



Air Toxics

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Page 1 of 1

Project Manager Michael Parry

Collected by: (Print and Sign) Michael Parry

Company MO DVE

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City Jefferson City State MO Zip 65102

Fax

Project Info:

P.O. # 3ESP400007

Project #

Project Name Bridgeton LF

Turn Around Time:

Normal

Rush

Lab Use Only Pressurized by:

Date:

Pressurization Gas:

N2 He

Table with columns: Lab I.D., Field Sample I.D. (Location), Can #, Date of Collection, Time of Collection, Analyses Requested, Canister Pressure/Vacuum (Initial, Final, Receipt, Final), Relinquished by, Date/Time, Received by, Date/Time, Notes.

Lab Use Only: Shipper Name, Air Bill #, Temp (C), Condition, Custody Seals Intact?, Work Order #

1/27/2015

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

Jefferson City MO 65109

Project Name: Bridgeton LF

Project #:

Workorder #: 1501145

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 1/14/2015 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 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 #: 1501145**

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 LF
<b>DATE RECEIVED:</b>	01/14/2015	<b>CONTACT:</b>	Brian Whittaker
<b>DATE COMPLETED:</b>	01/27/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	b1 (1412730)	Modified TO-15	2 "Hg	4.8 psi
02A	b2 (1412731)	Modified TO-15	3.1 "Hg	5.1 psi
03A	U1 (1412732)	Modified TO-15	1.8 "Hg	5 psi
04A	U2 (1412733)	Modified TO-15	1.6 "Hg	4.9 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: 01/27/15

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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**LABORATORY NARRATIVE**  
**Modified TO-15**  
**Missouri Dept. of Natural Resources**  
**Workorder# 1501145**

Four 6 Liter Summa Canister (100% Certified) samples were received on January 14, 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.

### **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: b1 (1412730)**

**Lab ID#: 1501145-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.14	0.43	0.70	2.1
Freon 11	0.14	0.21	0.80	1.2
Ethanol	0.71	30	1.3	57
Acetone	0.71	1.5 J0	1.7	3.6 J0
2-Propanol	0.71	1.6	1.7	4.0
Carbon Disulfide	0.71	2.9	2.2	9.0
Benzene	0.14	0.19	0.45	0.61
Toluene	0.14	0.18	0.54	0.67

**Client Sample ID: b2 (1412731)**

**Lab ID#: 1501145-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.41	0.74	2.0
Freon 11	0.15	0.19	0.84	1.0
Ethanol	0.75	1.4	1.4	2.6
Acetone	0.75	0.80 J0	1.8	1.9 J0
Benzene	0.15	0.36	0.48	1.1

**Client Sample ID: U1 (1412732)**

**Lab ID#: 1501145-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.14	0.40	0.71	2.0
Freon 11	0.14	0.21	0.80	1.2
Ethanol	0.72	37	1.3	69
Acetone	0.72	1.6 J0	1.7	3.8 J0
2-Propanol	0.72	2.1	1.8	5.2
Toluene	0.14	0.53	0.54	2.0

**Client Sample ID: U2 (1412733)**

**Lab ID#: 1501145-04A**

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

**Client Sample ID: U2 (1412733)**

**Lab ID#: 1501145-04A**

<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	0.14	0.44	0.70	2.2
Freon 11	0.14	0.19	0.79	1.1
Ethanol	0.70	1.6	1.3	3.0



Air Toxics

Client Sample ID: b1 (1412730)

Lab ID#: 1501145-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e011508	Date of Collection:	1/7/15 4:30:00 PM
Dil. Factor:	1.42	Date of Analysis:	1/16/15 05:27 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.14	0.43	0.70	2.1
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	0.21	0.80	1.2
Ethanol	0.71	30	1.3	57
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 J0	1.7	3.6 J0
2-Propanol	0.71	1.6	1.7	4.0
Carbon Disulfide	0.71	2.9	2.2	9.0
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	Not Detected	0.50	Not Detected
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	0.19	0.45	0.61
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	0.18	0.54	0.67
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: b1 (1412730)

Lab ID#: 1501145-01A

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

File Name:	e011508	Date of Collection:	1/7/15 4:30:00 PM
Dil. Factor:	1.42	Date of Analysis:	1/16/15 05:27 AM

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

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	103	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	99	70-130





Air Toxics

Client Sample ID: b2 (1412731)

