager, Remediation, Former Landfill, Suffolk County, NY.** Managed remedial activities at a NY State Environmental Restoration Program (ERP) Site situated at a former hospital landfill in Northport, NY. Responsibilities contractor management and oversight, soil disposal management, confirmatory testing, data review, and preparation of remedial work plan and final engineering report for remedial activities.
- **Project Manager, Remediation - AS/SVE, Various Sites, NYC and Long Island.** Performed pilot testing, design, installation and procurement of numerous multi-depth soil vapor extraction (SVE) and air sparge (AS) remediation systems on Long Island and in the NYC metropolitan area to remediate chlorinated solvents and petroleum. Conducted remediation system operation and maintenance, and evaluations of system performance.
- **Project Manager, Remediation - UIC Structures, Nassau and Suffolk County, NY.** Performed numerous storm water and sanitary leaching structure (UIC) cleanouts utilizing excavation and/or vacuum assisted equipment to remove contaminated sediments and liquids. Conducted waste characterization and profiling, pipe camera surveys, and structure locating utilizing water-soluble dyes and electronic locating equipment.
- **Project Manager, Remediation Sub-Slab Depressurization Systems, NYC, Nassau and Suffolk Counties, NY** Conceptually designed and oversaw the installation of a sub-slab depressurization system (SSDS) at several commercial properties in the NYC and Long Island to mitigate chlorinated solvent impacts. SSDS monitoring was conducted to ensure proper operation and emissions compliance of with NYSDEC air discharge guidelines.
- **Project Manager, Remediation System O & M, NYC and Long Island.** Operated and maintained remediation systems, including SVE, groundwater pump and treat, AS, dual-phase extraction, SSDS and free-phase petroleum recovery systems.
- **Project Manager, Remediation. White Plains, NY.** Managed and coordinated a petroleum spill investigation to evaluate the nature and extent of a fuel oil release at an office building in White Plains, NY. The investigation included excavation and removal of a 5,000-gallon UST situated over 20 feet below grade, tightness testing of the UST and associated piping, a soil and groundwater investigation, free product recovery utilizing vacuum-enhanced fluid recovery techniques, and coordination and reporting to the NYSDEC and Westchester County Department of Health.

### Health and Safety

- **HASP and CAMP Plan Preparation, Various Sites.** Prepared community air monitoring and health and safety plans for several NYSDEC inactive hazardous waste, brownfield cleanup program, volunteer cleanup program, petroleum spill, and NYC e-designation program sites
- **HASP Monitoring, Various Sites.** Performed health and safety monitoring at investigation and remediation sites during intrusive activities. Calibrated and operated photoionization detectors (PID) and flame-ionization detectors (FID) for organic vapors and combustible gas indicators (CGI) for methane. Compared results to applicable action levels and took preventative/protective measures as necessary.
- **CAMP Monitoring, Various Sites.** Performed community monitoring, including monitoring for noise, particulates (dust), and organic vapors. Recorded observations and compared to applicable action levels. Calibrated and operated noise meters, particulate monitors, and PID/FID.
- **Radiation Screening, Various Sites.** Performed screening for radiation at select sites. Operated Geiger counter in different radiation modes and obtained and evaluated background readings.
- **Mercury Screening.** Performed screening of mercury vapor for several projects. Operated and experienced with Jerome and Lumex Mercury Vapor Analyzers.

### Expert Witness/Technical Services

- **Expert Witness Services, Glen Cove Waterfront Redevelopment.** Provided expert witness services regarding environmental conditions and remedial procedures for redevelopment of a former industrial and commercial area in Glen Cove, NY.
- **Technical Services, multiple sites, Town of Brookhaven.** Provided technical services regarding environmental conditions at various commercial and residential sites within the municipality to evaluate potential compliance issues with Town code. Services included coordinating subsurface investigations, sampling of various media, methane surveys, tidal surveys, technical oversight of investigation activities.
- **Technical Services, multiple sites, Town of Huntington.** Provide technical review of environmental investigations and soil

management plans prepared for proposed development for the Planning Division to assess if the proposed development has been properly evaluated in accordance with town requirements.

### MGP Site Experience

- **Field Team Leader, Property Transfer of MGP sites.** Conducted soil and groundwater sampling at several Nicor MGP sites in Illinois prior to property transfer to Con Edison. Coordinated sampling crews, oversaw sampling and sample management, and implemented HASP monitoring.
- **Project Manager, Geophysical Investigation at Brooklyn Union Greenpoint MGP site.** Developed and implemented a geophysical investigation at an MGP site that was subject to differential settlement. Coordinated with client and subcontractors, oversaw survey activities, implemented HASP, interpreted results, and prepared a report to document the completed work.

### Other

- **Project Manager, RCRA Closure, Nassau County, NY** Coordinated RCRA closure activities and performed confirmatory sampling at a former package manufacturing and printing facility in Nassau County, NY. Project duties included preparation of a closure work plan, contractor procurement, a subsurface site investigation, rinsewater sampling, and regulatory agency reporting and coordination, and preparation of a closure report.
- **Project Manager, Former Landfill, Suffolk County, NY.** Prepared a remedial design (RD) work plan for a former hospital landfill on Long Island. The RD work plan included a summary of past investigations, a materials management plan for the excavation and disposal of contaminated soils and debris, a post-excavation sampling plan, a site restoration plan, community air monitoring plan (CAMP), health and safety plan (HASP) and a quality assurance and quality control (QA/QC) plan.
- **Project Manager, Air Monitoring, Nassau County, NY.** Managed and performed monthly soil gas sampling and quarterly indoor air quality sampling at an elementary school in southwestern Nassau County, NY. The monitoring and associated NYSDEC reporting were performed to ensure that a gasoline groundwater plume migrating through the school

property was not impacting indoor air at the school.

- **Project Manager, Environmental Compliance, Multiple Sites.** Performed compliance inspections to assess issues of potential

environmental concern at manufacturing, aviation, trucking, retail, and not-for-profit facilities.



Mr. Loyst has over 25 years of experience in environmental and civil engineering involving areas such as design & construction, regulation compliance & permitting, site investigation & remediation, environmental impact analysis, and expert witness testimony.

His clients include Federal agencies – USACE, US Army, USAF, FAA, USCG, USDA, USPS, IRS, VA; State agencies – NYSOGS, NYSParks, NYSDOT, DASNY, NYSOMH, NYSDEC, NYSPolice; City agencies – NYCT, NYCDEP, NYCDOC; Municipalities – Riverhead, Islip, Brookhaven, Smithtown, East Hampton, Village of Lake Success, Greenburgh, City of Rye and numerous private clients.

Functional Role	Title	Years of Experience
Program Manager	Corporate Vice President Department Manager - Environmental Engineering	29

**Personal Data**

**Education**

M.S./1997/Environmental Engineering – New York University (formerly Brooklyn Polytechnic University)  
 B.S./1989/Interdisciplinary Engineering & Management– Clarkson University  
 B.S./1988/Civil and Environmental Engineering – Clarkson University

**Registration and Certifications**

Licensed Professional Engineer in State of New York  
 Project Management Professional  
 NYSDEC Stormwater Qualified Inspector Training  
 OSHA-approved 40-hr Health and Safety Training  
 OSHA-approved 8-hr Refresher Training Course  
 OSHA 8-hr HAZWOPER Supervisor Training

**Societies/Associations**

American Society of Civil Engineers  
 Project Management Institute

**Employment History**

1992 to Present FPM Group  
 1989-1992 Westinghouse Electric Corp.

**Technical Seminars**

Stormwater, Soil Erosion & Sediment Control,  
 Hazardous Waste/RCRA, Emergency Planning &  
 Community Right-To-Know (EPCRA), Environmental  
 Impact Analysis/NEPA/EIS/EA, Air/CAA, Soil  
 Remediation

**Detailed Experience**

**Design & Construction**

- Performed site reconnaissance, surveying, identification, and enumeration activities to develop plans, specifications, and environmental permitting for NYSOGS for processing waste tire materials into beneficial shred material to be used by the New York State Department of Transportation (NYSDOT) in road construction projects and landfills. Following the

development of plans and specifications, FPM assisted NYSOGS with bidding phase services including contractor award and construction/remediation/restoration/ oversight. In total approx. 20 million tires were recycled at four sites across New York State (Smithtown, Saugerties, Catskill, and Plattsburgh).

- Prepared Program Reports and Design services for NYSOGS/ NYSDOT water supply treatment facilities in Wellsville, N. Java, and Oswego, NY.
- Evaluated existing site drainage design issues and provided corrective action for NYSOGS/DMNA AAFS in Rochester, NY.
- Investigated and designed corrective actions for failing maintenance bay trench drains at NYS Police Headquarters in Farmingdale, NY.
- Performed SWPPP services for NYSOGS/NYSPolice including weekly construction inspections and filing NOT upon project completion for new State Police zone headquarters in Hempstead, NY.
- Reviewed, prepared, and implemented numerous State Pollutant Discharge Elimination System (SPDES) General Permits for Stormwater Discharges from Construction Activities, Stormwater Pollution Prevention Plans (SWPPPs), and Soil Erosion and Sediment Control Plans for NYSOGS, NYSDEC, NYCDEP, municipalities, and private clients.
- Hazardous material storage area design for NYSOGS, NYSParks, and industrial facilities in accordance with Suffolk County and Nassau County regulations and containment provisions (e.g., containment buildings, bermed epoxy coated storage areas).
- Conventional subsurface sewage disposal system and reduced pressure zone device designs and construction management services for NYSOGS and numerous governmental, municipal, and private facilities.
- Hydrologist consultant to New York City Transit (NYCT) involving numerous drainage studies and



investigation of mitigation measures for stormwater and groundwater issues at bus depots, train yards, and subway stations.

- Hydrologist consultant to Town of Greenburgh involving the review of EIS documents, Stormwater Management Plans, Soil Erosion and Sediment Control Plans, drainage calculations, and modeling for proposed development projects on sites up to 300 acres.
- Hydrologist consultant to City of Rye involving site design review, flooding analyses, and environmental impact assessment for a 10-acre Brownfield remediation/development project.
- Prepared SWPPP and performed bi-weekly stormwater inspections for a NYCDEP 11-acre, 30 million gallon combined storage overflow facility in Brooklyn, NY.
- Performed dye-testing studies at several NYCT facilities in NYC and La Salle Military Academy in Oakdale, NY to identify discharges and remedies.
- Assisted NYCT with design mitigation measures and resiliency projects for critical infrastructure damaged during Hurricane Sandy.
- Design and construction services for rehabilitation and stabilization of streams and drainage channels for USACE in Binghamton, Endicott and Johnson, NY, and Danville, PA.
- Runoff calculations, drainage alternatives, and best management practices for site development projects in Long Island, NYC, and Westchester County.
- Evaluation and rehabilitation of groundwater well dewatering pumping systems for NYCT via downhole camera videotaping, riser swab cleaning, high velocity jetting, pump test analysis, specific capacity testing, and pump redesign.
- Performed leak investigation studies, and designed corrective measures for MTA Grand Central Station and South Ferry Station in Manhattan, NY.
- Certified numerous types of reports including periodic review, feasibility study, engineering, and work plans for inactive hazardous waste disposal (NYS Superfund) and environmental restoration program (ERP) sites.
- As Village of Lake Success environmental consultant, involved in groundwater pump and treat system quarterly OU-1 and OU-2 remedial system reporting, OMM and SSDS design review, indoor air quality monitoring, and overseeing sub-slab construction activities.
- Removal, recycling, and disposal of over 10,000 cy of construction and demolition debris at various waste management areas on Plum Island, NY involving development of plans and specifications, cost estimating, and construction oversight for USDA.
- Soil erosion and sediment control plans and certifications for FAA airport navigational aid projects.
- Performed Dam Classification, Spillway Analysis, and Design services for NYSParks repair/replacement of Connetquot Dam in Long Island, NY.
- Analyzed existing Paumanok Village Sewage Treatment Plant design to evaluate if 60 additional condominium units could be accommodated.
- Porous pavement designs and evaluations for NYCT bus depots.
- Prepared Remedial Design Report, plans and specifications, bid phase services, and construction supervision for remediation of a 3-acre VNSA landfill in Huntington, NY.
- Assisted the Town of Riverhead with capping estimates, feasibility study for reclaiming and capping a reduced landfill and engineering reviews for a full Part 360 landfill cap design.
- Development of plans and specifications for asbestos abatement projects for elementary schools in Long Island.
- Asbestos abatement specification reviews for FAA facility rehabilitations.
- Designed new track and field athletic complex at USCG Academy, New London, CT involving NCAA regulation 8-lane track with synthetic type running service, separate event throwing areas, NCAA regulation soccer field inside the track and all necessary elements for typical collegiate facilities (lighting, grandstand, scoreboard, etc.) Critical design aspects included managing infiltration and surface water runoff for discharge into Thames River and environmental permitting (SWPPP and coastal zone consistency determination).
- Performed study and conceptual design of an equalization tank for storing roof runoff to be used at two NYCT bus depots in Manhattan and Staten Island.
- Soil Vapor Intrusion (SVI) and sub slab depressurization system (SSDS) design work for office buildings and aircraft hangar/warehouses at former Griffiss AFB and 1.3 million sf of office building in Nassau County.
- Prepared plans for relocation of scales/scalehouse at a waste transfer/recycling facility in Islip, NY.
- Acquired Joint Application/Water Withdrawal Permits and prepared Engineering Report and Plans for construction of a lowered hydraulic connection between 2 lakes in Lake Success, NY.
- Sub-slab depressurization system (SSDS) design including a horizontal well and blower system for a DASNY and NYS Office of Alcoholism and Substance Abuse Services (OASAS) 4,000 sf facility on a 1-acre parcel on a municipal landfill in the City of Peekskill.
- Designed an 80'x45'x30' deep recharge basin with infiltration wells for an 11-acre NYCT bus depot in Staten Island, NY.

- Provided water well treatment design services for a golf course irrigation system in Lake Success, NY.
- Designed ground mounted 10kw Photovoltaic system for a Town of Islip Compost Facility.
- Performed condition assessments for the Latimer Reef and Little Gull Light Stations in Southold, NY.
- Feasibility Study (FS) to prevent the potential migration of a PCB oil pool/contaminated aqueous plume and peat layer settlement due to dewatering activities at Sunnyside Yard, Queens.
- FS for disposal alternatives for permanent subway dewatering activities in Brooklyn and Manhattan, NY.
- FS for property consolidations and expansion of shopping centers in Long Island. Site development potential was evaluated in accordance with local ordinances/codes.
- Evaluated roof leaks, mold investigation, and designed corrective action for Great Neck Post Office, NY.

#### **Regulation Compliance/Permitting**

- Suffolk County Department of Health Services (SCDHS) Article 12 and Nassau County Department of Health (NCDOH) Article 11 Toxic and Hazardous Material Storage Facility Permits for NYSOGS, USPS, NYS Parks, and private clients.
- UST compliance inspections in accordance with NYSDEC - Petroleum Bulk Storage (PBS) and Chemical Bulk Storage (CBS) regulations; SCDHS Article 12; NCDOH Article 11; and National Fire Protection Agency (NFPA) codes for NYSOGS, NYSDOT, USPS, and private clients.
- Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) permits for industrial and stormwater discharges for NYSOGS, NYCT, USPS, and private clients.
- Environmental compliance audits covering the Clean Air Act (CAA), Resource Conservation and Recovery Act (RCRA), Clean Water Act (CWA), Emergency Planning and Community Right to Know Act (EPCRA), and local regulations involving areas such as hazardous material storage for USPS and private clients.
- Air permitting and associated reporting including Title V and 76-19-3 air permits; new source review; seasonal variance applications; BACT analysis; emission statements; EPA NESHAP surveys, annual and semi-annual compliance certifications; Air Guide 1 and Screen 2 modeling; Air Facility Registrations; air quality assessments; emission reduction credits, and stack testing for VA, Islip, and private clients.
- Performed RCRA compliance activities involving waste stream characterizations; waste minimization; pollution prevention; manifest tracking; preparation of

quarterly, annual, and bi-annual reports; and training for USPS and private clients.

