



Air Toxics

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Page 1 of 1

Project Manager

Michael Harris

Collected by: (Print and Sign)

Michael Harris

Company

MO DNR

Email Michael.harris@dnr.maryland.gov

Address

Po Box 176

City Jefferson City State MO Zip 65102

Phone

(573) 526 3918

Fax

Project Info:

P.O. #

985740007

Project #

Project 1F

Project Name

Project 1F

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 (1412145)

4361

11/24/14

1030 530

70-15

-30

-6.5

02A

D2 (1412146)

60005

11/24/14

1049 535

70-15

-30

-7

03A

U1 (1412147)

927

11/24/14

1050 530

70-15

-30

-6.5

04A

U2 (1412148)

2488

11/23/14

1055 1610

70-15

-30

-7

Relinquished by: (signature) Date/Time

Michael Harris 12/1/14 1150

Received by: (signature) Date/Time

Michael Harris 12/8/14 1150

Notes:

Shipped via UPS

Tracking # 1Z6727880343455925

Relinquished by: (signature) Date/Time

Michael Harris 12/1/14 1150

Received by: (signature) Date/Time

Michael Harris 12/8/14 1150

Relinquished by: (signature) Date/Time

Michael Harris 12/1/14 1150

Received by: (signature) Date/Time

Michael Harris 12/8/14 1150

Shipper Name

Air Bill #

Temp (°C)

Condition

Custody Seals Intact?

Work Order #

Lab Use Only

USPS

NA

Good

☒ Yes ☐ No ☐ None

1412117

12/16/2014

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

Jefferson City MO 65109

Project Name: Bridgeton LF

Project #:

Workorder #: 1412117

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 12/8/2014 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

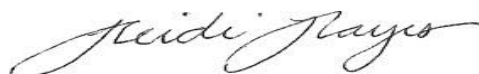
WORK ORDER #: 1412117

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:	12/08/2014	CONTACT:	Brian Whittaker
DATE COMPLETED:	12/16/2014		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (1412145)	Modified TO-15	5.9 "Hg	4.9 psi
02A	D2 (1412146)	Modified TO-15	6.3 "Hg	5.1 psi
03A	U1 (1412147)	Modified TO-15	6.3 "Hg	4.9 psi
04A	U2 (1412148)	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: 12/16/14

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# 1412117

Four 6 Liter Summa Canister (100% Certified) samples were received on December 08, 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.

Requirement	TO-15	ATL Modifications
Initial Calibration	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	$\leq 30\%$ RSD with 4 compounds allowed out to $< 40\%$ RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Due to the linear calibration range of the instrument, the reporting limit for Freon 12 and alpha-Chlorotoluene was raised from 0.10 ppbv to 0.50 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 (1412145)

Lab ID#: 1412117-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.21	0.93	1.2
Ethanol	0.83	3.7	1.6	7.0
Acetone	0.83	4.5	2.0	11
2-Butanone (Methyl Ethyl Ketone)	0.83	0.83	2.4	2.4
Benzene	0.17	0.21	0.53	0.67

Client Sample ID: D2 (1412146)

Lab ID#: 1412117-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.20	0.96	1.1
Ethanol	0.86	3.9	1.6	7.3
Acetone	0.86	5.1	2.0	12
Hexane	0.17	0.17	0.60	0.61
2-Butanone (Methyl Ethyl Ketone)	0.86	0.86	2.5	2.5
Benzene	0.17	0.19	0.55	0.62

Client Sample ID: U1 (1412147)

Lab ID#: 1412117-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.20	0.95	1.1
Ethanol	0.84	2.7	1.6	5.0
1,1-Dichloroethene	0.17	0.21	0.67	0.83
Acetone	0.84	4.7	2.0	11
Carbon Disulfide	0.84	1.2	2.6	3.9
Hexane	0.17	0.18	0.60	0.64
Tetrahydrofuran	0.84	1.6	2.5	4.6
Benzene	0.17	0.23	0.54	0.74
Trichloroethene	0.17	0.52	0.91	2.8
1,2-Dichloropropane	0.17	0.22	0.78	1.0
1,4-Dioxane	0.17	0.26	0.61	0.93
Toluene	0.17	0.23	0.64	0.86

