



Air Toxics

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

Page 1 of 1

Project Manager Michael Paris
Collected by: (Print and Sign) Teresa Trevino
Company NO DNR Email: mtre@no.ca.gov
Address PO Box 146 Chickabuckan City State NO Zip 65102
Phone (513) 526-3918 Fax _____

Project Info:
P.O. # 3E5P160421
Project # _____
Project Name Bridgeton UF

Turn Around Time:
 Normal
 Rush
Lab Use Only:
Pressurized by: _____
Date: _____
Pressurization Gas: _____
N₂ 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)
01A	D1 (154586)	14120	12/1/15	0829-1325	TO-15	-295	-55	
04A	D2 (154587)	34446	12/1/15	0859-1344	TO-15	-30	-6	
07A	V1 (154588)	925	12/1/15	0712-1357	TO-15	-30	-6	
04A	V2 (154589)	31151	12/1/15	0935-1435	TO-15	-30	-6	
Relinquished by: (signature) _____ Date/Time <u>12/1/15</u> 1502 Received by: (signature) <u>Michael Paris</u> Date/Time <u>12/7/15</u> 1140 Notes: <u>Shipped via UPS</u> <u>Tracking # 1ZRW040w60399610288</u>								
Relinquished by: (signature) _____ Date/Time _____			Received by: (signature) _____ Date/Time _____			Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None		
Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Work Order # <u>1512127</u>			

12/16/2015

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

Jefferson City MO 65109

Project Name: Bridgeton LF

Project #:

Workorder #: 1512127

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 12/7/2015 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 #: 1512127

Work Order Summary

CLIENT:	Mr. Dennis Schroeder Missouri Dept. of Natural Resources 2710 West Main Jefferson City, MO 65109	BILL TO:	Accounts Payable Missouri Dept. of Natural Resources P.O Box 176 Jefferson City, MO 65102
PHONE:	573-526-4428	P.O. #	3ESP160421
FAX:	573-526-3350	PROJECT #	Bridgeton LF
DATE RECEIVED:	12/07/2015	CONTACT:	Brian Whittaker
DATE COMPLETED:	12/16/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (154586)	Modified TO-15	5.5 "Hg	5 psi
02A	D2 (154587)	Modified TO-15	4.7 "Hg	5 psi
03A	U1 (154588)	Modified TO-15	5.3 "Hg	5 psi
04A	U2 (154589)	Modified TO-15	5.3 "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: 12/16/15

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# 1512127**

Four 6 Liter Summa Canister (100% Certified) samples were received on December 07, 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	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

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 (154586)

Lab ID#: 1512127-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.56	0.81	2.8
Freon 11	0.16	0.26	0.92	1.4
Ethanol	0.82	2.0	1.5	3.7
Acetone	0.82	3.0	1.9	7.1
Benzene	0.16	0.16 J	0.52	0.50 J

Client Sample ID: D2 (154587)

Lab ID#: 1512127-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.56	0.79	2.8
Freon 11	0.16	0.26	0.89	1.4
Ethanol	0.80	1.5	1.5	2.8
Acetone	0.80	2.1	1.9	5.0
Hexane	0.16	0.17	0.56	0.59
Benzene	0.16	0.18	0.51	0.58

Client Sample ID: U1 (154588)

Lab ID#: 1512127-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.61	0.81	3.0
Freon 11	0.16	0.25	0.92	1.4
Ethanol	0.82	1.5	1.5	2.8
Acetone	0.82	3.1	1.9	7.3
Hexane	0.16	0.59	0.57	2.1
Heptane	0.16	0.32	0.67	1.3

Client Sample ID: U2 (154589)

Lab ID#: 1512127-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: U2 (154589)

Lab ID#: 1512127-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.58	0.81	2.8
Freon 11	0.16	0.28	0.92	1.6
Ethanol	0.82	2.0	1.5	3.7
Acetone	0.82	1.6	1.9	3.8
Methylene Chloride	0.33	0.50	1.1	1.7



Air Toxics

Client Sample ID: D1 (154586)