- Prepared hazardous waste closure plans in accordance with 6NYCRR 373-3 and implemented closure of hazardous waste management areas in accordance with 6NYCRR 373-3.7(c) for private clients.
- Performed EPCRA/Sara Title III audits, reporting and investigated administrative complaints for private clients.
- Prepared, reviewed, and certified numerous Spill Prevention Control and Countermeasure Plans (SPCCPs) in accordance with 40 CFR Part 112 for NYS Parks, NYCDOC, and private clients.
- UST Closure activities for private clients in Long Island, NY in accordance with SCDHS requirements.
- SCDHS Article 7 compliance reviews for restricted chemical storage for private clients.
- SCDPW sewer connection and agreements for private clients.
- Prepared and acquired NYCDEP construction dewatering permits for private clients in NYC.
- Developed Stormwater Management Plan for Town of Smithtown in response to USEPA notice of violations.
- Prepared SAPs and performed Indoor Air Quality Sampling for VOCs and mold for municipalities and industrial clients in Long Island.
- Baseline and semi-annual monitoring, BMR and SMR reporting, and sampling for wastewater discharges for compliance with NYCDEP and SCDPW requirements.
- Performed health and safety monitoring at investigation and remediation sites during intrusive activities. Monitoring included calibration and operation of photoionization detector (PID) and flame-ionization detector (FID) for organic vapors and combustible gas indicator (CGI) for methane. Compared results to applicable action levels and took preventative/protective measures as necessary.
- Site Specific Health and Safety Plans (HASP) for USACE, USDA, NYSOGS, and private clients.
- Sound level studies to determine compliance with local noise ordinances for private clients.
- Prepared engineering reports for Long Island Well permits.
- Prepared Solid Waste Management Plan (SWMP) for Town of Riverhead.
- Performed compliance inspections and corrected NOV's for shellfish operation in Westbury, NY.

#### **Site Investigation & Remediation**

- Petroleum Spill Investigations (gasoline, diesel, No. 2 and No. 6 fuel oil, and lubricating oil) and associated closure work for tanks and other types of discharges for NYSOGS, USAF and private clients in the metropolitan and upstate NY regions.

- Identification, characterization, and removal of hazardous material and hazardous waste at industrial facilities and psychiatric centers for NYSOGS and private clients in Long Island and NYC.
- Developed and Implemented SAPs for USCG Station dredging projects in Long Island in accordance with NYSDEC Region 1 Marine Habitat Division protocols.
- Quarterly and semi-annual sampling/monitoring and reporting in accordance with NYSDEC Part 360 regulations for several landfills in Long Island.
- ASTM Phase I Environmental Assessments for property transactions in Suffolk, Nassau, and the five boroughs of New York.
- Sampling and Analysis Plans for Phase II investigations in Long Island and NYC.
- Groundwater, soil, and air sampling at numerous sites on Long Island and NYC for landfill closures, remedial investigations, and petroleum spills.
- Hazardous, Toxic, and Radioactive Waste (HTRW) Surveys and Preliminary Assessments in NY and NJ for FAA and USACE.
- Polychlorinated Biphenyl (PCB) basewide (3500 acres) evaluation of electrical equipment at Griffiss Air Force Base.
- Anthrax sampling for IRS mail sorting facilities in Holtsville, NY, and Andover, MA.
- Performed Indoor Air Quality Studies for office buildings in Long Island, NY.
- Performed Environmental Assessment Boring Programs (EABP) for NYCT stations/substation construction projects.
- Remediation of lead contaminated soil at four water tower sites at Barksdale Air Force Base, LA via excavation/disposal. Feasibility studies, work plans, Health and Safety Plans, Closure Reports, and No Further Response Action Planned Memorandums were prepared in conjunction with the remediation.
- In-situ soil remediation of VOCs through vapor extraction and soil aeration techniques at Long Island and NJ contaminated sites.
- Estimated the remaining volume and footprint for the Youngs Avenue Landfill, Riverhead, NY, which currently was in full scale reclamation mode, via a boring and excavation plan involving numerous deep borings and shallow test pits and topographic surveys/landfill maps.
- Cultural resource projects for USACE and FAA in the northeast region including cultural resource surveys; cultural resource assessments; underwater archeology surveys; and recordations.
- Wetland Delineations and Biological Surveys (Grassland Birds) in support of FAA EAs at Teterboro Airport.
- Historic Preservation Plan for Plum Island NY and Historic Structure Report for Plum Island Light Station, Plum Island Animal Disease Center, NY.
- Environmental Scoping Document and presentation agenda for the District's Atlantic Coast of Long Island Fire Island Inlet to Montauk Point, NY Storm Damage Reduction Reformation Study.
- Preliminary Environmental Assessment (PEA) Reconnaissance Studies for USACE Flood Control and Shore Protection Projects in South River, Raritan River Basin, NJ and Cliffwood Beach, NJ.
- Environmental assessment and architectural and historical study for a USMA historical building/site at West Point, NY.
- Draft Supplemental Environmental Impact Statement (EIS) Limited Reevaluation Study for the Deepening of the Arthur Kill/Howland Hook Navigation Channel in NY/NJ.
- Water resources impact analysis for Ramapo Energy Limited Partnership DEIS.
- Long and Short Environmental Assessment Forms (EAFs) for construction and site development projects in Long Island, NY.
- Environmental Assessments for Federal Aviation Administration (FAA) navigational aid projects at numerous airports in the northeast region in accordance with the National Environmental Policy Act (NEPA) and FAA order 1050.1D Policies and Procedures for Considering Environmental Impacts. Airport projects included Instrument Landing Systems (ILS), Approach Lighting Systems, Remote Transmitters, Doppler Equipment, Air Traffic Control Towers and Air Route Traffic Control Centers. Airports and support areas included Teterboro, Richmond Intl, Baltimore Washington Intl, Syracuse-Hancock Intl, Newark Intl, Stewart, Philadelphia Intl, LaGuardia Intl, and Leesburgh.
- Environmental assessments for the Army and Air Force Exchange Service (AAFES) at bases in Oahu, HI in accordance with NEPA, AR-200 Environmental Effects of Army Actions and DOD Directive 6050.1 Environmental Effects in the US of DOD Actions. Projects included capital improvement projects at Schofield Barracks, Helemano Military Reservation, Aliamanu Military Reservation, and Bellows Air Force Base.
- Surveying and mapping 3 shoreline and wetland conservation areas as part of a stipulation agreement between NYSDEC and PIADC on Plum Island, NY.

### **Environmental Impact Analysis**

- Coastal/Biological Monitoring Program components for the USACE, New York District Beach Erosion Control Projects including intertidal ichthyoplankton studies, intertidal offshore finfish studies, nearshore and offshore benthic sampling, water quality analysis, and creel census.



- Environmental Assessment for Rehabilitation of the Mine Lake Dam for USAG West Point, NY.
- Long Form EAF and Pine Barrens Core Preservation Area application for Westhampton Ready Mix Corp.
- Evaluated stormwater and subsurface impacts for D/FEIS and Findings Statement for parking improvements and conversion of building use from warehouse to office space at a 93-acre site in Village of Lake Success/Town of North Hempstead, NY.
- Evaluated Planned Development District (PDD) Alternatives for former 105-acre Dowling College site in Brookhaven, NY.
- Hazardous waste and disposal issues for case between defendant/Salinger & Sack and Ecolab, Inc. Engineering and Permitting issues for case between Town of Brookhaven and BRT for new rail line in Yaphank, NY. Landfill volume evaluation and closure alternatives for case between Town of Riverhead and Grimes Contracting.
- Hydrology and stormwater issues for case between Town of Greenburgh and Fortress Bible Church.
- Site contamination and site management plans, engineering and institution control issues for case between Town residents and City of Glen Cove/developers in Glen Cove, NY.

**Expert Witness Testimony**

- Beach erosion and accretion issues and evaluation of engineering/construction alternatives for case between Sea Gate Beach Club and USACE.



Mr. Linkletter has a diversified experience in geology and hydrogeology. His professional experience includes groundwater and soil investigations, routine landfill gas monitoring, Phase I Environmental Site Assessments, soil remediation projects, soil vapor intrusion evaluation, maintenance of groundwater, soil and soil vapor remediation systems, and evaluation of site compliance with environmental regulation.

Functional Role	Title	Years of Experience
Hydrogeologist	Hydrogeologist	3

## Personal Data

### Education

B.S./2015/Geology/SUNY Oneonta, NY

### Registration and Certifications

OSHA 40-hour HAZWOPER Health & Safety Training  
 Current OSHA 8-hour HAZWOPER Health & Safety Refresher

### Employment History

2015-Present FPM Group

## Detailed Experience

### Site Investigation and Monitoring

- Performs soil, soil vapor, indoor air and groundwater monitoring and sampling at commercial, industrial, and municipal sites throughout Long Island and the New York metropolitan area. Monitoring and sampling activities are conducted in accordance with NYSDEC-approved work plans, Phase II work plans, and regulatory agency requirements.
- Conducts Phase I and II Environmental Site Assessments (ESAs) for various residential, commercial, industrial and vacant sites in New York State in accordance with the ASTM Standard. Phase I ESA tasks included site inspections, interviews, evaluation of state and federal databases, record reviews at local and state government agencies, and reports.
- Skilled in use and calibration of field equipment including photoionization detectors (PID), Landtec Infrared Gas Analyzer, combustible gas indicator (CGI), water-level meters, interface probes, groundwater quality instrumentation, and survey equipment.
- Performs data tabulation and evaluation relative to established regulatory agency criteria including USEPA, NYSDEC, NCDOH, and SCDHS.

- Conducted Phase II ESAs for several sites in the New York City Office of Environmental Restoration (NYC OER) e-designations. Responsibilities include soil, groundwater, and soil vapor sampling, as well as frequent correspondence and coordination of NYC OER personnel.
- Performed long-term monitoring projects at several landfills at McGuire AFB, New Hanover, NJ for AFCEE. Collected groundwater, leachate, and surface water samples.
- Assisted in a groundwater, soil, and soil vapor investigation at a Brownfield Cleanup Program (BCP) Site in Far Rockaway, NY including petroleum compounds. Responsibilities included groundwater, soil, and soil vapor sampling for characterization and delineation, subcontractor coordination and oversight, and report preparation.
- Performed sediment sampling for the Town of Brookhaven, including sample collection, grain size analysis, and report preparation.

### Remediation

- Field Technician - Operates and maintains remediation systems, including soil vapor extraction, air sparge systems, groundwater pump and treat, and sub-slab depressurization systems.
- Field Technician, East Harlem, NY - Assisted in remedial activities at a Voluntary Cleanup Program (VCP) and NYC OER e-designated redevelopment site. Responsibilities included the collection of waste characterization and endpoint samples, oversight and documentation of the excavation and removal of impacted soils to various disposal facilities, and daily air monitoring to evaluate the effect of site activities on the surrounding community.
- Environmental Scientist, Brooklyn, NY - Assisted in remedial activities at a NYS Superfund Site in Greenpoint, NY. Responsibilities included collection of waste, monitoring product thickness and recovery, and documentation.

- Field Technician, Queens, NY - Assisted in remedial activities at a VCP and NYC OER e-designated redevelopment site in Woodside, NY. Responsibilities included the collection of waste characterization and endpoint samples, oversight and documentation of the excavation and removal of impacted soils to various disposal facilities, and daily air monitoring to evaluate the effect of site activities on the surrounding community.

### **Landfills**

- Hydrogeologist, Town of East Hampton - Conducts ongoing groundwater and methane monitoring programs for the Springs-Fireplace and Montauk town landfills. Responsibilities include collection of routine and baseline groundwater samples, methane monitoring and operating, tabulation of analytical data, and report preparation.
- Hydrogeologist, Town of Islip, NY - Conducts ongoing landfill gas monitoring projects at three Town of Islip landfills. Monitoring program includes monthly collection of landfill gas data from onsite and offsite methane wells, methane collection systems (extraction wells), and flare systems, volatile organic compound (VOC) monitoring, greenhouse gas monitoring, and report preparation.

- Hydrogeologist, Town of Islip, NY - Manages ongoing field and reporting activities for the U.S. Environmental Protection Agency (EPA) Greenhouse Gas (GHG) Reporting Program at the Blydenburgh Landfill in the Town of Islip. Program includes weekly GHG data collection, usage and maintenance of a dedicated data logging system, data management, and report preparation in accordance with EPA specifications.

### **Health and Safety**

- Performed health and safety monitoring at investigation and remediation sites during intrusive activities. Monitoring included calibration and operation of photoionization detectors (PIDs), flame-ionization detectors (FIDs), dust monitors, and combustible gas indicators (CGI). Compared results to applicable action levels and undertook preventative/protective measures as necessary.
- Performed community air monitoring (CAMP), including monitoring for noise, particulates (dust), and organic vapors at several sites throughout New York State. Recorded observations and compared to applicable action levels.

**APPENDIX C**  
**EC/IC CERTIFICATION**



Enclosure 2  
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**Site Management Periodic Review Report Notice**  
**Institutional and Engineering Controls Certification Form**



	Site Details	Box 1	
<b>Site No.</b>	<b>C224160</b>		
<b>Site Name Cinderella 248 LLC</b>			
Site Address: 248 Flatbush Avenue		Zip Code: 11217	
City/Town: Brooklyn			
County: Kings			
Site Acreage: 0.050			
Reporting Period: November 27, 2017 to March 27, 2019			
		YES	NO
1. Is the information above correct?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.			
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.</b>			
5. Is the site currently undergoing development?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<b>Box 2</b>	
		YES	NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial		<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.</b>			
<b>A Corrective Measures Work Plan must be submitted along with this form to address these issues.</b>			
_____ Signature of Owner, Remedial Party or Designated Representative		_____ Date	

		<b>Box 2A</b>	
		YES	NO
8.	Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.</b>			
9.	Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.</b>			

<b>SITE NO. C224160</b>		<b>Box 3</b>
<b>Description of Institutional Controls</b>		
<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
936-12	Cinderella 248 LLC	Ground Water Use Restriction Landuse Restriction Monitoring Plan Site Management Plan O&M Plan IC/EC Plan
1. Requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3); 2. Allows the use and development of the controlled property for restricted-residential use, which allows for commercial use and industrial use, as defined by Part 375-1.8(g), although land use is subject to local zoning laws; 3. Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and 4. Requires compliance with the Department approved Site Management Plan.		

		<b>Box 4</b>
<b>Description of Engineering Controls</b>		
<u>Parcel</u>	<u>Engineering Control</u>	
936-12	Vapor Mitigation	
Operation and maintenance of a sub-slab depressurization system (SSDS) to mitigate soil vapor intrusion at the site building and adjacent buildings.		