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: U1 (1412147)

Lab ID#: 1412117-03A

Client Sample ID: U2 (1412148)

Lab ID#: 1412117-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.16	0.20	0.92	1.1
Ethanol	0.82	2.4	1.5	4.6
Acetone	0.82	5.2	1.9	12
Carbon Disulfide	0.82	0.83	2.6	2.6
Hexane	0.16	0.20	0.58	0.70
Benzene	0.16	0.20	0.52	0.63



Air Toxics

Client Sample ID: D1 (1412145)

Lab ID#: 1412117-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120908	Date of Collection:	11/29/14 3:30:00 PM
Dil. Factor:	1.66	Date of Analysis:	12/9/14 03:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.83	Not Detected	4.1	Not Detected
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.83	Not Detected	1.7	Not Detected
Vinyl Chloride	0.17	Not Detected	0.42	Not Detected
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected
Bromomethane	0.83	Not Detected	3.2	Not Detected
Chloroethane	0.83	Not Detected	2.2	Not Detected
Freon 11	0.17	0.21	0.93	1.2
Ethanol	0.83	3.7	1.6	7.0
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Acetone	0.83	4.5	2.0	11
2-Propanol	0.83	Not Detected	2.0	Not Detected
Carbon Disulfide	0.83	Not Detected	2.6	Not Detected
3-Chloropropene	0.83	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.60	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Hexane	0.17	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.67	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.83	0.83	2.4	2.4
cis-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Tetrahydrofuran	0.83	Not Detected	2.4	Not Detected
Chloroform	0.17	Not Detected	0.81	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.90	Not Detected
Cyclohexane	0.17	Not Detected	0.57	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.83	Not Detected	3.9	Not Detected
Benzene	0.17	0.21	0.53	0.67
1,2-Dichloroethane	0.17	Not Detected	0.67	Not Detected
Heptane	0.17	Not Detected	0.68	Not Detected
Trichloroethene	0.17	Not Detected	0.89	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.77	Not Detected
1,4-Dioxane	0.17	Not Detected	0.60	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.75	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.68	Not Detected
Toluene	0.17	Not Detected	0.62	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.75	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.90	Not Detected
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
2-Hexanone	0.83	Not Detected	3.4	Not Detected



Air Toxics

Client Sample ID: D1 (1412145)

Lab ID#: 1412117-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120908	Date of Collection:	11/29/14 3:30:00 PM
Dil. Factor:	1.66	Date of Analysis:	12/9/14 03:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.76	Not Detected
Ethyl Benzene	0.17	Not Detected	0.72	Not Detected
m,p-Xylene	0.17	Not Detected	0.72	Not Detected
o-Xylene	0.17	Not Detected	0.72	Not Detected
Styrene	0.17	Not Detected	0.71	Not Detected
Bromoform	0.17	Not Detected	1.7	Not Detected
Cumene	0.17	Not Detected	0.82	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.1	Not Detected
Propylbenzene	0.17	Not Detected	0.82	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.82	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.82	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.82	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.83	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.83	Not Detected	6.2	Not Detected
Hexachlorobutadiene	0.83	Not Detected	8.8	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: D2 (1412146)