Lab ID#: 1512127-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120919	Date of Collection:	12/1/15 1:25:00 PM
Dil. Factor:	1.64	Date of Analysis:	12/9/15 06:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.56	0.81	2.8
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	Not Detected	1.7	Not Detected
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	0.26	0.92	1.4
Ethanol	0.82	2.0	1.5	3.7
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	3.0	1.9	7.1
2-Propanol	0.82	Not Detected	2.0	Not Detected
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	Not Detected	0.56	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	0.16 J	0.52	0.50 J
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	Not Detected	0.67	Not Detected
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.67	Not Detected
Toluene	0.16	Not Detected	0.62	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	Not Detected	3.4	Not Detected

Client Sample ID: D1 (154586)

Lab ID#: 1512127-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120919	Date of Collection:	12/1/15 1:25:00 PM
Dil. Factor:	1.64	Date of Analysis:	12/9/15 06:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
Styrene	0.16	Not Detected	0.70	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.81	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.81	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.81	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: D2 (154587)

Lab ID#: 1512127-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120920	Date of Collection:	12/1/15 1:44:00 PM
Dil. Factor:	1.59	Date of Analysis:	12/9/15 07:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.56	0.79	2.8
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.26	0.89	1.4
Ethanol	0.80	1.5	1.5	2.8
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	2.1	1.9	5.0
2-Propanol	0.80	Not Detected	2.0	Not Detected
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.57	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Hexane	0.16	0.17	0.56	0.59
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.78	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Cyclohexane	0.16	Not Detected	0.55	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.80	Not Detected	3.7	Not Detected
Benzene	0.16	0.18	0.51	0.58
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Heptane	0.16	Not Detected	0.65	Not Detected
Trichloroethene	0.16	Not Detected	0.85	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.73	Not Detected
1,4-Dioxane	0.16	Not Detected	0.57	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.65	Not Detected
Toluene	0.16	Not Detected	0.60	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.80	Not Detected	3.2	Not Detected



Client Sample ID: D2 (154587)

Lab ID#: 1512127-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120920	Date of Collection:	12/1/15 1:44:00 PM
Dil. Factor:	1.59	Date of Analysis:	12/9/15 07:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.73	Not Detected
Ethyl Benzene	0.16	Not Detected	0.69	Not Detected
m,p-Xylene	0.16	Not Detected	0.69	Not Detected
o-Xylene	0.16	Not Detected	0.69	Not Detected
Styrene	0.16	Not Detected	0.68	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.78	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.78	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.78	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.82	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.5	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: U1 (154588)

Lab ID#: 1512127-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120921	Date of Collection:	12/1/15 1:57:00 PM
Dil. Factor:	1.63	Date of Analysis:	12/9/15 08:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.61	0.81	3.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	Not Detected	1.7	Not Detected
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	0.25	0.92	1.4
Ethanol	0.82	1.5	1.5	2.8
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	3.1	1.9	7.3
2-Propanol	0.82	Not Detected	2.0	Not Detected
Carbon Disulfide	0.82	Not Detected	2.5	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	0.59	0.57	2.1
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	Not Detected	0.56	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	Not Detected	0.52	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	0.32	0.67	1.3
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.75	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.67	Not Detected
Toluene	0.16	Not Detected	0.61	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	Not Detected	3.3	Not Detected



Client Sample ID: U1 (154588)

Lab ID#: 1512127-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120921	Date of Collection:	12/1/15 1:57:00 PM
Dil. Factor:	1.63	Date of Analysis:	12/9/15 08:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.75	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
Styrene	0.16	Not Detected	0.69	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.80	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.80	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.80	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.80	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.80	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.84	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: U2 (154589)

Lab ID#: 1512127-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120922	Date of Collection:	12/1/15 2:33:00 PM
Dil. Factor:	1.64	Date of Analysis:	12/9/15 09:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.58	0.81	2.8
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	Not Detected	1.7	Not Detected
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	0.28	0.92	1.6
Ethanol	0.82	2.0	1.5	3.7
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	1.6	1.9	3.8
2-Propanol	0.82	Not Detected	2.0	Not Detected
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	0.50	1.1	1.7
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	Not Detected	0.56	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	Not Detected	0.52	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	Not Detected	0.67	Not Detected
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.67	Not Detected
Toluene	0.16	Not Detected	0.62	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	Not Detected	3.4	Not Detected



