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Air Toxics

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180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager Mike Parris

Collected by: (Print and Sign) DAW MORRIS

Company Missouri DNR

Address P.O. Box 176 City Jefferson City State MO Zip 65762

Phone 573-526-3915 Fax \_\_\_\_\_

Project Info:

P.O. # \_\_\_\_\_

Project # \_\_\_\_\_

Project Name Bridgeman Landfill

Turn Around Time:

Normal

Rush

Lab Use Only  
Pressurized by: \_\_\_\_\_  
Date: \_\_\_\_\_

Pressurization Gas: \_\_\_\_\_

specify: N<sub>2</sub> He

Lab I.D. Field Sample I.D. (Location)

Can #

Date of Collection Time of Collection

Analyses Requested

Canister Pressure/Vacuum  
Initial Final Receipt Final (psi)

O1A U1 (149203)

25259

3/1/14 1355-1824

TO-15

-30 -6.25

O2A D3 (149204)

33656

3/1/14 1418-1849

TO-15

-30 -5

O3A D1 (149201)

35286

3/1/14 1337-1841

TO-15

-30 -5.5

O4A D2 (149202)

34726

3/1/14 1341-1832

TO-15

-30 -4.75

Relinquished by: (signature) [Signature] Date/Time 3/3/14 0902

Received by: (signature) [Signature] Date/Time 03/07/14 1000

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Notes:

Sent via UPS Ground  
Tracking # 1Z 672 788  
03 4391 2501

Lab Shipper Name

Air Bill #

Temp (°C)

Condition

Custody Seals Intact?  Yes  No

Work Order #

Lab Use Only

UPS

1Z 672 788 03 4391 2501

NA

Good

Yes

No

None

1403137

3/18/2014  
Mr. Dennis Schroeder  
Missouri Dept. of Natural Resources  
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill  
Project #:  
Workorder #: 1403137

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 3/7/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified 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: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker  
Project Manager

**WORK ORDER #: 1403137**

Work Order Summary

<b>CLIENT:</b>	Mr. Dennis Schroeder Missouri Dept. of Natural Resources 2710 West Main Jefferson City, MO 65109	<b>BILL TO:</b>	Accounts Payable Missouri Dept. of Natural Resources P.O Box 176 Jefferson City, MO 65102
<b>PHONE:</b>	573-526-4428	<b>P.O. #</b>	3ESP1301039
<b>FAX:</b>	573-526-3350	<b>PROJECT #</b>	Bridgeton Landfill
<b>DATE RECEIVED:</b>	03/07/2014	<b>CONTACT:</b>	Brian Whittaker
<b>DATE COMPLETED:</b>	03/18/2014		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	U1 (149203)	Modified TO-15	4.3 "Hg	5.2 psi
02A	D3 (149204)	Modified TO-15	3.5 "Hg	5.3 psi
03A	D1 (149201)	Modified TO-15	3.1 "Hg	4.6 psi
04A	D2 (149202)	Modified TO-15	3.1 "Hg	5.3 psi
05A	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 03/18/14

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-13-6, UT NELAP CA009332013-4, VA NELAP - 460197, WA NELAP - C935  
 Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.

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  
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**LABORATORY NARRATIVE**  
**Modified TO-15**  
**Missouri Dept. of Natural Resources**  
**Workorder# 1403137**

Four 6 Liter Summa Canister (100% Certified) samples were received on March 07, 2014. The laboratory performed analysis via modified 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.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

**Receiving Notes**

There were no receiving discrepancies.

