



Air Toxics

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager Michael Paris

Collected by: (Print and Sign) Kid Mitchell

Company MRDMR Email _____

Address P.O. Box 176 City Stearns State MD Zip 20682

Phone 573 586 3715 Fax _____

Project Info:

P.O. # 35SP40007

Project # _____

Project Name Bridge for Low Hill

Turn Around Time: Normal Rush

Lab Use Only Pressurized by: _____

Date: _____

Pressurization Gas: _____

specify N₂ He

Lab I.D. Field Sample I.D. (Location)

Can #

Date of Collection

Time of Collection

Analyses Requested

Canister Pressure/Vacuum

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	U1 (A12726)	31439	12-29-14	1155-1523	TD-15	-30 -775
02A	U2 (A12727)	12009	12-29-14	1144-1544	TD-15	-29 -95
03A	D1 (A12728)	34396	12-29-14	1615-1615	TD-15	-30 -185
04A	D2 (A12729)	34323	12-29-14	1230-1640	TD-15	-30 -10

Relinquished by: (signature) Kid Mitchell Date/Time 12-30-14 1530

Received by: (signature) Michael Paris

Date/Time 12/30/14 1530

Notes: Shipped via UPS.

Relinquished by: (signature) Michael Paris Date/Time 12/31/14 1420

Received by: (signature) Michael Paris

Date/Time 12/31/14 1420

Relinquished by: (signature) _____ Date/Time _____

Received by: (signature) _____

Date/Time _____

Notes: Tracking # 1ZC1278809AS645216

Lab Use Only Shipper Name UPS

Air Bill # _____

Temp (°C) 1A

Condition Good

Custody Seals Intact? Yes No None

Work Order # 1501053

1/12/2015
Mr. Dennis Schroeder
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton LF
Project #:
Workorder #: 1501039

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 1/6/2015 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 #: 1501039

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. #	3ESP4000007
FAX:	573-526-3350	PROJECT #	Bridgeton LF
DATE RECEIVED:	01/06/2015	CONTACT:	Brian Whittaker
DATE COMPLETED:	01/12/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (1412750)	Modified TO-15	4.5 "Hg	4.9 psi
02A	D2 (1412751)	Modified TO-15	3.5 "Hg	5.2 psi
03A	D3 (1412752)	Modified TO-15	4.1 "Hg	5 psi
04A	U1 (1412753)	Modified TO-15	4.3 "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: 01/12/15

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# 1501039

Four 6 Liter Summa Canister (100% Certified) samples were received on January 06, 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

Due to the linear calibration range of the instrument, the reporting limit for alpha-Chlorotoluene was raised from 0.1ppbv to 0.5 ppbv.

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 (1412750)

Lab ID#: 1501039-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.78	2.1
Freon 11	0.16	0.20	0.88	1.2
Ethanol	0.78	2.5	1.5	4.7
Acetone	0.78	1.4	1.9	3.4
Hexane	0.16	0.17	0.55	0.60
Benzene	0.16	0.17	0.50	0.54
Tetrachloroethene	0.16	0.60	1.1	4.0

Client Sample ID: D2 (1412751)

Lab ID#: 1501039-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.42	0.76	2.0
Freon 11	0.15	0.20	0.86	1.1
Ethanol	0.76	2.0	1.4	3.7
Acetone	0.76	1.1	1.8	2.6
Benzene	0.15	0.19	0.49	0.61

Client Sample ID: D3 (1412752)

Lab ID#: 1501039-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.77	2.0
Freon 11	0.16	0.20	0.87	1.1
Ethanol	0.78	2.2	1.5	4.2
Acetone	0.78	2.6	1.8	6.3
Hexane	0.16	0.18	0.55	0.65
Benzene	0.16	0.27	0.50	0.86
1,4-Dioxane	0.16	0.16	0.56	0.58

Client Sample ID: U1 (1412753)

Lab ID#: 1501039-04A

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

Client Sample ID: U1 (1412753)

Lab ID#: 1501039-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.43	0.78	2.1
Freon 11	0.16	0.20	0.88	1.1
Ethanol	0.78	1.8	1.5	3.4
Acetone	0.78	0.94	1.9	2.2



Air Toxics

Client Sample ID: D1 (1412750)

