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Air Toxics

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FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager Michael Paris

Collected by: (Print and Sign) Cedric Gungon

Company MO DNR

Address P.O. Box 176 City Jefferson City State MO Zip 65102

Phone (573) 526-3418 Fax \_\_\_\_\_

Email michael.parriss@dnr.mo.gov

Project Info:

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

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

Project Name Bridgeton Landfill

Turn Around Time:

Normal

Rush

Lab Use Only

Pressurized by: \_\_\_\_\_

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

Pressurization Gas: 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)
D1	(135071)	33660	1/15/14	0844 - 1358	TO-15	-30	-55	
D2	(135072)	33940	1/15/14	0907 - 1517	TO-15	-30	-5	
U1	(135073)	34359	1/15/14	0925 - 1436	TO-15	-30	-5	
U2	(135074)	33931	1/15/14	1003 - 1446	TO-15	-30	-5	
<p>Relinquished by: (signature) _____ Date/Time <u>1/15/14 1705</u></p> <p>Received by: (signature) <u>Michael Paris</u> Date/Time <u>1/15/14 1705</u></p> <p>Relinquished by: (signature) _____ Date/Time <u>1/16/15 1115</u></p> <p>Received by: (signature) _____ Date/Time _____</p> <p>Notes: <u>Skipped via UPS Ground</u></p> <p>Tracking #: <u>1Z6724880345350070</u></p>								

Lab Shipper Name \_\_\_\_\_ Air Bill # \_\_\_\_\_ Temp (°C) \_\_\_\_\_ Condition \_\_\_\_\_ Custody Seals Intact?  Yes  No  None Work Order # \_\_\_\_\_

1/31/2014

Mr. Dennis Schroeder  
Missouri Dept. of Natural Resources  
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1401271

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 1/21/2014 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: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner  
Project Manager

**WORK ORDER #: 1401271**

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>	01/21/2014	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	01/31/2014		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (135071)	Modified TO-15	2.6 "Hg	4.9 psi
02A	D2 (135072)	Modified TO-15	1.8 "Hg	4.9 psi
03A	U1 (135073)	Modified TO-15	3.9 "Hg	5 psi
04A	U2 (135074)	Modified TO-15	2.8 "Hg	4.7 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: 01/31/14

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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**LABORATORY NARRATIVE  
Modified TO-15  
Missouri Dept. of Natural Resources  
Workorder# 1401271**

Four 6 Liter Summa Canister (100% Certified) samples were received on January 21, 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**

The Relative Percent Difference (RPD) of the LCS/LCSD exceeded the acceptance limit for Chloromethane.

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

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: D1 (135071)**

**Lab ID#: 1401271-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.48	0.72	2.4
Freon 11	0.15	0.19	0.82	1.1
Ethanol	0.73	1.7	1.4	3.2
Acetone	0.73	1.6	1.7	3.8
Hexane	0.15	0.18	0.51	0.63

**Client Sample ID: D2 (135072)**

**Lab ID#: 1401271-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.14	0.45	0.70	2.2
Freon 11	0.14	0.20	0.80	1.1
Ethanol	0.71	1.1	1.3	2.0
Acetone	0.71	1.5	1.7	3.6
Hexane	0.14	0.17	0.50	0.59
Toluene	0.14	0.14	0.54	0.54

**Client Sample ID: U1 (135073)**

**Lab ID#: 1401271-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.47	0.76	2.3
Freon 11	0.15	0.20	0.86	1.1
Ethanol	0.77	0.86	1.4	1.6
Acetone	0.77	0.92	1.8	2.2

**Client Sample ID: U2 (135074)**

**Lab ID#: 1401271-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.44	0.72	2.2
Freon 11	0.15	0.20	0.82	1.1

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

**Client Sample ID: U2 (135074)**

**Lab ID#: 1401271-04A**

Ethanol	0.73	0.92	1.4	1.7
Acetone	0.73	1.0	1.7	2.4
Methylene Chloride	0.29	0.30	1.0	1.0



Air Toxics

Client Sample ID: D1 (135071)

Lab ID#: 1401271-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c012313	Date of Collection:	1/15/14 1:58:00 PM
Dil. Factor:	1.46	Date of Analysis:	1/23/14 06:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.48	0.72	2.4
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	0.19	0.82	1.1
Ethanol	0.73	1.7	1.4	3.2
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Acetone	0.73	1.6	1.7	3.8
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	0.18	0.51	0.63
1,1-Dichloroethane	0.15	Not Detected	0.59	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.73	Not Detected	2.2	Not Detected
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	Not Detected	0.47	Not Detected
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	Not Detected	0.55	Not Detected
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 (135071)