**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.

**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

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r1-File was requantified for the purpose of reissue

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

**Client Sample ID: U1 (149203)**

**Lab ID#: 1403137-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.78	2.5
Freon 11	0.16	0.23	0.89	1.3
Ethanol	0.79	4.2	1.5	7.8
Acetone	0.79	1.8	1.9	4.2
Methylene Chloride	0.32	0.56	1.1	2.0
Toluene	0.16	0.21	0.60	0.78

**Client Sample ID: D3 (149204)**

**Lab ID#: 1403137-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.56	0.76	2.8
Freon 11	0.15	0.24	0.86	1.3
Ethanol	0.77	2.5	1.4	4.6
Acetone	0.77	1.8	1.8	4.3
Benzene	0.15	0.24	0.49	0.75

**Client Sample ID: D1 (149201)**

**Lab ID#: 1403137-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.58	0.72	2.9
Freon 11	0.15	0.23	0.82	1.3
Ethanol	0.73	7.7	1.4	14
Acetone	0.73	5.3	1.7	13
2-Butanone (Methyl Ethyl Ketone)	0.73	1.7	2.2	5.0
Benzene	0.15	0.84	0.47	2.7
Toluene	0.15	0.20	0.55	0.76

**Client Sample ID: D2 (149202)**

**Lab ID#: 1403137-04A**

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

**Client Sample ID: D2 (149202)**

**Lab ID#: 1403137-04A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	0.15	0.54	0.75	2.7
Freon 11	0.15	0.22	0.85	1.2
Ethanol	0.76	10	1.4	20
Acetone	0.76	7.3	1.8	17
2-Propanol	0.76	1.0	1.9	2.5
2-Butanone (Methyl Ethyl Ketone)	0.76	2.8	2.2	8.3
Tetrahydrofuran	0.76	1.0	2.2	3.0
Benzene	0.15	1.2	0.48	3.9
Toluene	0.15	0.28	0.57	1.1
m,p-Xylene	0.15	0.19	0.66	0.84



Air Toxics

Client Sample ID: U1 (149203)

Lab ID#: 1403137-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031309	Date of Collection:	3/1/14 6:24:00 PM
Dil. Factor:	1.58	Date of Analysis:	3/13/14 04:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.78	2.5
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.79	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.79	Not Detected	3.1	Not Detected
Chloroethane	0.79	Not Detected	2.1	Not Detected
Freon 11	0.16	0.23	0.89	1.3
Ethanol	0.79	4.2	1.5	7.8
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.79	1.8	1.9	4.2
2-Propanol	0.79	Not Detected	1.9	Not Detected
Carbon Disulfide	0.79	Not Detected	2.5	Not Detected
3-Chloropropene	0.79	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	0.56	1.1	2.0
Methyl tert-butyl ether	0.16	Not Detected	0.57	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Hexane	0.16	Not Detected	0.56	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.79	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.77	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.99	Not Detected
2,2,4-Trimethylpentane	0.79	Not Detected	3.7	Not Detected
Benzene	0.16	Not Detected	0.50	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Heptane	0.16	Not Detected	0.65	Not Detected
Trichloroethene	0.16	Not Detected	0.85	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.73	Not Detected
1,4-Dioxane	0.16	Not Detected	0.57	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.65	Not Detected
Toluene	0.16	0.21	0.60	0.78
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.79	Not Detected	3.2	Not Detected





Client Sample ID: U1 (149203)

Lab ID#: 1403137-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031309	Date of Collection:	3/1/14 6:24:00 PM
Dil. Factor:	1.58	Date of Analysis:	3/13/14 04:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.73	Not Detected
Ethyl Benzene	0.16	Not Detected	0.69	Not Detected
m,p-Xylene	0.16	Not Detected	0.69	Not Detected
o-Xylene	0.16	Not Detected	0.69	Not Detected
Styrene	0.16	Not Detected	0.67	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.78	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.78	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.78	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.82	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,2,4-Trichlorobenzene	0.79	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.79	Not Detected	8.4	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: D3 (149204)