Client Sample ID: U2 (154589)

Lab ID#: 1512127-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120922	Date of Collection:	12/1/15 2:33:00 PM
Dil. Factor:	1.64	Date of Analysis:	12/9/15 09:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
Styrene	0.16	Not Detected	0.70	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.81	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.81	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.81	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	125	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1512127-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120906	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/9/15 08:33 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#: 1512127-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/15 08:33 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

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1512127-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/15 05:50 AM

Compound	%Recovery
Freon 12	129
Freon 114	110
Chloromethane	127
Vinyl Chloride	122
1,3-Butadiene	110
Bromomethane	122
Chloroethane	123
Freon 11	118
Ethanol	111
Freon 113	98
1,1-Dichloroethene	107
Acetone	117
2-Propanol	109
Carbon Disulfide	112
3-Chloropropene	108
Methylene Chloride	109
Methyl tert-butyl ether	113
trans-1,2-Dichloroethene	107
Hexane	119
1,1-Dichloroethane	117
2-Butanone (Methyl Ethyl Ketone)	108
cis-1,2-Dichloroethene	108
Tetrahydrofuran	116
Chloroform	119
1,1,1-Trichloroethane	115
Cyclohexane	110
Carbon Tetrachloride	120
2,2,4-Trimethylpentane	116
Benzene	111
1,2-Dichloroethane	126
Heptane	117
Trichloroethene	109
1,2-Dichloropropane	118
1,4-Dioxane	106
Bromodichloromethane	122
cis-1,3-Dichloropropene	116
4-Methyl-2-pentanone	120
Toluene	117
trans-1,3-Dichloropropene	120
1,1,2-Trichloroethane	108
Tetrachloroethene	102
2-Hexanone	102

Client Sample ID: CCV

Lab ID#: 1512127-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/15 05:50 AM

Compound	%Recovery
Dibromochloromethane	114
1,2-Dibromoethane (EDB)	109
Chlorobenzene	114
Ethyl Benzene	110
m,p-Xylene	106
o-Xylene	107
Styrene	102
Bromoform	115
Cumene	108
1,1,2,2-Tetrachloroethane	120
Propylbenzene	107
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	105
1,2,4-Trimethylbenzene	104
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	94
alpha-Chlorotoluene	113
1,2-Dichlorobenzene	98
1,2,4-Trichlorobenzene	87
Hexachlorobutadiene	85

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: LCS

Lab ID#: 1512127-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/15 06:33 AM

Compound	%Recovery	Method Limits
Freon 12	136 Q	70-130
Freon 114	121	70-130
Chloromethane	128	70-130
Vinyl Chloride	130	70-130
1,3-Butadiene	113	70-130
Bromomethane	127	70-130
Chloroethane	125	70-130
Freon 11	126	70-130
Ethanol	118	70-130
Freon 113	106	70-130
1,1-Dichloroethene	112	70-130
Acetone	115	70-130
2-Propanol	120	70-130
Carbon Disulfide	104	70-130
3-Chloropropene	111	70-130
Methylene Chloride	114	70-130
Methyl tert-butyl ether	118	70-130
trans-1,2-Dichloroethene	115	70-130
Hexane	123	70-130
1,1-Dichloroethane	123	70-130
2-Butanone (Methyl Ethyl Ketone)	111	70-130
cis-1,2-Dichloroethene	110	70-130
Tetrahydrofuran	119	70-130
Chloroform	123	70-130
1,1,1-Trichloroethane	118	70-130
Cyclohexane	114	70-130
Carbon Tetrachloride	131 Q	70-130
2,2,4-Trimethylpentane	120	70-130
Benzene	117	70-130
1,2-Dichloroethane	126	70-130
Heptane	121	70-130
Trichloroethene	112	70-130
1,2-Dichloropropane	124	70-130
1,4-Dioxane	110	70-130
Bromodichloromethane	128	70-130
cis-1,3-Dichloropropene	112	70-130
4-Methyl-2-pentanone	123	70-130
Toluene	118	70-130
trans-1,3-Dichloropropene	127	70-130
1,1,2-Trichloroethane	113	70-130
Tetrachloroethene	110	70-130
2-Hexanone	113	70-130