Lab ID#: 1501145-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e011509	Date of Collection:	1/7/15 4:40:00 PM
Dil. Factor:	1.50	Date of Analysis:	1/16/15 06:13 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.41	0.74	2.0
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.75	Not Detected	1.5	Not Detected
Vinyl Chloride	0.15	Not Detected	0.38	Not Detected
1,3-Butadiene	0.15	Not Detected	0.33	Not Detected
Bromomethane	0.75	Not Detected	2.9	Not Detected
Chloroethane	0.75	Not Detected	2.0	Not Detected
Freon 11	0.15	0.19	0.84	1.0
Ethanol	0.75	1.4	1.4	2.6
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Acetone	0.75	0.80 J0	1.8	1.9 J0
2-Propanol	0.75	Not Detected	1.8	Not Detected
Carbon Disulfide	0.75	Not Detected	2.3	Not Detected
3-Chloropropene	0.75	Not Detected	2.3	Not Detected
Methylene Chloride	0.30	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.54	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Hexane	0.15	Not Detected	0.53	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.61	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.75	Not Detected	2.2	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Tetrahydrofuran	0.75	Not Detected	2.2	Not Detected
Chloroform	0.15	Not Detected	0.73	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.82	Not Detected
Cyclohexane	0.15	Not Detected	0.52	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.94	Not Detected
2,2,4-Trimethylpentane	0.75	Not Detected	3.5	Not Detected
Benzene	0.15	0.36	0.48	1.1
1,2-Dichloroethane	0.15	Not Detected	0.61	Not Detected
Heptane	0.15	Not Detected	0.61	Not Detected
Trichloroethene	0.15	Not Detected	0.81	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.69	Not Detected
1,4-Dioxane	0.15	Not Detected	0.54	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.61	Not Detected
Toluene	0.15	Not Detected	0.56	Not Detected
trans-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.82	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.75	Not Detected	3.1	Not Detected

Client Sample ID: b2 (1412731)

Lab ID#: 1501145-02A

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

File Name:	e011509	Date of Collection:	1/7/15 4:40:00 PM
Dil. Factor:	1.50	Date of Analysis:	1/16/15 06:13 AM

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	0.69	Not Detected
Ethyl Benzene	0.15	Not Detected	0.65	Not Detected
m,p-Xylene	0.15	Not Detected	0.65	Not Detected
o-Xylene	0.15	Not Detected	0.65	Not Detected
Styrene	0.15	Not Detected	0.64	Not Detected
Bromoform	0.15	Not Detected	1.6	Not Detected
Cumene	0.15	Not Detected	0.74	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.74	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.74	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.74	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.74	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.78	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected	5.6	Not Detected
Hexachlorobutadiene	0.75	Not Detected	8.0	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	95	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: U1 (1412732)

Lab ID#: 1501145-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e011510	Date of Collection:	1/7/15 4:50:00 PM
Dil. Factor:	1.43	Date of Analysis:	1/16/15 06:57 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.14	0.40	0.71	2.0
Freon 114	0.14	Not Detected	1.0	Not Detected
Chloromethane	0.72	Not Detected	1.5	Not Detected
Vinyl Chloride	0.14	Not Detected	0.36	Not Detected
1,3-Butadiene	0.14	Not Detected	0.32	Not Detected
Bromomethane	0.72	Not Detected	2.8	Not Detected
Chloroethane	0.72	Not Detected	1.9	Not Detected
Freon 11	0.14	0.21	0.80	1.2
Ethanol	0.72	37	1.3	69
Freon 113	0.14	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.14	Not Detected	0.57	Not Detected
Acetone	0.72	1.6 J0	1.7	3.8 J0
2-Propanol	0.72	2.1	1.8	5.2
Carbon Disulfide	0.72	Not Detected	2.2	Not Detected
3-Chloropropene	0.72	Not Detected	2.2	Not Detected
Methylene Chloride	0.29	Not Detected	0.99	Not Detected
Methyl tert-butyl ether	0.14	Not Detected	0.52	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.57	Not Detected
Hexane	0.14	Not Detected	0.50	Not Detected
1,1-Dichloroethane	0.14	Not Detected	0.58	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.72	Not Detected	2.1	Not Detected
cis-1,2-Dichloroethene	0.14	Not Detected	0.57	Not Detected
Tetrahydrofuran	0.72	Not Detected	2.1	Not Detected
Chloroform	0.14	Not Detected	0.70	Not Detected
1,1,1-Trichloroethane	0.14	Not Detected	0.78	Not Detected
Cyclohexane	0.14	Not Detected	0.49	Not Detected
Carbon Tetrachloride	0.14	Not Detected	0.90	Not Detected
2,2,4-Trimethylpentane	0.72	Not Detected	3.3	Not Detected
Benzene	0.14	Not Detected	0.46	Not Detected
1,2-Dichloroethane	0.14	Not Detected	0.58	Not Detected
Heptane	0.14	Not Detected	0.59	Not Detected
Trichloroethene	0.14	Not Detected	0.77	Not Detected
1,2-Dichloropropane	0.14	Not Detected	0.66	Not Detected
1,4-Dioxane	0.14	Not Detected	0.52	Not Detected
Bromodichloromethane	0.14	Not Detected	0.96	Not Detected
cis-1,3-Dichloropropene	0.14	Not Detected	0.65	Not Detected
4-Methyl-2-pentanone	0.14	Not Detected	0.58	Not Detected
Toluene	0.14	0.53	0.54	2.0
trans-1,3-Dichloropropene	0.14	Not Detected	0.65	Not Detected
1,1,2-Trichloroethane	0.14	Not Detected	0.78	Not Detected
Tetrachloroethene	0.14	Not Detected	0.97	Not Detected
2-Hexanone	0.72	Not Detected	2.9	Not Detected