Lab ID#: 1403137-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031310	Date of Collection:	3/1/14 6:49:00 PM
Dil. Factor:	1.54	Date of Analysis:	3/13/14 05:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.56	0.76	2.8
Freon 114	0.15	Not Detected	1.1	Not Detected
Chloromethane	0.77	Not Detected	1.6	Not Detected
Vinyl Chloride	0.15	Not Detected	0.39	Not Detected
1,3-Butadiene	0.15	Not Detected	0.34	Not Detected
Bromomethane	0.77	Not Detected	3.0	Not Detected
Chloroethane	0.77	Not Detected	2.0	Not Detected
Freon 11	0.15	0.24	0.86	1.3
Ethanol	0.77	2.5	1.4	4.6
Freon 113	0.15	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Acetone	0.77	1.8	1.8	4.3
2-Propanol	0.77	Not Detected	1.9	Not Detected
Carbon Disulfide	0.77	Not Detected	2.4	Not Detected
3-Chloropropene	0.77	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.56	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Hexane	0.15	Not Detected	0.54	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.62	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.77	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Tetrahydrofuran	0.77	Not Detected	2.3	Not Detected
Chloroform	0.15	Not Detected	0.75	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.84	Not Detected
Cyclohexane	0.15	Not Detected	0.53	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.97	Not Detected
2,2,4-Trimethylpentane	0.77	Not Detected	3.6	Not Detected
Benzene	0.15	0.24	0.49	0.75
1,2-Dichloroethane	0.15	Not Detected	0.62	Not Detected
Heptane	0.15	Not Detected	0.63	Not Detected
Trichloroethene	0.15	Not Detected	0.83	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.71	Not Detected
1,4-Dioxane	0.15	Not Detected	0.55	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.70	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.63	Not Detected
Toluene	0.15	Not Detected	0.58	Not Detected
trans-1,3-Dichloropropene	0.15	Not Detected	0.70	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.84	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.77	Not Detected	3.2	Not Detected



Client Sample ID: D3 (149204)

Lab ID#: 1403137-02A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	c031310	Date of Collection:	3/1/14 6:49:00 PM
Dil. Factor:	1.54	Date of Analysis:	3/13/14 05:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Chlorobenzene	0.15	Not Detected	0.71	Not Detected
Ethyl Benzene	0.15	Not Detected	0.67	Not Detected
m,p-Xylene	0.15	Not Detected	0.67	Not Detected
o-Xylene	0.15	Not Detected	0.67	Not Detected
Styrene	0.15	Not Detected	0.66	Not Detected
Bromoform	0.15	Not Detected	1.6	Not Detected
Cumene	0.15	Not Detected	0.76	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.76	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.76	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.76	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.76	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.80	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
1,2,4-Trichlorobenzene	0.77	Not Detected	5.7	Not Detected
Hexachlorobutadiene	0.77	Not Detected	8.2	Not Detected

**Container Type: 6 Liter Summa Canister (100% Certified)**

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



Air Toxics

Client Sample ID: D1 (149201)

Lab ID#: 1403137-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031311	Date of Collection:	3/1/14 6:41:00 PM
Dil. Factor:	1.46	Date of Analysis:	3/13/14 06:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.58	0.72	2.9
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.73	Not Detected	1.5	Not Detected
Vinyl Chloride	0.15	Not Detected	0.37	Not Detected
1,3-Butadiene	0.15	Not Detected	0.32	Not Detected
Bromomethane	0.73	Not Detected	2.8	Not Detected
Chloroethane	0.73	Not Detected	1.9	Not Detected
Freon 11	0.15	0.23	0.82	1.3
Ethanol	0.73	7.7	1.4	14
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Acetone	0.73	5.3	1.7	13
2-Propanol	0.73	Not Detected	1.8	Not Detected
Carbon Disulfide	0.73	Not Detected	2.3	Not Detected
3-Chloropropene	0.73	Not Detected	2.3	Not Detected
Methylene Chloride	0.29	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.53	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Hexane	0.15	Not Detected	0.51	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.59	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.73	1.7	2.2	5.0
cis-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Tetrahydrofuran	0.73	Not Detected	2.2	Not Detected
Chloroform	0.15	Not Detected	0.71	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.80	Not Detected
Cyclohexane	0.15	Not Detected	0.50	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.92	Not Detected
2,2,4-Trimethylpentane	0.73	Not Detected	3.4	Not Detected
Benzene	0.15	0.84	0.47	2.7
1,2-Dichloroethane	0.15	Not Detected	0.59	Not Detected
Heptane	0.15	Not Detected	0.60	Not Detected
Trichloroethene	0.15	Not Detected	0.78	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.67	Not Detected
1,4-Dioxane	0.15	Not Detected	0.53	Not Detected
Bromodichloromethane	0.15	Not Detected	0.98	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.66	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.60	Not Detected
Toluene	0.15	0.20	0.55	0.76
trans-1,3-Dichloropropene	0.15	Not Detected	0.66	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.80	Not Detected
Tetrachloroethene	0.15	Not Detected	0.99	Not Detected
2-Hexanone	0.73	Not Detected	3.0	Not Detected

