



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) Michael Paris

Company MD BVR

Address PO Box 176 City Jefferson City State MO zip 65102

Phone (573) 520 3918 Fax _____

Project Info:

P.O. # 3E5P400007

Project # _____

Project Name Bridgeton LF

Turn Around Time:

Normal

Rush

Lab Use Only
Pressurized by:

Date:

Pressurization Gas:

N₂ He

Canister Pressure/Vacuum

Initial Final Receipt Final (psi)

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Initial	Final	Receipt	Final (psi)
O1A	B1 (A12264)	9572	12/16/14	0910-1350	To-15	-30	-7		
O2A	B2 (A12334)	30933	12/16/14	0920-1400	To-15	-29.5	-5.5		
O3A	B3 (A12335)	33790	12/16/14	0930-1410	To-15	-29.5	-7		
O4A	B1 (A12730)	34725	12/16/14	0940-1330	To-15	-28	-6		

Notes:

Shipped via UPS
Tracking # 1Z6727880343016613

Relinquished by: (signature) [Signature] Date/Time 12/17/14 1345

Received by: (signature) [Signature] Date/Time 12-22-14 1025

Relinquished by: (signature) _____ Date/Time _____

Received by: (signature) _____ Date/Time _____

Lab Use Only

Shipper Name UPS Air Bill # _____ Temp (°C) NA Condition Good Custody Seals Intact? Yes No None Work Order # 1412343

1/6/2015

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

Jefferson City MO 65109

Project Name: Bridgeton LF

Project #:

Workorder #: 1412343

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 12/22/2014 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 #: 1412343

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:	12/22/2014	CONTACT:	Brian Whittaker
DATE COMPLETED:	01/06/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	b1 (1412264)	Modified TO-15	4.5 "Hg	4.9 psi
02A	b2 (1412734)	Modified TO-15	4.5 "Hg	4.8 psi
03A	b3 (1412735)	Modified TO-15	5.5 "Hg	5.1 psi
04A	u1 (1412736)	Modified TO-15	4.3 "Hg	5 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: 01/06/15

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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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1412343**

Four 6 Liter Summa Canister (100% Certified) samples were received on December 22, 2014. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

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.

Due to the linear calibration range of the instrument, the reporting limit for 1,4-Dioxane was raised from 0.10ppbv to 0.50ppbv.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: b1 (1412264)

Lab ID#: 1412343-01A

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	0.19	0.88	1.0
Ethanol	0.78	3.3	1.5	6.2
Acetone	0.78	0.90	1.9	2.1

Client Sample ID: b2 (1412734)

Lab ID#: 1412343-02A

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	0.18	0.88	0.98
Ethanol	0.78	3.4	1.5	6.4
Acetone	0.78	2.5	1.8	5.8
4-Methyl-2-pentanone	0.16	0.20	0.64	0.81

Client Sample ID: b3 (1412735)

Lab ID#: 1412343-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.82	2.1
Freon 11	0.16	0.19	0.93	1.0
Ethanol	0.82	15	1.6	29
Acetone	0.82	2.5	2.0	5.9
2-Propanol	0.82	0.86	2.0	2.1
Toluene	0.16	0.18	0.62	0.66

Client Sample ID: u1 (1412736)

Lab ID#: 1412343-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.77	2.0
Freon 11	0.16	0.18	0.88	1.0

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

Client Sample ID: u1 (1412736)

Lab ID#: 1412343-04A

Ethanol	0.78	43	1.5	82
Acetone	0.78	1.4	1.8	3.4
2-Propanol	0.78	2.3	1.9	5.6
Methylene Chloride	0.31	0.47	1.1	1.6
Toluene	0.16	0.24	0.59	0.91



Air Toxics

Client Sample ID: b1 (1412264)

Lab ID#: 1412343-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122617	Date of Collection:	12/16/14 1:50:00 PM
Dil. Factor:	1.57	Date of Analysis:	12/26/14 06:20 PM

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	0.19	0.88	1.0
Ethanol	0.78	3.3	1.5	6.2
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Acetone	0.78	0.90	1.9	2.1
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 UJ	0.99	Not Detected UJ
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	0.78	Not Detected	2.8	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: b1 (1412264)

Lab ID#: 1412343-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122617	Date of Collection:	12/16/14 1:50:00 PM
Dil. Factor:	1.57	Date of Analysis:	12/26/14 06:20 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	0.16	Not Detected	0.81	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

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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: b2 (1412734)

Lab ID#: 1412343-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122618	Date of Collection:	12/16/14 2:00:00 PM
Dil. Factor:	1.56	Date of Analysis:	12/26/14 07:20 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	0.18	0.88	0.98
Ethanol	0.78	3.4	1.5	6.4
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Acetone	0.78	2.5	1.8	5.8
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	0.62	Not Detected
Hexane	0.16	Not Detected	0.55	Not Detected
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	0.62	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	0.85	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.16	Not Detected UJ	0.98	Not Detected UJ
2,2,4-Trimethylpentane	0.78	Not Detected	3.6	Not Detected
Benzene	0.16	Not Detected	0.50	Not Detected
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	0.84	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
1,4-Dioxane	0.78	Not Detected	2.8	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	0.20	0.64	0.81
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	0.85	Not Detected
Tetrachloroethene	0.16	Not Detected	1.0	Not Detected
2-Hexanone	0.78	Not Detected	3.2	Not Detected