Client Sample ID: U1 (1412732)

Lab ID#: 1501145-03A

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

File Name:	e011510	Date of Collection:	1/7/15 4:50:00 PM
Dil. Factor:	1.43	Date of Analysis:	1/16/15 06:57 AM

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	0.66	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	0.61	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	0.98	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	0.86	Not Detected
1,4-Dichlorobenzene	0.14	Not Detected	0.86	Not Detected
alpha-Chlorotoluene	0.14	Not Detected	0.74	Not Detected
1,2-Dichlorobenzene	0.14	Not Detected	0.86	Not Detected
1,2,4-Trichlorobenzene	0.72	Not Detected	5.3	Not Detected
Hexachlorobutadiene	0.72	Not Detected	7.6	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	101	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: U2 (1412733)

Lab ID#: 1501145-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e011511	Date of Collection:	1/7/15 5:00:00 PM
Dil. Factor:	1.41	Date of Analysis:	1/16/15 07:41 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.14	0.44	0.70	2.2
Freon 114	0.14	Not Detected	0.98	Not Detected
Chloromethane	0.70	Not Detected	1.4	Not Detected
Vinyl Chloride	0.14	Not Detected	0.36	Not Detected
1,3-Butadiene	0.14	Not Detected	0.31	Not Detected
Bromomethane	0.70	Not Detected	2.7	Not Detected
Chloroethane	0.70	Not Detected	1.9	Not Detected
Freon 11	0.14	0.19	0.79	1.1
Ethanol	0.70	1.6	1.3	3.0
Freon 113	0.14	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.14	Not Detected	0.56	Not Detected
Acetone	0.70	Not Detected UJ	1.7	Not Detected UJ
2-Propanol	0.70	Not Detected	1.7	Not Detected
Carbon Disulfide	0.70	Not Detected	2.2	Not Detected
3-Chloropropene	0.70	Not Detected	2.2	Not Detected
Methylene Chloride	0.28	Not Detected	0.98	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	Not Detected	0.50	Not Detected
1,1-Dichloroethane	0.14	Not Detected	0.57	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.70	Not Detected	2.1	Not Detected
cis-1,2-Dichloroethene	0.14	Not Detected	0.56	Not Detected
Tetrahydrofuran	0.70	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	0.48	Not Detected
Carbon Tetrachloride	0.14	Not Detected	0.89	Not Detected
2,2,4-Trimethylpentane	0.70	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	0.65	Not Detected
1,4-Dioxane	0.14	Not Detected	0.51	Not Detected
Bromodichloromethane	0.14	Not Detected	0.94	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	Not Detected	0.53	Not Detected
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	0.70	Not Detected	2.9	Not Detected



Client Sample ID: U2 (1412733)

Lab ID#: 1501145-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e011511	Date of Collection:	1/7/15 5:00:00 PM
Dil. Factor:	1.41	Date of Analysis:	1/16/15 07:41 AM