Client Sample ID: D1 (149201)

Lab ID#: 1403137-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	c031311	Date of Collection:	3/1/14 6:41:00 PM
Dil. Factor:	1.46	Date of Analysis:	3/13/14 06:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.2	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.1	Not Detected
Chlorobenzene	0.15	Not Detected	0.67	Not Detected
Ethyl Benzene	0.15	Not Detected	0.63	Not Detected
m,p-Xylene	0.15	Not Detected	0.63	Not Detected
o-Xylene	0.15	Not Detected	0.63	Not Detected
Styrene	0.15	Not Detected	0.62	Not Detected
Bromoform	0.15	Not Detected	1.5	Not Detected
Cumene	0.15	Not Detected	0.72	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.72	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.72	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.72	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.72	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.76	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
1,2,4-Trichlorobenzene	0.73	Not Detected	5.4	Not Detected
Hexachlorobutadiene	0.73	Not Detected	7.8	Not Detected

**Container Type: 6 Liter Summa Canister (100% Certified)**

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



Air Toxics

Client Sample ID: D2 (149202)

Lab ID#: 1403137-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031312	Date of Collection:	3/1/14 6:32:00 PM
Dil. Factor:	1.52	Date of Analysis:	3/13/14 07:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.54	0.75	2.7
Freon 114	0.15	Not Detected	1.1	Not Detected
Chloromethane	0.76	Not Detected	1.6	Not Detected
Vinyl Chloride	0.15	Not Detected	0.39	Not Detected
1,3-Butadiene	0.15	Not Detected	0.34	Not Detected
Bromomethane	0.76	Not Detected	3.0	Not Detected
Chloroethane	0.76	Not Detected	2.0	Not Detected
Freon 11	0.15	0.22	0.85	1.2
Ethanol	0.76	10	1.4	20
Freon 113	0.15	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Acetone	0.76	7.3	1.8	17
2-Propanol	0.76	1.0	1.9	2.5
Carbon Disulfide	0.76	Not Detected	2.4	Not Detected
3-Chloropropene	0.76	Not Detected	2.4	Not Detected
Methylene Chloride	0.30	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.55	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Hexane	0.15	Not Detected	0.54	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.62	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.76	2.8	2.2	8.3
cis-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Tetrahydrofuran	0.76	1.0	2.2	3.0
Chloroform	0.15	Not Detected	0.74	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.83	Not Detected
Cyclohexane	0.15	Not Detected	0.52	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.96	Not Detected
2,2,4-Trimethylpentane	0.76	Not Detected	3.6	Not Detected
Benzene	0.15	1.2	0.48	3.9
1,2-Dichloroethane	0.15	Not Detected	0.62	Not Detected
Heptane	0.15	Not Detected	0.62	Not Detected
Trichloroethene	0.15	Not Detected	0.82	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.70	Not Detected
1,4-Dioxane	0.15	Not Detected	0.55	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.69	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.62	Not Detected
Toluene	0.15	0.28	0.57	1.1
trans-1,3-Dichloropropene	0.15	Not Detected	0.69	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.83	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.76	Not Detected	3.1	Not Detected

Client Sample ID: D2 (149202)