Lab ID#: 1501039-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010807	Date of Collection:	12/27/14 5:50:00 PM
Dil. Factor:	1.57	Date of Analysis:	1/8/15 11:46 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.78	2.1
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.78	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.78	Not Detected	3.0	Not Detected
Chloroethane	0.78	Not Detected	2.1	Not Detected
Freon 11	0.16	0.20	0.88	1.2
Ethanol	0.78	2.5	1.5	4.7
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Acetone	0.78	1.4	1.9	3.4
2-Propanol	0.78	Not Detected	1.9	Not Detected
Carbon Disulfide	0.78	Not Detected	2.4	Not Detected
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	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	0.62	Not Detected
Hexane	0.16	0.17	0.55	0.60
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Tetrahydrofuran	0.78	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.77	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.99	Not Detected
2,2,4-Trimethylpentane	0.78	Not Detected	3.7	Not Detected
Benzene	0.16	0.17	0.50	0.54
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Heptane	0.16	Not Detected	0.64	Not Detected
Trichloroethene	0.16	Not Detected	0.84	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
1,4-Dioxane	0.16	Not Detected	0.56	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.71	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.64	Not Detected
Toluene	0.16	Not Detected	0.59	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.71	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Tetrachloroethene	0.16	0.60	1.1	4.0
2-Hexanone	0.78	Not Detected	3.2	Not Detected



Client Sample ID: D1 (1412750)

Lab ID#: 1501039-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010807	Date of Collection:	12/27/14 5:50:00 PM
Dil. Factor:	1.57	Date of Analysis:	1/8/15 11:46 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.72	Not Detected
Ethyl Benzene	0.16	Not Detected	0.68	Not Detected
m,p-Xylene	0.16	Not Detected	0.68	Not Detected
o-Xylene	0.16	Not Detected	0.68	Not Detected
Styrene	0.16	Not Detected	0.67	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.77	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.77	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.77	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.77	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.77	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
alpha-Chlorotoluene	0.78	Not Detected	4.1	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,2,4-Trichlorobenzene	0.78	Not Detected	5.8	Not Detected
Hexachlorobutadiene	0.78	Not Detected	8.4	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: D2 (1412751)

Lab ID#: 1501039-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010808	Date of Collection:	12/27/14 6:20:00 PM
Dil. Factor:	1.53	Date of Analysis:	1/8/15 12:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.42	0.76	2.0
Freon 114	0.15	Not Detected	1.1	Not Detected
Chloromethane	0.76	Not Detected	1.6	Not Detected
Vinyl Chloride	0.15	Not Detected	0.39	Not Detected
1,3-Butadiene	0.15	Not Detected	0.34	Not Detected
Bromomethane	0.76	Not Detected	3.0	Not Detected
Chloroethane	0.76	Not Detected	2.0	Not Detected
Freon 11	0.15	0.20	0.86	1.1
Ethanol	0.76	2.0	1.4	3.7
Freon 113	0.15	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Acetone	0.76	1.1	1.8	2.6
2-Propanol	0.76	Not Detected	1.9	Not Detected
Carbon Disulfide	0.76	Not Detected	2.4	Not Detected
3-Chloropropene	0.76	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.55	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Hexane	0.15	Not Detected	0.54	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.62	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.76	Not Detected	2.2	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Tetrahydrofuran	0.76	Not Detected	2.2	Not Detected
Chloroform	0.15	Not Detected	0.75	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.83	Not Detected
Cyclohexane	0.15	Not Detected	0.53	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.96	Not Detected
2,2,4-Trimethylpentane	0.76	Not Detected	3.6	Not Detected
Benzene	0.15	0.19	0.49	0.61
1,2-Dichloroethane	0.15	Not Detected	0.62	Not Detected
Heptane	0.15	Not Detected	0.63	Not Detected
Trichloroethene	0.15	Not Detected	0.82	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.71	Not Detected
1,4-Dioxane	0.15	Not Detected	0.55	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.69	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.63	Not Detected
Toluene	0.15	Not Detected	0.58	Not Detected
trans-1,3-Dichloropropene	0.15	Not Detected	0.69	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.83	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.76	Not Detected	3.1	Not Detected



Client Sample ID: D2 (1412751)

