

## Detterman, Mark, Env. Health

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**From:** PDKing0000@aol.com  
**Sent:** Thursday, January 22, 2015 12:46 PM  
**To:** Detterman, Mark, Env. Health  
**Subject:** Plse confirm receipt of 22.3 MB e-mail just sent for James River Corp; RO2468 -

Hi Mark,

I just sent to you a 22.3 MB e-mail just for James River Corp; RO2468 showing proposed Vapor Pin locations.

Please confirm that the file made it through to you.

Thank you!

Paul

Paul H. King  
Professional Geologist

P&D Environmental, Inc.  
55 Santa Clara Avenue, Suite 240  
Oakland, CA 94610

(510) 658-6916 telephone  
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[Paul.King@pdenviro.com](mailto:Paul.King@pdenviro.com)

# **TABLES**

Table 1A  
Summary of Soil Gas Sample Analytical Results

Sample ID	Land Use	Sample Date	PID Reading (PPM)	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1,1-TCA	Vinyl Chloride	Chloroform	Other VOCs by TO-15	DFA	Percent Shroud
VP1	Commercial	11/5/2014	0	180	ND<6.0	ND<4.4	ND<4.4	ND<6.1	ND<2.9	69	ND, except Acetone = 96, Ethanol = 26, 2-Propanol = 20	49	0
VP2	Commercial	11/5/2014	0.7	ND<6.6	ND<5.3	ND<3.9	610	ND<5.3	ND<2.5	ND<4.8	ND, except Acetone = 34, Toluene = 9.8, Tetrahydrofuran = 6.3, Ethanol = 38, 2-Propanol = 11	3,000, a	0
VP2-DUP	Commercial	11/5/2014	0.7	ND<7.7	ND<6.1	ND<4.5	740	ND<6.2	ND<2.9	ND<5.5	ND, except Acetone = 31, Toluene = 9.9, Ethanol = 35	38,000, a	0.2
VP3	Commercial	12/10/2014	70	<b>320,000</b>	ND<2,000	ND<1,400	ND<1,400	ND<2,000	ND<940	ND<1,800	ND, except Toluene = 3,400, Ethanol = 3,600,	ND<4,000	0
VP3-DUP	Commercial	12/10/2014	NA	<b>310,000</b>	ND<990	ND<730	ND<730	ND<1,000	ND<470	ND<900	ND, except Toluene = 3,000	ND<2,000	0
VP3	Commercial	11/5/2014	119	<b>320,000</b>	ND<1,600	ND<1,200	ND<1,200	ND<1,600	ND<760	ND<1,400	ND, except Toluene = 4,000	41,000	0.2
VP4	Commercial	12/10/2014	0.5	<b>6,600</b>	ND<17	ND<13	ND<13	ND<18	ND<8.2	ND<16	ND, except 1,2,4-Trichlorobenzene = 140, Hexachlorobutadiene = 240	ND<35	0
VP4	Commercial	11/5/2014	4	<b>4,700</b>	ND<21	ND<15	ND<15	ND<21	ND<9.9	ND<19	ND, except Ethanol = 40	190,000, a	0.95
VP5	Commercial	12/10/2014	10.3	<b>65,000</b>	ND<130	ND<99	ND<99	ND<140	ND<64	ND<120	All ND	ND<270	0
VP5	Commercial	11/5/2014	18	<b>67,000</b>	ND<130	ND<97	ND<97	ND<130	ND<62	ND<120	All ND	320	0
VP6	Commercial	12/10/2014	2.9	<b>18,000</b>	ND<64	ND<47	ND<47	80	ND<30	ND<58	All ND	140	0
VP6	Commercial	11/5/2014	7	<b>18,000</b>	ND<52	ND<38	ND<38	76	ND<25	ND<47	ND, except Ethanol = 84	2,600	0
ESL				2,100	3,000	31,000	260,000	22,000,000	160	2,300	Acetone = 140,000,000, Toluene = 1,300,000, 1,2,4-Trichlorobenzene = 18,000, Hexachlorobutadiene = No Value, Tetrahydrofuran = No Value, Ethanol = No Value, 2-Propanol = No Value	No Value	No Value
Notes:													
PID = Photoionization Detector.													
PPM = Parts Per Million.													
PCE = Tetrachloroethene.													
TCE = Trichloroethene.													
cis-1,2-DCE = cis-1,2-Dichloroethene.													
trans-1,2-DCE = trans-1,2-Dichloroethene.													
1,1,1-TCA = 1,1,1-Trichloroethane.													
VOCs = Volatile Organic Compounds.													
DFA = 1,1-Difluoroethane. (Tracer Gas)													
ND = Not Detected.													
NA = Not Analyzed.													
a = Laboratory Note: exceeds instrument calibration range.													
Percent Shroud = The ratio of tracer gas concentration detected in the soil gas sample to the tracer gas concentration detected in the shroud air sample, expressed as a percentage.													
ESL = Environmental Screening Level, by San Francisco Bay - Regional Water Quality Control Board, updated December 2013 from Table E - Indoor Air and Soil Gas (Vapor Intrusion Concerns) Shallow Soil Gas Screening Levels for Commercial/Industrial Land Use.													
<b>Values in bold exceed their respective ESL values.</b>													
Results and ESLs reported in micrograms per cubic meter (µg/m <sup>3</sup> ), unless otherwise indicated													

Table 1B  
Summary of Soil Gas Shroud Sample Analytical Results - 1,1-Difluoroethane

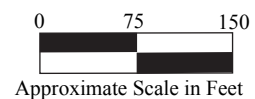
Sample ID	Sample Date	DFA, #
VP1	11/5/2014	17,000,000, a
VP2	11/5/2014	19,000,000, a
VP3	12/10/2014	13,000,000
VP3	11/5/2014	18,000,000, a
VP4	12/10/2014	11,000,000
VP4	11/5/2014	20,000,000, a
VP5	12/10/2014	9,400,000
VP5	11/5/2014	22,000,000, a
VP6	12/10/2014	19,000,000
VP6	11/5/2014	17,000,000, a
<u>Notes:</u>		
ND = Not Detected.		
NA = Not Analyzed.		
# = 1,1-Difluoroethane (DFA) used as leak detection compound for TO-15 analysis.		
Results in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), unless otherwise indicated.		



Figure X2  
 Site Plan Aerial Photograph Showing Vapor Pin Locations and PCE Soil Gas Concentrations  
 2101 Williams Street  
 San Leandro, California

Base Map from:  
 Google Earth, image dated August 28, 2012

P&D Environmental, Inc.  
 55 Santa Clara Avenue  
 Oakland, CA 94610



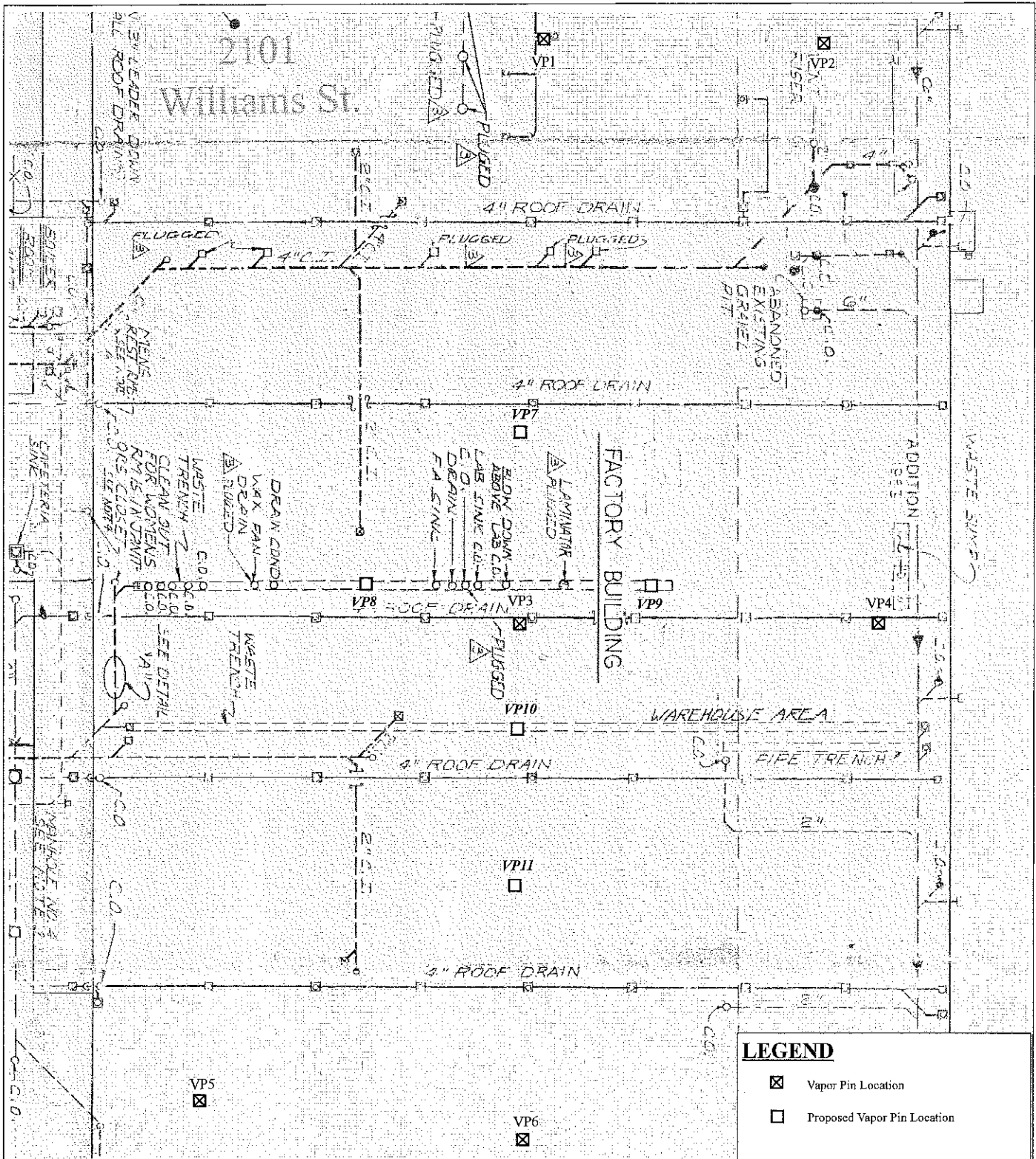
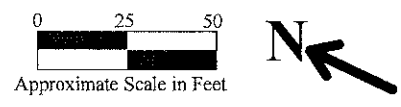


Figure X3  
 Site Plan Aerial Photograph Detail Showing Vapor Pin and Sub-Slab Utility Locations  
 2101 Williams Street  
 San Leandro, California

Base Map from:  
 Google Earth, image dated August 28, 2012

P&D Environmental, Inc.  
 55 Santa Clara Avenue  
 Oakland, CA 94610



## **LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION**

- **Air Toxics Work Order # 1411078 - Sub-Slab Soil Gas Samples VP1 Through VP6 TO-15 Results for Samples Collected on November 5, 2014**
- **Air Toxics Work Order # 1411068R1 - Sample Shroud Samples VP1 Through VP6 1,1-DFA Results for Samples Collected on November 5, 2014**
- **Air Toxics Work Order # 1412207 - Sub-Slab Soil Gas Samples VP3 Through VP6 TO-15 Results for Samples Collected on December 10, 2014**
- **Air Toxics Work Order # 1412148 - Sample Shroud Samples VP3 Through VP6 1,1-DFA Results for Samples Collected on December 10, 2014**



11/20/2014  
Mr. Paul King  
P & D Environmental  
55 Santa Clara  
Suite 240  
Oakland CA 94610

Project Name: James River Corporation 2101 Williams St  
Project #: 0660  
Workorder #: 1411078

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 11/6/2014 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori  
Project Manager



**WORK ORDER #: 1411078**

Work Order Summary

**CLIENT:** Mr. Paul King  
P & D Environmental  
55 Santa Clara  
Suite 240  
Oakland, CA 94610

**BILL TO:** Mr. Paul King  
P & D Environmental  
55 Santa Clara  
Suite 240  
Oakland, CA 94610

**PHONE:** 510-658-6916

**P.O. #**

**FAX:** 510-834-0772

**PROJECT #** 0660 James River Corporation 2101

**DATE RECEIVED:** 11/06/2014

**CONTACT:** Williams St  
Kyle Vagadori

**DATE COMPLETED:** 11/20/2014

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP1	TO-15	2.8 "Hg	15.1 psi
02A	VP2	TO-15	0.3 psi	14.7 psi
03A	VP2-DUP	TO-15	3.7 "Hg	14.5 psi
04A	VP3	TO-15	4.7 "Hg	14.9 psi
05A	VP4	TO-15	3.9 "Hg	15 psi
06A	VP5	TO-15	5.5 "Hg	14.6 psi
07A	VP6	TO-15	5.3 "Hg	14.6 psi
08A	Lab Blank	TO-15	NA	NA
09A	CCV	TO-15	NA	NA
10A	LCS	TO-15	NA	NA
10AA	LCSD	TO-15	NA	NA

CERTIFIED BY:



Technical Director

DATE: 11/20/14

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935  
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563

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**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**P & D Environmental**  
**Workorder# 1411078**

Seven 1 Liter Summa Canister samples were received on November 06, 2014. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There was a significant difference (greater than 5.0" Hg) between the measured canister receipt vacuum and that which was reported on the Chain of Custody (COC) OR the canister tag for sample VP2.