**Periodic Review Report (PRR) Certification Statements**

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

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES    NO

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

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES    NO

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and  
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

\_\_\_\_\_  
Signature of Owner, Remedial Party or Designated Representative

\_\_\_\_\_  
Date

IC CERTIFICATIONS  
SITE NO. C224160

Box 6

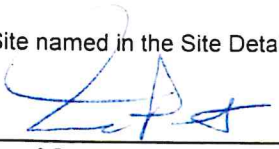
**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

I certify that all information and statements in Boxes 1, 2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I MICHAEL PINTCHIK at 254 FLATBUSH AVE BROOKLYN 11217  
print name print business address

am certifying as OWNER (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

  
Signature of Owner, Remedial Party, or Designated Representative  
Rendering Certification

2019-04-18  
Date



IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I KEVIN LOYST at FPM GROUP, 909 MARCONI AVE, ROCKONICOMA NY  
print name print business address

am certifying as a Professional Engineer for the \_\_\_\_\_  
(Owner or Remedial Party)



Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification



4-25-19  
Date

**APPENDIX D**

**SYSTEM OPERATING LOG**

**SSDS OPERATING LOG  
CINDERELLA 248 LLC SITE NYSDEC SITE NO. C224160  
248 FLATBUSH AVENUE, BROOKLYN, NY**

Date	SSDS									Vapor Monitoring Points								Comments/ Observations
	Vacuum Before Air Filter	Vacuum After Air Filter	Vacuum at Well SSDS-1	Flowrate at Well SSDS-1	Vacuum at Well SSDS-2	Flowrate at Well SSDS-2	Vacuum at Well SSDS-3	Flowrate at Well SSDS-3	Effluent PID	VMP-1	VMP-2	VMP-3	VMP-4	VMP-5	VMP-6	VMP-7	VMP-8	
	8/10/2016	24	32	18	60	18	60	16	60	150.0	0.02	0.05	0.02	0.02	0	0.005	0.15	
8/11/16	24	34	20	40	20	60	18	40	20.0	0.02	0.08	0.07	0.01	0.01	0.02	0.02	0.08	Effluent sample collected
8/25/2016	26	34	20	40	20	65	18	50	1.4	0.02	0.07	0.11	0.01	0.01	0.16	0.08	0.07	Effluent sample collected
8/31/2016	26	35	20	45	20	70	18	50	13.5	0.01	0.07	0.01	0.01	0.02	0.03	0.02	0.08	Effluent sample collected
9/20/2016	26	36	20	45	21	70	18	50	16.8	0.01	0.04	0.02	0.02	0.03	0.03	0.03	0.07	Effluent sample collected
12/28/2016	26	38	20	45	22	55	20	40	0.0	-	0.02	0.01	0.02	0.01	0.01	0.02	0.03	
3/29/2017	28	30	26	55	26	60	24	55	0.7	-	0.02	0.01	-	0	0.01	0.01	0.06	Effluent sample collected
6/27/2017	30	32	27	60	28	60	26	50	3.7	0.01	0.01	0.02	0	0	0.01	0.01	0.03	Effluent sample collected
9/28/2017	30	28	26	60	26	60	24	70	2.9	0	0.01	0.01	0.01	0	0	0.01	0.03	Effluent sample collected
12/28/2017	30	40	38	60	38	60	38	60	10.6									Effluent sample collected System offline on arrival - high knockout alarm
3/29/2018	30	28	24	60	26	60	24	60	12.4									System offline on arrival - high knockout alarm
4/15/2018	30	30	26	60	28	70	24	50	0.0	0.01	0.01	0.01	0.01	0	0.01	0.01	0.02	Effluent sample collected SVI Sampling performed
6/20/2018	30	30	28	70	30	70	25	60	0.0	0	0.01	0	0.01	0	0.01	0.01	0.11	Effluent sample collected
9/17/2018	30	30	26	70	28	80	25	70	0.0	0	0.01	0	0.01	0.01	0.01	0	0.02	Effluent sample collected
12/17/2018	32	30	26	70	28	70	26	65	0.0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	Effluent sample collected
3/27/2018	30	30	26	70	28	75	26	65	0.0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	

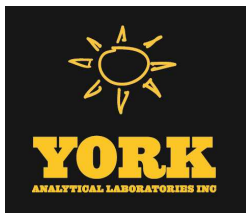
**Notes:**

"H<sub>2</sub>O = inches of water  
scfm = standard cubic feet per minute

ppm = parts per million  
psi = pounds per square inch

## APPENDIX E

# LABORATORY REPORTS FOR EFFLUENT SAMPLES



# Technical Report

prepared for:

**FPM Group**  
909 Marconi Avenue  
Ronkonkoma NY, 11779  
**Attention: Chris Linkletter**

Report Date: 12/29/2017  
**Client Project ID: Cinderella/1104g-15-03**  
York Project (SDG) No.: 17L0888

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

120 RESEARCH DRIVE  
[www.YORKLAB.com](http://www.YORKLAB.com)

STRATFORD, CT 06615  
(203) 325-1371



132-02 89th AVENUE  
FAX (203) 357-0166

RICHMOND HILL, NY 11418  
[ClientServices@yorklab.com](mailto:ClientServices@yorklab.com)

**FPM Group**  
909 Marconi Avenue  
Ronkonkoma NY, 11779  
Attention: Chris Linkletter

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 21, 2017 and listed below. The project was identified as your project: **Cinderella/1104g-15-03**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
17L0888-01	Effluent121817	Air	12/18/2017	12/21/2017

## General Notes for York Project (SDG) No.: 17L0888

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By:



Benjamin Gulizia  
Laboratory Director

Date: 12/29/2017





### Sample Information

**Client Sample ID:** Effluent121817

**York Sample ID:** 17L0888-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0888	Cinderella/1104g-15-03	Air	December 18, 2017 1:00 pm	12/21/2017

**Volatile Organics, EPA TO15 Full List**

Log-in Notes: TO-TD

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND	IS-LO	ug/m <sup>3</sup>	6.9	10	EPA TO-15 Certifications:	12/22/2017 22:04	12/22/2017 22:04	LDS
71-55-6	1,1,1-Trichloroethane	ND		ug/m <sup>3</sup>	5.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
79-34-5	1,1,2,2-Tetrachloroethane	ND	IS-LO	ug/m <sup>3</sup>	6.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m <sup>3</sup>	7.7	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
79-00-5	1,1,2-Trichloroethane	ND	IS-LO	ug/m <sup>3</sup>	5.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
75-34-3	1,1-Dichloroethane	ND		ug/m <sup>3</sup>	4.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
75-35-4	1,1-Dichloroethylene	ND		ug/m <sup>3</sup>	0.99	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
120-82-1	1,2,4-Trichlorobenzene	ND	IS-LO	ug/m <sup>3</sup>	7.4	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
95-63-6	1,2,4-Trimethylbenzene	ND	IS-LO	ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
106-93-4	1,2-Dibromoethane	ND	IS-LO	ug/m <sup>3</sup>	7.7	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
95-50-1	1,2-Dichlorobenzene	ND	IS-LO	ug/m <sup>3</sup>	6.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
107-06-2	1,2-Dichloroethane	ND		ug/m <sup>3</sup>	4.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
78-87-5	1,2-Dichloropropane	ND	IS-LO	ug/m <sup>3</sup>	4.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m <sup>3</sup>	7.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
108-67-8	1,3,5-Trimethylbenzene	ND	IS-LO	ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
106-99-0	1,3-Butadiene	ND		ug/m <sup>3</sup>	6.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
541-73-1	1,3-Dichlorobenzene	ND	IS-LO	ug/m <sup>3</sup>	6.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
142-28-9	* 1,3-Dichloropropane	ND	IS-LO	ug/m <sup>3</sup>	4.6	10	EPA TO-15 Certifications:	12/22/2017 22:04	12/22/2017 22:04	LDS
106-46-7	<b>1,4-Dichlorobenzene</b>	<b>110</b>	IS-LO	ug/m <sup>3</sup>	6.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
123-91-1	1,4-Dioxane	ND	IS-LO	ug/m <sup>3</sup>	7.2	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
78-93-3	<b>2-Butanone</b>	<b>4.1</b>		ug/m <sup>3</sup>	2.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
591-78-6	* 2-Hexanone	ND	IS-LO	ug/m <sup>3</sup>	8.2	10	EPA TO-15 Certifications:	12/22/2017 22:04	12/22/2017 22:04	LDS



## Sample Information

**Client Sample ID:** Effluent121817

**York Sample ID:** 17L0888-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

17L0888

Cinderella/1104g-15-03

Air

December 18, 2017 1:00 pm

12/21/2017

**Volatile Organics, EPA TO15 Full List**

**Log-in Notes:** TO-TD

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m <sup>3</sup>	16	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
108-10-1	4-Methyl-2-pentanone	ND	IS-LO	ug/m <sup>3</sup>	4.1	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
67-64-1	<b>Acetone</b>	<b>98</b>		ug/m <sup>3</sup>	4.8	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
107-13-1	Acrylonitrile	ND		ug/m <sup>3</sup>	2.2	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
71-43-2	Benzene	ND		ug/m <sup>3</sup>	3.2	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
100-44-7	Benzyl chloride	ND	IS-LO	ug/m <sup>3</sup>	5.2	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
75-27-4	Bromodichloromethane	ND	IS-LO	ug/m <sup>3</sup>	6.7	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
75-25-2	Bromoform	ND	IS-LO	ug/m <sup>3</sup>	10	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
74-83-9	Bromomethane	ND		ug/m <sup>3</sup>	3.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
75-15-0	Carbon disulfide	ND		ug/m <sup>3</sup>	3.1	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
56-23-5	Carbon tetrachloride	ND		ug/m <sup>3</sup>	1.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
108-90-7	Chlorobenzene	ND	IS-LO	ug/m <sup>3</sup>	4.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
75-00-3	Chloroethane	ND		ug/m <sup>3</sup>	2.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
67-66-3	<b>Chloroform</b>	<b>5.9</b>		ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
74-87-3	<b>Chloromethane</b>	<b>2.5</b>		ug/m <sup>3</sup>	2.1	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m <sup>3</sup>	0.99	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
10061-01-5	cis-1,3-Dichloropropylene	ND	IS-LO	ug/m <sup>3</sup>	4.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
110-82-7	Cyclohexane	ND		ug/m <sup>3</sup>	3.4	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
124-48-1	Dibromochloromethane	ND	IS-LO	ug/m <sup>3</sup>	8.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
75-71-8	Dichlorodifluoromethane	ND		ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
141-78-6	* Ethyl acetate	ND		ug/m <sup>3</sup>	7.2	10	EPA TO-15 Certifications:	12/22/2017 22:04	12/22/2017 22:04	LDS
100-41-4	Ethyl Benzene	ND	IS-LO	ug/m <sup>3</sup>	4.3	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
87-68-3	Hexachlorobutadiene	ND	IS-LO	ug/m <sup>3</sup>	11	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS





### Sample Information

**Client Sample ID:** Effluent121817

**York Sample ID:** 17L0888-01

<u>York Project (SDG) No.</u> 17L0888	<u>Client Project ID</u> Cinderella/1104g-15-03	<u>Matrix</u> Air	<u>Collection Date/Time</u> December 18, 2017 1:00 pm	<u>Date Received</u> 12/21/2017
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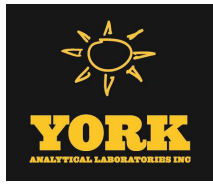
**Volatile Organics, EPA TO15 Full List**

**Log-in Notes:** TO-TD

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-63-0	Isopropanol	9.6		ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
80-62-6	Methyl Methacrylate	16	IS-LO	ug/m <sup>3</sup>	4.1	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m <sup>3</sup>	3.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
75-09-2	Methylene chloride	24		ug/m <sup>3</sup>	6.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
142-82-5	n-Heptane	ND		ug/m <sup>3</sup>	4.1	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
110-54-3	n-Hexane	ND		ug/m <sup>3</sup>	3.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
95-47-6	o-Xylene	ND	IS-LO	ug/m <sup>3</sup>	4.3	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
179601-23-1	p- & m- Xylenes	ND	IS-LO	ug/m <sup>3</sup>	8.7	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
622-96-8	* p-Ethyltoluene	ND	IS-LO	ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications:	12/22/2017 22:04	12/22/2017 22:04	LDS
115-07-1	* Propylene	1.7		ug/m <sup>3</sup>	1.7	10	EPA TO-15 Certifications:	12/22/2017 22:04	12/22/2017 22:04	LDS
100-42-5	Styrene	ND	IS-LO	ug/m <sup>3</sup>	4.3	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
127-18-4	Tetrachloroethylene	3000		ug/m <sup>3</sup>	6.8	40	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/29/2017 11:30	12/29/2017 11:30	LDS
109-99-9	* Tetrahydrofuran	ND		ug/m <sup>3</sup>	5.9	10	EPA TO-15 Certifications:	12/22/2017 22:04	12/22/2017 22:04	LDS
108-88-3	Toluene	6.0	IS-LO	ug/m <sup>3</sup>	3.8	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m <sup>3</sup>	4.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
10061-02-6	trans-1,3-Dichloropropylene	ND	IS-LO	ug/m <sup>3</sup>	4.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
79-01-6	Trichloroethylene	ND	IS-LO	ug/m <sup>3</sup>	1.3	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
75-69-4	Trichlorofluoromethane (Freon 11)	ND		ug/m <sup>3</sup>	5.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
108-05-4	Vinyl acetate	ND		ug/m <sup>3</sup>	3.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
593-60-2	Vinyl bromide	ND		ug/m <sup>3</sup>	4.4	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
75-01-4	Vinyl Chloride	ND		ug/m <sup>3</sup>	0.64	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/22/2017 22:04	12/22/2017 22:04	LDS
	<b>Surrogate Recoveries</b>	<b>Result</b>		<b>Acceptance Range</b>						
460-00-4	Surrogate: p-Bromofluorobenzene	85.8 %		70-130						



## Analytical Batch Summary

**Batch ID:** BL71104      **Preparation Method:** EPA TO15 PREP      **Prepared By:** LDS

YORK Sample ID	Client Sample ID	Preparation Date
17L0888-01	Effluent121817	12/22/17
BL71104-BLK1	Blank	12/22/17
BL71104-BS1	LCS	12/22/17

**Batch ID:** BL71325      **Preparation Method:** EPA TO15 PREP      **Prepared By:** LDS

YORK Sample ID	Client Sample ID	Preparation Date
17L0888-01RE1	Effluent121817	12/29/17
BL71325-BLK1	Blank	12/29/17
BL71325-BS1	LCS	12/29/17



**Volatile Organic Compounds in Air by GC/MS - Quality Control Data**

**York Analytical Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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**Batch BL71104 - EPA TO15 PREP**

**Blank (BL71104-BLK1)**

Prepared & Analyzed: 12/22/2017

1,1,1,2-Tetrachloroethane	ND	0.69	ug/m <sup>3</sup>								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								
Carbon disulfide	ND	0.31	"								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	ND	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								
n-Heptane	ND	0.41	"								



**Volatile Organic Compounds in Air by GC/MS - Quality Control Data**

**York Analytical Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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**Batch BL71104 - EPA TO15 PREP**

**Blank (BL71104-BLK1)**

Prepared & Analyzed: 12/22/2017

n-Hexane	ND	0.35	ug/m <sup>3</sup>								
o-Xylene	ND	0.43	"								
p- & m- Xylenes	ND	0.87	"								
p-Ethyltoluene	ND	0.49	"								
Propylene	ND	0.17	"								
Styrene	ND	0.43	"								
Tetrachloroethylene	ND	0.17	"								
Tetrahydrofuran	ND	0.59	"								
Toluene	ND	0.38	"								
trans-1,2-Dichloroethylene	ND	0.40	"								
trans-1,3-Dichloropropylene	ND	0.45	"								
Trichloroethylene	ND	0.13	"								
Trichlorofluoromethane (Freon 11)	ND	0.56	"								
Vinyl acetate	ND	0.35	"								
Vinyl bromide	ND	0.44	"								
Vinyl Chloride	ND	0.064	"								

*Surrogate: p-Bromofluorobenzene*      8.30      ppbv      10.0      83.0      70-130

**LCS (BL71104-BS1)**

Prepared & Analyzed: 12/22/2017

1,1,1,2-Tetrachloroethane	10.0		ppbv	10.0		100	70-130				
1,1,1-Trichloroethane	10.7		"	10.0		107	70-130				
1,1,2,2-Tetrachloroethane	9.55		"	10.0		95.5	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.9		"	10.0		109	70-130				
1,1,2-Trichloroethane	9.08		"	10.0		90.8	70-130				
1,1-Dichloroethane	9.98		"	10.0		99.8	70-130				
1,1-Dichloroethylene	9.54		"	10.0		95.4	70-130				
1,2,4-Trichlorobenzene	8.69		"	10.0		86.9	70-130				
1,2,4-Trimethylbenzene	9.61		"	10.0		96.1	70-130				
1,2-Dibromoethane	9.31		"	10.0		93.1	70-130				
1,2-Dichlorobenzene	9.70		"	10.0		97.0	70-130				
1,2-Dichloroethane	9.84		"	10.0		98.4	70-130				
1,2-Dichloropropane	8.59		"	10.0		85.9	70-130				
1,2-Dichlorotetrafluoroethane	9.14		"	10.0		91.4	70-130				
1,3,5-Trimethylbenzene	9.63		"	10.0		96.3	70-130				
1,3-Butadiene	9.17		"	10.0		91.7	70-130				
1,3-Dichlorobenzene	9.34		"	10.0		93.4	70-130				
1,3-Dichloropropane	8.79		"	10.0		87.9	70-130				
1,4-Dichlorobenzene	9.06		"	10.0		90.6	70-130				
1,4-Dioxane	7.74		"	10.0		77.4	70-130				
2-Butanone	8.77		"	10.0		87.7	70-130				
2-Hexanone	7.37		"	10.0		73.7	70-130				
3-Chloropropene	9.39		"	10.0		93.9	70-130				
4-Methyl-2-pentanone	8.09		"	10.0		80.9	70-130				
Acetone	7.82		"	10.0		78.2	70-130				
Acrylonitrile	9.66		"	10.0		96.6	70-130				
Benzene	10.0		"	10.0		100	70-130				
Benzyl chloride	9.37		"	10.0		93.7	70-130				
Bromodichloromethane	9.27		"	10.0		92.7	70-130				
Bromoform	10.6		"	10.0		106	70-130				
Bromomethane	6.15		"	10.0		61.5	70-130			Low Bias	
Carbon disulfide	10.4		"	10.0		104	70-130				