Lab ID#: 1403137-04A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	c031312	Date of Collection:	3/1/14 6:32:00 PM
Dil. Factor:	1.52	Date of Analysis:	3/13/14 07:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Chlorobenzene	0.15	Not Detected	0.70	Not Detected
Ethyl Benzene	0.15	Not Detected	0.66	Not Detected
m,p-Xylene	0.15	0.19	0.66	0.84
o-Xylene	0.15	Not Detected	0.66	Not Detected
Styrene	0.15	Not Detected	0.65	Not Detected
Bromoform	0.15	Not Detected	1.6	Not Detected
Cumene	0.15	Not Detected	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.75	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.75	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.75	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.75	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.79	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
1,2,4-Trichlorobenzene	0.76	Not Detected	5.6	Not Detected
Hexachlorobutadiene	0.76	Not Detected	8.1	Not Detected

**Container Type: 6 Liter Summa Canister (100% Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1403137-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/13/14 02:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected



Client Sample ID: Lab Blank

Lab ID#: 1403137-05A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	c031306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/13/14 02:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1403137-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/13/14 11:29 AM

Compound	%Recovery
Freon 12	105
Freon 114	98
Chloromethane	75
Vinyl Chloride	90
1,3-Butadiene	86
Bromomethane	101
Chloroethane	91
Freon 11	99
Ethanol	96
Freon 113	101
1,1-Dichloroethene	100
Acetone	88
2-Propanol	97
Carbon Disulfide	97
3-Chloropropene	102
Methylene Chloride	92
Methyl tert-butyl ether	112
trans-1,2-Dichloroethene	97
Hexane	98
1,1-Dichloroethane	95
2-Butanone (Methyl Ethyl Ketone)	100
cis-1,2-Dichloroethene	101
Tetrahydrofuran	90
Chloroform	104
1,1,1-Trichloroethane	109
Cyclohexane	107
Carbon Tetrachloride	76
2,2,4-Trimethylpentane	95
Benzene	97
1,2-Dichloroethane	103
Heptane	98
Trichloroethene	107
1,2-Dichloropropane	97
1,4-Dioxane	113
Bromodichloromethane	105
cis-1,3-Dichloropropene	112
4-Methyl-2-pentanone	107
Toluene	100
trans-1,3-Dichloropropene	115
1,1,2-Trichloroethane	99
Tetrachloroethene	110
2-Hexanone	109



Air Toxics

Client Sample ID: CCV

Lab ID#: 1403137-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/13/14 11:29 AM

Compound	%Recovery
Dibromochloromethane	113
1,2-Dibromoethane (EDB)	110
Chlorobenzene	101
Ethyl Benzene	109
m,p-Xylene	111
o-Xylene	110
Styrene	114
Bromoform	115
Cumene	116
1,1,2,2-Tetrachloroethane	98
Propylbenzene	109
4-Ethyltoluene	110
1,3,5-Trimethylbenzene	112
1,2,4-Trimethylbenzene	105
1,3-Dichlorobenzene	115
1,4-Dichlorobenzene	107
alpha-Chlorotoluene	113
1,2-Dichlorobenzene	109
1,2,4-Trichlorobenzene	88
Hexachlorobutadiene	89

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	108	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1403137-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/13/14 12:07 PM

Compound	%Recovery	Method Limits
Freon 12	107	70-130
Freon 114	105	70-130
Chloromethane	79	70-130
Vinyl Chloride	98	70-130
1,3-Butadiene	91	70-130
Bromomethane	110	70-130
Chloroethane	101	70-130
Freon 11	104	70-130
Ethanol	110	70-130
Freon 113	123	70-130
1,1-Dichloroethene	113	70-130
Acetone	96	70-130
2-Propanol	104	70-130
Carbon Disulfide	96	70-130
3-Chloropropene	109	70-130
Methylene Chloride	111	70-130
Methyl tert-butyl ether	117	70-130
trans-1,2-Dichloroethene	92	70-130
Hexane	104	70-130
1,1-Dichloroethane	101	70-130
2-Butanone (Methyl Ethyl Ketone)	104	70-130
cis-1,2-Dichloroethene	120	70-130
Tetrahydrofuran	94	70-130
Chloroform	110	70-130
1,1,1-Trichloroethane	112	70-130
Cyclohexane	116	70-130
Carbon Tetrachloride	69 Q	70-130
2,2,4-Trimethylpentane	96	70-130
Benzene	104	70-130
1,2-Dichloroethane	107	70-130
Heptane	108	70-130
Trichloroethene	118	70-130
1,2-Dichloropropane	102	70-130
1,4-Dioxane	123	70-130
Bromodichloromethane	115	70-130
cis-1,3-Dichloropropene	128	70-130
4-Methyl-2-pentanone	119	70-130
Toluene	108	70-130
trans-1,3-Dichloropropene	112	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	113	70-130
2-Hexanone	117	70-130



