



Air Toxics

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(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager Michael Parris

Collected by: (Print and Sign) Cedric Canigan

Company MO DNR Email cedric.canigan@dnr.mo.gov

Address PO Box 176 City Jefferson City State MO Zip 65102

Phone Fax

Project Info:
P.O. # 3E5P400007
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 (psf)). Rows include O1A, O2A, O3A, O4A.

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time
Notes: Shipped via UPS Tracking # 1Z6727850241338881
Shipper Name UPS Air Bill # Temp (C) Condition Good Custody Seals Intact? Yes No None Work Order # 1A07407

8/5/2014

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

Jefferson City MO 65109

Project Name: Bridgeton LF

Project #:

Workorder #: 1407407

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 7/23/2014 at Air Toxics Ltd.

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

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

Regards,



Brian Whittaker  
Project Manager

**WORK ORDER #: 1407407**

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>	07/23/2014	<b>CONTACT:</b>	Brian Whittaker
<b>DATE COMPLETED:</b>	08/05/2014		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (1411204)	Modified TO-15	8 "Hg	4.9 psi
02A	D2 (1411205)	Modified TO-15	8.6 "Hg	5 psi
03A	D3 (1411206)	Modified TO-15	8 "Hg	5.1 psi
04A	U1 (1411207)	Modified TO-15	10 "Hg	4.8 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: 08/05/14

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-13-6, UT NELAP CA009332014-5, 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# 1407407**

Four 6 Liter Summa Canister (100% Certified) samples were received on July 23, 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 1,3,5-Trimethylbenzene.

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 (1411204)**

**Lab ID#: 1407407-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.44	0.90	2.2
Freon 11	0.18	0.22	1.0	1.2
Ethanol	0.90	3.0	1.7	5.7
Acetone	0.90	4.8	2.1	12
Methylene Chloride	0.36	0.37	1.2	1.3

**Client Sample ID: D2 (1411205)**

**Lab ID#: 1407407-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.19	0.46	0.93	2.2
Freon 11	0.19	0.21	1.0	1.2
Ethanol	0.94	2.5	1.8	4.6
Acetone	0.94	6.9	2.2	16

**Client Sample ID: D3 (1411206)**

**Lab ID#: 1407407-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.47	0.90	2.3
Freon 11	0.18	0.20	1.0	1.1
Ethanol	0.92	2.9	1.7	5.4
Acetone	0.92	5.5	2.2	13
Benzene	0.18	0.36	0.58	1.2
Toluene	0.18	0.22	0.69	0.82

**Client Sample ID: U1 (1411207)**

**Lab ID#: 1407407-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.20	0.46	0.98	2.3
Freon 11	0.20	0.21	1.1	1.2

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

**Client Sample ID: U1 (1411207)**

**Lab ID#: 1407407-04A**

Ethanol	1.0	1.6	1.9	3.1
Acetone	1.0	4.8	2.4	11



Air Toxics

Client Sample ID: D1 (1411204)

Lab ID#: 1407407-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080115	Date of Collection:	7/17/14 3:28:00 PM
Dil. Factor:	1.81	Date of Analysis:	8/1/14 05:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.44	0.90	2.2
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	0.22	1.0	1.2
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	4.8	2.1	12
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	0.37	1.2	1.3
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	Not Detected	0.64	Not Detected
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	0.18	Not Detected	0.74	Not Detected
Toluene	0.18	Not Detected	0.68	Not Detected
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: D1 (1411204)

Lab ID#: 1407407-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080115	Date of Collection:	7/17/14 3:28:00 PM
Dil. Factor:	1.81	Date of Analysis:	8/1/14 05:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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	Not Detected	0.78	Not Detected
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	0.18	Not Detected	0.94	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)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: D2 (1411205)