The Summa canister for sample VP2 was leaking upon arrival. The client was notified and the analysis proceeded. Reported analyte concentrations are considered to be estimated.

**Analytical Notes**

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Dilution was performed on samples VP3, VP4, VP5 and VP6 due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: VP1**

**Lab ID#: 1411078-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Ethanol	4.5	14	8.4	26
Acetone	11	40	27	96
2-Propanol	4.5	8.0	11	20
Chloroform	1.1	14	5.5	69
Tetrachloroethene	1.1	27	7.6	180
1,1-Difluoroethane	4.5	18	12	49

**Client Sample ID: VP2**

**Lab ID#: 1411078-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Ethanol	3.9	20	7.4	38
Acetone	9.8	14	23	34
2-Propanol	3.9	4.6	9.6	11
trans-1,2-Dichloroethene	0.98	150	3.9	610
Tetrahydrofuran	0.98	2.1	2.9	6.3
Toluene	0.98	2.6	3.7	9.8
1,1-Difluoroethane	3.9	1100 E	10	3000 E

**Client Sample ID: VP2-DUP**

**Lab ID#: 1411078-03A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Ethanol	4.5	19	8.5	35
Acetone	11	13	27	31
trans-1,2-Dichloroethene	1.1	180	4.5	740
Toluene	1.1	2.6	4.2	9.9
1,1-Difluoroethane	4.5	14000 E	12	38000 E

**Client Sample ID: VP3**

**Lab ID#: 1411078-04A**

## Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: VP3**

**Lab ID#: 1411078-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	300	1000	1100	4000
Tetrachloroethene	300	46000	2000	320000
1,1-Difluoroethane	1200	15000	3200	41000

**Client Sample ID: VP4**

**Lab ID#: 1411078-05A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	15	21	29	40
Tetrachloroethene	3.9	700	26	4700
1,1-Difluoroethane	15	69000 E	42	190000 E

**Client Sample ID: VP5**

**Lab ID#: 1411078-06A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	24	9900	160	67000
1,1-Difluoroethane	98	120	260	320

**Client Sample ID: VP6**

**Lab ID#: 1411078-07A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	39	44	73	84
1,1,1-Trichloroethane	9.7	14	53	76
Tetrachloroethene	9.7	2600	66	18000
1,1-Difluoroethane	39	970	100	2600



Air Toxics

Client Sample ID: VP1

Lab ID#: 1411078-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111921	Date of Collection:	11/5/14 12:01:00 PM
Dil. Factor:	2.24	Date of Analysis:	11/19/14 10:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Freon 114	1.1	Not Detected	7.8	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	43	Not Detected
Chloroethane	4.5	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.3	Not Detected
Ethanol	4.5	14	8.4	26
Freon 113	1.1	Not Detected	8.6	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	11	40	27	96
2-Propanol	4.5	8.0	11	20
Carbon Disulfide	4.5	Not Detected	14	Not Detected
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	14	5.5	69
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Heptane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.5	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.6	Not Detected
Toluene	1.1	Not Detected	4.2	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	27	7.6	180
2-Hexanone	4.5	Not Detected	18	Not Detected

Client Sample ID: VP1

Lab ID#: 1411078-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111921	Date of Collection:	11/5/14 12:01:00 PM
Dil. Factor:	2.24	Date of Analysis:	11/19/14 10:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.5	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.6	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	Not Detected	4.9	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.5	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.7	Not Detected
Propylbenzene	1.1	Not Detected	5.5	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.5	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.8	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	33	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected
1,1-Difluoroethane	4.5	18	12	49

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	114	70-130



Air Toxics

Client Sample ID: VP2

Lab ID#: 1411078-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111922	Date of Collection:	11/5/14 10:50:00 AM
Dil. Factor:	1.96	Date of Analysis:	11/19/14 10:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.98	Not Detected	4.8	Not Detected
Freon 114	0.98	Not Detected	6.8	Not Detected
Chloromethane	9.8	Not Detected	20	Not Detected
Vinyl Chloride	0.98	Not Detected	2.5	Not Detected
1,3-Butadiene	0.98	Not Detected	2.2	Not Detected
Bromomethane	9.8	Not Detected	38	Not Detected
Chloroethane	3.9	Not Detected	10	Not Detected
Freon 11	0.98	Not Detected	5.5	Not Detected
Ethanol	3.9	20	7.4	38
Freon 113	0.98	Not Detected	7.5	Not Detected
1,1-Dichloroethene	0.98	Not Detected	3.9	Not Detected
Acetone	9.8	14	23	34
2-Propanol	3.9	4.6	9.6	11
Carbon Disulfide	3.9	Not Detected	12	Not Detected
3-Chloropropene	3.9	Not Detected	12	Not Detected
Methylene Chloride	9.8	Not Detected	34	Not Detected
Methyl tert-butyl ether	0.98	Not Detected	3.5	Not Detected
trans-1,2-Dichloroethene	0.98	150	3.9	610
Hexane	0.98	Not Detected	3.4	Not Detected
1,1-Dichloroethane	0.98	Not Detected	4.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	0.98	Not Detected	3.9	Not Detected
Tetrahydrofuran	0.98	2.1	2.9	6.3
Chloroform	0.98	Not Detected	4.8	Not Detected
1,1,1-Trichloroethane	0.98	Not Detected	5.3	Not Detected
Cyclohexane	0.98	Not Detected	3.4	Not Detected
Carbon Tetrachloride	0.98	Not Detected	6.2	Not Detected
2,2,4-Trimethylpentane	0.98	Not Detected	4.6	Not Detected
Benzene	0.98	Not Detected	3.1	Not Detected
1,2-Dichloroethane	0.98	Not Detected	4.0	Not Detected
Heptane	0.98	Not Detected	4.0	Not Detected
Trichloroethene	0.98	Not Detected	5.3	Not Detected
1,2-Dichloropropane	0.98	Not Detected	4.5	Not Detected
1,4-Dioxane	3.9	Not Detected	14	Not Detected
Bromodichloromethane	0.98	Not Detected	6.6	Not Detected
cis-1,3-Dichloropropene	0.98	Not Detected	4.4	Not Detected
4-Methyl-2-pentanone	0.98	Not Detected	4.0	Not Detected
Toluene	0.98	2.6	3.7	9.8
trans-1,3-Dichloropropene	0.98	Not Detected	4.4	Not Detected
1,1,2-Trichloroethane	0.98	Not Detected	5.3	Not Detected
Tetrachloroethene	0.98	Not Detected	6.6	Not Detected
2-Hexanone	3.9	Not Detected	16	Not Detected





Client Sample ID: VP2

Lab ID#: 1411078-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111922	Date of Collection:	11/5/14 10:50:00 AM
Dil. Factor:	1.96	Date of Analysis:	11/19/14 10:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.98	Not Detected	8.3	Not Detected
1,2-Dibromoethane (EDB)	0.98	Not Detected	7.5	Not Detected
Chlorobenzene	0.98	Not Detected	4.5	Not Detected
Ethyl Benzene	0.98	Not Detected	4.2	Not Detected
m,p-Xylene	0.98	Not Detected	4.2	Not Detected
o-Xylene	0.98	Not Detected	4.2	Not Detected
Styrene	0.98	Not Detected	4.2	Not Detected
Bromoform	0.98	Not Detected	10	Not Detected
Cumene	0.98	Not Detected	4.8	Not Detected
1,1,2,2-Tetrachloroethane	0.98	Not Detected	6.7	Not Detected
Propylbenzene	0.98	Not Detected	4.8	Not Detected
4-Ethyltoluene	0.98	Not Detected	4.8	Not Detected
1,3,5-Trimethylbenzene	0.98	Not Detected	4.8	Not Detected
1,2,4-Trimethylbenzene	0.98	Not Detected	4.8	Not Detected
1,3-Dichlorobenzene	0.98	Not Detected	5.9	Not Detected
1,4-Dichlorobenzene	0.98	Not Detected	5.9	Not Detected
alpha-Chlorotoluene	0.98	Not Detected	5.1	Not Detected
1,2-Dichlorobenzene	0.98	Not Detected	5.9	Not Detected
1,2,4-Trichlorobenzene	3.9	Not Detected	29	Not Detected
Hexachlorobutadiene	3.9	Not Detected	42	Not Detected
1,1-Difluoroethane	3.9	1100 E	10	3000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	112	70-130



Air Toxics

Client Sample ID: VP2-DUP

Lab ID#: 1411078-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111923	Date of Collection:	11/5/14 10:50:00 AM
Dil. Factor:	2.26	Date of Analysis:	11/19/14 10:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.6	Not Detected
Freon 114	1.1	Not Detected	7.9	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	44	Not Detected
Chloroethane	4.5	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.3	Not Detected
Ethanol	4.5	19	8.5	35
Freon 113	1.1	Not Detected	8.7	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	11	13	27	31
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	4.5	Not Detected	14	Not Detected
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.1	Not Detected
trans-1,2-Dichloroethene	1.1	180	4.5	740
Hexane	1.1	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	Not Detected	5.5	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Cyclohexane	1.1	Not Detected	3.9	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.1	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.6	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.6	Not Detected
Toluene	1.1	2.6	4.2	9.9
trans-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	Not Detected	7.7	Not Detected
2-Hexanone	4.5	Not Detected	18	Not Detected



Client Sample ID: VP2-DUP

Lab ID#: 1411078-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111923	Date of Collection:	11/5/14 10:50:00 AM
Dil. Factor:	2.26	Date of Analysis:	11/19/14 10:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.6	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.7	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	Not Detected	4.9	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.8	Not Detected
Propylbenzene	1.1	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.6	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.8	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	34	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected
1,1-Difluoroethane	4.5	14000 E	12	38000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	111	70-130



Air Toxics

Client Sample ID: VP3

Lab ID#: 1411078-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111924	Date of Collection:	11/5/14 3:05:00 PM
Dil. Factor:	597	Date of Analysis:	11/19/14 11:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	300	Not Detected	1500	Not Detected
Freon 114	300	Not Detected	2100	Not Detected
Chloromethane	3000	Not Detected	6200	Not Detected
Vinyl Chloride	300	Not Detected	760	Not Detected
1,3-Butadiene	300	Not Detected	660	Not Detected
Bromomethane	3000	Not Detected	12000	Not Detected
Chloroethane	1200	Not Detected	3200	Not Detected
Freon 11	300	Not Detected	1700	Not Detected
Ethanol	1200	Not Detected	2200	Not Detected
Freon 113	300	Not Detected	2300	Not Detected
1,1-Dichloroethene	300	Not Detected	1200	Not Detected
Acetone	3000	Not Detected	7100	Not Detected
2-Propanol	1200	Not Detected	2900	Not Detected
Carbon Disulfide	1200	Not Detected	3700	Not Detected
3-Chloropropene	1200	Not Detected	3700	Not Detected
Methylene Chloride	3000	Not Detected	10000	Not Detected
Methyl tert-butyl ether	300	Not Detected	1100	Not Detected
trans-1,2-Dichloroethene	300	Not Detected	1200	Not Detected
Hexane	300	Not Detected	1000	Not Detected
1,1-Dichloroethane	300	Not Detected	1200	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1200	Not Detected	3500	Not Detected
cis-1,2-Dichloroethene	300	Not Detected	1200	Not Detected
Tetrahydrofuran	300	Not Detected	880	Not Detected
Chloroform	300	Not Detected	1400	Not Detected
1,1,1-Trichloroethane	300	Not Detected	1600	Not Detected
Cyclohexane	300	Not Detected	1000	Not Detected
Carbon Tetrachloride	300	Not Detected	1900	Not Detected
2,2,4-Trimethylpentane	300	Not Detected	1400	Not Detected
Benzene	300	Not Detected	950	Not Detected
1,2-Dichloroethane	300	Not Detected	1200	Not Detected
Heptane	300	Not Detected	1200	Not Detected
Trichloroethene	300	Not Detected	1600	Not Detected
1,2-Dichloropropane	300	Not Detected	1400	Not Detected
1,4-Dioxane	1200	Not Detected	4300	Not Detected
Bromodichloromethane	300	Not Detected	2000	Not Detected
cis-1,3-Dichloropropene	300	Not Detected	1400	Not Detected
4-Methyl-2-pentanone	300	Not Detected	1200	Not Detected
Toluene	300	1000	1100	4000
trans-1,3-Dichloropropene	300	Not Detected	1400	Not Detected
1,1,2-Trichloroethane	300	Not Detected	1600	Not Detected
Tetrachloroethene	300	46000	2000	320000
2-Hexanone	1200	Not Detected	4900	Not Detected