Lab ID#: 1412117-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120909	Date of Collection:	11/29/14 3:35:00 PM
Dil. Factor:	1.71	Date of Analysis:	12/9/14 04:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.86	Not Detected	4.2	Not Detected
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.86	Not Detected	1.8	Not Detected
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.86	Not Detected	3.3	Not Detected
Chloroethane	0.86	Not Detected	2.2	Not Detected
Freon 11	0.17	0.20	0.96	1.1
Ethanol	0.86	3.9	1.6	7.3
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	5.1	2.0	12
2-Propanol	0.86	Not Detected	2.1	Not Detected
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Hexane	0.17	0.17	0.60	0.61
1,1-Dichloroethane	0.17	Not Detected	0.69	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	0.86	2.5	2.5
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.83	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.93	Not Detected
Cyclohexane	0.17	Not Detected	0.59	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.86	Not Detected	4.0	Not Detected
Benzene	0.17	0.19	0.55	0.62
1,2-Dichloroethane	0.17	Not Detected	0.69	Not Detected
Heptane	0.17	Not Detected	0.70	Not Detected
Trichloroethene	0.17	Not Detected	0.92	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.79	Not Detected
1,4-Dioxane	0.17	Not Detected	0.62	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.70	Not Detected
Toluene	0.17	Not Detected	0.64	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.93	Not Detected
Tetrachloroethene	0.17	Not Detected	1.2	Not Detected
2-Hexanone	0.86	Not Detected	3.5	Not Detected



Air Toxics

Client Sample ID: D2 (1412146)

Lab ID#: 1412117-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120909	Date of Collection:	11/29/14 3:35:00 PM
Dil. Factor:	1.71	Date of Analysis:	12/9/14 04:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.79	Not Detected
Ethyl Benzene	0.17	Not Detected	0.74	Not Detected
m,p-Xylene	0.17	Not Detected	0.74	Not Detected
o-Xylene	0.17	Not Detected	0.74	Not Detected
Styrene	0.17	Not Detected	0.73	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.84	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.84	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.84	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.84	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.84	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.86	Not Detected	4.4	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.3	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.1	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: U1 (1412147)

Lab ID#: 1412117-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120910	Date of Collection:	11/29/14 3:50:00 PM
Dil. Factor:	1.69	Date of Analysis:	12/9/14 06:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.84	Not Detected	4.2	Not Detected
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.84	Not Detected	1.7	Not Detected
Vinyl Chloride	0.17	Not Detected	0.43	Not Detected
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected
Bromomethane	0.84	Not Detected	3.3	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Freon 11	0.17	0.20	0.95	1.1
Ethanol	0.84	2.7	1.6	5.0
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	0.21	0.67	0.83
Acetone	0.84	4.7	2.0	11
2-Propanol	0.84	Not Detected	2.1	Not Detected
Carbon Disulfide	0.84	1.2	2.6	3.9
3-Chloropropene	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.61	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Hexane	0.17	0.18	0.60	0.64
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	Not Detected	2.5	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Tetrahydrofuran	0.84	1.6	2.5	4.6
Chloroform	0.17	Not Detected	0.82	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Cyclohexane	0.17	Not Detected	0.58	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
Benzene	0.17	0.23	0.54	0.74
1,2-Dichloroethane	0.17	Not Detected	0.68	Not Detected
Heptane	0.17	Not Detected	0.69	Not Detected
Trichloroethene	0.17	0.52	0.91	2.8
1,2-Dichloropropane	0.17	0.22	0.78	1.0
1,4-Dioxane	0.17	0.26	0.61	0.93
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.77	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.69	Not Detected
Toluene	0.17	0.23	0.64	0.86
trans-1,3-Dichloropropene	0.17	Not Detected	0.77	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
2-Hexanone	0.84	Not Detected	3.5	Not Detected



Air Toxics

Client Sample ID: U1 (1412147)

Lab ID#: 1412117-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120910	Date of Collection:	11/29/14 3:50:00 PM
Dil. Factor:	1.69	Date of Analysis:	12/9/14 06:33 PM

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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: U2 (1412148)

Lab ID#: 1412117-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120911	Date of Collection:	11/29/14 4:10:00 PM
Dil. Factor:	1.64	Date of Analysis:	12/9/14 08:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.82	Not Detected	4.0	Not Detected
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	0.20	0.92	1.1
Ethanol	0.82	2.4	1.5	4.6
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	5.2	1.9	12
2-Propanol	0.82	Not Detected	2.0	Not Detected
Carbon Disulfide	0.82	0.83	2.6	2.6
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	0.20	0.58	0.70
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	0.20	0.52	0.63
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 (1412148)

