



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 Michael Ferris

Collected by: (Print and Sign) Teresa Perry / Transport

Company MO DNR Email Michael.perry@dnr.mo.gov

Address P.O. Box 174 City Jefferson City State Mo Zip 65102

Phone (573) 526-3918 Fax \_\_\_\_\_

Project Info:

P.O. # 35540007

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

Project Name Biggsen landfill

Turn Around Time:

Normal

Rush

Specify \_\_\_\_\_

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 (153408)

61218

8/25/15

10:05

T0-15

-30 -8

D2 (153409)

61265

8/25/15

11:55

T0-15

-30 -65

V1 (153410)

13344

8/25/15

12:25

T0-15

-30 -65

V2 (~~9946~~) (153411)

9946

8/25/15

10:52

T0-15

-30 -6

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Notes:

[Signature] 8/25/15 16:36

[Signature] 8/25/15 10:34

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Shipped via UPS  
Tracking # 1Z612788034580 6488

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Lab Use Only

Shipper Name

Air Bill #

Temp (°C)

Condition

Custody Seals Intact?

Work Order #

UPS

N/A

Good

Yes  No  None

1508522

9/14/2015  
Mr. Dennis Schroeder  
Missouri Dept. of Natural Resources  
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill  
Project #:  
Workorder #: 1508522

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 8/31/2015 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 Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free 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 #: 1508522**

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>	3ESP4000007
<b>FAX:</b>	573-526-3350	<b>PROJECT #</b>	Bridgeton Landfill
<b>DATE RECEIVED:</b>	08/31/2015	<b>CONTACT:</b>	Brian Whittaker
<b>DATE COMPLETED:</b>	09/14/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1(153408)	Modified TO-15	6.7 "Hg	5.2 psi
02A	D2(153409)	Modified TO-15	6.9 "Hg	4.9 psi
03A	U1(153410)	Modified TO-15	7.6 "Hg	5.2 psi
04A	U2(153411)	Modified TO-15	6.1 "Hg	5.1 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: 09/14/15

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  
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**LABORATORY NARRATIVE**  
**Modified TO-15**  
**Missouri Dept. of Natural Resources**  
**Workorder# 1508522**

Four 6 Liter Summa Canister (100% Certified) samples were received on August 31, 2015. 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	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	$\leq 30\%$ 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. Target compound non-detects in the samples that are associated with high bias in CCV analyses have not been flagged.

Due to the linear calibration range of the instrument, the reporting limit for Freon 12, 4-Methyl-2-pentanone and alpha-Chlorotoluene was raised from 0.10ppbv to 0.50ppbv.

### **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(153408)**

**Lab ID#: 1508522-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.22	0.98	1.2
Ethanol	0.87	4.3	1.6	8.1
Acetone	0.87	12	2.1	29
2-Butanone (Methyl Ethyl Ketone)	0.87	1.9	2.6	5.5
m,p-Xylene	0.17	0.22	0.76	0.96

**Client Sample ID: D2(153409)**

**Lab ID#: 1508522-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.19	0.97	1.1
Ethanol	0.86	10	1.6	19
Acetone	0.86	11	2.0	27
2-Butanone (Methyl Ethyl Ketone)	0.86	1.6	2.6	4.7
Toluene	0.17	0.52	0.65	2.0

**Client Sample ID: U1(153410)**

**Lab ID#: 1508522-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.18	0.24	1.0	1.3
Ethanol	0.90	3.0	1.7	5.7
Acetone	0.90	4.0	2.1	9.6
Hexane	0.18	0.18	0.64	0.64
Toluene	0.18	0.58	0.68	2.2
m,p-Xylene	0.18	0.23	0.78	0.98