Air Toxics

Client Sample ID: VP3

Lab ID#: 1411078-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111924	Date of Collection:	11/5/14 3:05:00 PM
Dil. Factor:	597	Date of Analysis:	11/19/14 11:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	300	Not Detected	2500	Not Detected
1,2-Dibromoethane (EDB)	300	Not Detected	2300	Not Detected
Chlorobenzene	300	Not Detected	1400	Not Detected
Ethyl Benzene	300	Not Detected	1300	Not Detected
m,p-Xylene	300	Not Detected	1300	Not Detected
o-Xylene	300	Not Detected	1300	Not Detected
Styrene	300	Not Detected	1300	Not Detected
Bromoform	300	Not Detected	3100	Not Detected
Cumene	300	Not Detected	1500	Not Detected
1,1,2,2-Tetrachloroethane	300	Not Detected	2000	Not Detected
Propylbenzene	300	Not Detected	1500	Not Detected
4-Ethyltoluene	300	Not Detected	1500	Not Detected
1,3,5-Trimethylbenzene	300	Not Detected	1500	Not Detected
1,2,4-Trimethylbenzene	300	Not Detected	1500	Not Detected
1,3-Dichlorobenzene	300	Not Detected	1800	Not Detected
1,4-Dichlorobenzene	300	Not Detected	1800	Not Detected
alpha-Chlorotoluene	300	Not Detected	1500	Not Detected
1,2-Dichlorobenzene	300	Not Detected	1800	Not Detected
1,2,4-Trichlorobenzene	1200	Not Detected	8900	Not Detected
Hexachlorobutadiene	1200	Not Detected	13000	Not Detected
1,1-Difluoroethane	1200	15000	3200	41000

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	93	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	123	70-130



Air Toxics

Client Sample ID: VP4

Lab ID#: 1411078-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111925	Date of Collection:	11/5/14 2:07:00 PM
Dil. Factor:	7.74	Date of Analysis:	11/19/14 11:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.9	Not Detected	19	Not Detected
Freon 114	3.9	Not Detected	27	Not Detected
Chloromethane	39	Not Detected	80	Not Detected
Vinyl Chloride	3.9	Not Detected	9.9	Not Detected
1,3-Butadiene	3.9	Not Detected	8.6	Not Detected
Bromomethane	39	Not Detected	150	Not Detected
Chloroethane	15	Not Detected	41	Not Detected
Freon 11	3.9	Not Detected	22	Not Detected
Ethanol	15	21	29	40
Freon 113	3.9	Not Detected	30	Not Detected
1,1-Dichloroethene	3.9	Not Detected	15	Not Detected
Acetone	39	Not Detected	92	Not Detected
2-Propanol	15	Not Detected	38	Not Detected
Carbon Disulfide	15	Not Detected	48	Not Detected
3-Chloropropene	15	Not Detected	48	Not Detected
Methylene Chloride	39	Not Detected	130	Not Detected
Methyl tert-butyl ether	3.9	Not Detected	14	Not Detected
trans-1,2-Dichloroethene	3.9	Not Detected	15	Not Detected
Hexane	3.9	Not Detected	14	Not Detected
1,1-Dichloroethane	3.9	Not Detected	16	Not Detected
2-Butanone (Methyl Ethyl Ketone)	15	Not Detected	46	Not Detected
cis-1,2-Dichloroethene	3.9	Not Detected	15	Not Detected
Tetrahydrofuran	3.9	Not Detected	11	Not Detected
Chloroform	3.9	Not Detected	19	Not Detected
1,1,1-Trichloroethane	3.9	Not Detected	21	Not Detected
Cyclohexane	3.9	Not Detected	13	Not Detected
Carbon Tetrachloride	3.9	Not Detected	24	Not Detected
2,2,4-Trimethylpentane	3.9	Not Detected	18	Not Detected
Benzene	3.9	Not Detected	12	Not Detected
1,2-Dichloroethane	3.9	Not Detected	16	Not Detected
Heptane	3.9	Not Detected	16	Not Detected
Trichloroethene	3.9	Not Detected	21	Not Detected
1,2-Dichloropropane	3.9	Not Detected	18	Not Detected
1,4-Dioxane	15	Not Detected	56	Not Detected
Bromodichloromethane	3.9	Not Detected	26	Not Detected
cis-1,3-Dichloropropene	3.9	Not Detected	18	Not Detected
4-Methyl-2-pentanone	3.9	Not Detected	16	Not Detected
Toluene	3.9	Not Detected	14	Not Detected
trans-1,3-Dichloropropene	3.9	Not Detected	18	Not Detected
1,1,2-Trichloroethane	3.9	Not Detected	21	Not Detected
Tetrachloroethene	3.9	700	26	4700
2-Hexanone	15	Not Detected	63	Not Detected



Client Sample ID: VP4

Lab ID#: 1411078-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111925	Date of Collection:	11/5/14 2:07:00 PM
Dil. Factor:	7.74	Date of Analysis:	11/19/14 11:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	3.9	Not Detected	33	Not Detected
1,2-Dibromoethane (EDB)	3.9	Not Detected	30	Not Detected
Chlorobenzene	3.9	Not Detected	18	Not Detected
Ethyl Benzene	3.9	Not Detected	17	Not Detected
m,p-Xylene	3.9	Not Detected	17	Not Detected
o-Xylene	3.9	Not Detected	17	Not Detected
Styrene	3.9	Not Detected	16	Not Detected
Bromoform	3.9	Not Detected	40	Not Detected
Cumene	3.9	Not Detected	19	Not Detected
1,1,2,2-Tetrachloroethane	3.9	Not Detected	26	Not Detected
Propylbenzene	3.9	Not Detected	19	Not Detected
4-Ethyltoluene	3.9	Not Detected	19	Not Detected
1,3,5-Trimethylbenzene	3.9	Not Detected	19	Not Detected
1,2,4-Trimethylbenzene	3.9	Not Detected	19	Not Detected
1,3-Dichlorobenzene	3.9	Not Detected	23	Not Detected
1,4-Dichlorobenzene	3.9	Not Detected	23	Not Detected
alpha-Chlorotoluene	3.9	Not Detected	20	Not Detected
1,2-Dichlorobenzene	3.9	Not Detected	23	Not Detected
1,2,4-Trichlorobenzene	15	Not Detected	110	Not Detected
Hexachlorobutadiene	15	Not Detected	160	Not Detected
1,1-Difluoroethane	15	69000 E	42	190000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	113	70-130





Air Toxics

Client Sample ID: VP5

Lab ID#: 1411078-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111927	Date of Collection:	11/5/14 4:01:00 PM
Dil. Factor:	48.8	Date of Analysis:	11/20/14 12:20 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	24	Not Detected	120	Not Detected
Freon 114	24	Not Detected	170	Not Detected
Chloromethane	240	Not Detected	500	Not Detected
Vinyl Chloride	24	Not Detected	62	Not Detected
1,3-Butadiene	24	Not Detected	54	Not Detected
Bromomethane	240	Not Detected	950	Not Detected
Chloroethane	98	Not Detected	260	Not Detected
Freon 11	24	Not Detected	140	Not Detected
Ethanol	98	Not Detected	180	Not Detected
Freon 113	24	Not Detected	190	Not Detected
1,1-Dichloroethene	24	Not Detected	97	Not Detected
Acetone	240	Not Detected	580	Not Detected
2-Propanol	98	Not Detected	240	Not Detected
Carbon Disulfide	98	Not Detected	300	Not Detected
3-Chloropropene	98	Not Detected	300	Not Detected
Methylene Chloride	240	Not Detected	850	Not Detected
Methyl tert-butyl ether	24	Not Detected	88	Not Detected
trans-1,2-Dichloroethene	24	Not Detected	97	Not Detected
Hexane	24	Not Detected	86	Not Detected
1,1-Dichloroethane	24	Not Detected	99	Not Detected
2-Butanone (Methyl Ethyl Ketone)	98	Not Detected	290	Not Detected
cis-1,2-Dichloroethene	24	Not Detected	97	Not Detected
Tetrahydrofuran	24	Not Detected	72	Not Detected
Chloroform	24	Not Detected	120	Not Detected
1,1,1-Trichloroethane	24	Not Detected	130	Not Detected
Cyclohexane	24	Not Detected	84	Not Detected
Carbon Tetrachloride	24	Not Detected	150	Not Detected
2,2,4-Trimethylpentane	24	Not Detected	110	Not Detected
Benzene	24	Not Detected	78	Not Detected
1,2-Dichloroethane	24	Not Detected	99	Not Detected
Heptane	24	Not Detected	100	Not Detected
Trichloroethene	24	Not Detected	130	Not Detected
1,2-Dichloropropane	24	Not Detected	110	Not Detected
1,4-Dioxane	98	Not Detected	350	Not Detected
Bromodichloromethane	24	Not Detected	160	Not Detected
cis-1,3-Dichloropropene	24	Not Detected	110	Not Detected
4-Methyl-2-pentanone	24	Not Detected	100	Not Detected
Toluene	24	Not Detected	92	Not Detected
trans-1,3-Dichloropropene	24	Not Detected	110	Not Detected
1,1,2-Trichloroethane	24	Not Detected	130	Not Detected
Tetrachloroethene	24	9900	160	67000
2-Hexanone	98	Not Detected	400	Not Detected



Client Sample ID: VP5

Lab ID#: 1411078-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111927	Date of Collection:	11/5/14 4:01:00 PM
Dil. Factor:	48.8	Date of Analysis:	11/20/14 12:20 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	24	Not Detected	210	Not Detected
1,2-Dibromoethane (EDB)	24	Not Detected	190	Not Detected
Chlorobenzene	24	Not Detected	110	Not Detected
Ethyl Benzene	24	Not Detected	100	Not Detected
m,p-Xylene	24	Not Detected	100	Not Detected
o-Xylene	24	Not Detected	100	Not Detected
Styrene	24	Not Detected	100	Not Detected
Bromoform	24	Not Detected	250	Not Detected
Cumene	24	Not Detected	120	Not Detected
1,1,2,2-Tetrachloroethane	24	Not Detected	170	Not Detected
Propylbenzene	24	Not Detected	120	Not Detected
4-Ethyltoluene	24	Not Detected	120	Not Detected
1,3,5-Trimethylbenzene	24	Not Detected	120	Not Detected
1,2,4-Trimethylbenzene	24	Not Detected	120	Not Detected
1,3-Dichlorobenzene	24	Not Detected	150	Not Detected
1,4-Dichlorobenzene	24	Not Detected	150	Not Detected
alpha-Chlorotoluene	24	Not Detected	130	Not Detected
1,2-Dichlorobenzene	24	Not Detected	150	Not Detected
1,2,4-Trichlorobenzene	98	Not Detected	720	Not Detected
Hexachlorobutadiene	98	Not Detected	1000	Not Detected
1,1-Difluoroethane	98	120	260	320

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: VP6

Lab ID#: 1411078-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111926	Date of Collection:	11/5/14 4:59:00 PM
Dil. Factor:	19.4	Date of Analysis:	11/19/14 11:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	9.7	Not Detected	48	Not Detected
Freon 114	9.7	Not Detected	68	Not Detected
Chloromethane	97	Not Detected	200	Not Detected
Vinyl Chloride	9.7	Not Detected	25	Not Detected
1,3-Butadiene	9.7	Not Detected	21	Not Detected
Bromomethane	97	Not Detected	380	Not Detected
Chloroethane	39	Not Detected	100	Not Detected
Freon 11	9.7	Not Detected	54	Not Detected
Ethanol	39	44	73	84
Freon 113	9.7	Not Detected	74	Not Detected
1,1-Dichloroethene	9.7	Not Detected	38	Not Detected
Acetone	97	Not Detected	230	Not Detected
2-Propanol	39	Not Detected	95	Not Detected
Carbon Disulfide	39	Not Detected	120	Not Detected
3-Chloropropene	39	Not Detected	120	Not Detected
Methylene Chloride	97	Not Detected	340	Not Detected
Methyl tert-butyl ether	9.7	Not Detected	35	Not Detected
trans-1,2-Dichloroethene	9.7	Not Detected	38	Not Detected
Hexane	9.7	Not Detected	34	Not Detected
1,1-Dichloroethane	9.7	Not Detected	39	Not Detected
2-Butanone (Methyl Ethyl Ketone)	39	Not Detected	110	Not Detected
cis-1,2-Dichloroethene	9.7	Not Detected	38	Not Detected
Tetrahydrofuran	9.7	Not Detected	29	Not Detected
Chloroform	9.7	Not Detected	47	Not Detected
1,1,1-Trichloroethane	9.7	14	53	76
Cyclohexane	9.7	Not Detected	33	Not Detected
Carbon Tetrachloride	9.7	Not Detected	61	Not Detected
2,2,4-Trimethylpentane	9.7	Not Detected	45	Not Detected
Benzene	9.7	Not Detected	31	Not Detected
1,2-Dichloroethane	9.7	Not Detected	39	Not Detected
Heptane	9.7	Not Detected	40	Not Detected
Trichloroethene	9.7	Not Detected	52	Not Detected
1,2-Dichloropropane	9.7	Not Detected	45	Not Detected
1,4-Dioxane	39	Not Detected	140	Not Detected
Bromodichloromethane	9.7	Not Detected	65	Not Detected
cis-1,3-Dichloropropene	9.7	Not Detected	44	Not Detected
4-Methyl-2-pentanone	9.7	Not Detected	40	Not Detected
Toluene	9.7	Not Detected	36	Not Detected
trans-1,3-Dichloropropene	9.7	Not Detected	44	Not Detected
1,1,2-Trichloroethane	9.7	Not Detected	53	Not Detected
Tetrachloroethene	9.7	2600	66	18000
2-Hexanone	39	Not Detected	160	Not Detected