Lab ID#: 1412117-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120911	Date of Collection:	11/29/14 4:10:00 PM
Dil. Factor:	1.64	Date of Analysis:	12/9/14 08:04 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	0.82	Not Detected	4.2	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	105	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: Lab Blank

Lab ID#: 1412117-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/14 02:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	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#: 1412117-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/14 02:05 PM

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	105	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: CCV

Lab ID#: 1412117-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/14 08:30 AM

Compound	%Recovery
Freon 12	97
Freon 114	92
Chloromethane	98
Vinyl Chloride	108
1,3-Butadiene	106
Bromomethane	106
Chloroethane	107
Freon 11	94
Ethanol	126
Freon 113	89
1,1-Dichloroethene	99
Acetone	106
2-Propanol	110
Carbon Disulfide	107
3-Chloropropene	108
Methylene Chloride	104
Methyl tert-butyl ether	100
trans-1,2-Dichloroethene	102
Hexane	101
1,1-Dichloroethane	97
2-Butanone (Methyl Ethyl Ketone)	107
cis-1,2-Dichloroethene	105
Tetrahydrofuran	105
Chloroform	96
1,1,1-Trichloroethane	94
Cyclohexane	100
Carbon Tetrachloride	92
2,2,4-Trimethylpentane	100
Benzene	100
1,2-Dichloroethane	92
Heptane	100
Trichloroethene	95
1,2-Dichloropropane	100
1,4-Dioxane	99
Bromodichloromethane	97
cis-1,3-Dichloropropene	106
4-Methyl-2-pentanone	105
Toluene	99
trans-1,3-Dichloropropene	95
1,1,2-Trichloroethane	92
Tetrachloroethene	88
2-Hexanone	93

Client Sample ID: CCV

Lab ID#: 1412117-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/14 08:30 AM

Compound	%Recovery
Dibromochloromethane	87
1,2-Dibromoethane (EDB)	93
Chlorobenzene	91
Ethyl Benzene	97
m,p-Xylene	97
o-Xylene	103
Styrene	96
Bromoform	88
Cumene	98
1,1,2,2-Tetrachloroethane	95
Propylbenzene	103
4-Ethyltoluene	99
1,3,5-Trimethylbenzene	111
1,2,4-Trimethylbenzene	124
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	92
alpha-Chlorotoluene	87
1,2-Dichlorobenzene	98
1,2,4-Trichlorobenzene	116
Hexachlorobutadiene	101

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: LCS

Lab ID#: 1412117-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/14 09:15 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	94	70-130
Chloromethane	107	70-130
Vinyl Chloride	112	70-130
1,3-Butadiene	107	70-130
Bromomethane	114	70-130
Chloroethane	109	70-130
Freon 11	98	70-130
Ethanol	145 Q	70-130
Freon 113	99	70-130
1,1-Dichloroethene	105	70-130
Acetone	107	70-130
2-Propanol	119	70-130
Carbon Disulfide	103	70-130
3-Chloropropene	101	70-130
Methylene Chloride	110	70-130
Methyl tert-butyl ether	104	70-130
trans-1,2-Dichloroethene	102	70-130
Hexane	102	70-130
1,1-Dichloroethane	102	70-130
2-Butanone (Methyl Ethyl Ketone)	112	70-130
cis-1,2-Dichloroethene	105	70-130
Tetrahydrofuran	104	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	97	70-130
Cyclohexane	102	70-130
Carbon Tetrachloride	56 Q	70-130
2,2,4-Trimethylpentane	100	70-130
Benzene	96	70-130
1,2-Dichloroethane	92	70-130
Heptane	99	70-130
Trichloroethene	90	70-130
1,2-Dichloropropane	99	70-130
1,4-Dioxane	101	70-130
Bromodichloromethane	92	70-130
cis-1,3-Dichloropropene	110	70-130
4-Methyl-2-pentanone	102	70-130
Toluene	97	70-130
trans-1,3-Dichloropropene	89	70-130
1,1,2-Trichloroethane	92	70-130
Tetrachloroethene	89	70-130
2-Hexanone	97	70-130