Lab ID#: 1501039-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010808	Date of Collection:	12/27/14 6:20:00 PM
Dil. Factor:	1.53	Date of Analysis:	1/8/15 12:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Chlorobenzene	0.15	Not Detected	0.70	Not Detected
Ethyl Benzene	0.15	Not Detected	0.66	Not Detected
m,p-Xylene	0.15	Not Detected	0.66	Not Detected
o-Xylene	0.15	Not Detected	0.66	Not Detected
Styrene	0.15	Not Detected	0.65	Not Detected
Bromoform	0.15	Not Detected	1.6	Not Detected
Cumene	0.15	Not Detected	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.75	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.75	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.75	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.75	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
alpha-Chlorotoluene	0.76	Not Detected	4.0	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
1,2,4-Trichlorobenzene	0.76	Not Detected	5.7	Not Detected
Hexachlorobutadiene	0.76	Not Detected	8.2	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: D3 (1412752)

Lab ID#: 1501039-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010809	Date of Collection:	12/27/14 6:30:00 PM
Dil. Factor:	1.55	Date of Analysis:	1/8/15 01:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.77	2.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.78	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.34	Not Detected
Bromomethane	0.78	Not Detected	3.0	Not Detected
Chloroethane	0.78	Not Detected	2.0	Not Detected
Freon 11	0.16	0.20	0.87	1.1
Ethanol	0.78	2.2	1.5	4.2
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Acetone	0.78	2.6	1.8	6.3
2-Propanol	0.78	Not Detected	1.9	Not Detected
Carbon Disulfide	0.78	Not Detected	2.4	Not Detected
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.56	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Hexane	0.16	0.18	0.55	0.65
1,1-Dichloroethane	0.16	Not Detected	0.63	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Tetrahydrofuran	0.78	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.76	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Cyclohexane	0.16	Not Detected	0.53	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.98	Not Detected
2,2,4-Trimethylpentane	0.78	Not Detected	3.6	Not Detected
Benzene	0.16	0.27	0.50	0.86
1,2-Dichloroethane	0.16	Not Detected	0.63	Not Detected
Heptane	0.16	Not Detected	0.64	Not Detected
Trichloroethene	0.16	Not Detected	0.83	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
1,4-Dioxane	0.16	0.16	0.56	0.58
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.63	Not Detected
Toluene	0.16	Not Detected	0.58	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Tetrachloroethene	0.16	Not Detected	1.0	Not Detected
2-Hexanone	0.78	Not Detected	3.2	Not Detected



Air Toxics

Client Sample ID: D3 (1412752)

Lab ID#: 1501039-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010809	Date of Collection:	12/27/14 6:30:00 PM
Dil. Factor:	1.55	Date of Analysis:	1/8/15 01:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.71	Not Detected
Ethyl Benzene	0.16	Not Detected	0.67	Not Detected
m,p-Xylene	0.16	Not Detected	0.67	Not Detected
o-Xylene	0.16	Not Detected	0.67	Not Detected
Styrene	0.16	Not Detected	0.66	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.76	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.76	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.76	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.76	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.76	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
alpha-Chlorotoluene	0.78	Not Detected	4.0	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,2,4-Trichlorobenzene	0.78	Not Detected	5.8	Not Detected
Hexachlorobutadiene	0.78	Not Detected	8.3	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: U1 (1412753)

Lab ID#: 1501039-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010810	Date of Collection:	12/27/14 6:40:00 PM
Dil. Factor:	1.57	Date of Analysis:	1/8/15 02:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.43	0.78	2.1
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.78	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.78	Not Detected	3.0	Not Detected
Chloroethane	0.78	Not Detected	2.1	Not Detected
Freon 11	0.16	0.20	0.88	1.1
Ethanol	0.78	1.8	1.5	3.4
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Acetone	0.78	0.94	1.9	2.2
2-Propanol	0.78	Not Detected	1.9	Not Detected
Carbon Disulfide	0.78	Not Detected	2.4	Not Detected
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	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	0.62	Not Detected
Hexane	0.16	Not Detected	0.55	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Tetrahydrofuran	0.78	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.77	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.99	Not Detected
2,2,4-Trimethylpentane	0.78	Not Detected	3.7	Not Detected
Benzene	0.16	Not Detected	0.50	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Heptane	0.16	Not Detected	0.64	Not Detected
Trichloroethene	0.16	Not Detected	0.84	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
1,4-Dioxane	0.16	Not Detected	0.56	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.71	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.64	Not Detected
Toluene	0.16	Not Detected	0.59	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.71	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.78	Not Detected	3.2	Not Detected