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	0.61	Not Detected
m,p-Xylene	0.14	Not Detected	0.61	Not Detected
o-Xylene	0.14	Not Detected	0.61	Not Detected
Styrene	0.14	Not Detected	0.60	Not Detected
Bromoform	0.14	Not Detected	1.4	Not Detected
Cumene	0.14	Not Detected	0.69	Not Detected
1,1,2,2-Tetrachloroethane	0.14	Not Detected	0.97	Not Detected
Propylbenzene	0.14	Not Detected	0.69	Not Detected
4-Ethyltoluene	0.14	Not Detected	0.69	Not Detected
1,3,5-Trimethylbenzene	0.14	Not Detected	0.69	Not Detected
1,2,4-Trimethylbenzene	0.14	Not Detected	0.69	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	0.73	Not Detected
1,2-Dichlorobenzene	0.14	Not Detected	0.85	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected	5.2	Not Detected
Hexachlorobutadiene	0.70	Not Detected	7.5	Not Detected

UJ = Analyte associated with low bias in the CCV and/or LCS.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1501145-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e011506	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/15/15 11:43 AM

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 UJ	1.2	Not Detected UJ
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#: 1501145-05A

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

File Name:	e011506	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/15/15 11:43 AM

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

UJ = Analyte associated with low bias in the CCV and/or LCS.

Container Type: NA - Not Applicable

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





Air Toxics

Client Sample ID: CCV

Lab ID#: 1501145-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e011502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/15/15 08:31 AM

Compound	%Recovery
Freon 12	96
Freon 114	105
Chloromethane	90
Vinyl Chloride	98
1,3-Butadiene	99
Bromomethane	100
Chloroethane	91
Freon 11	104
Ethanol	76
Freon 113	90
1,1-Dichloroethene	87
Acetone	68 Q
2-Propanol	85
Carbon Disulfide	108
3-Chloropropene	84
Methylene Chloride	83
Methyl tert-butyl ether	96
trans-1,2-Dichloroethene	93
Hexane	91
1,1-Dichloroethane	87
2-Butanone (Methyl Ethyl Ketone)	89
cis-1,2-Dichloroethene	93
Tetrahydrofuran	78
Chloroform	92
1,1,1-Trichloroethane	100
Cyclohexane	94
Carbon Tetrachloride	106
2,2,4-Trimethylpentane	92
Benzene	85
1,2-Dichloroethane	94
Heptane	87
Trichloroethene	92
1,2-Dichloropropane	81
1,4-Dioxane	90
Bromodichloromethane	92
cis-1,3-Dichloropropene	88
4-Methyl-2-pentanone	85
Toluene	90
trans-1,3-Dichloropropene	96
1,1,2-Trichloroethane	88
Tetrachloroethene	98
2-Hexanone	90



Client Sample ID: CCV

Lab ID#: 1501145-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e011502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/15/15 08:31 AM

Compound	%Recovery
Dibromochloromethane	99
1,2-Dibromoethane (EDB)	95
Chlorobenzene	94
Ethyl Benzene	97
m,p-Xylene	101
o-Xylene	99
Styrene	106
Bromoform	100
Cumene	101
1,1,2,2-Tetrachloroethane	83
Propylbenzene	97
4-Ethyltoluene	95
1,3,5-Trimethylbenzene	105
1,2,4-Trimethylbenzene	100
1,3-Dichlorobenzene	90
1,4-Dichlorobenzene	91
alpha-Chlorotoluene	84
1,2-Dichlorobenzene	91
1,2,4-Trichlorobenzene	81
Hexachlorobutadiene	84

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	107	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1501145-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e011503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/15/15 09:16 AM

Compound	%Recovery	Method Limits
Freon 12	107	70-130
Freon 114	108	70-130
Chloromethane	83	70-130
Vinyl Chloride	93	70-130
1,3-Butadiene	94	70-130
Bromomethane	102	70-130
Chloroethane	98	70-130
Freon 11	113	70-130
Ethanol	128	70-130
Freon 113	106	70-130
1,1-Dichloroethene	99	70-130
Acetone	75	70-130
2-Propanol	102	70-130
Carbon Disulfide	86	70-130
3-Chloropropene	88	70-130
Methylene Chloride	97	70-130
Methyl tert-butyl ether	97	70-130
trans-1,2-Dichloroethene	101	70-130
Hexane	97	70-130
1,1-Dichloroethane	95	70-130
2-Butanone (Methyl Ethyl Ketone)	95	70-130
cis-1,2-Dichloroethene	104	70-130
Tetrahydrofuran	87	70-130
Chloroform	103	70-130
1,1,1-Trichloroethane	111	70-130
Cyclohexane	105	70-130
Carbon Tetrachloride	117	70-130
2,2,4-Trimethylpentane	98	70-130
Benzene	92	70-130
1,2-Dichloroethane	105	70-130
Heptane	96	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	89	70-130
1,4-Dioxane	96	70-130
Bromodichloromethane	102	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	93	70-130
Toluene	98	70-130
trans-1,3-Dichloropropene	103	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	106	70-130
2-Hexanone	91	70-130