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BL71104 - EPA TO15 PREP

LCS (BL71104-BS1)

Prepared & Analyzed: 12/22/2017

Carbon tetrachloride	11.2		ppbv	10.0		112	70-130				
Chlorobenzene	9.51		"	10.0		95.1	70-130				
Chloroethane	5.69		"	10.0		56.9	70-130	Low Bias			
Chloroform	10.4		"	10.0		104	70-130				
Chloromethane	10.0		"	10.0		100	70-130				
cis-1,2-Dichloroethylene	8.53		"	10.0		85.3	70-130				
cis-1,3-Dichloropropylene	9.58		"	10.0		95.8	70-130				
Cyclohexane	9.75		"	10.0		97.5	70-130				
Dibromochloromethane	9.71		"	10.0		97.1	70-130				
Dichlorodifluoromethane	9.40		"	10.0		94.0	70-130				
Ethyl acetate	9.27		"	10.0		92.7	70-130				
Ethyl Benzene	9.36		"	10.0		93.6	70-130				
Hexachlorobutadiene	10.2		"	10.0		102	70-130				
Isopropanol	8.82		"	10.0		88.2	70-130				
Methyl Methacrylate	8.98		"	10.0		89.8	70-130				
Methyl tert-butyl ether (MTBE)	9.41		"	10.0		94.1	70-130				
Methylene chloride	9.47		"	10.0		94.7	70-130				
n-Heptane	9.23		"	10.0		92.3	70-130				
n-Hexane	9.77		"	10.0		97.7	70-130				
o-Xylene	9.59		"	10.0		95.9	70-130				
p- & m- Xylenes	18.7		"	20.0		93.6	70-130				
p-Ethyltoluene	9.98		"	10.0		99.8	70-130				
Propylene	7.95		"	10.0		79.5	70-130				
Styrene	9.74		"	10.0		97.4	70-130				
Tetrachloroethylene	7.46		"	10.0		74.6	70-130				
Tetrahydrofuran	9.03		"	10.0		90.3	70-130				
Toluene	9.01		"	10.0		90.1	70-130				
trans-1,2-Dichloroethylene	9.93		"	10.0		99.3	70-130				
trans-1,3-Dichloropropylene	10.0		"	10.0		100	70-130				
Trichloroethylene	9.21		"	10.0		92.1	70-130				
Trichlorofluoromethane (Freon 11)	8.86		"	10.0		88.6	70-130				
Vinyl acetate	11.9		"	10.0		119	70-130				
Vinyl bromide	7.83		"	10.0		78.3	70-130				
Vinyl Chloride	8.73		"	10.0		87.3	70-130				
Surrogate: p-Bromofluorobenzene	9.71		"	10.0		97.1	70-130				



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BL71325 - EPA TO15 PREP

Blank (BL71325-BLK1)

Prepared & Analyzed: 12/29/2017

1,1,1,2-Tetrachloroethane	ND	0.69	ug/m <sup>3</sup>								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								
Carbon disulfide	ND	0.31	"								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	ND	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								
n-Heptane	ND	0.41	"								
n-Hexane	ND	0.35	"								



**Volatile Organic Compounds in Air by GC/MS - Quality Control Data**

**York Analytical Laboratories, Inc.**

Analyte	Result	Reporting	Units	Spike	Source*	%REC	%REC	Limits	Flag	RPD	Flag
		Limit			Result					Limit	

**Batch BL71325 - EPA TO15 PREP**

**Blank (BL71325-BLK1)**

Prepared & Analyzed: 12/29/2017

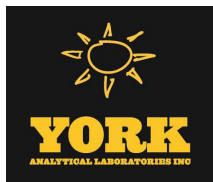
o-Xylene	ND	0.43	ug/m <sup>3</sup>								
p- & m- Xylenes	ND	0.87	"								
p-Ethyltoluene	ND	0.49	"								
Propylene	ND	0.17	"								
Styrene	ND	0.43	"								
Tetrachloroethylene	ND	0.17	"								
Tetrahydrofuran	ND	0.59	"								
Toluene	ND	0.38	"								
trans-1,2-Dichloroethylene	ND	0.40	"								
trans-1,3-Dichloropropylene	ND	0.45	"								
Trichloroethylene	ND	0.13	"								
Trichlorofluoromethane (Freon 11)	ND	0.56	"								
Vinyl acetate	ND	0.35	"								
Vinyl bromide	ND	0.44	"								
Vinyl Chloride	ND	0.064	"								

<i>Surrogate: p-Bromofluorobenzene</i>	8.38		ppbv	10.0		83.8	70-130				
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**LCS (BL71325-BS1)**

Prepared & Analyzed: 12/29/2017

1,1,1,2-Tetrachloroethane	9.06		ppbv	10.0		90.6	70-130				
1,1,1-Trichloroethane	8.23		"	10.0		82.3	70-130				
1,1,2,2-Tetrachloroethane	9.20		"	10.0		92.0	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.00		"	10.0		90.0	70-130				
1,1,2-Trichloroethane	8.92		"	10.0		89.2	70-130				
1,1-Dichloroethane	9.23		"	10.0		92.3	70-130				
1,1-Dichloroethylene	8.82		"	10.0		88.2	70-130				
1,2,4-Trichlorobenzene	7.67		"	10.0		76.7	70-130				
1,2,4-Trimethylbenzene	9.54		"	10.0		95.4	70-130				
1,2-Dibromoethane	8.58		"	10.0		85.8	70-130				
1,2-Dichlorobenzene	9.45		"	10.0		94.5	70-130				
1,2-Dichloroethane	7.65		"	10.0		76.5	70-130				
1,2-Dichloropropane	9.11		"	10.0		91.1	70-130				
1,2-Dichlorotetrafluoroethane	9.46		"	10.0		94.6	70-130				
1,3,5-Trimethylbenzene	9.49		"	10.0		94.9	70-130				
1,3-Butadiene	7.09		"	10.0		70.9	70-130				
1,3-Dichlorobenzene	9.46		"	10.0		94.6	70-130				
1,3-Dichloropropane	8.86		"	10.0		88.6	70-130				
1,4-Dichlorobenzene	9.59		"	10.0		95.9	70-130				
1,4-Dioxane	10.8		"	10.0		108	70-130				
2-Butanone	7.93		"	10.0		79.3	70-130				
2-Hexanone	10.1		"	10.0		101	70-130				
3-Chloropropene	8.53		"	10.0		85.3	70-130				
4-Methyl-2-pentanone	9.23		"	10.0		92.3	70-130				
Acetone	6.28		"	10.0		62.8	70-130		Low Bias		
Acrylonitrile	8.84		"	10.0		88.4	70-130				
Benzene	8.95		"	10.0		89.5	70-130				
Benzyl chloride	9.49		"	10.0		94.9	70-130				
Bromodichloromethane	8.73		"	10.0		87.3	70-130				
Bromoform	9.45		"	10.0		94.5	70-130				
Bromomethane	11.1		"	10.0		111	70-130				
Carbon disulfide	9.70		"	10.0		97.0	70-130				
Carbon tetrachloride	8.19		"	10.0		81.9	70-130				



**Volatile Organic Compounds in Air by GC/MS - Quality Control Data**

**York Analytical Laboratories, Inc.**

Analyte	Result	Reporting	Units	Spike	Source*	%REC	%REC	Limits	Flag	RPD	RPD	Limit	Flag
		Limit			Result					Limit			

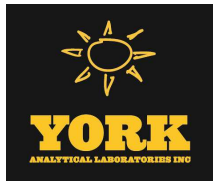
**Batch BL71325 - EPA TO15 PREP**

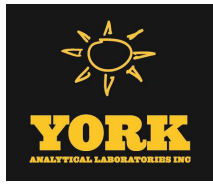
**LCS (BL71325-BS1)**

Prepared & Analyzed: 12/29/2017

Chlorobenzene	8.85		ppbv	10.0		88.5	70-130						
Chloroethane	12.6		"	10.0		126	70-130						
Chloroform	8.39		"	10.0		83.9	70-130						
Chloromethane	7.16		"	10.0		71.6	70-130						
cis-1,2-Dichloroethylene	7.33		"	10.0		73.3	70-130						
cis-1,3-Dichloropropylene	9.11		"	10.0		91.1	70-130						
Cyclohexane	9.48		"	10.0		94.8	70-130						
Dibromochloromethane	8.98		"	10.0		89.8	70-130						
Dichlorodifluoromethane	9.60		"	10.0		96.0	70-130						
Ethyl acetate	8.02		"	10.0		80.2	70-130						
Ethyl Benzene	9.18		"	10.0		91.8	70-130						
Hexachlorobutadiene	9.43		"	10.0		94.3	70-130						
Isopropanol	8.19		"	10.0		81.9	70-130						
Methyl Methacrylate	9.10		"	10.0		91.0	70-130						
Methyl tert-butyl ether (MTBE)	8.65		"	10.0		86.5	70-130						
Methylene chloride	8.58		"	10.0		85.8	70-130						
n-Heptane	8.78		"	10.0		87.8	70-130						
n-Hexane	8.02		"	10.0		80.2	70-130						
o-Xylene	9.27		"	10.0		92.7	70-130						
p- & m- Xylenes	18.4		"	20.0		92.2	70-130						
p-Ethyltoluene	9.42		"	10.0		94.2	70-130						
Propylene	9.09		"	10.0		90.9	70-130						
Styrene	9.31		"	10.0		93.1	70-130						
Tetrachloroethylene	7.61		"	10.0		76.1	70-130						
Tetrahydrofuran	9.29		"	10.0		92.9	70-130						
Toluene	8.89		"	10.0		88.9	70-130						
trans-1,2-Dichloroethylene	8.71		"	10.0		87.1	70-130						
trans-1,3-Dichloropropylene	9.22		"	10.0		92.2	70-130						
Trichloroethylene	8.01		"	10.0		80.1	70-130						
Trichlorofluoromethane (Freon 11)	8.93		"	10.0		89.3	70-130						
Vinyl acetate	8.57		"	10.0		85.7	70-130						
Vinyl bromide	10.4		"	10.0		104	70-130						
Vinyl Chloride	7.14		"	10.0		71.4	70-130						
<i>Surrogate: p-Bromofluorobenzene</i>	<i>9.62</i>		<i>"</i>	<i>10.0</i>		<i>96.2</i>	<i>70-130</i>						







## Sample and Data Qualifiers Relating to This Work Order

TO-TD	The sample was received in a tedlar bag which is not compliant with EPA TO-15 requirements.
QL-03	This LCS analyte recovered outside of acceptance limits. The LCS contains approximately 70 compounds, a limited number of which may be outside acceptance windows.
IS-LO	The internal std associated with this target compound did not meet acceptance criteria (area <50% CCV) at the stated dilution due to matrix effects. Sample was rerun to confirm matrix effects.
CCV-A	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>30% Difference for average Rf). This applies to detected analytes only.

### Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

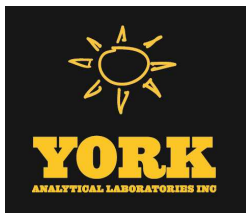


Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

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# Technical Report

prepared for:

**FPM Group**  
909 Marconi Avenue  
Ronkonkoma NY, 11779  
**Attention: Chris Linkletter**

Report Date: 06/28/2018  
**Client Project ID: 1104g-15-03**  
York Project (SDG) No.: 18F1062

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

120 RESEARCH DRIVE  
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(203) 325-1371



132-02 89th AVENUE  
FAX (203) 357-0166

RICHMOND HILL, NY 11418  
[ClientServices@yorklab.com](mailto:ClientServices@yorklab.com)

**FPM Group**  
909 Marconi Avenue  
Ronkonkoma NY, 11779  
Attention: Chris Linkletter

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on June 21, 2018 and listed below. The project was identified as your project: **1104g-15-03**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
18F1062-01	Effluent 0620	Air	06/20/2018	06/21/2018

## General Notes for York Project (SDG) No.: 18F1062

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By:



Benjamin Gulizia  
Laboratory Director

Date: 06/28/2018





### Sample Information

**Client Sample ID:** Effluent 0620

**York Sample ID:** 18F1062-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18F1062	1104g-15-03	Air	June 20, 2018 12:00 pm	06/21/2018

**Volatile Organics, EPA TO15 Full List**

Log-in Notes: TO-TD

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m <sup>3</sup>	0.69	1	EPA TO-15 Certifications:	06/26/2018 00:18	06/26/2018 00:18	LDS
71-55-6	1,1,1-Trichloroethane	ND		ug/m <sup>3</sup>	0.55	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m <sup>3</sup>	0.69	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m <sup>3</sup>	0.77	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
79-00-5	1,1,2-Trichloroethane	ND		ug/m <sup>3</sup>	0.55	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
75-34-3	1,1-Dichloroethane	ND		ug/m <sup>3</sup>	0.40	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
75-35-4	1,1-Dichloroethylene	ND		ug/m <sup>3</sup>	0.099	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m <sup>3</sup>	0.74	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
95-63-6	<b>1,2,4-Trimethylbenzene</b>	<b>1.3</b>		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
106-93-4	1,2-Dibromoethane	ND		ug/m <sup>3</sup>	0.77	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
95-50-1	1,2-Dichlorobenzene	ND		ug/m <sup>3</sup>	0.60	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
107-06-2	1,2-Dichloroethane	ND		ug/m <sup>3</sup>	0.40	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
78-87-5	1,2-Dichloropropane	ND		ug/m <sup>3</sup>	0.46	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m <sup>3</sup>	0.70	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
106-99-0	1,3-Butadiene	ND		ug/m <sup>3</sup>	0.66	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
541-73-1	1,3-Dichlorobenzene	ND		ug/m <sup>3</sup>	0.60	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
142-28-9	* 1,3-Dichloropropane	ND		ug/m <sup>3</sup>	0.46	1	EPA TO-15 Certifications:	06/26/2018 00:18	06/26/2018 00:18	LDS
106-46-7	<b>1,4-Dichlorobenzene</b>	<b>140</b>		ug/m <sup>3</sup>	0.60	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
123-91-1	1,4-Dioxane	ND		ug/m <sup>3</sup>	0.72	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
78-93-3	<b>2-Butanone</b>	<b>7.3</b>		ug/m <sup>3</sup>	0.29	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
591-78-6	* 2-Hexanone	ND		ug/m <sup>3</sup>	0.82	1	EPA TO-15 Certifications:	06/26/2018 00:18	06/26/2018 00:18	LDS



### Sample Information

**Client Sample ID:** Effluent 0620

**York Sample ID:** 18F1062-01

<u>York Project (SDG) No.</u> 18F1062	<u>Client Project ID</u> 1104g-15-03	<u>Matrix</u> Air	<u>Collection Date/Time</u> June 20, 2018 12:00 pm	<u>Date Received</u> 06/21/2018
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**Volatile Organics, EPA TO15 Full List**