Client Sample ID: U1 (1412753)

Lab ID#: 1501039-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010810	Date of Collection:	12/27/14 6:40:00 PM
Dil. Factor:	1.57	Date of Analysis:	1/8/15 02:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.72	Not Detected
Ethyl Benzene	0.16	Not Detected	0.68	Not Detected
m,p-Xylene	0.16	Not Detected	0.68	Not Detected
o-Xylene	0.16	Not Detected	0.68	Not Detected
Styrene	0.16	Not Detected	0.67	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.77	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.77	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.77	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.77	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.77	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
alpha-Chlorotoluene	0.78	Not Detected	4.1	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,2,4-Trichlorobenzene	0.78	Not Detected	5.8	Not Detected
Hexachlorobutadiene	0.78	Not Detected	8.4	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1501039-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010806	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/8/15 10:56 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#: 1501039-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010806	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/8/15 10:56 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	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1501039-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/8/15 06:32 AM

Compound	%Recovery
Freon 12	89
Freon 114	94
Chloromethane	93
Vinyl Chloride	96
1,3-Butadiene	90
Bromomethane	94
Chloroethane	95
Freon 11	97
Ethanol	95
Freon 113	97
1,1-Dichloroethene	85
Acetone	92
2-Propanol	97
Carbon Disulfide	92
3-Chloropropene	96
Methylene Chloride	90
Methyl tert-butyl ether	90
trans-1,2-Dichloroethene	88
Hexane	90
1,1-Dichloroethane	94
2-Butanone (Methyl Ethyl Ketone)	96
cis-1,2-Dichloroethene	95
Tetrahydrofuran	99
Chloroform	92
1,1,1-Trichloroethane	89
Cyclohexane	90
Carbon Tetrachloride	98
2,2,4-Trimethylpentane	97
Benzene	95
1,2-Dichloroethane	95
Heptane	100
Trichloroethene	96
1,2-Dichloropropane	96
1,4-Dioxane	89
Bromodichloromethane	86
cis-1,3-Dichloropropene	97
4-Methyl-2-pentanone	101
Toluene	95
trans-1,3-Dichloropropene	85
1,1,2-Trichloroethane	78
Tetrachloroethene	90
2-Hexanone	79

Client Sample ID: CCV

Lab ID#: 1501039-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/8/15 06:32 AM

Compound	%Recovery
Dibromochloromethane	84
1,2-Dibromoethane (EDB)	87
Chlorobenzene	86
Ethyl Benzene	85
m,p-Xylene	84
o-Xylene	85
Styrene	82
Bromoform	89
Cumene	86
1,1,2,2-Tetrachloroethane	84
Propylbenzene	84
4-Ethyltoluene	83
1,3,5-Trimethylbenzene	85
1,2,4-Trimethylbenzene	86
1,3-Dichlorobenzene	85
1,4-Dichlorobenzene	80
alpha-Chlorotoluene	84
1,2-Dichlorobenzene	79
1,2,4-Trichlorobenzene	94
Hexachlorobutadiene	86

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	124	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1501039-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/8/15 07:13 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	107	70-130
Chloromethane	111	70-130
Vinyl Chloride	109	70-130
1,3-Butadiene	98	70-130
Bromomethane	103	70-130
Chloroethane	105	70-130
Freon 11	109	70-130
Ethanol	125	70-130
Freon 113	116	70-130
1,1-Dichloroethene	98	70-130
Acetone	102	70-130
2-Propanol	117	70-130
Carbon Disulfide	98	70-130
3-Chloropropene	105	70-130
Methylene Chloride	106	70-130
Methyl tert-butyl ether	99	70-130
trans-1,2-Dichloroethene	90	70-130
Hexane	104	70-130
1,1-Dichloroethane	106	70-130
2-Butanone (Methyl Ethyl Ketone)	108	70-130
cis-1,2-Dichloroethene	110	70-130
Tetrahydrofuran	109	70-130
Chloroform	102	70-130
1,1,1-Trichloroethane	101	70-130
Cyclohexane	99	70-130
Carbon Tetrachloride	114	70-130
2,2,4-Trimethylpentane	106	70-130
Benzene	106	70-130
1,2-Dichloroethane	107	70-130
Heptane	110	70-130
Trichloroethene	109	70-130
1,2-Dichloropropane	106	70-130
1,4-Dioxane	99	70-130
Bromodichloromethane	97	70-130
cis-1,3-Dichloropropene	111	70-130
4-Methyl-2-pentanone	112	70-130
Toluene	106	70-130
trans-1,3-Dichloropropene	92	70-130
1,1,2-Trichloroethane	93	70-130
Tetrachloroethene	106	70-130
2-Hexanone	97	70-130