Client Sample ID: VP6

Lab ID#: 1411078-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111926	Date of Collection:	11/5/14 4:59:00 PM
Dil. Factor:	19.4	Date of Analysis:	11/19/14 11:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	9.7	Not Detected	83	Not Detected
1,2-Dibromoethane (EDB)	9.7	Not Detected	74	Not Detected
Chlorobenzene	9.7	Not Detected	45	Not Detected
Ethyl Benzene	9.7	Not Detected	42	Not Detected
m,p-Xylene	9.7	Not Detected	42	Not Detected
o-Xylene	9.7	Not Detected	42	Not Detected
Styrene	9.7	Not Detected	41	Not Detected
Bromoform	9.7	Not Detected	100	Not Detected
Cumene	9.7	Not Detected	48	Not Detected
1,1,2,2-Tetrachloroethane	9.7	Not Detected	66	Not Detected
Propylbenzene	9.7	Not Detected	48	Not Detected
4-Ethyltoluene	9.7	Not Detected	48	Not Detected
1,3,5-Trimethylbenzene	9.7	Not Detected	48	Not Detected
1,2,4-Trimethylbenzene	9.7	Not Detected	48	Not Detected
1,3-Dichlorobenzene	9.7	Not Detected	58	Not Detected
1,4-Dichlorobenzene	9.7	Not Detected	58	Not Detected
alpha-Chlorotoluene	9.7	Not Detected	50	Not Detected
1,2-Dichlorobenzene	9.7	Not Detected	58	Not Detected
1,2,4-Trichlorobenzene	39	Not Detected	290	Not Detected
Hexachlorobutadiene	39	Not Detected	410	Not Detected
1,1-Difluoroethane	39	970	100	2600

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	109	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1411078-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111906c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/19/14 12:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected



Client Sample ID: Lab Blank

Lab ID#: 1411078-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111906c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/19/14 12:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
1,1-Difluoroethane	2.0	Not Detected	5.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	88	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1411078-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/19/14 10:26 AM

Compound	%Recovery
Freon 12	96
Freon 114	94
Chloromethane	94
Vinyl Chloride	96
1,3-Butadiene	92
Bromomethane	95
Chloroethane	94
Freon 11	94
Ethanol	85
Freon 113	94
1,1-Dichloroethene	95
Acetone	93
2-Propanol	88
Carbon Disulfide	92
3-Chloropropene	93
Methylene Chloride	97
Methyl tert-butyl ether	99
trans-1,2-Dichloroethene	100
Hexane	99
1,1-Dichloroethane	95
2-Butanone (Methyl Ethyl Ketone)	95
cis-1,2-Dichloroethene	96
Tetrahydrofuran	98
Chloroform	94
1,1,1-Trichloroethane	95
Cyclohexane	103
Carbon Tetrachloride	95
2,2,4-Trimethylpentane	100
Benzene	102
1,2-Dichloroethane	100
Heptane	109
Trichloroethene	91
1,2-Dichloropropane	93
1,4-Dioxane	96
Bromodichloromethane	94
cis-1,3-Dichloropropene	94
4-Methyl-2-pentanone	103
Toluene	100
trans-1,3-Dichloropropene	98
1,1,2-Trichloroethane	99
Tetrachloroethene	99
2-Hexanone	102





Air Toxics

Client Sample ID: CCV

Lab ID#: 1411078-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/19/14 10:26 AM

Compound	%Recovery
Dibromochloromethane	98
1,2-Dibromoethane (EDB)	99
Chlorobenzene	94
Ethyl Benzene	108
m,p-Xylene	109
o-Xylene	106
Styrene	113
Bromoform	98
Cumene	111
1,1,2,2-Tetrachloroethane	98
Propylbenzene	106
4-Ethyltoluene	107
1,3,5-Trimethylbenzene	109
1,2,4-Trimethylbenzene	110
1,3-Dichlorobenzene	101
1,4-Dichlorobenzene	104
alpha-Chlorotoluene	102
1,2-Dichlorobenzene	101
1,2,4-Trichlorobenzene	80
Hexachlorobutadiene	84
1,1-Difluoroethane	101

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1411078-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/19/14 10:49 AM

Compound	%Recovery	Method Limits
Freon 12	83	70-130
Freon 114	80	70-130
Chloromethane	78	70-130
Vinyl Chloride	79	70-130
1,3-Butadiene	73	70-130
Bromomethane	78	70-130
Chloroethane	76	70-130
Freon 11	77	70-130
Ethanol	77	70-130
Freon 113	80	70-130
1,1-Dichloroethene	77	70-130
Acetone	74	70-130
2-Propanol	80	70-130
Carbon Disulfide	69 Q	70-130
3-Chloropropene	74	70-130
Methylene Chloride	82	70-130
Methyl tert-butyl ether	72	70-130
trans-1,2-Dichloroethene	76	70-130
Hexane	76	70-130
1,1-Dichloroethane	75	70-130
2-Butanone (Methyl Ethyl Ketone)	73	70-130
cis-1,2-Dichloroethene	75	70-130
Tetrahydrofuran	75	70-130
Chloroform	76	70-130
1,1,1-Trichloroethane	76	70-130
Cyclohexane	81	70-130
Carbon Tetrachloride	77	70-130
2,2,4-Trimethylpentane	76	70-130
Benzene	80	70-130
1,2-Dichloroethane	78	70-130
Heptane	82	70-130
Trichloroethene	73	70-130
1,2-Dichloropropane	74	70-130
1,4-Dioxane	78	70-130
Bromodichloromethane	73	70-130
cis-1,3-Dichloropropene	78	70-130
4-Methyl-2-pentanone	82	70-130
Toluene	77	70-130
trans-1,3-Dichloropropene	73	70-130
1,1,2-Trichloroethane	76	70-130
Tetrachloroethene	78	70-130
2-Hexanone	80	70-130



Client Sample ID: LCS

Lab ID#: 1411078-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/19/14 10:49 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	78	70-130
1,2-Dibromoethane (EDB)	77	70-130
Chlorobenzene	73	70-130
Ethyl Benzene	82	70-130
m,p-Xylene	85	70-130
o-Xylene	82	70-130
Styrene	94	70-130
Bromoform	79	70-130
Cumene	86	70-130
1,1,2,2-Tetrachloroethane	77	70-130
Propylbenzene	85	70-130
4-Ethyltoluene	89	70-130
1,3,5-Trimethylbenzene	98	70-130
1,2,4-Trimethylbenzene	93	70-130
1,3-Dichlorobenzene	83	70-130
1,4-Dichlorobenzene	85	70-130
alpha-Chlorotoluene	133 Q	70-130
1,2-Dichlorobenzene	85	70-130
1,2,4-Trichlorobenzene	81	70-130
Hexachlorobutadiene	82	70-130
1,1-Difluoroethane	Not Spiked	

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1411078-10AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/19/14 11:13 AM

Compound	%Recovery	Method Limits
Freon 12	81	70-130
Freon 114	81	70-130
Chloromethane	78	70-130
Vinyl Chloride	81	70-130
1,3-Butadiene	74	70-130
Bromomethane	79	70-130
Chloroethane	77	70-130
Freon 11	78	70-130
Ethanol	79	70-130
Freon 113	81	70-130
1,1-Dichloroethene	81	70-130
Acetone	74	70-130
2-Propanol	80	70-130
Carbon Disulfide	71	70-130
3-Chloropropene	74	70-130
Methylene Chloride	82	70-130
Methyl tert-butyl ether	74	70-130
trans-1,2-Dichloroethene	78	70-130
Hexane	79	70-130
1,1-Dichloroethane	76	70-130
2-Butanone (Methyl Ethyl Ketone)	76	70-130
cis-1,2-Dichloroethene	77	70-130
Tetrahydrofuran	78	70-130
Chloroform	77	70-130
1,1,1-Trichloroethane	76	70-130
Cyclohexane	80	70-130
Carbon Tetrachloride	78	70-130
2,2,4-Trimethylpentane	77	70-130
Benzene	81	70-130
1,2-Dichloroethane	80	70-130
Heptane	82	70-130
Trichloroethene	74	70-130
1,2-Dichloropropane	76	70-130
1,4-Dioxane	79	70-130
Bromodichloromethane	75	70-130
cis-1,3-Dichloropropene	80	70-130
4-Methyl-2-pentanone	82	70-130
Toluene	78	70-130
trans-1,3-Dichloropropene	75	70-130
1,1,2-Trichloroethane	77	70-130
Tetrachloroethene	78	70-130
2-Hexanone	80	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1411078-10AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17111904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/19/14 11:13 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	79	70-130
1,2-Dibromoethane (EDB)	78	70-130
Chlorobenzene	74	70-130
Ethyl Benzene	85	70-130
m,p-Xylene	87	70-130
o-Xylene	84	70-130
Styrene	95	70-130
Bromoform	80	70-130
Cumene	88	70-130
1,1,2,2-Tetrachloroethane	78	70-130
Propylbenzene	87	70-130
4-Ethyltoluene	89	70-130
1,3,5-Trimethylbenzene	101	70-130
1,2,4-Trimethylbenzene	96	70-130
1,3-Dichlorobenzene	84	70-130
1,4-Dichlorobenzene	88	70-130
alpha-Chlorotoluene	138 Q	70-130
1,2-Dichlorobenzene	88	70-130
1,2,4-Trichlorobenzene	103	70-130
Hexachlorobutadiene	102	70-130
1,1-Difluoroethane	Not Spiked	

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	102	70-130

# CHAIN OF CUSTODY RECORD

**P&D ENVIRONMENTAL, INC.**  
 55 Santa Clara Ave., Suite 240  
 Oakland, CA 94610  
 (510) 658-6916

PROJECT NUMBER:

*0660*

PROJECT NAME:

*James River Corporation  
 2101 Williams St  
 San Leandro, CA*

SAMPLED BY: (PRINTED & SIGNATURE)

*MICHAEL BASS-DESCHENES Michael Bass-Deschenes*

NUMBER OF CONTAINERS

ANALYSIS(ES):  
*including EPA TO-15  
 DFA*

PRESERVATIVE

REMARKS

01A  
02A  
03A  
04A  
05A  
06A  
07A

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES)	PRESERVATIVE	REMARKS
				IMT VAC TEL PID(perm)				
<i>VP1</i>	<i>11/5/14</i>	<i>11:54:00</i>	<i>Soil/GAS</i>	<i>-30 -5 0</i>	<i>1</i>	<i>X</i>	<i>None</i>	<i>UNRMT TAT</i>
<i>VP2</i>		<i>12:37:00</i>		<i>-30 -5 0.7</i>	<i>1</i>	<i>X</i>		
<i>VP2-DUP</i>		<i>12:50:35</i>		<i>-30 -5 0.7</i>	<i>1</i>	<i>X</i>		
<i>VP3</i>		<i>10:57:00</i>		<i>-30 -5 119</i>	<i>1</i>	<i>X</i>		
<i>VP4</i>		<i>15:22:30</i>		<i>-30 -5 4</i>	<i>1</i>	<i>X</i>		
<i>VP5</i>		<i>15:25:50</i>		<i>-30 -5 12</i>	<i>1</i>	<i>X</i>		
<i>VP6</i>		<i>14:00:00</i>		<i>-30 -5 7</i>	<i>1</i>	<i>X</i>		
		<i>14:07:45</i>						
		<i>15:55:00</i>						
		<i>16:01:30</i>						
		<i>16:52:00</i>						
		<i>16:57:00</i>						

Custody Seal Intact?  
 Y  None Temp *NA*  
*EPA Drop off*

RELINQUISHED BY: (SIGNATURE) <i>Michael Bass-Deschenes</i>	DATE <i>11-5-14</i>	TIME <i>11:30</i>	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	Total No. of Samples (This Shipment) <i>7</i>	LABORATORY: <i>EUROFINS/AIR TOXICS, INC</i>
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment) <i>7</i>	LABORATORY CONTACT: <i>KYLE VAGADORI (916) 605-3339</i>
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	

Results and billing to:  
 P&D Environmental, Inc.  
 lab@pdenviro.com

REMARKS: *DFA used as Tracer Gas, 1 LITER SUMMA.*

**1411078**

12/2/2014  
Mr. Paul King  
P & D Environmental  
55 Santa Clara  
Suite 240  
Oakland CA 94610

Project Name: Janus River Corporation  
Project #: 0660  
Workorder #: 1411068R1

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 11/6/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori  
Project Manager



**WORK ORDER #: 1411068R1**

Work Order Summary

<b>CLIENT:</b>	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	<b>BILL TO:</b>	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
<b>PHONE:</b>	510-658-6916	<b>P.O. #</b>	
<b>FAX:</b>	510-834-0772	<b>PROJECT #</b>	0660 Janus River Corporation
<b>DATE RECEIVED:</b>	11/06/2014	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	11/20/2014		
<b>DATE REISSUED:</b>	12/02/2014		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP1	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
02A	VP2	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
03A	VP3	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
04A	VP4	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
05A	VP5	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
06A	VP6	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
07A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
08A	CCV	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 12/02/14

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935  
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards  
 This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.  
 180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**EPA Method TO-15 Soil Gas**  
**P & D Environmental**  
**Workorder# 1411068R1**

Six 1 Liter Tedlar Bag samples were received on November 06, 2014. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Method TO-15 is validated for samples collected in specially treated canisters. As such, the use of Tedlar bags for sample collection is outside the scope of the method and not recommended for ambient or indoor air samples. It is the responsibility of the data user to determine the usability of TO-15 results generated from Tedlar bags.