**Log-in Notes:** TO-TD

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m <sup>3</sup>	1.6	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>5.1</b>		ug/m <sup>3</sup>	0.41	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
67-64-1	<b>Acetone</b>	<b>93</b>		ug/m <sup>3</sup>	0.48	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
107-13-1	Acrylonitrile	ND		ug/m <sup>3</sup>	0.22	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
71-43-2	<b>Benzene</b>	<b>0.96</b>		ug/m <sup>3</sup>	0.32	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
100-44-7	Benzyl chloride	ND		ug/m <sup>3</sup>	0.52	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
75-27-4	Bromodichloromethane	ND		ug/m <sup>3</sup>	0.67	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
75-25-2	Bromoform	ND		ug/m <sup>3</sup>	1.0	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
74-83-9	Bromomethane	ND		ug/m <sup>3</sup>	0.39	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
75-15-0	<b>Carbon disulfide</b>	<b>2.6</b>		ug/m <sup>3</sup>	0.31	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
56-23-5	<b>Carbon tetrachloride</b>	<b>0.44</b>		ug/m <sup>3</sup>	0.16	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
108-90-7	Chlorobenzene	ND		ug/m <sup>3</sup>	0.46	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
75-00-3	<b>Chloroethane</b>	<b>2.0</b>		ug/m <sup>3</sup>	0.26	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
67-66-3	<b>Chloroform</b>	<b>3.6</b>		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
74-87-3	<b>Chloromethane</b>	<b>3.6</b>		ug/m <sup>3</sup>	0.21	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m <sup>3</sup>	0.099	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m <sup>3</sup>	0.45	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
110-82-7	<b>Cyclohexane</b>	<b>0.83</b>		ug/m <sup>3</sup>	0.34	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
124-48-1	Dibromochloromethane	ND		ug/m <sup>3</sup>	0.85	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
75-71-8	<b>Dichlorodifluoromethane</b>	<b>2.0</b>		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
141-78-6	<b>* Ethyl acetate</b>	<b>1.2</b>		ug/m <sup>3</sup>	0.72	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
100-41-4	<b>Ethyl Benzene</b>	<b>1.0</b>		ug/m <sup>3</sup>	0.43	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS





## Sample Information

**Client Sample ID:** Effluent 0620

**York Sample ID:** 18F1062-01

<u>York Project (SDG) No.</u> 18F1062	<u>Client Project ID</u> 1104g-15-03	<u>Matrix</u> Air	<u>Collection Date/Time</u> June 20, 2018 12:00 pm	<u>Date Received</u> 06/21/2018
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**Volatile Organics, EPA TO15 Full List**

**Log-in Notes:** TO-TD

**Sample Notes:**

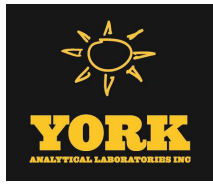
Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m <sup>3</sup>	1.1	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
67-63-0	<b>Isopropanol</b>	<b>44</b>		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
80-62-6	Methyl Methacrylate	ND		ug/m <sup>3</sup>	0.41	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m <sup>3</sup>	0.36	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
75-09-2	<b>Methylene chloride</b>	<b>2.6</b>		ug/m <sup>3</sup>	0.69	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
142-82-5	<b>n-Heptane</b>	<b>13</b>		ug/m <sup>3</sup>	0.41	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
110-54-3	<b>n-Hexane</b>	<b>1.8</b>		ug/m <sup>3</sup>	0.35	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
95-47-6	<b>o-Xylene</b>	<b>0.87</b>		ug/m <sup>3</sup>	0.43	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
179601-23-1	<b>p- &amp; m- Xylenes</b>	<b>2.5</b>		ug/m <sup>3</sup>	0.87	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
622-96-8	<b>* p-Ethyltoluene</b>	<b>0.98</b>		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
115-07-1	<b>* Propylene</b>	<b>16</b>		ug/m <sup>3</sup>	0.17	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
100-42-5	<b>Styrene</b>	<b>3.1</b>		ug/m <sup>3</sup>	0.43	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
127-18-4	<b>Tetrachloroethylene</b>	<b>1600</b>		ug/m <sup>3</sup>	1.7	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 10:14	06/26/2018 10:14	LDS
109-99-9	<b>* Tetrahydrofuran</b>	ND		ug/m <sup>3</sup>	0.59	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
108-88-3	<b>Toluene</b>	<b>5.6</b>		ug/m <sup>3</sup>	0.38	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m <sup>3</sup>	0.40	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m <sup>3</sup>	0.45	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
79-01-6	<b>Trichloroethylene</b>	<b>0.27</b>		ug/m <sup>3</sup>	0.13	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
75-69-4	<b>Trichlorofluoromethane (Freon 11)</b>	<b>1.5</b>		ug/m <sup>3</sup>	0.56	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
108-05-4	Vinyl acetate	ND		ug/m <sup>3</sup>	0.35	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
593-60-2	Vinyl bromide	ND		ug/m <sup>3</sup>	0.44	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS
75-01-4	Vinyl Chloride	ND		ug/m <sup>3</sup>	0.064	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	06/26/2018 00:18	06/26/2018 00:18	LDS

**Surrogate Recoveries**

**Result**

**Acceptance Range**



Sample Information

Client Sample ID: Effluent 0620

York Sample ID: 18F1062-01

York Project (SDG) No. 18F1062

Client Project ID 1104g-15-03

Matrix Air

Collection Date/Time June 20, 2018 12:00 pm

Date Received 06/21/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes: TO-TD

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
460-00-4	Surrogate: p-Bromofluorobenzene	110 %			70-130					



## Analytical Batch Summary

**Batch ID:** BF81413

**Preparation Method:** EPA TO15 PREP

**Prepared By:** LDS

YORK Sample ID	Client Sample ID	Preparation Date
18F1062-01	Effluent 0620	06/26/18
18F1062-01RE1	Effluent 0620	06/26/18
BF81413-BLK1	Blank	06/25/18
BF81413-BS1	LCS	06/25/18



**Volatile Organic Compounds in Air by GC/MS - Quality Control Data**

**York Analytical Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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**Batch BF81413 - EPA TO15 PREP**

**Blank (BF81413-BLK1)**

Prepared & Analyzed: 06/25/2018

1,1,1,2-Tetrachloroethane	ND	0.69	ug/m <sup>3</sup>								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								
Carbon disulfide	ND	0.31	"								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	ND	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								
n-Heptane	ND	0.41	"								



**Volatile Organic Compounds in Air by GC/MS - Quality Control Data**

**York Analytical Laboratories, Inc.**

Analyte	Result	Reporting	Units	Spike Level	Source*	%REC	%REC Limits	Flag	RPD	
		Limit			Result				RPD	Limit

**Batch BF81413 - EPA TO15 PREP**

**Blank (BF81413-BLK1)**

Prepared & Analyzed: 06/25/2018

n-Hexane	ND	0.35	ug/m <sup>3</sup>							
o-Xylene	ND	0.43	"							
p- & m- Xylenes	ND	0.87	"							
p-Ethyltoluene	ND	0.49	"							
Propylene	ND	0.17	"							
Styrene	ND	0.43	"							
Tetrachloroethylene	ND	0.17	"							
Tetrahydrofuran	ND	0.59	"							
Toluene	ND	0.38	"							
trans-1,2-Dichloroethylene	ND	0.40	"							
trans-1,3-Dichloropropylene	ND	0.45	"							
Trichloroethylene	ND	0.13	"							
Trichlorofluoromethane (Freon 11)	ND	0.56	"							
Vinyl acetate	ND	0.35	"							
Vinyl bromide	ND	0.44	"							
Vinyl Chloride	ND	0.064	"							

*Surrogate: p-Bromofluorobenzene*      9.10      ppbv      10.0      91.0      70-130

**LCS (BF81413-BS1)**

Prepared & Analyzed: 06/25/2018

1,1,1,2-Tetrachloroethane	9.78		ppbv	10.0	97.8	70-130
1,1,1-Trichloroethane	10.0		"	10.0	100	70-130
1,1,2,2-Tetrachloroethane	9.87		"	10.0	98.7	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.1		"	10.0	101	70-130
1,1,2-Trichloroethane	9.85		"	10.0	98.5	70-130
1,1-Dichloroethane	9.92		"	10.0	99.2	70-130
1,1-Dichloroethylene	9.09		"	10.0	90.9	70-130
1,2,4-Trichlorobenzene	9.77		"	10.0	97.7	70-130
1,2,4-Trimethylbenzene	9.89		"	10.0	98.9	70-130
1,2-Dibromoethane	9.94		"	10.0	99.4	70-130
1,2-Dichlorobenzene	11.0		"	10.0	110	70-130
1,2-Dichloroethane	9.86		"	10.0	98.6	70-130
1,2-Dichloropropane	9.55		"	10.0	95.5	70-130
1,2-Dichlorotetrafluoroethane	10.4		"	10.0	104	70-130
1,3,5-Trimethylbenzene	9.68		"	10.0	96.8	70-130
1,3-Butadiene	9.86		"	10.0	98.6	70-130
1,3-Dichlorobenzene	11.3		"	10.0	113	70-130
1,3-Dichloropropane	9.59		"	10.0	95.9	70-130
1,4-Dichlorobenzene	11.6		"	10.0	116	70-130
1,4-Dioxane	8.78		"	10.0	87.8	70-130
2-Butanone	9.61		"	10.0	96.1	70-130
2-Hexanone	10.1		"	10.0	101	70-130
3-Chloropropene	9.46		"	10.0	94.6	70-130
4-Methyl-2-pentanone	9.64		"	10.0	96.4	70-130
Acetone	9.15		"	10.0	91.5	70-130
Acrylonitrile	10.3		"	10.0	103	70-130
Benzene	9.46		"	10.0	94.6	70-130
Benzyl chloride	10.6		"	10.0	106	70-130
Bromodichloromethane	9.90		"	10.0	99.0	70-130
Bromoform	10.3		"	10.0	103	70-130
Bromomethane	9.75		"	10.0	97.5	70-130
Carbon disulfide	10.7		"	10.0	107	70-130



**Volatile Organic Compounds in Air by GC/MS - Quality Control Data**

**York Analytical Laboratories, Inc.**

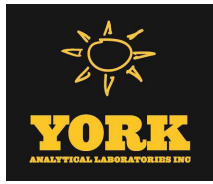
Analyte	Result	Reporting		Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD	
		Limit	Units							Limit	Flag

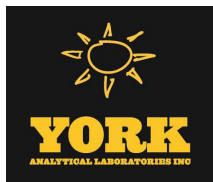
**Batch BF81413 - EPA TO15 PREP**

**LCS (BF81413-BS1)**

Prepared & Analyzed: 06/25/2018

Carbon tetrachloride	9.22		ppbv	10.0		92.2	70-130				
Chlorobenzene	9.85		"	10.0		98.5	70-130				
Chloroethane	11.2		"	10.0		112	70-130				
Chloroform	9.97		"	10.0		99.7	70-130				
Chloromethane	10.0		"	10.0		100	70-130				
cis-1,2-Dichloroethylene	9.36		"	10.0		93.6	70-130				
cis-1,3-Dichloropropylene	9.97		"	10.0		99.7	70-130				
Cyclohexane	9.85		"	10.0		98.5	70-130				
Dibromochloromethane	10.0		"	10.0		100	70-130				
Dichlorodifluoromethane	10.4		"	10.0		104	70-130				
Ethyl acetate	9.67		"	10.0		96.7	70-130				
Ethyl Benzene	9.24		"	10.0		92.4	70-130				
Hexachlorobutadiene	9.75		"	10.0		97.5	70-130				
Isopropanol	11.1		"	10.0		111	70-130				
Methyl Methacrylate	9.82		"	10.0		98.2	70-130				
Methyl tert-butyl ether (MTBE)	17.6		"	10.0		176	70-130	High Bias			
Methylene chloride	9.93		"	10.0		99.3	70-130				
n-Heptane	9.28		"	10.0		92.8	70-130				
n-Hexane	9.92		"	10.0		99.2	70-130				
o-Xylene	9.14		"	10.0		91.4	70-130				
p- & m- Xylenes	18.8		"	20.0		94.0	70-130				
p-Ethyltoluene	10.7		"	10.0		107	70-130				
Propylene	9.63		"	10.0		96.3	70-130				
Styrene	10.3		"	10.0		103	70-130				
Tetrachloroethylene	10.6		"	10.0		106	70-130				
Tetrahydrofuran	9.68		"	10.0		96.8	70-130				
Toluene	9.29		"	10.0		92.9	70-130				
trans-1,2-Dichloroethylene	10.2		"	10.0		102	70-130				
trans-1,3-Dichloropropylene	9.60		"	10.0		96.0	70-130				
Trichloroethylene	9.03		"	10.0		90.3	70-130				
Trichlorofluoromethane (Freon 11)	9.99		"	10.0		99.9	70-130				
Vinyl acetate	14.6		"	10.0		146	70-130	High Bias			
Vinyl bromide	10.5		"	10.0		105	70-130				
Vinyl Chloride	9.89		"	10.0		98.9	70-130				
<i>Surrogate: p-Bromofluorobenzene</i>	<i>10.5</i>		<i>"</i>	<i>10.0</i>		<i>105</i>	<i>70-130</i>				





## Sample and Data Qualifiers Relating to This Work Order

- TO-TD The sample was received in a tedlar bag which is not compliant with EPA TO-15 requirements.
- QL-03 This LCS analyte recovered outside of acceptance limits. The LCS contains approximately 70 compounds, a limited number of which may be outside acceptance windows.

### Definitions and Other Explanations

- \* Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
- ND NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
- RL REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
- LOQ LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
- LOD LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
- MDL METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
- Reported to This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
- NR Not reported
- RPD Relative Percent Difference
- Wet The data has been reported on an as-received (wet weight) basis
- Low Bias Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- High Bias High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- Non-Dir. Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

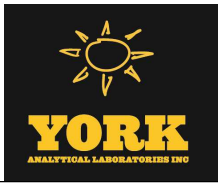
2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.





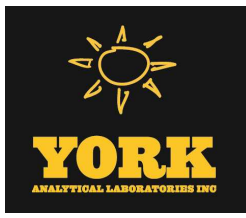
# Field Chain-of-Custody Record

York Analytical Laboratories, Inc.  
 120 Research Drive  
 Stratford, CT 06615  
 clientservices@yorklab.com  
 www.yorklab.com

**YORK**  
 ANALYTICAL LABORATORIES, INC.

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.  
 This document serves as your written authorization for YORK to proceed with the analyses requested below.  
 Your signature binds you to YORK's Standard Terms & Conditions.