Client Sample ID: LCS

Lab ID#: 1501039-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/8/15 07:13 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	99	70-130
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	99	70-130
Ethyl Benzene	97	70-130
m,p-Xylene	102	70-130
o-Xylene	99	70-130
Styrene	111	70-130
Bromoform	104	70-130
Cumene	104	70-130
1,1,2,2-Tetrachloroethane	94	70-130
Propylbenzene	102	70-130
4-Ethyltoluene	102	70-130
1,3,5-Trimethylbenzene	110	70-130
1,2,4-Trimethylbenzene	103	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	97	70-130
alpha-Chlorotoluene	174 Q	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	150 Q	70-130
Hexachlorobutadiene	131 Q	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	120	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1501039-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/8/15 07:53 AM

Compound	%Recovery	Method Limits
Freon 12	107	70-130
Freon 114	112	70-130
Chloromethane	112	70-130
Vinyl Chloride	112	70-130
1,3-Butadiene	100	70-130
Bromomethane	110	70-130
Chloroethane	109	70-130
Freon 11	111	70-130
Ethanol	119	70-130
Freon 113	119	70-130
1,1-Dichloroethene	103	70-130
Acetone	102	70-130
2-Propanol	119	70-130
Carbon Disulfide	100	70-130
3-Chloropropene	106	70-130
Methylene Chloride	110	70-130
Methyl tert-butyl ether	102	70-130
trans-1,2-Dichloroethene	94	70-130
Hexane	105	70-130
1,1-Dichloroethane	108	70-130
2-Butanone (Methyl Ethyl Ketone)	106	70-130
cis-1,2-Dichloroethene	109	70-130
Tetrahydrofuran	109	70-130
Chloroform	107	70-130
1,1,1-Trichloroethane	101	70-130
Cyclohexane	101	70-130
Carbon Tetrachloride	118	70-130
2,2,4-Trimethylpentane	113	70-130
Benzene	108	70-130
1,2-Dichloroethane	112	70-130
Heptane	114	70-130
Trichloroethene	112	70-130
1,2-Dichloropropane	110	70-130
1,4-Dioxane	105	70-130
Bromodichloromethane	99	70-130
cis-1,3-Dichloropropene	116	70-130
4-Methyl-2-pentanone	114	70-130
Toluene	110	70-130
trans-1,3-Dichloropropene	101	70-130
1,1,2-Trichloroethane	99	70-130
Tetrachloroethene	112	70-130
2-Hexanone	102	70-130



Client Sample ID: LCSD

Lab ID#: 1501039-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v010804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/8/15 07:53 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	109	70-130
1,2-Dibromoethane (EDB)	108	70-130
Chlorobenzene	108	70-130
Ethyl Benzene	110	70-130
m,p-Xylene	111	70-130
o-Xylene	110	70-130
Styrene	119	70-130
Bromoform	111	70-130
Cumene	113	70-130
1,1,2,2-Tetrachloroethane	100	70-130
Propylbenzene	111	70-130
4-Ethyltoluene	110	70-130
1,3,5-Trimethylbenzene	116	70-130
1,2,4-Trimethylbenzene	113	70-130
1,3-Dichlorobenzene	110	70-130
1,4-Dichlorobenzene	107	70-130
alpha-Chlorotoluene	192 Q	70-130
1,2-Dichlorobenzene	110	70-130
1,2,4-Trichlorobenzene	166 Q	70-130
Hexachlorobutadiene	143 Q	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	115	70-130