**Client Sample ID: U2(153411)**

**Lab ID#: 1508522-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.22	0.95	1.2

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

**Client Sample ID: U2(153411)**

**Lab ID#: 1508522-04A**

Ethanol	0.84	10	1.6	19
Acetone	0.84	5.2	2.0	12
2-Propanol	0.84	1.0 J0	2.1	2.4 J0
Methylene Chloride	0.34	0.64	1.2	2.2
Hexane	0.17	0.22	0.60	0.78
Benzene	0.17	0.17	0.54	0.54
Heptane	0.17	0.26	0.69	1.0
1,4-Dioxane	0.17	0.19	0.61	0.68
Toluene	0.17	2.2	0.64	8.1
Ethyl Benzene	0.17	0.21	0.73	0.90
m,p-Xylene	0.17	0.68	0.73	2.9
o-Xylene	0.17	0.26	0.73	1.1
4-Ethyltoluene	0.17	0.27	0.83	1.3
1,2,4-Trimethylbenzene	0.17	0.29	0.83	1.4



Air Toxics

Client Sample ID: D1(153408)

Lab ID#: 1508522-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v091011	Date of Collection:	8/25/15 4:05:00 PM
Dil. Factor:	1.74	Date of Analysis:	9/10/15 03:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.87	Not Detected	4.3	Not Detected
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.87	Not Detected	1.8	Not Detected
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.87	Not Detected	3.4	Not Detected
Chloroethane	0.87	Not Detected	2.3	Not Detected
Freon 11	0.17	0.22	0.98	1.2
Ethanol	0.87	4.3	1.6	8.1
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.69	Not Detected
Acetone	0.87	12	2.1	29
2-Propanol	0.87	Not Detected	2.1	Not Detected
Carbon Disulfide	0.87	Not Detected	2.7	Not Detected
3-Chloropropene	0.87	Not Detected	2.7	Not Detected
Methylene Chloride	0.35	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.63	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.69	Not Detected
Hexane	0.17	Not Detected	0.61	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.87	1.9	2.6	5.5
cis-1,2-Dichloroethene	0.17	Not Detected	0.69	Not Detected
Tetrahydrofuran	0.87	Not Detected	2.6	Not Detected
Chloroform	0.17	Not Detected	0.85	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.95	Not Detected
Cyclohexane	0.17	Not Detected	0.60	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.87	Not Detected	4.1	Not Detected
Benzene	0.17	Not Detected	0.56	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.70	Not Detected
Heptane	0.17	Not Detected	0.71	Not Detected
Trichloroethene	0.17	Not Detected	0.94	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.80	Not Detected
1,4-Dioxane	0.17	Not Detected	0.63	Not Detected
Bromodichloromethane	0.17	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.79	Not Detected
4-Methyl-2-pentanone	0.87	Not Detected	3.6	Not Detected
Toluene	0.17	Not Detected	0.66	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.79	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.95	Not Detected
Tetrachloroethene	0.17	Not Detected	1.2	Not Detected
2-Hexanone	0.87	Not Detected	3.6	Not Detected





Client Sample ID: D1(153408)

Lab ID#: 1508522-01A

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

<b>File Name:</b>	<b>v091011</b>	<b>Date of Collection:</b> 8/25/15 4:05:00 PM
<b>Dil. Factor:</b>	<b>1.74</b>	<b>Date of Analysis:</b> 9/10/15 03:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.80	Not Detected
Ethyl Benzene	0.17	Not Detected	0.76	Not Detected
m,p-Xylene	0.17	0.22	0.76	0.96
o-Xylene	0.17	Not Detected	0.76	Not Detected
Styrene	0.17	Not Detected	0.74	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.86	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.86	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.86	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.86	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.86	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.87	Not Detected	4.5	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.87	Not Detected	6.4	Not Detected
Hexachlorobutadiene	0.87	Not Detected	9.3	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: D2(153409)