Client Sample ID: LCS

Lab ID#: 1403137-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/13/14 12:07 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	119	70-130
1,2-Dibromoethane (EDB)	111	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	110	70-130
m,p-Xylene	115	70-130
o-Xylene	113	70-130
Styrene	119	70-130
Bromoform	119	70-130
Cumene	121	70-130
1,1,2,2-Tetrachloroethane	102	70-130
Propylbenzene	115	70-130
4-Ethyltoluene	116	70-130
1,3,5-Trimethylbenzene	115	70-130
1,2,4-Trimethylbenzene	103	70-130
1,3-Dichlorobenzene	114	70-130
1,4-Dichlorobenzene	108	70-130
alpha-Chlorotoluene	129	70-130
1,2-Dichlorobenzene	111	70-130
1,2,4-Trichlorobenzene	85	70-130
Hexachlorobutadiene	78	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	108	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1403137-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/13/14 12:46 PM

Compound	%Recovery	Method Limits
Freon 12	107	70-130
Freon 114	102	70-130
Chloromethane	78	70-130
Vinyl Chloride	97	70-130
1,3-Butadiene	90	70-130
Bromomethane	112	70-130
Chloroethane	102	70-130
Freon 11	104	70-130
Ethanol	108	70-130
Freon 113	124	70-130
1,1-Dichloroethene	114	70-130
Acetone	96	70-130
2-Propanol	103	70-130
Carbon Disulfide	96	70-130
3-Chloropropene	116	70-130
Methylene Chloride	110	70-130
Methyl tert-butyl ether	118	70-130
trans-1,2-Dichloroethene	92	70-130
Hexane	104	70-130
1,1-Dichloroethane	102	70-130
2-Butanone (Methyl Ethyl Ketone)	107	70-130
cis-1,2-Dichloroethene	120	70-130
Tetrahydrofuran	94	70-130
Chloroform	111	70-130
1,1,1-Trichloroethane	110	70-130
Cyclohexane	119	70-130
Carbon Tetrachloride	67 Q	70-130
2,2,4-Trimethylpentane	95	70-130
Benzene	100	70-130
1,2-Dichloroethane	101	70-130
Heptane	105	70-130
Trichloroethene	116	70-130
1,2-Dichloropropane	101	70-130
1,4-Dioxane	119	70-130
Bromodichloromethane	111	70-130
cis-1,3-Dichloropropene	125	70-130
4-Methyl-2-pentanone	115	70-130
Toluene	106	70-130
trans-1,3-Dichloropropene	115	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	111	70-130
2-Hexanone	122	70-130



Client Sample ID: LCSD

Lab ID#: 1403137-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c031304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/13/14 12:46 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	121	70-130
1,2-Dibromoethane (EDB)	113	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	110	70-130
m,p-Xylene	117	70-130
o-Xylene	112	70-130
Styrene	118	70-130
Bromoform	119	70-130
Cumene	118	70-130
1,1,2,2-Tetrachloroethane	100	70-130
Propylbenzene	111	70-130
4-Ethyltoluene	110	70-130
1,3,5-Trimethylbenzene	111	70-130
1,2,4-Trimethylbenzene	99	70-130
1,3-Dichlorobenzene	115	70-130
1,4-Dichlorobenzene	107	70-130
alpha-Chlorotoluene	130	70-130
1,2-Dichlorobenzene	108	70-130
1,2,4-Trichlorobenzene	84	70-130
Hexachlorobutadiene	80	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	108	70-130