YOUR INFORMATION		REPORT TO:		INVOICE TO:		YOUR PROJECT NUMBER		TURN-AROUND TIME			
Company: FPM Group	Company: SAME	Company: SAME	Company: SAME	Company: SAME	Company: SAME	1104g-15-03		RUSH - Next Day			
Address: 909 Marconi Avenue Rochester, NY 11770		Address:		Address:				RUSH - Two Day			
Phone: (631) 737-6200		Phone:		Phone:				RUSH - Three Day			
Contact: Chris Linkletter		Contact:		Contact:				RUSH - Four Day			
E-mail: c.linkletter@fpm-group.com		E-mail:		E-mail:				Standard (5-7 Day)			
<p style="font-size: small;">Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.</p> <p style="font-size: large; text-align: center;"><b>Chris Linkletter</b></p> <p style="font-size: x-small;">Samples Collected by: (print your name above and sign below)  <i>Chris Linkletter</i></p>		Matrix Codes		Samples From		Report / EDD Type (circle selections)					
		S - soil / solid		New York		Summary Report		CT RCP		Standard Excel EDD	
		GW - groundwater		New Jersey		<u>QA Report</u>		CT RCP DQA/DUE		EQUIS (Standard)	
		DW - drinking water		Connecticut		NY ASP A Package		NJDEP Reduced Deliverables		NYSDEC EQUIS	
		WW - wastewater		Pennsylvania		NY ASP B Package		NJDKQP		NJDEP SRP HazSite	
		O - Oil ; Other		Other						Other:	
Sample Identification		Sample Matrix		Date/Time Sampled		Analysis Requested		Container Description			
Effluent 0620		Air		6/20/18 12:00		T0-15		1x tedlar bag			
<b>Comments:</b>										Special Instruction	
Samples Relinquished by / Company										Field Filtered	
										Lab to Filter	
Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time	
6/20/18 15:00		6/20/18 15:00									
Samples Received by / Company										Temp. Received at Lab	
<i>Chris Linkletter, FPM</i>										6-21-18 10:00	
Samples Relinquished by / Company										Temp. Received at Lab	
Date/Time										Date/Time	
Date/Time										Date/Time	
Date/Time										Date/Time	



# Technical Report

prepared for:

**FPM Group**  
909 Marconi Avenue  
Ronkonkoma NY, 11779  
**Attention: Chris Linkletter**

Report Date: 09/25/2018  
**Client Project ID: 1104g-18-05/01 Cinderella**  
York Project (SDG) No.: 18I0756

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

120 RESEARCH DRIVE  
[www.YORKLAB.com](http://www.YORKLAB.com)

STRATFORD, CT 06615  
(203) 325-1371



132-02 89th AVENUE  
FAX (203) 357-0166

RICHMOND HILL, NY 11418  
[ClientServices@yorklab.com](mailto:ClientServices@yorklab.com)

**FPM Group**  
909 Marconi Avenue  
Ronkonkoma NY, 11779  
Attention: Chris Linkletter

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on September 19, 2018 and listed below. The project was identified as your project: **1104g-18-05/01 Cinderella**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
18I0756-01	Effluent 091718	Vapor Extraction	09/17/2018	09/19/2018

## General Notes for York Project (SDG) No.: 18I0756

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By:



Benjamin Gulizia  
Laboratory Director

Date: 09/25/2018





### Sample Information

**Client Sample ID:** Effluent 091718

**York Sample ID:** 1810756-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
1810756	1104g-18-05/01 Cinderella	Vapor Extraction	September 17, 2018 12:00 pm	09/19/2018

**Volatile Organics, EPA TO15 Full List**

**Log-in Notes:** TO-TD

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m <sup>3</sup>	0.69	1	EPA TO-15 Certifications:	09/22/2018 08:08	09/22/2018 08:08	LDS
71-55-6	1,1,1-Trichloroethane	ND		ug/m <sup>3</sup>	0.55	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m <sup>3</sup>	0.69	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m <sup>3</sup>	0.77	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
79-00-5	1,1,2-Trichloroethane	ND		ug/m <sup>3</sup>	0.55	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
75-34-3	1,1-Dichloroethane	ND		ug/m <sup>3</sup>	0.40	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
75-35-4	1,1-Dichloroethylene	ND		ug/m <sup>3</sup>	0.099	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m <sup>3</sup>	0.74	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
106-93-4	1,2-Dibromoethane	ND		ug/m <sup>3</sup>	0.77	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
95-50-1	1,2-Dichlorobenzene	ND		ug/m <sup>3</sup>	0.60	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
107-06-2	<b>1,2-Dichloroethane</b>	<b>8.3</b>		ug/m <sup>3</sup>	0.40	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
78-87-5	1,2-Dichloropropane	ND		ug/m <sup>3</sup>	0.46	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m <sup>3</sup>	0.70	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
106-99-0	1,3-Butadiene	ND		ug/m <sup>3</sup>	0.66	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
541-73-1	1,3-Dichlorobenzene	ND		ug/m <sup>3</sup>	0.60	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
142-28-9	* 1,3-Dichloropropane	ND		ug/m <sup>3</sup>	0.46	1	EPA TO-15 Certifications:	09/22/2018 08:08	09/22/2018 08:08	LDS
106-46-7	<b>1,4-Dichlorobenzene</b>	<b>28</b>		ug/m <sup>3</sup>	0.60	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
123-91-1	1,4-Dioxane	ND		ug/m <sup>3</sup>	0.72	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
78-93-3	<b>2-Butanone</b>	<b>3.4</b>		ug/m <sup>3</sup>	0.29	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
591-78-6	* 2-Hexanone	ND		ug/m <sup>3</sup>	0.82	1	EPA TO-15 Certifications:	09/22/2018 08:08	09/22/2018 08:08	LDS



## Sample Information

**Client Sample ID:** Effluent 091718

**York Sample ID:** 1810756-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

1810756

1104g-18-05/01 Cinderella

Vapor Extraction

September 17, 2018 12:00 pm

09/19/2018

**Volatile Organics, EPA TO15 Full List**

**Log-in Notes:** TO-TD

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m <sup>3</sup>	1.6	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
108-10-1	4-Methyl-2-pentanone	ND		ug/m <sup>3</sup>	0.41	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
67-64-1	<b>Acetone</b>	<b>150</b>		ug/m <sup>3</sup>	4.8	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/24/2018 11:43	09/24/2018 15:12	LDS
107-13-1	Acrylonitrile	ND		ug/m <sup>3</sup>	0.22	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
71-43-2	Benzene	ND		ug/m <sup>3</sup>	0.32	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
100-44-7	Benzyl chloride	ND		ug/m <sup>3</sup>	0.52	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
75-27-4	Bromodichloromethane	ND		ug/m <sup>3</sup>	0.67	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
75-25-2	Bromoform	ND		ug/m <sup>3</sup>	1.0	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
74-83-9	Bromomethane	ND		ug/m <sup>3</sup>	0.39	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
75-15-0	<b>Carbon disulfide</b>	<b>5.0</b>		ug/m <sup>3</sup>	0.31	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
56-23-5	Carbon tetrachloride	ND		ug/m <sup>3</sup>	0.16	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
108-90-7	Chlorobenzene	ND		ug/m <sup>3</sup>	0.46	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
75-00-3	<b>Chloroethane</b>	<b>6.3</b>		ug/m <sup>3</sup>	0.26	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
67-66-3	<b>Chloroform</b>	<b>5.3</b>		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
74-87-3	<b>Chloromethane</b>	<b>34</b>		ug/m <sup>3</sup>	0.21	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m <sup>3</sup>	0.099	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m <sup>3</sup>	0.45	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
110-82-7	Cyclohexane	ND		ug/m <sup>3</sup>	0.34	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
124-48-1	Dibromochloromethane	ND		ug/m <sup>3</sup>	0.85	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
75-71-8	Dichlorodifluoromethane	ND		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
141-78-6	<b>* Ethyl acetate</b>	<b>3.1</b>		ug/m <sup>3</sup>	0.72	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
100-41-4	Ethyl Benzene	ND		ug/m <sup>3</sup>	0.43	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
87-68-3	Hexachlorobutadiene	ND		ug/m <sup>3</sup>	1.1	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS



## Sample Information

**Client Sample ID:** Effluent 091718

**York Sample ID:** 1810756-01

<u>York Project (SDG) No.</u> 1810756	<u>Client Project ID</u> 1104g-18-05/01 Cinderella	<u>Matrix</u> Vapor Extraction	<u>Collection Date/Time</u> September 17, 2018 12:00 pm	<u>Date Received</u> 09/19/2018
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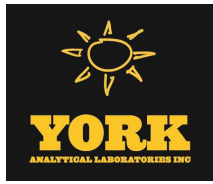
**Volatile Organics, EPA TO15 Full List**

**Log-in Notes:** TO-TD

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-63-0	<b>Isopropanol</b>	<b>25</b>		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
80-62-6	Methyl Methacrylate	ND		ug/m <sup>3</sup>	0.41	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m <sup>3</sup>	0.36	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
75-09-2	<b>Methylene chloride</b>	<b>7.0</b>		ug/m <sup>3</sup>	0.69	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
142-82-5	n-Heptane	ND		ug/m <sup>3</sup>	0.41	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
110-54-3	<b>n-Hexane</b>	<b>4.8</b>		ug/m <sup>3</sup>	0.35	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
95-47-6	o-Xylene	ND		ug/m <sup>3</sup>	0.43	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
179601-23-1	<b>p- &amp; m- Xylenes</b>	<b>3.2</b>		ug/m <sup>3</sup>	0.87	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
622-96-8	* p-Ethyltoluene	ND		ug/m <sup>3</sup>	0.49	1	EPA TO-15 Certifications:	09/22/2018 08:08	09/22/2018 08:08	LDS
115-07-1	* <b>Propylene</b>	<b>19</b>		ug/m <sup>3</sup>	0.17	1	EPA TO-15 Certifications:	09/22/2018 08:08	09/22/2018 08:08	LDS
100-42-5	<b>Styrene</b>	<b>2.3</b>		ug/m <sup>3</sup>	0.43	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
127-18-4	<b>Tetrachloroethylene</b>	<b>1300</b>		ug/m <sup>3</sup>	1.7	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/24/2018 11:43	09/24/2018 15:12	LDS
109-99-9	* Tetrahydrofuran	ND		ug/m <sup>3</sup>	0.59	1	EPA TO-15 Certifications:	09/22/2018 08:08	09/22/2018 08:08	LDS
108-88-3	<b>Toluene</b>	<b>6.4</b>		ug/m <sup>3</sup>	0.38	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m <sup>3</sup>	0.40	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m <sup>3</sup>	0.45	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
79-01-6	<b>Trichloroethylene</b>	<b>3.9</b>		ug/m <sup>3</sup>	0.13	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
75-69-4	<b>Trichlorofluoromethane (Freon 11)</b>	<b>3.0</b>		ug/m <sup>3</sup>	0.56	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
108-05-4	Vinyl acetate	ND		ug/m <sup>3</sup>	0.35	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
593-60-2	Vinyl bromide	ND		ug/m <sup>3</sup>	0.44	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
75-01-4	<b>Vinyl Chloride</b>	<b>3.0</b>		ug/m <sup>3</sup>	0.064	1	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/22/2018 08:08	09/22/2018 08:08	LDS
<b>Surrogate Recoveries</b>		<b>Result</b>	<b>Acceptance Range</b>							
460-00-4	Surrogate: p-Bromofluorobenzene	99.1 %	70-130							



## Analytical Batch Summary

**Batch ID:** BI81096                      **Preparation Method:** EPA TO15 PREP                      **Prepared By:** LDS

YORK Sample ID	Client Sample ID	Preparation Date
18I0756-01	Effluent 091718	09/22/18
BI81096-BLK1	Blank	09/21/18
BI81096-BS1	LCS	09/21/18

**Batch ID:** BI81140                      **Preparation Method:** EPA TO15 PREP                      **Prepared By:** LDS

YORK Sample ID	Client Sample ID	Preparation Date
18I0756-01RE1	Effluent 091718	09/24/18
BI81140-BLK1	Blank	09/24/18
BI81140-BS1	LCS	09/24/18





Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BI81096 - EPA TO15 PREP

Blank (BI81096-BLK1)

Prepared & Analyzed: 09/21/2018

1,1,1,2-Tetrachloroethane	ND	0.69	ug/m <sup>3</sup>								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								
Carbon disulfide	ND	0.31	"								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	ND	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								
n-Heptane	ND	0.41	"								



**Volatile Organic Compounds in Air by GC/MS - Quality Control Data**

**York Analytical Laboratories, Inc.**

Analyte	Result	Reporting	Units	Spike	Source*	%REC	%REC	Limits	Flag	RPD	Flag
		Limit			Result					Limit	

**Batch BI81096 - EPA TO15 PREP**

**Blank (BI81096-BLK1)**

Prepared & Analyzed: 09/21/2018

n-Hexane	ND	0.35	ug/m <sup>3</sup>								
o-Xylene	ND	0.43	"								
p- & m- Xylenes	ND	0.87	"								
p-Ethyltoluene	ND	0.49	"								
Propylene	ND	0.17	"								
Styrene	ND	0.43	"								
Tetrachloroethylene	ND	0.17	"								
Tetrahydrofuran	ND	0.59	"								
Toluene	ND	0.38	"								
trans-1,2-Dichloroethylene	ND	0.40	"								
trans-1,3-Dichloropropylene	ND	0.45	"								
Trichloroethylene	ND	0.13	"								
Trichlorofluoromethane (Freon 11)	ND	0.56	"								
Vinyl acetate	ND	0.35	"								
Vinyl bromide	ND	0.44	"								
Vinyl Chloride	ND	0.064	"								

*Surrogate: p-Bromofluorobenzene*      8.67      ppbv      10.0      86.7      70-130

**LCS (BI81096-BS1)**

Prepared & Analyzed: 09/21/2018

1,1,1,2-Tetrachloroethane	10.2		ppbv	10.0		102	70-130
1,1,1-Trichloroethane	9.78		"	10.0		97.8	70-130
1,1,2,2-Tetrachloroethane	10.2		"	10.0		102	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.2		"	10.0		102	70-130
1,1,2-Trichloroethane	10.1		"	10.0		101	70-130
1,1-Dichloroethane	9.79		"	10.0		97.9	70-130
1,1-Dichloroethylene	8.87		"	10.0		88.7	70-130
1,2,4-Trichlorobenzene	8.25		"	10.0		82.5	70-130
1,2,4-Trimethylbenzene	10.1		"	10.0		101	70-130
1,2-Dibromoethane	9.96		"	10.0		99.6	70-130
1,2-Dichlorobenzene	11.1		"	10.0		111	70-130
1,2-Dichloroethane	8.89		"	10.0		88.9	70-130
1,2-Dichloropropane	9.72		"	10.0		97.2	70-130
1,2-Dichlorotetrafluoroethane	10.8		"	10.0		108	70-130
1,3,5-Trimethylbenzene	9.82		"	10.0		98.2	70-130
1,3-Butadiene	10.0		"	10.0		100	70-130
1,3-Dichlorobenzene	11.4		"	10.0		114	70-130
1,3-Dichloropropane	9.69		"	10.0		96.9	70-130
1,4-Dichlorobenzene	11.3		"	10.0		113	70-130
1,4-Dioxane	8.13		"	10.0		81.3	70-130
2-Butanone	8.85		"	10.0		88.5	70-130
2-Hexanone	9.27		"	10.0		92.7	70-130
3-Chloropropene	8.89		"	10.0		88.9	70-130
4-Methyl-2-pentanone	9.36		"	10.0		93.6	70-130
Acetone	8.34		"	10.0		83.4	70-130
Acrylonitrile	10.0		"	10.0		100	70-130
Benzene	9.54		"	10.0		95.4	70-130
Benzyl chloride	9.82		"	10.0		98.2	70-130
Bromodichloromethane	9.92		"	10.0		99.2	70-130
Bromoform	10.7		"	10.0		107	70-130
Bromomethane	9.45		"	10.0		94.5	70-130
Carbon disulfide	10.7		"	10.0		107	70-130



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BI81096 - EPA TO15 PREP

LCS (BI81096-BS1)

Prepared & Analyzed: 09/21/2018

Carbon tetrachloride	9.02		ppbv	10.0		90.2	70-130				
Chlorobenzene	10.3		"	10.0		103	70-130				
Chloroethane	11.1		"	10.0		111	70-130				
Chloroform	9.78		"	10.0		97.8	70-130				
Chloromethane	10.2		"	10.0		102	70-130				
cis-1,2-Dichloroethylene	9.18		"	10.0		91.8	70-130				
cis-1,3-Dichloropropylene	9.95		"	10.0		99.5	70-130				
Cyclohexane	9.68		"	10.0		96.8	70-130				
Dibromochloromethane	10.2		"	10.0		102	70-130				
Dichlorodifluoromethane	10.1		"	10.0		101	70-130				
Ethyl acetate	9.07		"	10.0		90.7	70-130				
Ethyl Benzene	9.55		"	10.0		95.5	70-130				
Hexachlorobutadiene	10.3		"	10.0		103	70-130				
Isopropanol	10.3		"	10.0		103	70-130				
Methyl Methacrylate	9.66		"	10.0		96.6	70-130				
Methyl tert-butyl ether (MTBE)	17.3		"	10.0		173	70-130	High Bias			
Methylene chloride	9.53		"	10.0		95.3	70-130				
n-Heptane	8.86		"	10.0		88.6	70-130				
n-Hexane	9.87		"	10.0		98.7	70-130				
o-Xylene	9.40		"	10.0		94.0	70-130				
p- & m- Xylenes	19.4		"	20.0		97.2	70-130				
p-Ethyltoluene	10.4		"	10.0		104	70-130				
Propylene	8.88		"	10.0		88.8	70-130				
Styrene	10.5		"	10.0		105	70-130				
Tetrachloroethylene	10.4		"	10.0		104	70-130				
Tetrahydrofuran	8.97		"	10.0		89.7	70-130				
Toluene	9.69		"	10.0		96.9	70-130				
trans-1,2-Dichloroethylene	9.96		"	10.0		99.6	70-130				
trans-1,3-Dichloropropylene	9.33		"	10.0		93.3	70-130				
Trichloroethylene	9.24		"	10.0		92.4	70-130				
Trichlorofluoromethane (Freon 11)	9.72		"	10.0		97.2	70-130				
Vinyl acetate	13.2		"	10.0		132	70-130	High Bias			
Vinyl bromide	10.5		"	10.0		105	70-130				
Vinyl Chloride	9.92		"	10.0		99.2	70-130				
Surrogate: p-Bromofluorobenzene	10.1		"	10.0		101	70-130				