Lab ID#: 1508522-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v091012	Date of Collection:	8/25/15 3:58:00 PM
Dil. Factor:	1.73	Date of Analysis:	9/10/15 04:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.86	Not Detected	4.3	Not Detected
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.86	Not Detected	1.8	Not Detected
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.86	Not Detected	3.4	Not Detected
Chloroethane	0.86	Not Detected	2.3	Not Detected
Freon 11	0.17	0.19	0.97	1.1
Ethanol	0.86	10	1.6	19
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	11	2.0	27
2-Propanol	0.86	Not Detected	2.1	Not Detected
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.35	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Hexane	0.17	Not Detected	0.61	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	1.6	2.6	4.7
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.6	Not Detected
Chloroform	0.17	Not Detected	0.84	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Cyclohexane	0.17	Not Detected	0.60	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.86	Not Detected	4.0	Not Detected
Benzene	0.17	Not Detected	0.55	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.70	Not Detected
Heptane	0.17	Not Detected	0.71	Not Detected
Trichloroethene	0.17	Not Detected	0.93	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.80	Not Detected
1,4-Dioxane	0.17	Not Detected	0.62	Not Detected
Bromodichloromethane	0.17	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.86	Not Detected	3.5	Not Detected
Toluene	0.17	0.52	0.65	2.0
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Tetrachloroethene	0.17	Not Detected	1.2	Not Detected
2-Hexanone	0.86	Not Detected	3.5	Not Detected

Client Sample ID: D2(153409)

Lab ID#: 1508522-02A

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

<b>File Name:</b>	<b>v091012</b>	<b>Date of Collection:</b> 8/25/15 3:58:00 PM
<b>Dil. Factor:</b>	<b>1.73</b>	<b>Date of Analysis:</b> 9/10/15 04:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.80	Not Detected
Ethyl Benzene	0.17	Not Detected	0.75	Not Detected
m,p-Xylene	0.17	Not Detected	0.75	Not Detected
o-Xylene	0.17	Not Detected	0.75	Not Detected
Styrene	0.17	Not Detected	0.74	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.85	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.85	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.85	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.85	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.85	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.86	Not Detected	4.5	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.4	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.2	Not Detected

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

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



Air Toxics

Client Sample ID: U1(153410)

Lab ID#: 1508522-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v091013	Date of Collection:	8/25/15 4:16:00 PM
Dil. Factor:	1.81	Date of Analysis:	9/10/15 05:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.90	Not Detected	4.5	Not Detected
Freon 114	0.18	Not Detected	1.3	Not Detected
Chloromethane	0.90	Not Detected	1.9	Not Detected
Vinyl Chloride	0.18	Not Detected	0.46	Not Detected
1,3-Butadiene	0.18	Not Detected	0.40	Not Detected
Bromomethane	0.90	Not Detected	3.5	Not Detected
Chloroethane	0.90	Not Detected	2.4	Not Detected
Freon 11	0.18	0.24	1.0	1.3
Ethanol	0.90	3.0	1.7	5.7
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Acetone	0.90	4.0	2.1	9.6
2-Propanol	0.90	Not Detected	2.2	Not Detected
Carbon Disulfide	0.90	Not Detected	2.8	Not Detected
3-Chloropropene	0.90	Not Detected	2.8	Not Detected
Methylene Chloride	0.36	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.65	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Hexane	0.18	0.18	0.64	0.64
1,1-Dichloroethane	0.18	Not Detected	0.73	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.90	Not Detected	2.7	Not Detected
cis-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Tetrahydrofuran	0.90	Not Detected	2.7	Not Detected
Chloroform	0.18	Not Detected	0.88	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.99	Not Detected
Cyclohexane	0.18	Not Detected	0.62	Not Detected
Carbon Tetrachloride	0.18	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.90	Not Detected	4.2	Not Detected
Benzene	0.18	Not Detected	0.58	Not Detected
1,2-Dichloroethane	0.18	Not Detected	0.73	Not Detected
Heptane	0.18	Not Detected	0.74	Not Detected
Trichloroethene	0.18	Not Detected	0.97	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.84	Not Detected
1,4-Dioxane	0.18	Not Detected	0.65	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.82	Not Detected
4-Methyl-2-pentanone	0.90	Not Detected	3.7	Not Detected
Toluene	0.18	0.58	0.68	2.2
trans-1,3-Dichloropropene	0.18	Not Detected	0.82	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	0.99	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
2-Hexanone	0.90	Not Detected	3.7	Not Detected