Lab ID#: 1401271-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c012313	Date of Collection:	1/15/14 1:58:00 PM
Dil. Factor:	1.46	Date of Analysis:	1/23/14 06:45 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	92	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	87	70-130



Air Toxics

Client Sample ID: D2 (135072)

Lab ID#: 1401271-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c012314	Date of Collection:	1/15/14 3:17:00 PM
Dil. Factor:	1.42	Date of Analysis:	1/23/14 07:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.14	0.45	0.70	2.2
Freon 114	0.14	Not Detected	0.99	Not Detected
Chloromethane	0.71	Not Detected	1.5	Not Detected
Vinyl Chloride	0.14	Not Detected	0.36	Not Detected
1,3-Butadiene	0.14	Not Detected	0.31	Not Detected
Bromomethane	0.71	Not Detected	2.8	Not Detected
Chloroethane	0.71	Not Detected	1.9	Not Detected
Freon 11	0.14	0.20	0.80	1.1
Ethanol	0.71	1.1	1.3	2.0
Freon 113	0.14	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.14	Not Detected	0.56	Not Detected
Acetone	0.71	1.5	1.7	3.6
2-Propanol	0.71	Not Detected	1.7	Not Detected
Carbon Disulfide	0.71	Not Detected	2.2	Not Detected
3-Chloropropene	0.71	Not Detected	2.2	Not Detected
Methylene Chloride	0.28	Not Detected	0.99	Not Detected
Methyl tert-butyl ether	0.14	Not Detected	0.51	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.56	Not Detected
Hexane	0.14	0.17	0.50	0.59
1,1-Dichloroethane	0.14	Not Detected	0.57	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.71	Not Detected	2.1	Not Detected
cis-1,2-Dichloroethene	0.14	Not Detected	0.56	Not Detected
Tetrahydrofuran	0.71	Not Detected	2.1	Not Detected
Chloroform	0.14	Not Detected	0.69	Not Detected
1,1,1-Trichloroethane	0.14	Not Detected	0.77	Not Detected
Cyclohexane	0.14	Not Detected	0.49	Not Detected
Carbon Tetrachloride	0.14	Not Detected	0.89	Not Detected
2,2,4-Trimethylpentane	0.71	Not Detected	3.3	Not Detected
Benzene	0.14	Not Detected	0.45	Not Detected
1,2-Dichloroethane	0.14	Not Detected	0.57	Not Detected
Heptane	0.14	Not Detected	0.58	Not Detected
Trichloroethene	0.14	Not Detected	0.76	Not Detected
1,2-Dichloropropane	0.14	Not Detected	0.66	Not Detected
1,4-Dioxane	0.14	Not Detected	0.51	Not Detected
Bromodichloromethane	0.14	Not Detected	0.95	Not Detected
cis-1,3-Dichloropropene	0.14	Not Detected	0.64	Not Detected
4-Methyl-2-pentanone	0.14	Not Detected	0.58	Not Detected
Toluene	0.14	0.14	0.54	0.54
trans-1,3-Dichloropropene	0.14	Not Detected	0.64	Not Detected
1,1,2-Trichloroethane	0.14	Not Detected	0.77	Not Detected
Tetrachloroethene	0.14	Not Detected	0.96	Not Detected
2-Hexanone	0.71	Not Detected	2.9	Not Detected

Client Sample ID: D2 (135072)

Lab ID#: 1401271-02A

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

<b>File Name:</b>	<b>c012314</b>	<b>Date of Collection:</b> 1/15/14 3:17:00 PM
<b>Dil. Factor:</b>	<b>1.42</b>	<b>Date of Analysis:</b> 1/23/14 07:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.14	Not Detected	1.2	Not Detected
1,2-Dibromoethane (EDB)	0.14	Not Detected	1.1	Not Detected
Chlorobenzene	0.14	Not Detected	0.65	Not Detected
Ethyl Benzene	0.14	Not Detected	0.62	Not Detected
m,p-Xylene	0.14	Not Detected	0.62	Not Detected
o-Xylene	0.14	Not Detected	0.62	Not Detected
Styrene	0.14	Not Detected	0.60	Not Detected
Bromoform	0.14	Not Detected	1.5	Not Detected
Cumene	0.14	Not Detected	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.14	Not Detected	0.97	Not Detected
Propylbenzene	0.14	Not Detected	0.70	Not Detected
4-Ethyltoluene	0.14	Not Detected	0.70	Not Detected
1,3,5-Trimethylbenzene	0.14	Not Detected	0.70	Not Detected
1,2,4-Trimethylbenzene	0.14	Not Detected	0.70	Not Detected
1,3-Dichlorobenzene	0.14	Not Detected	0.85	Not Detected
1,4-Dichlorobenzene	0.14	Not Detected	0.85	Not Detected
alpha-Chlorotoluene	0.14	Not Detected	0.74	Not Detected
1,2-Dichlorobenzene	0.14	Not Detected	0.85	Not Detected
1,2,4-Trichlorobenzene	0.71	Not Detected	5.3	Not Detected
Hexachlorobutadiene	0.71	Not Detected	7.6	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: U1 (135073)