Samples VP1, VP2, VP3, VP4, VP5 and VP6 were transferred from Tedlar bags into summa canisters to extend the hold time from 72 hours to 30 days. Canister pressurization resulted in a dilution factor which was applied to all analytical results.

Dilution was performed on samples VP1, VP2, VP3, VP4, VP5 and VP6 due to the presence of high level target species.

THE WORK ORDER WAS REISSUED ON 12/2/14 TO AMEND THE TARGET COMPOUND LIST AS REQUIRED BY THE SPECIFIC CLIENT OR PROJECT. CHANGING THE COMPOUND LIST CAUSED SOME PREVIOUSLY REPORTED COMPOUNDS TO BECOME NOT REPORTED.

WHILE THE INITIAL REPORT MET THE LABORATORY DATA QUALITY REQUIREMENTS FOR THE ORIGINAL LIST OF COMPOUNDS, ALL SAMPLES HAD 1,1-DIFLUOROETHANE LEVELS EXCEEDING THE CALIBRATION RANGE AND RESULTS WERE REPORTED WITH 'E' FLAGS.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

### Summary of Detected Compounds EPA METHOD TO-15 GC/MS

**Client Sample ID: VP1**

**Lab ID#: 1411068R1-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20000	6400000 E	54000	17000000 E

**Client Sample ID: VP2**

**Lab ID#: 1411068R1-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20000	7200000 E	54000	19000000 E

**Client Sample ID: VP3**

**Lab ID#: 1411068R1-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20000	6800000 E	54000	18000000 E

**Client Sample ID: VP4**

**Lab ID#: 1411068R1-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20000	7500000 E	54000	20000000 E

**Client Sample ID: VP5**

**Lab ID#: 1411068R1-05A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20000	8000000 E	54000	22000000 E

**Client Sample ID: VP6**

**Lab ID#: 1411068R1-06A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	13000	6300000 E	36000	17000000 E



Air Toxics

Client Sample ID: VP1

Lab ID#: 1411068R1-01A

EPA METHOD TO-15 GC/MS

File Name:	j111822	Date of Collection:	11/5/14 11:51:00 AM	
Dil. Factor:	1000	Date of Analysis:	11/19/14 12:58 AM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20000	6400000 E	54000	17000000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	117	70-130



Air Toxics

Client Sample ID: VP2

Lab ID#: 1411068R1-02A

EPA METHOD TO-15 GC/MS

File Name:	j111808	Date of Collection:	11/5/14 10:35:00 AM	
Dil. Factor:	995	Date of Analysis:	11/18/14 05:07 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20000	7200000 E	54000	19000000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	108	70-130

Client Sample ID: VP3

Lab ID#: 1411068R1-03A

EPA METHOD TO-15 GC/MS

File Name:	j111809	Date of Collection:	11/5/14 3:00:00 PM	
Dil. Factor:	1000	Date of Analysis:	11/18/14 05:30 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20000	6800000 E	54000	18000000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	111	70-130

Client Sample ID: VP4

Lab ID#: 1411068R1-04A

EPA METHOD TO-15 GC/MS

File Name:	j111823	Date of Collection:	11/5/14 1:53:00 PM
Dil. Factor:	995	Date of Analysis:	11/19/14 01:23 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20000	7500000 E	54000	20000000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	122	70-130





Air Toxics

Client Sample ID: VP5

Lab ID#: 1411068R1-05A

EPA METHOD TO-15 GC/MS

File Name:	j111811	Date of Collection:	11/5/14 3:54:00 PM	
Dil. Factor:	1000	Date of Analysis:	11/18/14 06:23 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20000	8000000 E	54000	22000000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	111	70-130



Air Toxics

Client Sample ID: VP6

Lab ID#: 1411068R1-06A

EPA METHOD TO-15 GC/MS

File Name:	j111812	Date of Collection:	11/5/14 4:51:00 PM
Dil. Factor:	667	Date of Analysis:	11/18/14 06:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	13000	6300000 E	36000	17000000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	114	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1411068R1-07A

EPA METHOD TO-15 GC/MS

File Name:	j111806c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/18/14 02:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20	Not Detected	54	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1411068R1-08A

EPA METHOD TO-15 GC/MS

File Name:	j111805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/18/14 01:41 PM

Compound	%Recovery
1,1-Difluoroethane	106

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130

# CHAIN OF CUSTODY RECORD

**P&D ENVIRONMENTAL, INC.**  
 55 Santa Clara Ave., Suite 240  
 Oakland, CA 94610  
 (510) 658-6916

PROJECT NUMBER:

0660

PROJECT NAME:

James Rives Corporation  
2101 Williams St.  
San Leandro, CA

SAMPLED BY: (PRINTED & SIGNATURE)

MICHAEL BASS-DESCHENES 

NUMBER OF CONTAINERS

ANALYSIS(ES):

IFA BY EPA TO-15

PRESERVATIVE


REMARKS

O1A  
O2A  
O3A  
O4A  
O5A  
O6A

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES)	PRESERVATIVE	REMARKS
<u>VP1</u>	<u>11/5/14</u>	<u>1151</u>	<u>AIR</u>		<u>1</u>	<u>X</u>	<u>NONE</u>	<u>NORMAL TAT</u>
<u>VP2</u>		<u>1035</u>			<u>1</u>	<u>X</u>		
<u>VP3</u>		<u>1500</u>			<u>1</u>	<u>X</u>		
<u>VP4</u>		<u>1353</u>			<u>1</u>	<u>X</u>		
<u>VP5</u>		<u>1554</u>			<u>1</u>	<u>X</u>		
<u>VP6</u>		<u>1651</u>			<u>1</u>	<u>X</u>		

Custody Seal  
 Y N (None) Temp NA  
 Delivered

RELINQUISHED BY: (SIGNATURE)



DATE TIME

11-05-14 1130

RECEIVED BY: (SIGNATURE)



Total No. of Samples (This Shipment)

6

Total No. of Containers (This Shipment)

6

LABORATORY:

EUROFINS/AMTROL, INC.

RELINQUISHED BY: (SIGNATURE)

DATE TIME

RECEIVED BY: (SIGNATURE)

LABORATORY CONTACT:

Kyle Vasquez

LABORATORY PHONE NUMBER:

(916) 605-3339

RELINQUISHED BY: (SIGNATURE)

DATE TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE)

SAMPLE ANALYSIS REQUEST SHEET

ATTACHED: ( ) YES ( ) NO

Results and billing to:  
 P&D Environmental, Inc.  
 lab@pdenviro.com

REMARKS:

1- LITER TEDLAR BAGS

**1411068**

12/23/2014  
Mr. Paul King  
P & D Environmental  
55 Santa Clara  
Suite 240  
Oakland CA 94610

Project Name: James River Corporation 2101 Williams St  
Project #: 0660  
Workorder #: 1412207

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 12/10/2014 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori  
Project Manager

**WORK ORDER #: 1412207**

Work Order Summary

**CLIENT:** Mr. Paul King  
P & D Environmental  
55 Santa Clara  
Suite 240  
Oakland, CA 94610

**BILL TO:** Mr. Paul King  
P & D Environmental  
55 Santa Clara  
Suite 240  
Oakland, CA 94610

**PHONE:** 510-658-6916

**P.O. #**

**FAX:** 510-834-0772

**PROJECT #** 0660 James River Corporation 2101

**DATE RECEIVED:** 12/10/2014

**CONTACT:** Williams St  
Kyle Vagadori

**DATE COMPLETED:** 12/23/2014

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP3	TO-15	9.4 "Hg	15 psi
02A	VP3-DUP	TO-15	9.4 "Hg	15 psi
03A	VP4	TO-15	5.1 "Hg	14.8 psi
04A	VP5	TO-15	5.9 "Hg	14.7 psi
05A	VP6	TO-15	4.7 "Hg	14.7 psi
06A	Lab Blank	TO-15	NA	NA
06B	Lab Blank	TO-15	NA	NA
07A	CCV	TO-15	NA	NA
07B	CCV	TO-15	NA	NA
08A	LCS	TO-15	NA	NA
08AA	LCSD	TO-15	NA	NA
08B	LCS	TO-15	NA	NA
08BB	LCSD	TO-15	NA	NA

CERTIFIED BY: 

DATE: 12/23/14

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935  
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**P & D Environmental**  
**Workorder# 1412207**

Five 1 Liter Summa Canister samples were received on December 10, 2014. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

The reported CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Dilution was performed on samples VP3, VP3-DUP, VP4, VP5 and VP6 due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



## Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: VP3**

**Lab ID#: 1412207-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	1500	1900	2800	3600
Toluene	370	900	1400	3400
Tetrachloroethene	370	47000	2500	320000

**Client Sample ID: VP3-DUP**

**Lab ID#: 1412207-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	180	800	690	3000
Tetrachloroethene	180	45000	1200	310000

**Client Sample ID: VP4**

**Lab ID#: 1412207-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	3.2	980	22	6600
1,2,4-Trichlorobenzene	13	18	96	140
Hexachlorobutadiene	13	23	140	240

**Client Sample ID: VP5**

**Lab ID#: 1412207-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	25	9600	170	65000

**Client Sample ID: VP6**

**Lab ID#: 1412207-05A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	12	15	65	80
Tetrachloroethene	12	2700	80	18000
1,1-Difluoroethane	47	53	130	140



Air Toxics

Client Sample ID: VP3

Lab ID#: 1412207-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121828	Date of Collection:	12/10/14 11:42:00 A
Dil. Factor:	736	Date of Analysis:	12/19/14 01:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	370	Not Detected	1800	Not Detected
Freon 114	370	Not Detected	2600	Not Detected
Chloromethane	3700	Not Detected	7600	Not Detected
Vinyl Chloride	370	Not Detected	940	Not Detected
1,3-Butadiene	370	Not Detected	810	Not Detected
Bromomethane	3700	Not Detected	14000	Not Detected
Chloroethane	1500	Not Detected	3900	Not Detected
Freon 11	370	Not Detected	2100	Not Detected
Ethanol	1500	1900	2800	3600
Freon 113	370	Not Detected	2800	Not Detected
1,1-Dichloroethene	370	Not Detected	1400	Not Detected
Acetone	3700	Not Detected	8700	Not Detected
2-Propanol	1500	Not Detected	3600	Not Detected
Carbon Disulfide	1500	Not Detected	4600	Not Detected
3-Chloropropene	1500	Not Detected	4600	Not Detected
Methylene Chloride	3700	Not Detected	13000	Not Detected
Methyl tert-butyl ether	370	Not Detected	1300	Not Detected
trans-1,2-Dichloroethene	370	Not Detected	1400	Not Detected
Hexane	370	Not Detected	1300	Not Detected
1,1-Dichloroethane	370	Not Detected	1500	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1500	Not Detected	4300	Not Detected
cis-1,2-Dichloroethene	370	Not Detected	1400	Not Detected
Tetrahydrofuran	370	Not Detected	1100	Not Detected
Chloroform	370	Not Detected	1800	Not Detected
1,1,1-Trichloroethane	370	Not Detected	2000	Not Detected
Cyclohexane	370	Not Detected	1300	Not Detected
Carbon Tetrachloride	370	Not Detected	2300	Not Detected
2,2,4-Trimethylpentane	370	Not Detected	1700	Not Detected
Benzene	370	Not Detected	1200	Not Detected
1,2-Dichloroethane	370	Not Detected	1500	Not Detected
Heptane	370	Not Detected	1500	Not Detected
Trichloroethene	370	Not Detected	2000	Not Detected
1,2-Dichloropropane	370	Not Detected	1700	Not Detected
1,4-Dioxane	1500	Not Detected	5300	Not Detected
Bromodichloromethane	370	Not Detected	2500	Not Detected
cis-1,3-Dichloropropene	370	Not Detected	1700	Not Detected
4-Methyl-2-pentanone	370	Not Detected	1500	Not Detected
Toluene	370	900	1400	3400
trans-1,3-Dichloropropene	370	Not Detected	1700	Not Detected
1,1,2-Trichloroethane	370	Not Detected	2000	Not Detected
Tetrachloroethene	370	47000	2500	320000
2-Hexanone	1500	Not Detected	6000	Not Detected