Client Sample ID: U1(153410)

Lab ID#: 1508522-03A

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

<b>File Name:</b>	<b>v091013</b>	<b>Date of Collection:</b>	<b>8/25/15 4:16:00 PM</b>
<b>Dil. Factor:</b>	<b>1.81</b>	<b>Date of Analysis:</b>	<b>9/10/15 05:03 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Dibromochloromethane	0.18	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.83	Not Detected
Ethyl Benzene	0.18	Not Detected	0.78	Not Detected
m,p-Xylene	0.18	0.23	0.78	0.98
o-Xylene	0.18	Not Detected	0.78	Not Detected
Styrene	0.18	Not Detected	0.77	Not Detected
Bromoform	0.18	Not Detected	1.9	Not Detected
Cumene	0.18	Not Detected	0.89	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
Propylbenzene	0.18	Not Detected	0.89	Not Detected
4-Ethyltoluene	0.18	Not Detected	0.89	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.89	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.89	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.90	Not Detected	4.7	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.90	Not Detected	6.7	Not Detected
Hexachlorobutadiene	0.90	Not Detected	9.6	Not Detected

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

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: U2(153411)

Lab ID#: 1508522-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v091014	Date of Collection:	8/25/15 4:22:00 PM
Dil. Factor:	1.69	Date of Analysis:	9/10/15 05:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.84	Not Detected	4.2	Not Detected
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.84	Not Detected	1.7	Not Detected
Vinyl Chloride	0.17	Not Detected	0.43	Not Detected
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected
Bromomethane	0.84	Not Detected	3.3	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Freon 11	0.17	0.22	0.95	1.2
Ethanol	0.84	10	1.6	19
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	5.2	2.0	12
2-Propanol	0.84	1.0 J0	2.1	2.4 J0
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
3-Chloropropene	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.34	0.64	1.2	2.2
Methyl tert-butyl ether	0.17	Not Detected	0.61	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Hexane	0.17	0.22	0.60	0.78
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	Not Detected	2.5	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Tetrahydrofuran	0.84	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.82	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Cyclohexane	0.17	Not Detected	0.58	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
Benzene	0.17	0.17	0.54	0.54
1,2-Dichloroethane	0.17	Not Detected	0.68	Not Detected
Heptane	0.17	0.26	0.69	1.0
Trichloroethene	0.17	Not Detected	0.91	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.78	Not Detected
1,4-Dioxane	0.17	0.19	0.61	0.68
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.77	Not Detected
4-Methyl-2-pentanone	0.84	Not Detected	3.5	Not Detected
Toluene	0.17	2.2	0.64	8.1
trans-1,3-Dichloropropene	0.17	Not Detected	0.77	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
2-Hexanone	0.84	Not Detected	3.5	Not Detected



Client Sample ID: U2(153411)

Lab ID#: 1508522-04A

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

<b>File Name:</b>	<b>v091014</b>	<b>Date of Collection:</b> 8/25/15 4:22:00 PM
<b>Dil. Factor:</b>	<b>1.69</b>	<b>Date of Analysis:</b> 9/10/15 05:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.78	Not Detected
Ethyl Benzene	0.17	0.21	0.73	0.90
m,p-Xylene	0.17	0.68	0.73	2.9
o-Xylene	0.17	0.26	0.73	1.1
Styrene	0.17	Not Detected	0.72	Not Detected
Bromoform	0.17	Not Detected	1.7	Not Detected
Cumene	0.17	Not Detected	0.83	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.83	Not Detected
4-Ethyltoluene	0.17	0.27	0.83	1.3
1,3,5-Trimethylbenzene	0.17	Not Detected	0.83	Not Detected
1,2,4-Trimethylbenzene	0.17	0.29	0.83	1.4
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.84	Not Detected	4.4	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.3	Not Detected
Hexachlorobutadiene	0.84	Not Detected	9.0	Not Detected