Lab ID#: 1407407-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080116	Date of Collection:	7/17/14 3:38:00 PM
Dil. Factor:	1.88	Date of Analysis:	8/1/14 06:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.19	0.46	0.93	2.2
Freon 114	0.19	Not Detected	1.3	Not Detected
Chloromethane	0.94	Not Detected	1.9	Not Detected
Vinyl Chloride	0.19	Not Detected	0.48	Not Detected
1,3-Butadiene	0.19	Not Detected	0.42	Not Detected
Bromomethane	0.94	Not Detected	3.6	Not Detected
Chloroethane	0.94	Not Detected	2.5	Not Detected
Freon 11	0.19	0.21	1.0	1.2
Ethanol	0.94	2.5	1.8	4.6
Freon 113	0.19	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Acetone	0.94	6.9	2.2	16
2-Propanol	0.94	Not Detected	2.3	Not Detected
Carbon Disulfide	0.94	Not Detected	2.9	Not Detected
3-Chloropropene	0.94	Not Detected	2.9	Not Detected
Methylene Chloride	0.38	Not Detected	1.3	Not Detected
Methyl tert-butyl ether	0.19	Not Detected	0.68	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Hexane	0.19	Not Detected	0.66	Not Detected
1,1-Dichloroethane	0.19	Not Detected	0.76	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.94	Not Detected	2.8	Not Detected
cis-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Tetrahydrofuran	0.94	Not Detected	2.8	Not Detected
Chloroform	0.19	Not Detected	0.92	Not Detected
1,1,1-Trichloroethane	0.19	Not Detected	1.0	Not Detected
Cyclohexane	0.19	Not Detected	0.65	Not Detected
Carbon Tetrachloride	0.19	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	0.94	Not Detected	4.4	Not Detected
Benzene	0.19	Not Detected	0.60	Not Detected
1,2-Dichloroethane	0.19	Not Detected	0.76	Not Detected
Heptane	0.19	Not Detected	0.77	Not Detected
Trichloroethene	0.19	Not Detected	1.0	Not Detected
1,2-Dichloropropane	0.19	Not Detected	0.87	Not Detected
1,4-Dioxane	0.19	Not Detected	0.68	Not Detected
Bromodichloromethane	0.19	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.19	Not Detected	0.85	Not Detected
4-Methyl-2-pentanone	0.19	Not Detected	0.77	Not Detected
Toluene	0.19	Not Detected	0.71	Not Detected
trans-1,3-Dichloropropene	0.19	Not Detected	0.85	Not Detected
1,1,2-Trichloroethane	0.19	Not Detected	1.0	Not Detected
Tetrachloroethene	0.19	Not Detected	1.3	Not Detected
2-Hexanone	0.94	Not Detected	3.8	Not Detected



Client Sample ID: D2 (1411205)

Lab ID#: 1407407-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080116	Date of Collection:	7/17/14 3:38:00 PM
Dil. Factor:	1.88	Date of Analysis:	8/1/14 06:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.19	Not Detected	1.6	Not Detected
1,2-Dibromoethane (EDB)	0.19	Not Detected	1.4	Not Detected
Chlorobenzene	0.19	Not Detected	0.86	Not Detected
Ethyl Benzene	0.19	Not Detected	0.82	Not Detected
m,p-Xylene	0.19	Not Detected	0.82	Not Detected
o-Xylene	0.19	Not Detected	0.82	Not Detected
Styrene	0.19	Not Detected	0.80	Not Detected
Bromoform	0.19	Not Detected	1.9	Not Detected
Cumene	0.19	Not Detected	0.92	Not Detected
1,1,2,2-Tetrachloroethane	0.19	Not Detected	1.3	Not Detected
Propylbenzene	0.19	Not Detected	0.92	Not Detected
4-Ethyltoluene	0.19	Not Detected	0.92	Not Detected
1,3,5-Trimethylbenzene	0.19	Not Detected	0.92	Not Detected
1,2,4-Trimethylbenzene	0.19	Not Detected	0.92	Not Detected
1,3-Dichlorobenzene	0.19	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.19	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.19	Not Detected	0.97	Not Detected
1,2-Dichlorobenzene	0.19	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.94	Not Detected	7.0	Not Detected
Hexachlorobutadiene	0.94	Not Detected	10	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: D3 (1411206)

Lab ID#: 1407407-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080117	Date of Collection:	7/17/14 3:53:00 PM
Dil. Factor:	1.83	Date of Analysis:	8/1/14 07:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.47	0.90	2.3
Freon 114	0.18	Not Detected	1.3	Not Detected
Chloromethane	0.92	Not Detected	1.9	Not Detected
Vinyl Chloride	0.18	Not Detected	0.47	Not Detected
1,3-Butadiene	0.18	Not Detected	0.40	Not Detected
Bromomethane	0.92	Not Detected	3.6	Not Detected
Chloroethane	0.92	Not Detected	2.4	Not Detected
Freon 11	0.18	0.20	1.0	1.1
Ethanol	0.92	2.9	1.7	5.4
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Acetone	0.92	5.5	2.2	13
2-Propanol	0.92	Not Detected	2.2	Not Detected
Carbon Disulfide	0.92	Not Detected	2.8	Not Detected
3-Chloropropene	0.92	Not Detected	2.9	Not Detected
Methylene Chloride	0.37	Not Detected	1.3	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Hexane	0.18	Not Detected	0.64	Not Detected
1,1-Dichloroethane	0.18	Not Detected	0.74	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.92	Not Detected	2.7	Not Detected
cis-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Tetrahydrofuran	0.92	Not Detected	2.7	Not Detected
Chloroform	0.18	Not Detected	0.89	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Cyclohexane	0.18	Not Detected	0.63	Not Detected
Carbon Tetrachloride	0.18	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	0.92	Not Detected	4.3	Not Detected
Benzene	0.18	0.36	0.58	1.2
1,2-Dichloroethane	0.18	Not Detected	0.74	Not Detected
Heptane	0.18	Not Detected	0.75	Not Detected
Trichloroethene	0.18	Not Detected	0.98	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.84	Not Detected
1,4-Dioxane	0.18	Not Detected	0.66	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.75	Not Detected
Toluene	0.18	0.22	0.69	0.82
trans-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
2-Hexanone	0.92	Not Detected	3.7	Not Detected