Client Sample ID: VP3

Lab ID#: 1412207-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121828	Date of Collection:	12/10/14 11:42:00 A
Dil. Factor:	736	Date of Analysis:	12/19/14 01:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	370	Not Detected	3100	Not Detected
1,2-Dibromoethane (EDB)	370	Not Detected	2800	Not Detected
Chlorobenzene	370	Not Detected	1700	Not Detected
Ethyl Benzene	370	Not Detected	1600	Not Detected
m,p-Xylene	370	Not Detected	1600	Not Detected
o-Xylene	370	Not Detected	1600	Not Detected
Styrene	370	Not Detected	1600	Not Detected
Bromoform	370	Not Detected	3800	Not Detected
Cumene	370	Not Detected	1800	Not Detected
1,1,2,2-Tetrachloroethane	370	Not Detected	2500	Not Detected
Propylbenzene	370	Not Detected	1800	Not Detected
4-Ethyltoluene	370	Not Detected	1800	Not Detected
1,3,5-Trimethylbenzene	370	Not Detected	1800	Not Detected
1,2,4-Trimethylbenzene	370	Not Detected	1800	Not Detected
1,3-Dichlorobenzene	370	Not Detected	2200	Not Detected
1,4-Dichlorobenzene	370	Not Detected	2200	Not Detected
alpha-Chlorotoluene	370	Not Detected	1900	Not Detected
1,2-Dichlorobenzene	370	Not Detected	2200	Not Detected
1,2,4-Trichlorobenzene	1500	Not Detected	11000	Not Detected
Hexachlorobutadiene	1500	Not Detected	16000	Not Detected
1,1-Difluoroethane	1500	Not Detected	4000	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: VP3-DUP

Lab ID#: 1412207-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121913	Date of Collection:	12/10/14 11:42:00 A
Dil. Factor:	368	Date of Analysis:	12/19/14 06:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	180	Not Detected	910	Not Detected
Freon 114	180	Not Detected	1300	Not Detected
Chloromethane	1800	Not Detected	3800	Not Detected
Vinyl Chloride	180	Not Detected	470	Not Detected
1,3-Butadiene	180	Not Detected	410	Not Detected
Bromomethane	1800	Not Detected	7100	Not Detected
Chloroethane	740	Not Detected	1900	Not Detected
Freon 11	180	Not Detected	1000	Not Detected
Ethanol	740	Not Detected	1400	Not Detected
Freon 113	180	Not Detected	1400	Not Detected
1,1-Dichloroethene	180	Not Detected	730	Not Detected
Acetone	1800	Not Detected	4400	Not Detected
2-Propanol	740	Not Detected	1800	Not Detected
Carbon Disulfide	740	Not Detected	2300	Not Detected
3-Chloropropene	740	Not Detected	2300	Not Detected
Methylene Chloride	1800	Not Detected	6400	Not Detected
Methyl tert-butyl ether	180	Not Detected	660	Not Detected
trans-1,2-Dichloroethene	180	Not Detected	730	Not Detected
Hexane	180	Not Detected	650	Not Detected
1,1-Dichloroethane	180	Not Detected	740	Not Detected
2-Butanone (Methyl Ethyl Ketone)	740	Not Detected	2200	Not Detected
cis-1,2-Dichloroethene	180	Not Detected	730	Not Detected
Tetrahydrofuran	180	Not Detected	540	Not Detected
Chloroform	180	Not Detected	900	Not Detected
1,1,1-Trichloroethane	180	Not Detected	1000	Not Detected
Cyclohexane	180	Not Detected	630	Not Detected
Carbon Tetrachloride	180	Not Detected	1200	Not Detected
2,2,4-Trimethylpentane	180	Not Detected	860	Not Detected
Benzene	180	Not Detected	590	Not Detected
1,2-Dichloroethane	180	Not Detected	740	Not Detected
Heptane	180	Not Detected	750	Not Detected
Trichloroethene	180	Not Detected	990	Not Detected
1,2-Dichloropropane	180	Not Detected	850	Not Detected
1,4-Dioxane	740	Not Detected	2600	Not Detected
Bromodichloromethane	180	Not Detected	1200	Not Detected
cis-1,3-Dichloropropene	180	Not Detected	840	Not Detected
4-Methyl-2-pentanone	180	Not Detected	750	Not Detected
Toluene	180	800	690	3000
trans-1,3-Dichloropropene	180	Not Detected	840	Not Detected
1,1,2-Trichloroethane	180	Not Detected	1000	Not Detected
Tetrachloroethene	180	45000	1200	310000
2-Hexanone	740	Not Detected	3000	Not Detected



Air Toxics

Client Sample ID: VP3-DUP

Lab ID#: 1412207-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121913	Date of Collection:	12/10/14 11:42:00 A
Dil. Factor:	368	Date of Analysis:	12/19/14 06:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	180	Not Detected	1600	Not Detected
1,2-Dibromoethane (EDB)	180	Not Detected	1400	Not Detected
Chlorobenzene	180	Not Detected	850	Not Detected
Ethyl Benzene	180	Not Detected	800	Not Detected
m,p-Xylene	180	Not Detected	800	Not Detected
o-Xylene	180	Not Detected	800	Not Detected
Styrene	180	Not Detected	780	Not Detected
Bromoform	180	Not Detected	1900	Not Detected
Cumene	180	Not Detected	900	Not Detected
1,1,2,2-Tetrachloroethane	180	Not Detected	1300	Not Detected
Propylbenzene	180	Not Detected	900	Not Detected
4-Ethyltoluene	180	Not Detected	900	Not Detected
1,3,5-Trimethylbenzene	180	Not Detected	900	Not Detected
1,2,4-Trimethylbenzene	180	Not Detected	900	Not Detected
1,3-Dichlorobenzene	180	Not Detected	1100	Not Detected
1,4-Dichlorobenzene	180	Not Detected	1100	Not Detected
alpha-Chlorotoluene	180	Not Detected	950	Not Detected
1,2-Dichlorobenzene	180	Not Detected	1100	Not Detected
1,2,4-Trichlorobenzene	740	Not Detected	5500	Not Detected
Hexachlorobutadiene	740	Not Detected	7800	Not Detected
1,1-Difluoroethane	740	Not Detected	2000	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	108	70-130



Air Toxics

Client Sample ID: VP4

Lab ID#: 1412207-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121830	Date of Collection:	12/10/14 10:41:00 A
Dil. Factor:	6.45	Date of Analysis:	12/19/14 02:12 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.2	Not Detected	16	Not Detected
Freon 114	3.2	Not Detected	22	Not Detected
Chloromethane	32	Not Detected	66	Not Detected
Vinyl Chloride	3.2	Not Detected	8.2	Not Detected
1,3-Butadiene	3.2	Not Detected	7.1	Not Detected
Bromomethane	32	Not Detected	120	Not Detected
Chloroethane	13	Not Detected	34	Not Detected
Freon 11	3.2	Not Detected	18	Not Detected
Ethanol	13	Not Detected	24	Not Detected
Freon 113	3.2	Not Detected	25	Not Detected
1,1-Dichloroethene	3.2	Not Detected	13	Not Detected
Acetone	32	Not Detected	77	Not Detected
2-Propanol	13	Not Detected	32	Not Detected
Carbon Disulfide	13	Not Detected	40	Not Detected
3-Chloropropene	13	Not Detected	40	Not Detected
Methylene Chloride	32	Not Detected	110	Not Detected
Methyl tert-butyl ether	3.2	Not Detected	12	Not Detected
trans-1,2-Dichloroethene	3.2	Not Detected	13	Not Detected
Hexane	3.2	Not Detected	11	Not Detected
1,1-Dichloroethane	3.2	Not Detected	13	Not Detected
2-Butanone (Methyl Ethyl Ketone)	13	Not Detected	38	Not Detected
cis-1,2-Dichloroethene	3.2	Not Detected	13	Not Detected
Tetrahydrofuran	3.2	Not Detected	9.5	Not Detected
Chloroform	3.2	Not Detected	16	Not Detected
1,1,1-Trichloroethane	3.2	Not Detected	18	Not Detected
Cyclohexane	3.2	Not Detected	11	Not Detected
Carbon Tetrachloride	3.2	Not Detected	20	Not Detected
2,2,4-Trimethylpentane	3.2	Not Detected	15	Not Detected
Benzene	3.2	Not Detected	10	Not Detected
1,2-Dichloroethane	3.2	Not Detected	13	Not Detected
Heptane	3.2	Not Detected	13	Not Detected
Trichloroethene	3.2	Not Detected	17	Not Detected
1,2-Dichloropropane	3.2	Not Detected	15	Not Detected
1,4-Dioxane	13	Not Detected	46	Not Detected
Bromodichloromethane	3.2	Not Detected	22	Not Detected
cis-1,3-Dichloropropene	3.2	Not Detected	15	Not Detected
4-Methyl-2-pentanone	3.2	Not Detected	13	Not Detected
Toluene	3.2	Not Detected	12	Not Detected
trans-1,3-Dichloropropene	3.2	Not Detected	15	Not Detected
1,1,2-Trichloroethane	3.2	Not Detected	18	Not Detected
Tetrachloroethene	3.2	980	22	6600
2-Hexanone	13	Not Detected	53	Not Detected



Client Sample ID: VP4

Lab ID#: 1412207-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121830	Date of Collection:	12/10/14 10:41:00 A
Dil. Factor:	6.45	Date of Analysis:	12/19/14 02:12 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	3.2	Not Detected	27	Not Detected
1,2-Dibromoethane (EDB)	3.2	Not Detected	25	Not Detected
Chlorobenzene	3.2	Not Detected	15	Not Detected
Ethyl Benzene	3.2	Not Detected	14	Not Detected
m,p-Xylene	3.2	Not Detected	14	Not Detected
o-Xylene	3.2	Not Detected	14	Not Detected
Styrene	3.2	Not Detected	14	Not Detected
Bromoform	3.2	Not Detected	33	Not Detected
Cumene	3.2	Not Detected	16	Not Detected
1,1,2,2-Tetrachloroethane	3.2	Not Detected	22	Not Detected
Propylbenzene	3.2	Not Detected	16	Not Detected
4-Ethyltoluene	3.2	Not Detected	16	Not Detected
1,3,5-Trimethylbenzene	3.2	Not Detected	16	Not Detected
1,2,4-Trimethylbenzene	3.2	Not Detected	16	Not Detected
1,3-Dichlorobenzene	3.2	Not Detected	19	Not Detected
1,4-Dichlorobenzene	3.2	Not Detected	19	Not Detected
alpha-Chlorotoluene	3.2	Not Detected	17	Not Detected
1,2-Dichlorobenzene	3.2	Not Detected	19	Not Detected
1,2,4-Trichlorobenzene	13	18	96	140
Hexachlorobutadiene	13	23	140	240
1,1-Difluoroethane	13	Not Detected	35	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: VP5

Lab ID#: 1412207-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121832	Date of Collection:	12/10/14 9:27:00 AM
Dil. Factor:	49.8	Date of Analysis:	12/19/14 03:02 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	25	Not Detected	120	Not Detected
Freon 114	25	Not Detected	170	Not Detected
Chloromethane	250	Not Detected	510	Not Detected
Vinyl Chloride	25	Not Detected	64	Not Detected
1,3-Butadiene	25	Not Detected	55	Not Detected
Bromomethane	250	Not Detected	970	Not Detected
Chloroethane	100	Not Detected	260	Not Detected
Freon 11	25	Not Detected	140	Not Detected
Ethanol	100	Not Detected	190	Not Detected
Freon 113	25	Not Detected	190	Not Detected
1,1-Dichloroethene	25	Not Detected	99	Not Detected
Acetone	250	Not Detected	590	Not Detected
2-Propanol	100	Not Detected	240	Not Detected
Carbon Disulfide	100	Not Detected	310	Not Detected
3-Chloropropene	100	Not Detected	310	Not Detected
Methylene Chloride	250	Not Detected	860	Not Detected
Methyl tert-butyl ether	25	Not Detected	90	Not Detected
trans-1,2-Dichloroethene	25	Not Detected	99	Not Detected
Hexane	25	Not Detected	88	Not Detected
1,1-Dichloroethane	25	Not Detected	100	Not Detected
2-Butanone (Methyl Ethyl Ketone)	100	Not Detected	290	Not Detected
cis-1,2-Dichloroethene	25	Not Detected	99	Not Detected
Tetrahydrofuran	25	Not Detected	73	Not Detected
Chloroform	25	Not Detected	120	Not Detected
1,1,1-Trichloroethane	25	Not Detected	140	Not Detected
Cyclohexane	25	Not Detected	86	Not Detected
Carbon Tetrachloride	25	Not Detected	160	Not Detected
2,2,4-Trimethylpentane	25	Not Detected	120	Not Detected
Benzene	25	Not Detected	80	Not Detected
1,2-Dichloroethane	25	Not Detected	100	Not Detected
Heptane	25	Not Detected	100	Not Detected
Trichloroethene	25	Not Detected	130	Not Detected
1,2-Dichloropropane	25	Not Detected	120	Not Detected
1,4-Dioxane	100	Not Detected	360	Not Detected
Bromodichloromethane	25	Not Detected	170	Not Detected
cis-1,3-Dichloropropene	25	Not Detected	110	Not Detected
4-Methyl-2-pentanone	25	Not Detected	100	Not Detected
Toluene	25	Not Detected	94	Not Detected
trans-1,3-Dichloropropene	25	Not Detected	110	Not Detected
1,1,2-Trichloroethane	25	Not Detected	140	Not Detected
Tetrachloroethene	25	9600	170	65000
2-Hexanone	100	Not Detected	410	Not Detected