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BI81140 - EPA TO15 PREP

Blank (BI81140-BLK1)

Prepared & Analyzed: 09/24/2018

1,1,1,2-Tetrachloroethane	ND	0.69	ug/m <sup>3</sup>								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								
Carbon disulfide	ND	0.31	"								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	ND	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								
n-Heptane	ND	0.41	"								
n-Hexane	ND	0.35	"								



**Volatile Organic Compounds in Air by GC/MS - Quality Control Data**

**York Analytical Laboratories, Inc.**

Analyte	Result	Reporting	Units	Spike	Source*	%REC	%REC	Limits	Flag	RPD	Flag
		Limit			Result					RPD	

**Batch BI81140 - EPA TO15 PREP**

**Blank (BI81140-BLK1)**

Prepared & Analyzed: 09/24/2018

o-Xylene	ND	0.43	ug/m <sup>3</sup>								
p- & m- Xylenes	ND	0.87	"								
p-Ethyltoluene	ND	0.49	"								
Propylene	ND	0.17	"								
Styrene	ND	0.43	"								
Tetrachloroethylene	ND	0.17	"								
Tetrahydrofuran	ND	0.59	"								
Toluene	ND	0.38	"								
trans-1,2-Dichloroethylene	ND	0.40	"								
trans-1,3-Dichloropropylene	ND	0.45	"								
Trichloroethylene	ND	0.13	"								
Trichlorofluoromethane (Freon 11)	ND	0.56	"								
Vinyl acetate	ND	0.35	"								
Vinyl bromide	ND	0.44	"								
Vinyl Chloride	ND	0.064	"								

<i>Surrogate: p-Bromofluorobenzene</i>	<i>8.47</i>		<i>ppbv</i>	<i>10.0</i>		<i>84.7</i>	<i>70-130</i>				
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**LCS (BI81140-BS1)**

Prepared & Analyzed: 09/24/2018

1,1,1,2-Tetrachloroethane	10.1		ppbv	10.0		101	70-130				
1,1,1-Trichloroethane	12.0		"	10.0		120	70-130				
1,1,2,2-Tetrachloroethane	9.25		"	10.0		92.5	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.7		"	10.0		117	70-130				
1,1,2-Trichloroethane	9.65		"	10.0		96.5	70-130				
1,1-Dichloroethane	10.5		"	10.0		105	70-130				
1,1-Dichloroethylene	9.47		"	10.0		94.7	70-130				
1,2,4-Trichlorobenzene	8.25		"	10.0		82.5	70-130				
1,2,4-Trimethylbenzene	9.77		"	10.0		97.7	70-130				
1,2-Dibromoethane	9.63		"	10.0		96.3	70-130				
1,2-Dichlorobenzene	11.0		"	10.0		110	70-130				
1,2-Dichloroethane	10.2		"	10.0		102	70-130				
1,2-Dichloropropane	8.53		"	10.0		85.3	70-130				
1,2-Dichlorotetrafluoroethane	10.2		"	10.0		102	70-130				
1,3,5-Trimethylbenzene	9.11		"	10.0		91.1	70-130				
1,3-Butadiene	10.6		"	10.0		106	70-130				
1,3-Dichlorobenzene	11.2		"	10.0		112	70-130				
1,3-Dichloropropane	8.94		"	10.0		89.4	70-130				
1,4-Dichlorobenzene	11.2		"	10.0		112	70-130				
1,4-Dioxane	7.61		"	10.0		76.1	70-130				
2-Butanone	8.64		"	10.0		86.4	70-130				
2-Hexanone	7.65		"	10.0		76.5	70-130				
3-Chloropropene	8.83		"	10.0		88.3	70-130				
4-Methyl-2-pentanone	7.75		"	10.0		77.5	70-130				
Acetone	8.44		"	10.0		84.4	70-130				
Acrylonitrile	10.1		"	10.0		101	70-130				
Benzene	10.8		"	10.0		108	70-130				
Benzyl chloride	9.32		"	10.0		93.2	70-130				
Bromodichloromethane	9.30		"	10.0		93.0	70-130				
Bromoform	10.7		"	10.0		107	70-130				
Bromomethane	10.6		"	10.0		106	70-130				
Carbon disulfide	11.6		"	10.0		116	70-130				
Carbon tetrachloride	11.3		"	10.0		113	70-130				



**Volatile Organic Compounds in Air by GC/MS - Quality Control Data**

**York Analytical Laboratories, Inc.**

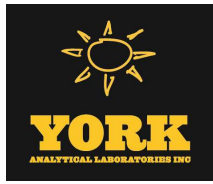
Analyte	Result	Reporting	Units	Spike Level	Source*	%REC	%REC Limits	Flag	RPD	RPD	Flag
		Limit			Result					Limit	

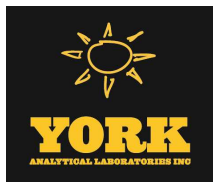
**Batch BI81140 - EPA TO15 PREP**

**LCS (BI81140-BS1)**

Prepared & Analyzed: 09/24/2018

Chlorobenzene	9.80		ppbv	10.0		98.0	70-130				
Chloroethane	11.4		"	10.0		114	70-130				
Chloroform	11.2		"	10.0		112	70-130				
Chloromethane	10.4		"	10.0		104	70-130				
cis-1,2-Dichloroethylene	9.87		"	10.0		98.7	70-130				
cis-1,3-Dichloropropylene	9.25		"	10.0		92.5	70-130				
Cyclohexane	10.2		"	10.0		102	70-130				
Dibromochloromethane	10.4		"	10.0		104	70-130				
Dichlorodifluoromethane	10.6		"	10.0		106	70-130				
Ethyl acetate	8.82		"	10.0		88.2	70-130				
Ethyl Benzene	8.91		"	10.0		89.1	70-130				
Hexachlorobutadiene	10.6		"	10.0		106	70-130				
Isopropanol	10.3		"	10.0		103	70-130				
Methyl Methacrylate	8.83		"	10.0		88.3	70-130				
Methyl tert-butyl ether (MTBE)	19.9		"	10.0		199	70-130	High Bias			
Methylene chloride	9.58		"	10.0		95.8	70-130				
n-Heptane	8.84		"	10.0		88.4	70-130				
n-Hexane	10.2		"	10.0		102	70-130				
o-Xylene	9.14		"	10.0		91.4	70-130				
p- & m- Xylenes	18.6		"	20.0		92.8	70-130				
p-Ethyltoluene	10.2		"	10.0		102	70-130				
Propylene	7.49		"	10.0		74.9	70-130				
Styrene	10.4		"	10.0		104	70-130				
Tetrachloroethylene	10.8		"	10.0		108	70-130				
Tetrahydrofuran	8.82		"	10.0		88.2	70-130				
Toluene	9.30		"	10.0		93.0	70-130				
trans-1,2-Dichloroethylene	10.7		"	10.0		107	70-130				
trans-1,3-Dichloropropylene	8.82		"	10.0		88.2	70-130				
Trichloroethylene	8.92		"	10.0		89.2	70-130				
Trichlorofluoromethane (Freon 11)	11.6		"	10.0		116	70-130				
Vinyl acetate	13.2		"	10.0		132	70-130	High Bias			
Vinyl bromide	12.0		"	10.0		120	70-130				
Vinyl Chloride	10.6		"	10.0		106	70-130				
<i>Surrogate: p-Bromofluorobenzene</i>	<i>9.65</i>		<i>"</i>	<i>10.0</i>		<i>96.5</i>	<i>70-130</i>				





## Sample and Data Qualifiers Relating to This Work Order

TO-TD	The sample was received in a tedlar bag which is not compliant with EPA TO-15 requirements.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
CCV-A	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>30% Difference for average Rf ). This applies to detected analytes only.

### Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW -846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

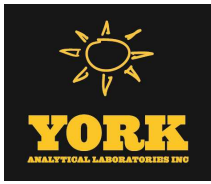
If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.





For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

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**YORK**  
ANALYTICAL LABORATORIES, INC.

York Analytical Laboratories, Inc.  
120 Research Drive  
Stratford, CT 06615  
clientservices@yorklab.com  
www.yorklab.com

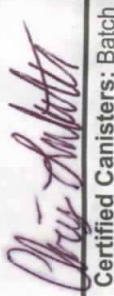
# Field Chain-of-Custody Record - AIR

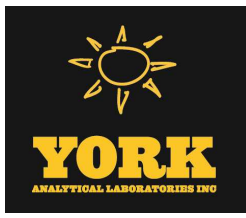
NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. signature binds you to YORK's Standard Terms & Conditions.

YORK Project No.  
1820756

Page 1 of 1

Your

YOUR INFORMATION		Report To:		Invoice To:		YOUR Project Number		Turn-Around Time	
Company: FPM Group	Company: SAME	Company: SAME	Company: SAME	Company: SAME	Company: SAME	1104g-18-05/01		RUSH - Next Day	
Address: 900 Marconi Avenue	Address: [blacked out]	Address: [blacked out]	Address: [blacked out]	Address: [blacked out]	Address: [blacked out]			RUSH - Two Day	
Phone: Ronkonkoma NY 11779	Phone: [blacked out]	Phone: [blacked out]	Phone: [blacked out]	Phone: [blacked out]	Phone: [blacked out]			RUSH - Three Day	
Contact: (631) 737-6200	Contact: [blacked out]	Contact: [blacked out]	Contact: [blacked out]	Contact: [blacked out]	Contact: [blacked out]			RUSH - Four Day	
E-mail: Chris Linkletter	E-mail: [blacked out]	E-mail: [blacked out]	E-mail: [blacked out]	E-mail: [blacked out]	E-mail: [blacked out]			Standard (5-7 Day)	<input checked="" type="checkbox"/>
E-mail: Chris Linkletter @ fpm-group.com Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.		Chris Linkletter Samples Collected by: (print your name above and sign below) 		YOUR PO#:		YOUR Project Name Cindecella			
Certified Canisters: Batch Individual		Air Matrix Codes AI - Indoor Ambient Air AO - Outdoor Amb. Air AE - Vapor Extraction Well/Process Gas/Effluent AS - Soil Vapor/Sub-Slab		Samples From <input checked="" type="checkbox"/> New York <input type="checkbox"/> New Jersey <input type="checkbox"/> Connecticut <input type="checkbox"/> Pennsylvania <input type="checkbox"/> Other		Report / EDD Type (circle selections) CT RCP CT PCP DQADUE NJDEP Reduced Deliv. NJDKQP		YORK Reg. Comp. Compared to the following Regulation(s): (please fill in)	
Sample Identification Effluent 021718		Date/Time Sampled 9/17/18 12:00		Canister ID AE		Flow Cont. ID		Reporting Units: ug/m <sup>3</sup> X ppbv ___ ppmv ___ Analysis Requested TO-15	
Please enter the following REQUIRED Field Data									
Canister Vacuum Before Sampling (in Hg)		Canister Vacuum After Sampling (in Hg)		Canister ID		Flow Cont. ID		Analysis Requested	
Comments:									
Samples Relinquished by / Company Chris Linkletter, FPM		Date/Time 9/18/18 8:30		Samples Received by / Company K Bakh v/c		Date/Time 9/18/18 11:35AM		Detection Limits Required ≤ 1 ug/m <sup>3</sup> X Routine Survey NY SDEC V1 Limits Other	
								Sampling Media 6 Liter Canister Tedlar Bag	
								Date/Time 9-19-18 7:40AM	
								Date/Time 9-19-18 7:40AM	
								Date/Time 9-19-18 7:40	



# Technical Report

prepared for:

**FPM Group**  
909 Marconi Avenue  
Ronkonkoma NY, 11779  
**Attention: Stephanie Davis**

Report Date: 12/28/2018  
**Client Project ID: 1104g-18-05/01 Cinderella**  
York Project (SDG) No.: 18L0800

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

120 RESEARCH DRIVE  
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(203) 325-1371



132-02 89th AVENUE  
FAX (203) 357-0166

RICHMOND HILL, NY 11418  
[ClientServices@yorklab.com](mailto:ClientServices@yorklab.com)

**FPM Group**  
909 Marconi Avenue  
Ronkonkoma NY, 11779  
Attention: Stephanie Davis

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 19, 2018 and listed below. The project was identified as your project: **1104g-18-05/01 Cinderella**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
18L0800-01	Effluent 121718	Vapor Extraction	12/17/2018	12/19/2018

## General Notes for York Project (SDG) No.: 18L0800

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By:



Benjamin Gulizia  
Laboratory Director

Date: 12/28/2018





### Sample Information

**Client Sample ID:** Effluent 121718

**York Sample ID:** 18L0800-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18L0800	1104g-18-05/01 Cinderella	Vapor Extraction	December 17, 2018 12:00 pm	12/19/2018

**Volatile Organics, EPA TO15 Full List**

Log-in Notes: TO-TD

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m <sup>3</sup>	6.9	10	EPA TO-15 Certifications:	12/27/2018 09:00	12/27/2018 15:58	PP
71-55-6	1,1,1-Trichloroethane	ND		ug/m <sup>3</sup>	5.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m <sup>3</sup>	6.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m <sup>3</sup>	7.7	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
79-00-5	1,1,2-Trichloroethane	ND		ug/m <sup>3</sup>	5.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
75-34-3	1,1-Dichloroethane	ND		ug/m <sup>3</sup>	4.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
75-35-4	1,1-Dichloroethylene	ND		ug/m <sup>3</sup>	0.99	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m <sup>3</sup>	7.4	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
95-63-6	<b>1,2,4-Trimethylbenzene</b>	<b>16</b>		ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
106-93-4	1,2-Dibromoethane	ND		ug/m <sup>3</sup>	7.7	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
95-50-1	1,2-Dichlorobenzene	ND		ug/m <sup>3</sup>	6.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
107-06-2	<b>1,2-Dichloroethane</b>	<b>4.0</b>		ug/m <sup>3</sup>	4.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
78-87-5	1,2-Dichloropropane	ND		ug/m <sup>3</sup>	4.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m <sup>3</sup>	7.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
108-67-8	<b>1,3,5-Trimethylbenzene</b>	<b>4.9</b>		ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
106-99-0	1,3-Butadiene	ND		ug/m <sup>3</sup>	6.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
541-73-1	1,3-Dichlorobenzene	ND		ug/m <sup>3</sup>	6.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
142-28-9	* 1,3-Dichloropropane	ND		ug/m <sup>3</sup>	4.6	10	EPA TO-15 Certifications:	12/27/2018 09:00	12/27/2018 15:58	PP
106-46-7	<b>1,4-Dichlorobenzene</b>	<b>280</b>		ug/m <sup>3</sup>	6.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
123-91-1	1,4-Dioxane	ND		ug/m <sup>3</sup>	7.2	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
78-93-3	<b>2-Butanone</b>	<b>26</b>		ug/m <sup>3</sup>	2.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
591-78-6	* 2-Hexanone	ND		ug/m <sup>3</sup>	8.2	10	EPA TO-15 Certifications:	12/27/2018 09:00	12/27/2018 15:58	PP





## Sample Information

**Client Sample ID:** Effluent 121718

**York Sample ID:** 18L0800-01

<u>York Project (SDG) No.</u> 18L0800	<u>Client Project ID</u> 1104g-18-05/01 Cinderella	<u>Matrix</u> Vapor Extraction	<u>Collection Date/Time</u> December 17, 2018 12:00 pm	<u>Date Received</u> 12/19/2018
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**Volatile Organics, EPA TO15 Full List**