Client Sample ID: D3 (1411206)

Lab ID#: 1407407-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080117	Date of Collection:	7/17/14 3:53:00 PM
Dil. Factor:	1.83	Date of Analysis:	8/1/14 07:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.18	Not Detected	1.6	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.84	Not Detected
Ethyl Benzene	0.18	Not Detected	0.79	Not Detected
m,p-Xylene	0.18	Not Detected	0.79	Not Detected
o-Xylene	0.18	Not Detected	0.79	Not Detected
Styrene	0.18	Not Detected	0.78	Not Detected
Bromoform	0.18	Not Detected	1.9	Not Detected
Cumene	0.18	Not Detected	0.90	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
Propylbenzene	0.18	Not Detected	0.90	Not Detected
4-Ethyltoluene	0.18	Not Detected	0.90	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.90	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.90	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	0.18	Not Detected	0.95	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.92	Not Detected	6.8	Not Detected
Hexachlorobutadiene	0.92	Not Detected	9.8	Not Detected

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	92	70-130



Air Toxics

Client Sample ID: U1 (1411207)

Lab ID#: 1407407-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080118	Date of Collection:	7/17/14 4:03:00 PM
Dil. Factor:	1.99	Date of Analysis:	8/1/14 08:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.20	0.46	0.98	2.3
Freon 114	0.20	Not Detected	1.4	Not Detected
Chloromethane	1.0	Not Detected	2.0	Not Detected
Vinyl Chloride	0.20	Not Detected	0.51	Not Detected
1,3-Butadiene	0.20	Not Detected	0.44	Not Detected
Bromomethane	1.0	Not Detected	3.9	Not Detected
Chloroethane	1.0	Not Detected	2.6	Not Detected
Freon 11	0.20	0.21	1.1	1.2
Ethanol	1.0	1.6	1.9	3.1
Freon 113	0.20	Not Detected	1.5	Not Detected
1,1-Dichloroethene	0.20	Not Detected	0.79	Not Detected
Acetone	1.0	4.8	2.4	11
2-Propanol	1.0	Not Detected	2.4	Not Detected
Carbon Disulfide	1.0	Not Detected	3.1	Not Detected
3-Chloropropene	1.0	Not Detected	3.1	Not Detected
Methylene Chloride	0.40	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.20	Not Detected	0.72	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.79	Not Detected
Hexane	0.20	Not Detected	0.70	Not Detected
1,1-Dichloroethane	0.20	Not Detected	0.80	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	2.9	Not Detected
cis-1,2-Dichloroethene	0.20	Not Detected	0.79	Not Detected
Tetrahydrofuran	1.0	Not Detected	2.9	Not Detected
Chloroform	0.20	Not Detected	0.97	Not Detected
1,1,1-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Cyclohexane	0.20	Not Detected	0.68	Not Detected
Carbon Tetrachloride	0.20	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.6	Not Detected
Benzene	0.20	Not Detected	0.64	Not Detected
1,2-Dichloroethane	0.20	Not Detected	0.80	Not Detected
Heptane	0.20	Not Detected	0.82	Not Detected
Trichloroethene	0.20	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.20	Not Detected	0.92	Not Detected
1,4-Dioxane	0.20	Not Detected	0.72	Not Detected
Bromodichloromethane	0.20	Not Detected	1.3	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected	0.90	Not Detected
4-Methyl-2-pentanone	0.20	Not Detected	0.82	Not Detected
Toluene	0.20	Not Detected	0.75	Not Detected
trans-1,3-Dichloropropene	0.20	Not Detected	0.90	Not Detected
1,1,2-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Tetrachloroethene	0.20	Not Detected	1.3	Not Detected
2-Hexanone	1.0	Not Detected	4.1	Not Detected