Air Toxics

Client Sample ID: VP5

Lab ID#: 1412207-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121832	Date of Collection:	12/10/14 9:27:00 AM
Dil. Factor:	49.8	Date of Analysis:	12/19/14 03:02 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	25	Not Detected	210	Not Detected
1,2-Dibromoethane (EDB)	25	Not Detected	190	Not Detected
Chlorobenzene	25	Not Detected	110	Not Detected
Ethyl Benzene	25	Not Detected	110	Not Detected
m,p-Xylene	25	Not Detected	110	Not Detected
o-Xylene	25	Not Detected	110	Not Detected
Styrene	25	Not Detected	110	Not Detected
Bromoform	25	Not Detected	260	Not Detected
Cumene	25	Not Detected	120	Not Detected
1,1,2,2-Tetrachloroethane	25	Not Detected	170	Not Detected
Propylbenzene	25	Not Detected	120	Not Detected
4-Ethyltoluene	25	Not Detected	120	Not Detected
1,3,5-Trimethylbenzene	25	Not Detected	120	Not Detected
1,2,4-Trimethylbenzene	25	Not Detected	120	Not Detected
1,3-Dichlorobenzene	25	Not Detected	150	Not Detected
1,4-Dichlorobenzene	25	Not Detected	150	Not Detected
alpha-Chlorotoluene	25	Not Detected	130	Not Detected
1,2-Dichlorobenzene	25	Not Detected	150	Not Detected
1,2,4-Trichlorobenzene	100	Not Detected	740	Not Detected
Hexachlorobutadiene	100	Not Detected	1100	Not Detected
1,1-Difluoroethane	100	Not Detected	270	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: VP6

Lab ID#: 1412207-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121831	Date of Collection:	12/10/14 7:58:00 AM
Dil. Factor:	23.7	Date of Analysis:	12/19/14 02:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	12	Not Detected	59	Not Detected
Freon 114	12	Not Detected	83	Not Detected
Chloromethane	120	Not Detected	240	Not Detected
Vinyl Chloride	12	Not Detected	30	Not Detected
1,3-Butadiene	12	Not Detected	26	Not Detected
Bromomethane	120	Not Detected	460	Not Detected
Chloroethane	47	Not Detected	120	Not Detected
Freon 11	12	Not Detected	66	Not Detected
Ethanol	47	Not Detected	89	Not Detected
Freon 113	12	Not Detected	91	Not Detected
1,1-Dichloroethene	12	Not Detected	47	Not Detected
Acetone	120	Not Detected	280	Not Detected
2-Propanol	47	Not Detected	120	Not Detected
Carbon Disulfide	47	Not Detected	150	Not Detected
3-Chloropropene	47	Not Detected	150	Not Detected
Methylene Chloride	120	Not Detected	410	Not Detected
Methyl tert-butyl ether	12	Not Detected	43	Not Detected
trans-1,2-Dichloroethene	12	Not Detected	47	Not Detected
Hexane	12	Not Detected	42	Not Detected
1,1-Dichloroethane	12	Not Detected	48	Not Detected
2-Butanone (Methyl Ethyl Ketone)	47	Not Detected	140	Not Detected
cis-1,2-Dichloroethene	12	Not Detected	47	Not Detected
Tetrahydrofuran	12	Not Detected	35	Not Detected
Chloroform	12	Not Detected	58	Not Detected
1,1,1-Trichloroethane	12	15	65	80
Cyclohexane	12	Not Detected	41	Not Detected
Carbon Tetrachloride	12	Not Detected	74	Not Detected
2,2,4-Trimethylpentane	12	Not Detected	55	Not Detected
Benzene	12	Not Detected	38	Not Detected
1,2-Dichloroethane	12	Not Detected	48	Not Detected
Heptane	12	Not Detected	48	Not Detected
Trichloroethene	12	Not Detected	64	Not Detected
1,2-Dichloropropane	12	Not Detected	55	Not Detected
1,4-Dioxane	47	Not Detected	170	Not Detected
Bromodichloromethane	12	Not Detected	79	Not Detected
cis-1,3-Dichloropropene	12	Not Detected	54	Not Detected
4-Methyl-2-pentanone	12	Not Detected	48	Not Detected
Toluene	12	Not Detected	45	Not Detected
trans-1,3-Dichloropropene	12	Not Detected	54	Not Detected
1,1,2-Trichloroethane	12	Not Detected	65	Not Detected
Tetrachloroethene	12	2700	80	18000
2-Hexanone	47	Not Detected	190	Not Detected



Client Sample ID: VP6

Lab ID#: 1412207-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121831	Date of Collection:	12/10/14 7:58:00 AM
Dil. Factor:	23.7	Date of Analysis:	12/19/14 02:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	12	Not Detected	100	Not Detected
1,2-Dibromoethane (EDB)	12	Not Detected	91	Not Detected
Chlorobenzene	12	Not Detected	54	Not Detected
Ethyl Benzene	12	Not Detected	51	Not Detected
m,p-Xylene	12	Not Detected	51	Not Detected
o-Xylene	12	Not Detected	51	Not Detected
Styrene	12	Not Detected	50	Not Detected
Bromoform	12	Not Detected	120	Not Detected
Cumene	12	Not Detected	58	Not Detected
1,1,2,2-Tetrachloroethane	12	Not Detected	81	Not Detected
Propylbenzene	12	Not Detected	58	Not Detected
4-Ethyltoluene	12	Not Detected	58	Not Detected
1,3,5-Trimethylbenzene	12	Not Detected	58	Not Detected
1,2,4-Trimethylbenzene	12	Not Detected	58	Not Detected
1,3-Dichlorobenzene	12	Not Detected	71	Not Detected
1,4-Dichlorobenzene	12	Not Detected	71	Not Detected
alpha-Chlorotoluene	12	Not Detected	61	Not Detected
1,2-Dichlorobenzene	12	Not Detected	71	Not Detected
1,2,4-Trichlorobenzene	47	Not Detected	350	Not Detected
Hexachlorobutadiene	47	Not Detected	500	Not Detected
1,1-Difluoroethane	47	53	130	140

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1412207-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121808d	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/18/14 01:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 1412207-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121808d	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/18/14 01:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
1,1-Difluoroethane	2.0	Not Detected	5.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1412207-06B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121908e	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/19/14 02:28 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 1412207-06B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121908e	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/19/14 02:28 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
1,1-Difluoroethane	2.0	Not Detected	5.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1412207-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/18/14 10:18 AM

Compound	%Recovery
Freon 12	106
Freon 114	105
Chloromethane	84
Vinyl Chloride	95
1,3-Butadiene	102
Bromomethane	102
Chloroethane	105
Freon 11	106
Ethanol	102
Freon 113	102
1,1-Dichloroethene	93
Acetone	99
2-Propanol	99
Carbon Disulfide	98
3-Chloropropene	99
Methylene Chloride	106
Methyl tert-butyl ether	100
trans-1,2-Dichloroethene	101
Hexane	102
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	102
Tetrahydrofuran	106
Chloroform	106
1,1,1-Trichloroethane	105
Cyclohexane	104
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	109
Benzene	103
1,2-Dichloroethane	104
Heptane	105
Trichloroethene	102
1,2-Dichloropropane	99
1,4-Dioxane	98
Bromodichloromethane	101
cis-1,3-Dichloropropene	102
4-Methyl-2-pentanone	106
Toluene	106
trans-1,3-Dichloropropene	102
1,1,2-Trichloroethane	102
Tetrachloroethene	105
2-Hexanone	108





Air Toxics

Client Sample ID: CCV

Lab ID#: 1412207-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/18/14 10:18 AM

Compound	%Recovery
Dibromochloromethane	105
1,2-Dibromoethane (EDB)	102
Chlorobenzene	102
Ethyl Benzene	104
m,p-Xylene	109
o-Xylene	105
Styrene	105
Bromoform	101
Cumene	107
1,1,2,2-Tetrachloroethane	101
Propylbenzene	103
4-Ethyltoluene	101
1,3,5-Trimethylbenzene	103
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	99
alpha-Chlorotoluene	95
1,2-Dichlorobenzene	96
1,2,4-Trichlorobenzene	85
Hexachlorobutadiene	88
1,1-Difluoroethane	107

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1412207-07B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/19/14 10:16 AM

Compound	%Recovery
Freon 12	107
Freon 114	105
Chloromethane	84
Vinyl Chloride	97
1,3-Butadiene	105
Bromomethane	100
Chloroethane	108
Freon 11	105
Ethanol	102
Freon 113	103
1,1-Dichloroethene	97
Acetone	103
2-Propanol	102
Carbon Disulfide	100
3-Chloropropene	103
Methylene Chloride	107
Methyl tert-butyl ether	101
trans-1,2-Dichloroethene	105
Hexane	105
1,1-Dichloroethane	105
2-Butanone (Methyl Ethyl Ketone)	108
cis-1,2-Dichloroethene	103
Tetrahydrofuran	108
Chloroform	106
1,1,1-Trichloroethane	106
Cyclohexane	107
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	112
Benzene	103
1,2-Dichloroethane	103
Heptane	107
Trichloroethene	102
1,2-Dichloropropane	100
1,4-Dioxane	100
Bromodichloromethane	102
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	106
Toluene	107
trans-1,3-Dichloropropene	103
1,1,2-Trichloroethane	102
Tetrachloroethene	103
2-Hexanone	107



Air Toxics

Client Sample ID: CCV

Lab ID#: 1412207-07B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/19/14 10:16 AM

Compound	%Recovery
Dibromochloromethane	103
1,2-Dibromoethane (EDB)	102
Chlorobenzene	101
Ethyl Benzene	105
m,p-Xylene	108
o-Xylene	106
Styrene	104
Bromoform	102
Cumene	108
1,1,2,2-Tetrachloroethane	102
Propylbenzene	103
4-Ethyltoluene	101
1,3,5-Trimethylbenzene	103
1,2,4-Trimethylbenzene	95
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	95
1,2-Dichlorobenzene	95
1,2,4-Trichlorobenzene	85
Hexachlorobutadiene	87
1,1-Difluoroethane	108

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1412207-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/18/14 10:43 AM

Compound	%Recovery	Method Limits
Freon 12	103	70-130
Freon 114	100	70-130
Chloromethane	95	70-130
Vinyl Chloride	94	70-130
1,3-Butadiene	94	70-130
Bromomethane	100	70-130
Chloroethane	104	70-130
Freon 11	100	70-130
Ethanol	114	70-130
Freon 113	100	70-130
1,1-Dichloroethene	95	70-130
Acetone	92	70-130
2-Propanol	106	70-130
Carbon Disulfide	87	70-130
3-Chloropropene	95	70-130
Methylene Chloride	104	70-130
Methyl tert-butyl ether	91	70-130
trans-1,2-Dichloroethene	93	70-130
Hexane	96	70-130
1,1-Dichloroethane	98	70-130
2-Butanone (Methyl Ethyl Ketone)	96	70-130
cis-1,2-Dichloroethene	96	70-130
Tetrahydrofuran	102	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	101	70-130
Cyclohexane	100	70-130
Carbon Tetrachloride	101	70-130
2,2,4-Trimethylpentane	102	70-130
Benzene	98	70-130
1,2-Dichloroethane	97	70-130
Heptane	99	70-130
Trichloroethene	98	70-130
1,2-Dichloropropane	95	70-130
1,4-Dioxane	104	70-130
Bromodichloromethane	96	70-130
cis-1,3-Dichloropropene	105	70-130
4-Methyl-2-pentanone	104	70-130
Toluene	102	70-130
trans-1,3-Dichloropropene	97	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	102	70-130
2-Hexanone	113	70-130

Client Sample ID: LCS

Lab ID#: 1412207-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/18/14 10:43 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	103	70-130
1,2-Dibromoethane (EDB)	100	70-130
Chlorobenzene	99	70-130
Ethyl Benzene	103	70-130
m,p-Xylene	108	70-130
o-Xylene	106	70-130
Styrene	119	70-130
Bromoform	104	70-130
Cumene	109	70-130
1,1,2,2-Tetrachloroethane	102	70-130
Propylbenzene	108	70-130
4-Ethyltoluene	108	70-130
1,3,5-Trimethylbenzene	125	70-130
1,2,4-Trimethylbenzene	112	70-130
1,3-Dichlorobenzene	106	70-130
1,4-Dichlorobenzene	109	70-130
alpha-Chlorotoluene	176 Q	70-130
1,2-Dichlorobenzene	109	70-130
1,2,4-Trichlorobenzene	101	70-130
Hexachlorobutadiene	105	70-130
1,1-Difluoroethane	Not Spiked	

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1412207-08AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/18/14 11:08 AM

Compound	%Recovery	Method Limits
Freon 12	100	70-130
Freon 114	97	70-130
Chloromethane	96	70-130
Vinyl Chloride	90	70-130
1,3-Butadiene	93	70-130
Bromomethane	98	70-130
Chloroethane	97	70-130
Freon 11	97	70-130
Ethanol	110	70-130
Freon 113	99	70-130
1,1-Dichloroethene	93	70-130
Acetone	91	70-130
2-Propanol	103	70-130
Carbon Disulfide	85	70-130
3-Chloropropene	94	70-130
Methylene Chloride	102	70-130
Methyl tert-butyl ether	89	70-130
trans-1,2-Dichloroethene	92	70-130
Hexane	94	70-130
1,1-Dichloroethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	96	70-130
cis-1,2-Dichloroethene	94	70-130
Tetrahydrofuran	99	70-130
Chloroform	98	70-130
1,1,1-Trichloroethane	99	70-130
Cyclohexane	97	70-130
Carbon Tetrachloride	99	70-130
2,2,4-Trimethylpentane	101	70-130
Benzene	97	70-130
1,2-Dichloroethane	97	70-130
Heptane	100	70-130
Trichloroethene	97	70-130
1,2-Dichloropropane	93	70-130
1,4-Dioxane	103	70-130
Bromodichloromethane	96	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	103	70-130
Toluene	102	70-130
trans-1,3-Dichloropropene	95	70-130
1,1,2-Trichloroethane	95	70-130
Tetrachloroethene	99	70-130
2-Hexanone	113	70-130