Client Sample ID: LCS

Lab ID#: 1412117-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/14 09:15 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	82	70-130
1,2-Dibromoethane (EDB)	92	70-130
Chlorobenzene	90	70-130
Ethyl Benzene	94	70-130
m,p-Xylene	91	70-130
o-Xylene	93	70-130
Styrene	94	70-130
Bromoform	84	70-130
Cumene	90	70-130
1,1,2,2-Tetrachloroethane	92	70-130
Propylbenzene	93	70-130
4-Ethyltoluene	93	70-130
1,3,5-Trimethylbenzene	114	70-130
1,2,4-Trimethylbenzene	128	70-130
1,3-Dichlorobenzene	89	70-130
1,4-Dichlorobenzene	83	70-130
alpha-Chlorotoluene	135 Q	70-130
1,2-Dichlorobenzene	87	70-130
1,2,4-Trichlorobenzene	106	70-130
Hexachlorobutadiene	83	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCSD

Lab ID#: 1412117-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/14 09:59 AM

Compound	%Recovery	Method Limits
Freon 12	99	70-130
Freon 114	92	70-130
Chloromethane	100	70-130
Vinyl Chloride	106	70-130
1,3-Butadiene	102	70-130
Bromomethane	110	70-130
Chloroethane	104	70-130
Freon 11	94	70-130
Ethanol	140 Q	70-130
Freon 113	93	70-130
1,1-Dichloroethene	102	70-130
Acetone	101	70-130
2-Propanol	112	70-130
Carbon Disulfide	100	70-130
3-Chloropropene	98	70-130
Methylene Chloride	105	70-130
Methyl tert-butyl ether	98	70-130
trans-1,2-Dichloroethene	95	70-130
Hexane	96	70-130
1,1-Dichloroethane	98	70-130
2-Butanone (Methyl Ethyl Ketone)	104	70-130
cis-1,2-Dichloroethene	103	70-130
Tetrahydrofuran	105	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	92	70-130
Cyclohexane	94	70-130
Carbon Tetrachloride	55 Q	70-130
2,2,4-Trimethylpentane	96	70-130
Benzene	98	70-130
1,2-Dichloroethane	93	70-130
Heptane	97	70-130
Trichloroethene	90	70-130
1,2-Dichloropropane	102	70-130
1,4-Dioxane	101	70-130
Bromodichloromethane	94	70-130
cis-1,3-Dichloropropene	110	70-130
4-Methyl-2-pentanone	104	70-130
Toluene	98	70-130
trans-1,3-Dichloropropene	91	70-130
1,1,2-Trichloroethane	93	70-130
Tetrachloroethene	87	70-130
2-Hexanone	94	70-130

Client Sample ID: LCSD

Lab ID#: 1412117-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/9/14 09:59 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	83	70-130
1,2-Dibromoethane (EDB)	92	70-130
Chlorobenzene	88	70-130
Ethyl Benzene	91	70-130
m,p-Xylene	89	70-130
o-Xylene	96	70-130
Styrene	96	70-130
Bromoform	84	70-130
Cumene	93	70-130
1,1,2,2-Tetrachloroethane	93	70-130
Propylbenzene	98	70-130
4-Ethyltoluene	95	70-130
1,3,5-Trimethylbenzene	116	70-130
1,2,4-Trimethylbenzene	128	70-130
1,3-Dichlorobenzene	89	70-130
1,4-Dichlorobenzene	87	70-130
alpha-Chlorotoluene	144 Q	70-130
1,2-Dichlorobenzene	90	70-130
1,2,4-Trichlorobenzene	120	70-130
Hexachlorobutadiene	88	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	105	70-130
4-Bromofluorobenzene	101	70-130