Air Toxics

Client Sample ID: U1 (1411207)

Lab ID#: 1407407-04A

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

<b>File Name:</b>	<b>v080118</b>	<b>Date of Collection:</b> 7/17/14 4:03:00 PM
<b>Dil. Factor:</b>	<b>1.99</b>	<b>Date of Analysis:</b> 8/1/14 08:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.20	Not Detected	1.7	Not Detected
1,2-Dibromoethane (EDB)	0.20	Not Detected	1.5	Not Detected
Chlorobenzene	0.20	Not Detected	0.92	Not Detected
Ethyl Benzene	0.20	Not Detected	0.86	Not Detected
m,p-Xylene	0.20	Not Detected	0.86	Not Detected
o-Xylene	0.20	Not Detected	0.86	Not Detected
Styrene	0.20	Not Detected	0.85	Not Detected
Bromoform	0.20	Not Detected	2.0	Not Detected
Cumene	0.20	Not Detected	0.98	Not Detected
1,1,2,2-Tetrachloroethane	0.20	Not Detected	1.4	Not Detected
Propylbenzene	0.20	Not Detected	0.98	Not Detected
4-Ethyltoluene	0.20	Not Detected	0.98	Not Detected
1,3,5-Trimethylbenzene	0.20	Not Detected	0.98	Not Detected
1,2,4-Trimethylbenzene	0.20	Not Detected	0.98	Not Detected
1,3-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.20	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.4	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1407407-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080106	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/1/14 10:19 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	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#: 1407407-05A

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

<b>File Name:</b>	<b>v080106</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 8/1/14 10:19 AM

<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	0.10	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

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	107	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1407407-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/1/14 07:55 AM

Compound	%Recovery
Freon 12	98
Freon 114	101
Chloromethane	121
Vinyl Chloride	108
1,3-Butadiene	113
Bromomethane	101
Chloroethane	101
Freon 11	102
Ethanol	98
Freon 113	103
1,1-Dichloroethene	94
Acetone	106
2-Propanol	117
Carbon Disulfide	100
3-Chloropropene	98
Methylene Chloride	95
Methyl tert-butyl ether	101
trans-1,2-Dichloroethene	101
Hexane	111
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	103
cis-1,2-Dichloroethene	100
Tetrahydrofuran	121
Chloroform	100
1,1,1-Trichloroethane	97
Cyclohexane	96
Carbon Tetrachloride	73
2,2,4-Trimethylpentane	113
Benzene	100
1,2-Dichloroethane	106
Heptane	107
Trichloroethene	97
1,2-Dichloropropane	100
1,4-Dioxane	99
Bromodichloromethane	95
cis-1,3-Dichloropropene	99
4-Methyl-2-pentanone	119
Toluene	100
trans-1,3-Dichloropropene	86
1,1,2-Trichloroethane	83
Tetrachloroethene	91
2-Hexanone	90



Air Toxics

Client Sample ID: CCV

Lab ID#: 1407407-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/1/14 07:55 AM

Compound	%Recovery
Dibromochloromethane	89
1,2-Dibromoethane (EDB)	86
Chlorobenzene	87
Ethyl Benzene	87
m,p-Xylene	88
o-Xylene	88
Styrene	86
Bromoform	86
Cumene	91
1,1,2,2-Tetrachloroethane	86
Propylbenzene	92
4-Ethyltoluene	80
1,3,5-Trimethylbenzene	109
1,2,4-Trimethylbenzene	86
1,3-Dichlorobenzene	88
1,4-Dichlorobenzene	82
alpha-Chlorotoluene	86
1,2-Dichlorobenzene	86
1,2,4-Trichlorobenzene	86
Hexachlorobutadiene	83

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	123	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1407407-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080104	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/1/14 08:54 AM