Client Sample ID: LCSD

Lab ID#: 1412207-08AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/18/14 11:08 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	101	70-130
1,2-Dibromoethane (EDB)	99	70-130
Chlorobenzene	98	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	106	70-130
o-Xylene	104	70-130
Styrene	118	70-130
Bromoform	103	70-130
Cumene	107	70-130
1,1,2,2-Tetrachloroethane	100	70-130
Propylbenzene	106	70-130
4-Ethyltoluene	107	70-130
1,3,5-Trimethylbenzene	124	70-130
1,2,4-Trimethylbenzene	112	70-130
1,3-Dichlorobenzene	104	70-130
1,4-Dichlorobenzene	108	70-130
alpha-Chlorotoluene	176 Q	70-130
1,2-Dichlorobenzene	108	70-130
1,2,4-Trichlorobenzene	118	70-130
Hexachlorobutadiene	119	70-130
1,1-Difluoroethane	Not Spiked	

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1412207-08B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/19/14 11:17 AM

Compound	%Recovery	Method Limits
Freon 12	101	70-130
Freon 114	98	70-130
Chloromethane	96	70-130
Vinyl Chloride	92	70-130
1,3-Butadiene	95	70-130
Bromomethane	98	70-130
Chloroethane	102	70-130
Freon 11	98	70-130
Ethanol	116	70-130
Freon 113	99	70-130
1,1-Dichloroethene	94	70-130
Acetone	91	70-130
2-Propanol	107	70-130
Carbon Disulfide	87	70-130
3-Chloropropene	95	70-130
Methylene Chloride	103	70-130
Methyl tert-butyl ether	91	70-130
trans-1,2-Dichloroethene	91	70-130
Hexane	96	70-130
1,1-Dichloroethane	99	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
cis-1,2-Dichloroethene	96	70-130
Tetrahydrofuran	102	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	98	70-130
Cyclohexane	100	70-130
Carbon Tetrachloride	99	70-130
2,2,4-Trimethylpentane	102	70-130
Benzene	98	70-130
1,2-Dichloroethane	98	70-130
Heptane	100	70-130
Trichloroethene	99	70-130
1,2-Dichloropropane	96	70-130
1,4-Dioxane	106	70-130
Bromodichloromethane	96	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	105	70-130
Toluene	101	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	100	70-130
2-Hexanone	114	70-130



Client Sample ID: LCS

Lab ID#: 1412207-08B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/19/14 11:17 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	101	70-130
1,2-Dibromoethane (EDB)	100	70-130
Chlorobenzene	99	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	108	70-130
o-Xylene	105	70-130
Styrene	118	70-130
Bromoform	103	70-130
Cumene	108	70-130
1,1,2,2-Tetrachloroethane	101	70-130
Propylbenzene	108	70-130
4-Ethyltoluene	109	70-130
1,3,5-Trimethylbenzene	122	70-130
1,2,4-Trimethylbenzene	112	70-130
1,3-Dichlorobenzene	105	70-130
1,4-Dichlorobenzene	108	70-130
alpha-Chlorotoluene	178 Q	70-130
1,2-Dichlorobenzene	108	70-130
1,2,4-Trichlorobenzene	104	70-130
Hexachlorobutadiene	108	70-130
1,1-Difluoroethane	Not Spiked	

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1412207-08BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121907	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/19/14 01:21 PM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	101	70-130
Chloromethane	100	70-130
Vinyl Chloride	95	70-130
1,3-Butadiene	100	70-130
Bromomethane	100	70-130
Chloroethane	106	70-130
Freon 11	100	70-130
Ethanol	122	70-130
Freon 113	101	70-130
1,1-Dichloroethene	98	70-130
Acetone	96	70-130
2-Propanol	112	70-130
Carbon Disulfide	90	70-130
3-Chloropropene	98	70-130
Methylene Chloride	106	70-130
Methyl tert-butyl ether	94	70-130
trans-1,2-Dichloroethene	93	70-130
Hexane	100	70-130
1,1-Dichloroethane	100	70-130
2-Butanone (Methyl Ethyl Ketone)	98	70-130
cis-1,2-Dichloroethene	98	70-130
Tetrahydrofuran	103	70-130
Chloroform	101	70-130
1,1,1-Trichloroethane	99	70-130
Cyclohexane	101	70-130
Carbon Tetrachloride	100	70-130
2,2,4-Trimethylpentane	104	70-130
Benzene	102	70-130
1,2-Dichloroethane	98	70-130
Heptane	103	70-130
Trichloroethene	101	70-130
1,2-Dichloropropane	97	70-130
1,4-Dioxane	110	70-130
Bromodichloromethane	98	70-130
cis-1,3-Dichloropropene	107	70-130
4-Methyl-2-pentanone	106	70-130
Toluene	103	70-130
trans-1,3-Dichloropropene	100	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	102	70-130
2-Hexanone	118	70-130

Client Sample ID: LCSD

Lab ID#: 1412207-08BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3121907	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/19/14 01:21 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	103	70-130
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	105	70-130
m,p-Xylene	110	70-130
o-Xylene	107	70-130
Styrene	121	70-130
Bromoform	105	70-130
Cumene	110	70-130
1,1,2,2-Tetrachloroethane	103	70-130
Propylbenzene	109	70-130
4-Ethyltoluene	109	70-130
1,3,5-Trimethylbenzene	124	70-130
1,2,4-Trimethylbenzene	114	70-130
1,3-Dichlorobenzene	106	70-130
1,4-Dichlorobenzene	108	70-130
alpha-Chlorotoluene	179 Q	70-130
1,2-Dichlorobenzene	110	70-130
1,2,4-Trichlorobenzene	112	70-130
Hexachlorobutadiene	115	70-130
1,1-Difluoroethane	Not Spiked	

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	100	70-130

# CHAIN OF CUSTODY RECORD

## P&D ENVIRONMENTAL, INC.

55 Santa Clara Ave., Suite 240  
Oakland, CA 94610  
(510) 658-6916

PROJECT NUMBER:

*0660*

PROJECT NAME:

*James River Corporation  
2101 Williams St.  
San Leandro, CA*

SAMPLED BY: (PRINTED & SIGNATURE)

*MICHAEL BASS-DESCHENES Michael Bass-Deschenes*

NUMBER OF CONTAINERS

ANALYSIS(ES):  
EPA 10-15 INCLUDING DFA

PRESERVATIVE

REMARKS

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION			NUMBER OF CONTAINERS	ANALYSIS(ES)	PRESERVATIVE	REMARKS
				INIT VAC	FINAL VAC	PID (PPM)				
<i>QA VP3</i>	<i>12/10/14</i>	<i>113100</i> <i>114245</i>	<i>Sil/gas</i>	<i>-30</i>	<i>-5</i>	<i>70</i>	<i>1</i>	<i>X</i>	<i>NONE</i>	<i>NORMAL TAT</i>
<i>QA VP3-DJP</i>	<i>↓</i>	<i>113100</i> <i>114245</i>	<i>↓</i>	<i>-30</i>	<i>-5</i>	<i>70</i>	<i>1</i>	<i>X</i>	<i>↓</i>	<i>↓</i>
<i>QA VP4</i>	<i>↓</i>	<i>103608</i> <i>104137</i>	<i>↓</i>	<i>-30</i>	<i>-5</i>	<i>0.5</i>	<i>1</i>	<i>X</i>	<i>↓</i>	<i>↓</i>
<i>QA VP5</i>	<i>↓</i>	<i>092100</i> <i>092710</i>	<i>↓</i>	<i>-28</i>	<i>-5</i>	<i>10.3</i>	<i>1</i>	<i>X</i>	<i>↓</i>	<i>↓</i>
<i>QA VP6</i>	<i>↓</i>	<i>075200</i> <i>075205</i>	<i>↓</i>	<i>-30</i>	<i>-5</i>	<i>2.9</i>	<i>1</i>	<i>X</i>	<i>↓</i>	<i>↓</i>

Custody Seal Intact?  
*Y N None Temp NA*  
*410*

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment)	LABORATORY:
<i>Michael Bass-Deschenes</i>	<i>12-10-14</i>	<i>13:53</i>	<i>Kyle Vagadori</i>	<i>5</i>	<i>EUROFINS/AIR TOXICS LIMITED</i>
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment)	LABORATORY CONTACT:
				<i>5</i>	<i>KYLE VAGADORI (916) 605-3339</i>
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	

Results and billing to:  
P&D Environmental, Inc.  
lab@pdenviro.com

REMARKS: *1 LITER SUMMA  
DFA USED AS TRACER GAS*

**1412207**

12/23/2014  
Mr. Paul King  
P & D Environmental  
55 Santa Clara  
Suite 240  
Oakland CA 94610

Project Name: James River Corporation 2101 Williams St  
Project #: 0660  
Workorder #: 1412148

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 12/10/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori  
Project Manager

**WORK ORDER #: 1412148**

Work Order Summary

**CLIENT:** Mr. Paul King  
P & D Environmental  
55 Santa Clara  
Suite 240  
Oakland, CA 94610

**BILL TO:** Mr. Paul King  
P & D Environmental  
55 Santa Clara  
Suite 240  
Oakland, CA 94610

**PHONE:** 510-658-6916

**P.O. #**

**FAX:** 510-834-0772

**PROJECT #** 0660 James River Corporation 2101

**DATE RECEIVED:** 12/10/2014

**CONTACT:** Williams St  
Kyle Vagadori

**DATE COMPLETED:** 12/23/2014

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP3	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
02A	VP4	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
03A	VP5	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
04A	VP6	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
05A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
06A	CCV	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY:



Technical Director

DATE: 12/23/14

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935  
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**EPA Method TO-15 Soil Gas**  
**P & D Environmental**  
**Workorder# 1412148**

Four 1 Liter Tedlar Bag samples were received on December 10, 2014. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Method TO-15 is validated for samples collected in specially treated canisters. As such, the use of Tedlar bags for sample collection is outside the scope of the method and not recommended for ambient or indoor air samples. It is the responsibility of the data user to determine the usability of TO-15 results generated from Tedlar bags.

Samples VP3, VP4, VP5 and VP6 were transferred from Tedlar bags into summa canisters to extend the hold time from 3 days to 30 days. Canister pressurization resulted in a dilution factor which was applied to all analytical results.

Dilution was performed on samples VP3, VP4, VP5 and VP6 due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



### Summary of Detected Compounds EPA METHOD TO-15 GC/MS

**Client Sample ID: VP3**

**Lab ID#: 1412148-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	530000	5000000	1400000	13000000

**Client Sample ID: VP4**

**Lab ID#: 1412148-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	570000	4100000	1500000	11000000

**Client Sample ID: VP5**

**Lab ID#: 1412148-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	520000	3500000	1400000	9400000

**Client Sample ID: VP6**

**Lab ID#: 1412148-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	520000	7000000	1400000	19000000



Air Toxics

Client Sample ID: VP3

Lab ID#: 1412148-01A

EPA METHOD TO-15 GC/MS

File Name:	14121528	Date of Collection:	12/10/14 11:29:00 A	
Dil. Factor:	26600	Date of Analysis:	12/15/14 09:41 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	530000	5000000	1400000	13000000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	87	70-130



Air Toxics

Client Sample ID: VP4

Lab ID#: 1412148-02A

EPA METHOD TO-15 GC/MS

File Name:	14121529	Date of Collection:	12/10/14 10:35:00 A	
Dil. Factor:	28400	Date of Analysis:	12/15/14 10:03 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	570000	4100000	1500000	11000000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: VP5

Lab ID#: 1412148-03A

EPA METHOD TO-15 GC/MS

File Name:	14121530	Date of Collection:	12/10/14 9:19:00 AM	
Dil. Factor:	26100	Date of Analysis:	12/15/14 10:44 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	520000	3500000	1400000	9400000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	89	70-130



Air Toxics

Client Sample ID: VP6

Lab ID#: 1412148-04A

EPA METHOD TO-15 GC/MS

File Name:	14121531	Date of Collection:	12/10/14 7:47:00 AM	
Dil. Factor:	26100	Date of Analysis:	12/15/14 11:05 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	520000	7000000	1400000	19000000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1412148-05A

EPA METHOD TO-15 GC/MS

File Name:	14121506d	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/15/14 08:59 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20	Not Detected	54	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	91	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1412148-06A

EPA METHOD TO-15 GC/MS

File Name:	14121505	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/15/14 08:26 AM

Compound	%Recovery
1,1-Difluoroethane	120

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	96	70-130