J0 = Estimated value due to bias in the CCV.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1508522-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v091007	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/10/15 12:31 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	0.10	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	0.50	Not Detected	2.0	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#: 1508522-05A

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

<b>File Name:</b>	<b>v091007</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 9/10/15 12:31 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
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	0.50	Not Detected	2.6	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

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1508522-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v091002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/10/15 08:56 AM

Compound	%Recovery
Freon 12	110
Freon 114	107
Chloromethane	103
Vinyl Chloride	108
1,3-Butadiene	111
Bromomethane	104
Chloroethane	106
Freon 11	108
Ethanol	128
Freon 113	107
1,1-Dichloroethene	105
Acetone	108
2-Propanol	135 Q
Carbon Disulfide	109
3-Chloropropene	107
Methylene Chloride	109
Methyl tert-butyl ether	106
trans-1,2-Dichloroethene	107
Hexane	101
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	107
cis-1,2-Dichloroethene	108
Tetrahydrofuran	110
Chloroform	109
1,1,1-Trichloroethane	98
Cyclohexane	112
Carbon Tetrachloride	104
2,2,4-Trimethylpentane	108
Benzene	107
1,2-Dichloroethane	106
Heptane	112
Trichloroethene	105
1,2-Dichloropropane	108
1,4-Dioxane	102
Bromodichloromethane	107
cis-1,3-Dichloropropene	108
4-Methyl-2-pentanone	109
Toluene	105
trans-1,3-Dichloropropene	112
1,1,2-Trichloroethane	107
Tetrachloroethene	103
2-Hexanone	116

Client Sample ID: CCV

Lab ID#: 1508522-06A

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

File Name:	v091002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/10/15 08:56 AM

Compound	%Recovery
Dibromochloromethane	107
1,2-Dibromoethane (EDB)	114
Chlorobenzene	111
Ethyl Benzene	110
m,p-Xylene	114
o-Xylene	120
Styrene	114
Bromoform	101
Cumene	116
1,1,2,2-Tetrachloroethane	101
Propylbenzene	111
4-Ethyltoluene	109
1,3,5-Trimethylbenzene	103
1,2,4-Trimethylbenzene	112
1,3-Dichlorobenzene	109
1,4-Dichlorobenzene	108
alpha-Chlorotoluene	110
1,2-Dichlorobenzene	100
1,2,4-Trichlorobenzene	90
Hexachlorobutadiene	92

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1508522-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v091003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/10/15 09:39 AM

Compound	%Recovery	Method Limits
Freon 12	119	70-130
Freon 114	118	70-130
Chloromethane	110	70-130
Vinyl Chloride	118	70-130
1,3-Butadiene	115	70-130
Bromomethane	114	70-130
Chloroethane	116	70-130
Freon 11	115	70-130
Ethanol	132 Q	70-130
Freon 113	112	70-130
1,1-Dichloroethene	111	70-130
Acetone	104	70-130
2-Propanol	124	70-130
Carbon Disulfide	101	70-130
3-Chloropropene	112	70-130
Methylene Chloride	106	70-130
Methyl tert-butyl ether	109	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	105	70-130
1,1-Dichloroethane	111	70-130
2-Butanone (Methyl Ethyl Ketone)	115	70-130
cis-1,2-Dichloroethene	122	70-130
Tetrahydrofuran	116	70-130
Chloroform	112	70-130
1,1,1-Trichloroethane	104	70-130
Cyclohexane	117	70-130
Carbon Tetrachloride	114	70-130
2,2,4-Trimethylpentane	114	70-130
Benzene	109	70-130
1,2-Dichloroethane	108	70-130
Heptane	115	70-130
Trichloroethene	104	70-130
1,2-Dichloropropane	113	70-130
1,4-Dioxane	110	70-130
Bromodichloromethane	113	70-130
cis-1,3-Dichloropropene	102	70-130
4-Methyl-2-pentanone	113	70-130
Toluene	108	70-130
trans-1,3-Dichloropropene	112	70-130
1,1,2-Trichloroethane	110	70-130
Tetrachloroethene	108	70-130
2-Hexanone	138 Q	70-130