Compound	%Recovery	Method Limits
Freon 12	98	70-130
Freon 114	101	70-130
Chloromethane	122	70-130
Vinyl Chloride	108	70-130
1,3-Butadiene	111	70-130
Bromomethane	102	70-130
Chloroethane	102	70-130
Freon 11	100	70-130
Ethanol	98	70-130
Freon 113	114	70-130
1,1-Dichloroethene	107	70-130
Acetone	106	70-130
2-Propanol	113	70-130
Carbon Disulfide	91	70-130
3-Chloropropene	88	70-130
Methylene Chloride	105	70-130
Methyl tert-butyl ether	100	70-130
trans-1,2-Dichloroethene	86	70-130
Hexane	110	70-130
1,1-Dichloroethane	106	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
cis-1,2-Dichloroethene	111	70-130
Tetrahydrofuran	118	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	95	70-130
Cyclohexane	98	70-130
Carbon Tetrachloride	56 Q	70-130
2,2,4-Trimethylpentane	112	70-130
Benzene	100	70-130
1,2-Dichloroethane	108	70-130
Heptane	110	70-130
Trichloroethene	98	70-130
1,2-Dichloropropane	101	70-130
1,4-Dioxane	104	70-130
Bromodichloromethane	98	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	126	70-130
Toluene	100	70-130
trans-1,3-Dichloropropene	83	70-130
1,1,2-Trichloroethane	87	70-130
Tetrachloroethene	96	70-130
2-Hexanone	100	70-130

Client Sample ID: LCS

Lab ID#: 1407407-07A

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

File Name:	v080104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/1/14 08:54 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	94	70-130
1,2-Dibromoethane (EDB)	91	70-130
Chlorobenzene	90	70-130
Ethyl Benzene	90	70-130
m,p-Xylene	92	70-130
o-Xylene	90	70-130
Styrene	89	70-130
Bromoform	89	70-130
Cumene	97	70-130
1,1,2,2-Tetrachloroethane	92	70-130
Propylbenzene	97	70-130
4-Ethyltoluene	101	70-130
1,3,5-Trimethylbenzene	88	70-130
1,2,4-Trimethylbenzene	88	70-130
1,3-Dichlorobenzene	91	70-130
1,4-Dichlorobenzene	85	70-130
alpha-Chlorotoluene	96	70-130
1,2-Dichlorobenzene	88	70-130
1,2,4-Trichlorobenzene	89	70-130
Hexachlorobutadiene	80	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	117	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1407407-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v080105	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/1/14 09:30 AM

Compound	%Recovery	Method Limits
Freon 12	99	70-130
Freon 114	101	70-130
Chloromethane	122	70-130
Vinyl Chloride	110	70-130
1,3-Butadiene	112	70-130
Bromomethane	101	70-130
Chloroethane	102	70-130
Freon 11	103	70-130
Ethanol	100	70-130
Freon 113	115	70-130
1,1-Dichloroethene	106	70-130
Acetone	109	70-130
2-Propanol	115	70-130
Carbon Disulfide	91	70-130
3-Chloropropene	87	70-130
Methylene Chloride	104	70-130
Methyl tert-butyl ether	101	70-130
trans-1,2-Dichloroethene	86	70-130
Hexane	112	70-130
1,1-Dichloroethane	107	70-130
2-Butanone (Methyl Ethyl Ketone)	102	70-130
cis-1,2-Dichloroethene	113	70-130
Tetrahydrofuran	121	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	98	70-130
Carbon Tetrachloride	56 Q	70-130
2,2,4-Trimethylpentane	113	70-130
Benzene	103	70-130
1,2-Dichloroethane	113	70-130
Heptane	113	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	104	70-130
1,4-Dioxane	107	70-130
Bromodichloromethane	101	70-130
cis-1,3-Dichloropropene	106	70-130
4-Methyl-2-pentanone	129	70-130
Toluene	102	70-130
trans-1,3-Dichloropropene	91	70-130
1,1,2-Trichloroethane	93	70-130
Tetrachloroethene	105	70-130
2-Hexanone	108	70-130

Client Sample ID: LCSD

Lab ID#: 1407407-07AA

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

<b>File Name:</b>	<b>v080105</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 8/1/14 09:30 AM

<b>Compound</b>	<b>%Recovery</b>	<b>Method Limits</b>
Dibromochloromethane	102	70-130
1,2-Dibromoethane (EDB)	100	70-130
Chlorobenzene	98	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	100	70-130
o-Xylene	99	70-130
Styrene	98	70-130
Bromoform	97	70-130
Cumene	107	70-130
1,1,2,2-Tetrachloroethane	103	70-130
Propylbenzene	112	70-130
4-Ethyltoluene	100	70-130
1,3,5-Trimethylbenzene	132 Q	70-130
1,2,4-Trimethylbenzene	106	70-130
1,3-Dichlorobenzene	103	70-130
1,4-Dichlorobenzene	96	70-130
alpha-Chlorotoluene	106	70-130
1,2-Dichlorobenzene	98	70-130
1,2,4-Trichlorobenzene	90	70-130
Hexachlorobutadiene	88	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	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	126	70-130