Lab ID#: 1401271-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c012315	Date of Collection:	1/15/14 2:36:00 PM
Dil. Factor:	1.54	Date of Analysis:	1/23/14 08:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.47	0.76	2.3
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	0.20	0.86	1.1
Ethanol	0.77	0.86	1.4	1.6
Freon 113	0.15	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Acetone	0.77	0.92	1.8	2.2
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	Not Detected	0.49	Not Detected
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: U1 (135073)

Lab ID#: 1401271-03A

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

<b>File Name:</b>	<b>c012315</b>	<b>Date of Collection:</b> 1/15/14 2:36:00 PM
<b>Dil. Factor:</b>	<b>1.54</b>	<b>Date of Analysis:</b> 1/23/14 08:30 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	95	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	87	70-130



Air Toxics

Client Sample ID: U2 (135074)

Lab ID#: 1401271-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c012316	Date of Collection:	1/15/14 2:46:00 PM
Dil. Factor:	1.46	Date of Analysis:	1/23/14 09:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.44	0.72	2.2
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	0.20	0.82	1.1
Ethanol	0.73	0.92	1.4	1.7
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Acetone	0.73	1.0	1.7	2.4
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	0.30	1.0	1.0
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	Not Detected	2.2	Not Detected
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	Not Detected	0.47	Not Detected
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	Not Detected	0.55	Not Detected
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: U2 (135074)

Lab ID#: 1401271-04A

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

<b>File Name:</b>	<b>c012316</b>	<b>Date of Collection:</b> 1/15/14 2:46:00 PM
<b>Dil. Factor:</b>	<b>1.46</b>	<b>Date of Analysis:</b> 1/23/14 09:13 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	94	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1401271-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c012306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/23/14 12:58 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#: 1401271-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c012306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/23/14 12:58 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	88	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1401271-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c012302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/23/14 09:34 AM

Compound	%Recovery
Freon 12	98
Freon 114	104
Chloromethane	102
Vinyl Chloride	105
1,3-Butadiene	105
Bromomethane	115
Chloroethane	100
Freon 11	94
Ethanol	108
Freon 113	100
1,1-Dichloroethene	94
Acetone	95
2-Propanol	98
Carbon Disulfide	100
3-Chloropropene	105
Methylene Chloride	96
Methyl tert-butyl ether	104
trans-1,2-Dichloroethene	99
Hexane	100
1,1-Dichloroethane	95
2-Butanone (Methyl Ethyl Ketone)	101
cis-1,2-Dichloroethene	100
Tetrahydrofuran	102
Chloroform	98
1,1,1-Trichloroethane	93
Cyclohexane	106
Carbon Tetrachloride	87
2,2,4-Trimethylpentane	97
Benzene	96
1,2-Dichloroethane	94
Heptane	98
Trichloroethene	95
1,2-Dichloropropane	96
1,4-Dioxane	103
Bromodichloromethane	99
cis-1,3-Dichloropropene	101
4-Methyl-2-pentanone	107
Toluene	100
trans-1,3-Dichloropropene	96
1,1,2-Trichloroethane	104
Tetrachloroethene	105
2-Hexanone	95

Client Sample ID: CCV

Lab ID#: 1401271-06A

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

<b>File Name:</b>	<b>c012302</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 1/23/14 09:34 AM

<b>Compound</b>	<b>%Recovery</b>
Dibromochloromethane	103
1,2-Dibromoethane (EDB)	104
Chlorobenzene	99
Ethyl Benzene	100
m,p-Xylene	106
o-Xylene	104
Styrene	103
Bromoform	103
Cumene	98
1,1,2,2-Tetrachloroethane	95
Propylbenzene	95
4-Ethyltoluene	96
1,3,5-Trimethylbenzene	94
1,2,4-Trimethylbenzene	92
1,3-Dichlorobenzene	86
1,4-Dichlorobenzene	103
alpha-Chlorotoluene	107
1,2-Dichlorobenzene	98
1,2,4-Trichlorobenzene	81
Hexachlorobutadiene	80

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1401271-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c012303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/23/14 10:19 AM