Client Sample ID: LCS

Lab ID#: 1508522-07A

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

<b>File Name:</b>	<b>v091003</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 9/10/15 09:39 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	112	70-130
1,2-Dibromoethane (EDB)	117	70-130
Chlorobenzene	112	70-130
Ethyl Benzene	114	70-130
m,p-Xylene	120	70-130
o-Xylene	125	70-130
Styrene	124	70-130
Bromoform	115	70-130
Cumene	120	70-130
1,1,2,2-Tetrachloroethane	106	70-130
Propylbenzene	120	70-130
4-Ethyltoluene	118	70-130
1,3,5-Trimethylbenzene	110	70-130
1,2,4-Trimethylbenzene	114	70-130
1,3-Dichlorobenzene	111	70-130
1,4-Dichlorobenzene	110	70-130
alpha-Chlorotoluene	118	70-130
1,2-Dichlorobenzene	102	70-130
1,2,4-Trichlorobenzene	97	70-130
Hexachlorobutadiene	100	70-130

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1508522-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v091004	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/10/15 10:20 AM

Compound	%Recovery	Method Limits
Freon 12	118	70-130
Freon 114	118	70-130
Chloromethane	108	70-130
Vinyl Chloride	117	70-130
1,3-Butadiene	109	70-130
Bromomethane	110	70-130
Chloroethane	114	70-130
Freon 11	114	70-130
Ethanol	132 Q	70-130
Freon 113	112	70-130
1,1-Dichloroethene	115	70-130
Acetone	106	70-130
2-Propanol	121	70-130
Carbon Disulfide	97	70-130
3-Chloropropene	113	70-130
Methylene Chloride	112	70-130
Methyl tert-butyl ether	109	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	106	70-130
1,1-Dichloroethane	110	70-130
2-Butanone (Methyl Ethyl Ketone)	114	70-130
cis-1,2-Dichloroethene	124	70-130
Tetrahydrofuran	114	70-130
Chloroform	112	70-130
1,1,1-Trichloroethane	104	70-130
Cyclohexane	112	70-130
Carbon Tetrachloride	114	70-130
2,2,4-Trimethylpentane	111	70-130
Benzene	107	70-130
1,2-Dichloroethane	107	70-130
Heptane	114	70-130
Trichloroethene	104	70-130
1,2-Dichloropropane	109	70-130
1,4-Dioxane	103	70-130
Bromodichloromethane	113	70-130
cis-1,3-Dichloropropene	103	70-130
4-Methyl-2-pentanone	114	70-130
Toluene	105	70-130
trans-1,3-Dichloropropene	112	70-130
1,1,2-Trichloroethane	112	70-130
Tetrachloroethene	109	70-130
2-Hexanone	134 Q	70-130

Client Sample ID: LCSD

Lab ID#: 1508522-07AA

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

File Name:	v091004	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/10/15 10:20 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	112	70-130
1,2-Dibromoethane (EDB)	118	70-130
Chlorobenzene	112	70-130
Ethyl Benzene	112	70-130
m,p-Xylene	119	70-130
o-Xylene	128	70-130
Styrene	121	70-130
Bromoform	115	70-130
Cumene	118	70-130
1,1,2,2-Tetrachloroethane	105	70-130
Propylbenzene	117	70-130
4-Ethyltoluene	115	70-130
1,3,5-Trimethylbenzene	108	70-130
1,2,4-Trimethylbenzene	112	70-130
1,3-Dichlorobenzene	110	70-130
1,4-Dichlorobenzene	112	70-130
alpha-Chlorotoluene	118	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	102	70-130
Hexachlorobutadiene	104	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130