**Log-in Notes:** TO-TD

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m <sup>3</sup>	16	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>61</b>		ug/m <sup>3</sup>	4.1	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
67-64-1	<b>Acetone</b>	<b>450</b>		ug/m <sup>3</sup>	4.8	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
107-13-1	Acrylonitrile	ND		ug/m <sup>3</sup>	2.2	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
71-43-2	<b>Benzene</b>	<b>14</b>		ug/m <sup>3</sup>	3.2	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
100-44-7	Benzyl chloride	ND		ug/m <sup>3</sup>	5.2	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
75-27-4	Bromodichloromethane	ND		ug/m <sup>3</sup>	6.7	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
75-25-2	Bromoform	ND		ug/m <sup>3</sup>	10	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
74-83-9	Bromomethane	ND		ug/m <sup>3</sup>	3.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
75-15-0	Carbon disulfide	ND		ug/m <sup>3</sup>	3.1	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
56-23-5	<b>Carbon tetrachloride</b>	<b>5.0</b>		ug/m <sup>3</sup>	1.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
108-90-7	Chlorobenzene	ND		ug/m <sup>3</sup>	4.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
75-00-3	Chloroethane	ND		ug/m <sup>3</sup>	2.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
67-66-3	Chloroform	ND		ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
74-87-3	<b>Chloromethane</b>	<b>15</b>	QL-03	ug/m <sup>3</sup>	2.1	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m <sup>3</sup>	0.99	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m <sup>3</sup>	4.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
110-82-7	<b>Cyclohexane</b>	<b>9.3</b>		ug/m <sup>3</sup>	3.4	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
124-48-1	Dibromochloromethane	ND		ug/m <sup>3</sup>	8.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
75-71-8	<b>Dichlorodifluoromethane</b>	<b>22</b>		ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
141-78-6	* Ethyl acetate	<b>100</b>		ug/m <sup>3</sup>	7.2	10	EPA TO-15 Certifications:	12/27/2018 09:00	12/27/2018 15:58	PP
100-41-4	<b>Ethyl Benzene</b>	<b>28</b>		ug/m <sup>3</sup>	4.3	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
87-68-3	Hexachlorobutadiene	ND		ug/m <sup>3</sup>	11	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP



### Sample Information

**Client Sample ID:** Effluent 121718

**York Sample ID:** 18L0800-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

18L0800

1104g-18-05/01 Cinderella

Vapor Extraction

December 17, 2018 12:00 pm

12/19/2018

**Volatile Organics, EPA TO15 Full List**

**Log-in Notes:** TO-TD

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-63-0	Isopropanol	180		ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
80-62-6	Methyl Methacrylate	20		ug/m <sup>3</sup>	4.1	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m <sup>3</sup>	3.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
75-09-2	Methylene chloride	14		ug/m <sup>3</sup>	6.9	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
142-82-5	n-Heptane	18		ug/m <sup>3</sup>	4.1	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
110-54-3	n-Hexane	28		ug/m <sup>3</sup>	3.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
95-47-6	o-Xylene	27		ug/m <sup>3</sup>	4.3	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
179601-23-1	p- & m- Xylenes	100		ug/m <sup>3</sup>	8.7	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
622-96-8	* p-Ethyltoluene	15		ug/m <sup>3</sup>	4.9	10	EPA TO-15 Certifications:	12/27/2018 09:00	12/27/2018 15:58	PP
115-07-1	* Propylene	13		ug/m <sup>3</sup>	1.7	10	EPA TO-15 Certifications:	12/27/2018 09:00	12/27/2018 15:58	PP
100-42-5	Styrene	9.4		ug/m <sup>3</sup>	4.3	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
127-18-4	Tetrachloroethylene	89		ug/m <sup>3</sup>	1.7	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
109-99-9	* Tetrahydrofuran	ND		ug/m <sup>3</sup>	5.9	10	EPA TO-15 Certifications:	12/27/2018 09:00	12/27/2018 15:58	PP
108-88-3	Toluene	420		ug/m <sup>3</sup>	3.8	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m <sup>3</sup>	4.0	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m <sup>3</sup>	4.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
79-01-6	Trichloroethylene	2.7		ug/m <sup>3</sup>	1.3	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
75-69-4	Trichlorofluoromethane (Freon 11)	13		ug/m <sup>3</sup>	5.6	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
108-05-4	Vinyl acetate	ND		ug/m <sup>3</sup>	3.5	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
593-60-2	Vinyl bromide	ND		ug/m <sup>3</sup>	4.4	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
75-01-4	Vinyl Chloride	ND		ug/m <sup>3</sup>	0.64	10	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/27/2018 09:00	12/27/2018 15:58	PP
	<b>Surrogate Recoveries</b>	<b>Result</b>			<b>Acceptance Range</b>					
460-00-4	Surrogate: SURR: p-Bromofluorobenzene	86.4 %			70-130					



### Sample Information

**Client Sample ID:** Effluent 121718

**York Sample ID:** 18L0800-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

18L0800

1104g-18-05/01 Cinderella

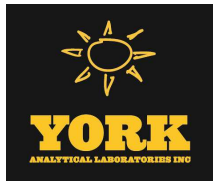
Vapor Extraction

December 17, 2018 12:00 pm

12/19/2018

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## Analytical Batch Summary

**Batch ID:** BL81381

**Preparation Method:** EPA TO15 PREP

**Prepared By:** AS

YORK Sample ID	Client Sample ID	Preparation Date
18L0800-01	Effluent 121718	12/27/18
BL81381-BLK1	Blank	12/27/18
BL81381-BS1	LCS	12/27/18



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BL81381 - EPA TO15 PREP

Blank (BL81381-BLK1)

Prepared & Analyzed: 12/27/2018

1,1,1,2-Tetrachloroethane	ND	0.69	ug/m <sup>3</sup>								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								
Carbon disulfide	ND	0.31	"								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	ND	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								
n-Heptane	ND	0.41	"								



**Volatile Organic Compounds in Air by GC/MS - Quality Control Data**

**York Analytical Laboratories, Inc.**

Analyte	Result	Reporting	Units	Spike	Source*	%REC	%REC	Limits	Flag	RPD	Flag
		Limit			Result					Limit	

**Batch BL81381 - EPA TO15 PREP**

**Blank (BL81381-BLK1)**

Prepared & Analyzed: 12/27/2018

n-Hexane	ND	0.35	ug/m <sup>3</sup>								
o-Xylene	ND	0.43	"								
p- & m- Xylenes	ND	0.87	"								
p-Ethyltoluene	ND	0.49	"								
Propylene	ND	0.17	"								
Styrene	ND	0.43	"								
Tetrachloroethylene	ND	0.17	"								
Tetrahydrofuran	ND	0.59	"								
Toluene	ND	0.38	"								
trans-1,2-Dichloroethylene	ND	0.40	"								
trans-1,3-Dichloropropylene	ND	0.45	"								
Trichloroethylene	ND	0.13	"								
Trichlorofluoromethane (Freon 11)	ND	0.56	"								
Vinyl acetate	ND	0.35	"								
Vinyl bromide	ND	0.44	"								
Vinyl Chloride	ND	0.064	"								

*Surrogate: SURR: p-Bromofluorobenzene*      8.31      ppbv      10.0      83.1      70-130

**LCS (BL81381-BS1)**

Prepared & Analyzed: 12/27/2018

1,1,1,2-Tetrachloroethane	10.9		ppbv	10.0		109	70-130
1,1,1-Trichloroethane	11.2		"	10.0		112	70-130
1,1,2,2-Tetrachloroethane	11.1		"	10.0		111	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.0		"	10.0		110	70-130
1,1,2-Trichloroethane	10.5		"	10.0		105	70-130
1,1-Dichloroethane	11.0		"	10.0		110	70-130
1,1-Dichloroethylene	10.5		"	10.0		105	70-130
1,2,4-Trichlorobenzene	9.40		"	10.0		94.0	70-130
1,2,4-Trimethylbenzene	11.3		"	10.0		113	70-130
1,2-Dibromoethane	10.6		"	10.0		106	70-130
1,2-Dichlorobenzene	12.0		"	10.0		120	70-130
1,2-Dichloroethane	10.3		"	10.0		103	70-130
1,2-Dichloropropane	10.3		"	10.0		103	70-130
1,2-Dichlorotetrafluoroethane	11.2		"	10.0		112	70-130
1,3,5-Trimethylbenzene	11.1		"	10.0		111	70-130
1,3-Butadiene	11.5		"	10.0		115	70-130
1,3-Dichlorobenzene	11.9		"	10.0		119	70-130
1,3-Dichloropropane	10.3		"	10.0		103	70-130
1,4-Dichlorobenzene	12.1		"	10.0		121	70-130
1,4-Dioxane	10.7		"	10.0		107	70-130
2-Butanone	10.7		"	10.0		107	70-130
2-Hexanone	10.5		"	10.0		105	70-130
3-Chloropropene	10.5		"	10.0		105	70-130
4-Methyl-2-pentanone	10.4		"	10.0		104	70-130
Acetone	9.18		"	10.0		91.8	70-130
Acrylonitrile	10.4		"	10.0		104	70-130
Benzene	10.9		"	10.0		109	70-130
Benzyl chloride	10.1		"	10.0		101	70-130
Bromodichloromethane	10.4		"	10.0		104	70-130
Bromoform	12.3		"	10.0		123	70-130
Bromomethane	11.0		"	10.0		110	70-130
Carbon disulfide	11.1		"	10.0		111	70-130



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

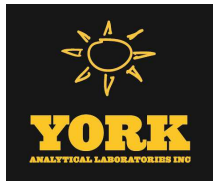
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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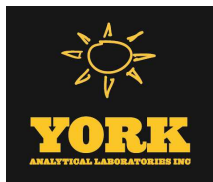
Batch BL81381 - EPA TO15 PREP

LCS (BL81381-BS1)

Prepared & Analyzed: 12/27/2018

Carbon tetrachloride	11.0		ppbv	10.0		110	70-130				
Chlorobenzene	10.9		"	10.0		109	70-130				
Chloroethane	11.0		"	10.0		110	70-130				
Chloroform	10.9		"	10.0		109	70-130				
Chloromethane	13.1		"	10.0		131	70-130	High Bias			
cis-1,2-Dichloroethylene	10.2		"	10.0		102	70-130				
cis-1,3-Dichloropropylene	10.4		"	10.0		104	70-130				
Cyclohexane	10.7		"	10.0		107	70-130				
Dibromochloromethane	10.6		"	10.0		106	70-130				
Dichlorodifluoromethane	11.9		"	10.0		119	70-130				
Ethyl acetate	10.8		"	10.0		108	70-130				
Ethyl Benzene	10.9		"	10.0		109	70-130				
Hexachlorobutadiene	12.7		"	10.0		127	70-130				
Isopropanol	10.7		"	10.0		107	70-130				
Methyl Methacrylate	10.7		"	10.0		107	70-130				
Methyl tert-butyl ether (MTBE)	11.6		"	10.0		116	70-130				
Methylene chloride	11.1		"	10.0		111	70-130				
n-Heptane	10.6		"	10.0		106	70-130				
n-Hexane	10.8		"	10.0		108	70-130				
o-Xylene	11.6		"	10.0		116	70-130				
p- & m- Xylenes	22.7		"	20.0		114	70-130				
p-Ethyltoluene	11.9		"	10.0		119	70-130				
Propylene	10.2		"	10.0		102	70-130				
Styrene	11.8		"	10.0		118	70-130				
Tetrachloroethylene	10.0		"	10.0		100	70-130				
Tetrahydrofuran	10.6		"	10.0		106	70-130				
Toluene	9.98		"	10.0		99.8	70-130				
trans-1,2-Dichloroethylene	10.8		"	10.0		108	70-130				
trans-1,3-Dichloropropylene	10.2		"	10.0		102	70-130				
Trichloroethylene	10.1		"	10.0		101	70-130				
Trichlorofluoromethane (Freon 11)	11.2		"	10.0		112	70-130				
Vinyl acetate	10.6		"	10.0		106	70-130				
Vinyl bromide	11.4		"	10.0		114	70-130				
Vinyl Chloride	11.6		"	10.0		116	70-130				
Surrogate: SURR: p-Bromofluorobenzene	9.79		"	10.0		97.9	70-130				





## Sample and Data Qualifiers Relating to This Work Order

- TO-TD The sample was received in a tedlar bag which is not compliant with EPA TO-15 requirements.
- QL-03 This LCS analyte recovered outside of acceptance limits. The LCS contains approximately 70 compounds, a limited number of which may be outside acceptance windows.

### Definitions and Other Explanations

- \* Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
- ND NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
- RL REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
- LOQ LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
- LOD LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
- MDL METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
- Reported to This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
- NR Not reported
- RPD Relative Percent Difference
- Wet The data has been reported on an as-received (wet weight) basis
- Low Bias Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- High Bias High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- Non-Dir. Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

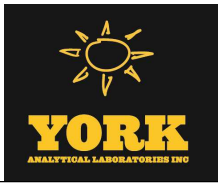
If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.





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# Field Chain-of-Custody Record - AIR

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. signature binds you to YORK's Standard Terms & Conditions.

YORK Project No.  
18L0800

Page 1 of 1

YOUR Information		Report To:		Invoice To:		YOUR Project Number		Turn-Around Time	
Company: FPM Group	Company: SAME	Company: SAME	Company: SAME	Summary Report	Standard Excel EDD	RUSH - Next Day		RUSH - Next Day	
Address: 90a Maccon Avenue	Address: SAME	Address: SAME	Address: SAME	QA Report	EQUS (Standard)	RUSH - Two Day		RUSH - Two Day	
Phone: Bontonoma NY 11179	Phone:	Phone:	Phone:	NY ASP A Package	NYSDEC EQUS	RUSH - Three Day		RUSH - Three Day	
Contact: (631) 737-6200	Contact:	Contact:	Contact:	NY ASP B Package	NJDEP Reduced Deliv.	RUSH - Four Day		RUSH - Four Day	
E-mail: Chris Linkletter	E-mail:	E-mail:	E-mail:	Other:	NJDEP SRP HazSite	Standard (5-7 Day)		Standard (5-7 Day)	<input checked="" type="checkbox"/>
Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.		Air Matrix Codes		Report / EDD Type (circle selections)		YORK Reg. Comp.			
		AI - Indoor Ambient Air		CT RCP		Compared to the following Regulation(s): (please fill in)			
		AO - Outdoor Amb. Air		CT RCP DQ&DUE					
		AE - Vapor Extraction Well/ Process Gas/Effluent		NJDEP Reduced Deliv.					
		AS - Soil Vapor/Sup-Stab		NJDKQP					
		Other							
Chris Linkletter Samples Collected by: (print your name above and sign below)		Samples From							
Chris Linkletter		New York							
		New Jersey							
		Connecticut							
		Pennsylvania							
		Other							

Certified Canisters: Batch _____ Individual _____		Please enter the following REQUIRED Field Data				Reporting Units: ug/m <sup>3</sup> <input checked="" type="checkbox"/> ppbv _____ ppmv _____	
Sample Identification	Date/Time Sampled	Air Matrix	Canister Vacuum Before Sampling (in Hg)	Canister Vacuum After Sampling (in Hg)	Canister ID	Flow Cont. ID	Analysis Requested
ESF Vent 121718	12/17/18 12:00	AE					TO-15
Comments:							
Samples Relinquished by / Company		Samples Received by / Company		Date/Time		Detection Limits Required	
Chris Linkletter, FPM		Patty Elo - York		12/17/18 16:00		≤ 1 ug/m <sup>3</sup> <input checked="" type="checkbox"/> NYSDEC V1 Limits _____	
Samples Received by / Company		Samples Relinquished by / Company		Date/Time		Routine Survey _____ Other _____	
Samples Relinquished by / Company		Samples Received by / Company		Date/Time		6 Liter Canister <input checked="" type="checkbox"/>	
						Tedlar Bag <input checked="" type="checkbox"/>	