Compound	%Recovery	Method Limits
Freon 12	92	70-130
Freon 114	97	70-130
Chloromethane	96	70-130
Vinyl Chloride	101	70-130
1,3-Butadiene	100	70-130
Bromomethane	114	70-130
Chloroethane	101	70-130
Freon 11	92	70-130
Ethanol	111	70-130
Freon 113	118	70-130
1,1-Dichloroethene	109	70-130
Acetone	99	70-130
2-Propanol	100	70-130
Carbon Disulfide	93	70-130
3-Chloropropene	109	70-130
Methylene Chloride	109	70-130
Methyl tert-butyl ether	105	70-130
trans-1,2-Dichloroethene	84	70-130
Hexane	105	70-130
1,1-Dichloroethane	98	70-130
2-Butanone (Methyl Ethyl Ketone)	106	70-130
cis-1,2-Dichloroethene	117	70-130
Tetrahydrofuran	102	70-130
Chloroform	98	70-130
1,1,1-Trichloroethane	95	70-130
Cyclohexane	112	70-130
Carbon Tetrachloride	99	70-130
2,2,4-Trimethylpentane	100	70-130
Benzene	103	70-130
1,2-Dichloroethane	98	70-130
Heptane	107	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	101	70-130
1,4-Dioxane	112	70-130
Bromodichloromethane	108	70-130
cis-1,3-Dichloropropene	112	70-130
4-Methyl-2-pentanone	117	70-130
Toluene	108	70-130
trans-1,3-Dichloropropene	97	70-130
1,1,2-Trichloroethane	109	70-130
Tetrachloroethene	114	70-130
2-Hexanone	111	70-130

Client Sample ID: LCS

Lab ID#: 1401271-07A

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

<b>File Name:</b>	<b>c012303</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 1/23/14 10:19 AM

<b>Compound</b>	<b>%Recovery</b>	<b>Method Limits</b>
Dibromochloromethane	116	70-130
1,2-Dibromoethane (EDB)	111	70-130
Chlorobenzene	106	70-130
Ethyl Benzene	108	70-130
m,p-Xylene	109	70-130
o-Xylene	107	70-130
Styrene	111	70-130
Bromoform	117	70-130
Cumene	104	70-130
1,1,2,2-Tetrachloroethane	97	70-130
Propylbenzene	100	70-130
4-Ethyltoluene	99	70-130
1,3,5-Trimethylbenzene	95	70-130
1,2,4-Trimethylbenzene	95	70-130
1,3-Dichlorobenzene	84	70-130
1,4-Dichlorobenzene	102	70-130
alpha-Chlorotoluene	116	70-130
1,2-Dichlorobenzene	95	70-130
1,2,4-Trichlorobenzene	76	70-130
Hexachlorobutadiene	66 Q	70-130

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1401271-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c012304	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/23/14 10:55 AM

Compound	%Recovery	Method Limits
Freon 12	82	70-130
Freon 114	86	70-130
Chloromethane	74	70-130
Vinyl Chloride	90	70-130
1,3-Butadiene	91	70-130
Bromomethane	113	70-130
Chloroethane	97	70-130
Freon 11	88	70-130
Ethanol	114	70-130
Freon 113	110	70-130
1,1-Dichloroethene	108	70-130
Acetone	93	70-130
2-Propanol	93	70-130
Carbon Disulfide	88	70-130
3-Chloropropene	105	70-130
Methylene Chloride	104	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	82	70-130
Hexane	99	70-130
1,1-Dichloroethane	90	70-130
2-Butanone (Methyl Ethyl Ketone)	101	70-130
cis-1,2-Dichloroethene	111	70-130
Tetrahydrofuran	96	70-130
Chloroform	91	70-130
1,1,1-Trichloroethane	87	70-130
Cyclohexane	108	70-130
Carbon Tetrachloride	93	70-130
2,2,4-Trimethylpentane	96	70-130
Benzene	101	70-130
1,2-Dichloroethane	97	70-130
Heptane	106	70-130
Trichloroethene	103	70-130
1,2-Dichloropropane	102	70-130
1,4-Dioxane	110	70-130
Bromodichloromethane	106	70-130
cis-1,3-Dichloropropene	111	70-130
4-Methyl-2-pentanone	115	70-130
Toluene	105	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	110	70-130
Tetrachloroethene	113	70-130
2-Hexanone	113	70-130

Client Sample ID: LCSD

Lab ID#: 1401271-07AA

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

File Name:	c012304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/23/14 10:55 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	112	70-130
Chlorobenzene	105	70-130
Ethyl Benzene	106	70-130
m,p-Xylene	114	70-130
o-Xylene	108	70-130
Styrene	110	70-130
Bromoform	116	70-130
Cumene	107	70-130
1,1,2,2-Tetrachloroethane	98	70-130
Propylbenzene	102	70-130
4-Ethyltoluene	105	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	94	70-130
1,3-Dichlorobenzene	89	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	124	70-130
1,2-Dichlorobenzene	99	70-130
1,2,4-Trichlorobenzene	79	70-130
Hexachlorobutadiene	68 Q	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	81	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130