Client Sample ID: LCS

Lab ID#: 1512127-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/15 06:33 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	123	70-130
1,2-Dibromoethane (EDB)	116	70-130
Chlorobenzene	117	70-130
Ethyl Benzene	113	70-130
m,p-Xylene	108	70-130
o-Xylene	110	70-130
Styrene	105	70-130
Bromoform	124	70-130
Cumene	112	70-130
1,1,2,2-Tetrachloroethane	124	70-130
Propylbenzene	109	70-130
4-Ethyltoluene	98	70-130
1,3,5-Trimethylbenzene	106	70-130
1,2,4-Trimethylbenzene	106	70-130
1,3-Dichlorobenzene	101	70-130
1,4-Dichlorobenzene	94	70-130
alpha-Chlorotoluene	123	70-130
1,2-Dichlorobenzene	97	70-130
1,2,4-Trichlorobenzene	77	70-130
Hexachlorobutadiene	75	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	95	70-130

Client Sample ID: LCS D

Lab ID#: 1512127-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/15 07:14 AM

Compound	%Recovery	Method Limits
Freon 12	133 Q	70-130
Freon 114	118	70-130
Chloromethane	127	70-130
Vinyl Chloride	127	70-130
1,3-Butadiene	109	70-130
Bromomethane	126	70-130
Chloroethane	122	70-130
Freon 11	127	70-130
Ethanol	120	70-130
Freon 113	104	70-130
1,1-Dichloroethene	114	70-130
Acetone	113	70-130
2-Propanol	121	70-130
Carbon Disulfide	104	70-130
3-Chloropropene	106	70-130
Methylene Chloride	115	70-130
Methyl tert-butyl ether	116	70-130
trans-1,2-Dichloroethene	118	70-130
Hexane	123	70-130
1,1-Dichloroethane	123	70-130
2-Butanone (Methyl Ethyl Ketone)	112	70-130
cis-1,2-Dichloroethene	109	70-130
Tetrahydrofuran	119	70-130
Chloroform	121	70-130
1,1,1-Trichloroethane	118	70-130
Cyclohexane	115	70-130
Carbon Tetrachloride	129	70-130
2,2,4-Trimethylpentane	122	70-130
Benzene	119	70-130
1,2-Dichloroethane	126	70-130
Heptane	120	70-130
Trichloroethene	111	70-130
1,2-Dichloropropane	121	70-130
1,4-Dioxane	109	70-130
Bromodichloromethane	126	70-130
cis-1,3-Dichloropropene	112	70-130
4-Methyl-2-pentanone	123	70-130
Toluene	120	70-130
trans-1,3-Dichloropropene	125	70-130
1,1,2-Trichloroethane	111	70-130
Tetrachloroethene	108	70-130
2-Hexanone	116	70-130

Client Sample ID: LCSD

Lab ID#: 1512127-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20120904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/15 07:14 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	121	70-130
1,2-Dibromoethane (EDB)	113	70-130
Chlorobenzene	114	70-130
Ethyl Benzene	111	70-130
m,p-Xylene	108	70-130
o-Xylene	111	70-130
Styrene	106	70-130
Bromoform	122	70-130
Cumene	112	70-130
1,1,2,2-Tetrachloroethane	123	70-130
Propylbenzene	109	70-130
4-Ethyltoluene	98	70-130
1,3,5-Trimethylbenzene	106	70-130
1,2,4-Trimethylbenzene	104	70-130
1,3-Dichlorobenzene	101	70-130
1,4-Dichlorobenzene	96	70-130
alpha-Chlorotoluene	121	70-130
1,2-Dichlorobenzene	99	70-130
1,2,4-Trichlorobenzene	79	70-130
Hexachlorobutadiene	75	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	94	70-130