Client Sample ID: LCS

Lab ID#: 1501145-07A

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

<b>File Name:</b>	<b>e011503</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 1/15/15 09:16 AM

<b>Compound</b>	<b>%Recovery</b>	<b>Method Limits</b>
Dibromochloromethane	108	70-130
1,2-Dibromoethane (EDB)	103	70-130
Chlorobenzene	101	70-130
Ethyl Benzene	105	70-130
m,p-Xylene	112	70-130
o-Xylene	110	70-130
Styrene	121	70-130
Bromoform	110	70-130
Cumene	112	70-130
1,1,2,2-Tetrachloroethane	93	70-130
Propylbenzene	108	70-130
4-Ethyltoluene	110	70-130
1,3,5-Trimethylbenzene	137 Q	70-130
1,2,4-Trimethylbenzene	133 Q	70-130
1,3-Dichlorobenzene	116	70-130
1,4-Dichlorobenzene	124	70-130
alpha-Chlorotoluene	200 Q	70-130
1,2-Dichlorobenzene	127	70-130
1,2,4-Trichlorobenzene	115	70-130
Hexachlorobutadiene	112	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	102	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1501145-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e011504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/15/15 09:58 AM

Compound	%Recovery	Method Limits
Freon 12	108	70-130
Freon 114	110	70-130
Chloromethane	86	70-130
Vinyl Chloride	94	70-130
1,3-Butadiene	86	70-130
Bromomethane	111	70-130
Chloroethane	100	70-130
Freon 11	116	70-130
Ethanol	126	70-130
Freon 113	108	70-130
1,1-Dichloroethene	101	70-130
Acetone	76	70-130
2-Propanol	101	70-130
Carbon Disulfide	82	70-130
3-Chloropropene	95	70-130
Methylene Chloride	99	70-130
Methyl tert-butyl ether	99	70-130
trans-1,2-Dichloroethene	103	70-130
Hexane	95	70-130
1,1-Dichloroethane	98	70-130
2-Butanone (Methyl Ethyl Ketone)	95	70-130
cis-1,2-Dichloroethene	106	70-130
Tetrahydrofuran	89	70-130
Chloroform	105	70-130
1,1,1-Trichloroethane	113	70-130
Cyclohexane	106	70-130
Carbon Tetrachloride	121	70-130
2,2,4-Trimethylpentane	100	70-130
Benzene	92	70-130
1,2-Dichloroethane	103	70-130
Heptane	93	70-130
Trichloroethene	101	70-130
1,2-Dichloropropane	91	70-130
1,4-Dioxane	96	70-130
Bromodichloromethane	102	70-130
cis-1,3-Dichloropropene	99	70-130
4-Methyl-2-pentanone	92	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	100	70-130
1,1,2-Trichloroethane	89	70-130
Tetrachloroethene	104	70-130
2-Hexanone	87	70-130

Client Sample ID: LCSD

Lab ID#: 1501145-07AA

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

File Name:	e011504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/15/15 09:58 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	105	70-130
1,2-Dibromoethane (EDB)	105	70-130
Chlorobenzene	95	70-130
Ethyl Benzene	103	70-130
m,p-Xylene	106	70-130
o-Xylene	106	70-130
Styrene	118	70-130
Bromoform	106	70-130
Cumene	109	70-130
1,1,2,2-Tetrachloroethane	89	70-130
Propylbenzene	105	70-130
4-Ethyltoluene	108	70-130
1,3,5-Trimethylbenzene	133 Q	70-130
1,2,4-Trimethylbenzene	128	70-130
1,3-Dichlorobenzene	110	70-130
1,4-Dichlorobenzene	116	70-130
alpha-Chlorotoluene	197 Q	70-130
1,2-Dichlorobenzene	122	70-130
1,2,4-Trichlorobenzene	121	70-130
Hexachlorobutadiene	114	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	104	70-130