Client Sample ID: b2 (1412734)

Lab ID#: 1412343-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122618	Date of Collection:	12/16/14 2:00:00 PM
Dil. Factor:	1.56	Date of Analysis:	12/26/14 07:20 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	0.66	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	0.16	Not Detected	0.81	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	8.3	Not Detected

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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: b3 (1412735)

Lab ID#: 1412343-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122619	Date of Collection:	12/16/14 2:10:00 PM
Dil. Factor:	1.65	Date of Analysis:	12/26/14 08:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.82	2.1
Freon 114	0.16	Not Detected	1.2	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	0.19	0.93	1.0
Ethanol	0.82	15	1.6	29
Freon 113	0.16	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	2.5	2.0	5.9
2-Propanol	0.82	0.86	2.0	2.1
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	0.67	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	0.90	Not Detected
Cyclohexane	0.16	Not Detected	0.57	Not Detected
Carbon Tetrachloride	0.16	Not Detected UJ	1.0	Not Detected UJ
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	Not Detected	0.53	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.67	Not Detected
Heptane	0.16	Not Detected	0.68	Not Detected
Trichloroethene	0.16	Not Detected	0.89	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.82	Not Detected	3.0	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.75	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.68	Not Detected
Toluene	0.16	0.18	0.62	0.66
trans-1,3-Dichloropropene	0.16	Not Detected	0.75	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.90	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	Not Detected	3.4	Not Detected



Client Sample ID: b3 (1412735)

Lab ID#: 1412343-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122619	Date of Collection:	12/16/14 2:10:00 PM
Dil. Factor:	1.65	Date of Analysis:	12/26/14 08:33 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	0.72	Not Detected
m,p-Xylene	0.16	Not Detected	0.72	Not Detected
o-Xylene	0.16	Not Detected	0.72	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	8.8	Not Detected

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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: u1 (1412736)

Lab ID#: 1412343-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122620	Date of Collection:	12/16/14 1:30:00 PM
Dil. Factor:	1.56	Date of Analysis:	12/26/14 09:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	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	0.18	0.88	1.0
Ethanol	0.78	43	1.5	82
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	1.8	3.4
2-Propanol	0.78	2.3	1.9	5.6
Carbon Disulfide	0.78	Not Detected	2.4	Not Detected
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	0.47	1.1	1.6
Methyl tert-butyl ether	0.16	Not Detected	0.56	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	0.63	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.62	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	0.85	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.16	Not Detected UJ	0.98	Not Detected UJ
2,2,4-Trimethylpentane	0.78	Not Detected	3.6	Not Detected
Benzene	0.16	Not Detected	0.50	Not Detected
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	0.84	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
1,4-Dioxane	0.78	Not Detected	2.8	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	0.24	0.59	0.91
trans-1,3-Dichloropropene	0.16	Not Detected	0.71	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.85	Not Detected
Tetrachloroethene	0.16	Not Detected	1.0	Not Detected
2-Hexanone	0.78	Not Detected	3.2	Not Detected



Client Sample ID: u1 (1412736)

Lab ID#: 1412343-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122620	Date of Collection:	12/16/14 1:30:00 PM
Dil. Factor:	1.56	Date of Analysis:	12/26/14 09:15 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	0.66	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	0.16	Not Detected	0.81	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	8.3	Not Detected

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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: Lab Blank

Lab ID#: 1412343-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122606	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/26/14 09:24 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 UJ	0.63	Not Detected UJ
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	0.50	Not Detected	1.8	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#: 1412343-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122606	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/26/14 09:24 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

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

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1412343-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/26/14 06:20 AM

Compound	%Recovery
Freon 12	90
Freon 114	85
Chloromethane	75
Vinyl Chloride	80
1,3-Butadiene	80
Bromomethane	82
Chloroethane	77
Freon 11	88
Ethanol	72
Freon 113	84
1,1-Dichloroethene	85
Acetone	72
2-Propanol	85
Carbon Disulfide	100
3-Chloropropene	81
Methylene Chloride	79
Methyl tert-butyl ether	97
trans-1,2-Dichloroethene	87
Hexane	92
1,1-Dichloroethane	84
2-Butanone (Methyl Ethyl Ketone)	81
cis-1,2-Dichloroethene	86
Tetrahydrofuran	84
Chloroform	86
1,1,1-Trichloroethane	92
Cyclohexane	94
Carbon Tetrachloride	67 Q
2,2,4-Trimethylpentane	91
Benzene	82
1,2-Dichloroethane	93
Heptane	92
Trichloroethene	88
1,2-Dichloropropane	77
1,4-Dioxane	88
Bromodichloromethane	85
cis-1,3-Dichloropropene	86
4-Methyl-2-pentanone	89
Toluene	87
trans-1,3-Dichloropropene	91
1,1,2-Trichloroethane	82
Tetrachloroethene	86
2-Hexanone	87



Client Sample ID: CCV

Lab ID#: 1412343-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/26/14 06:20 AM

Compound	%Recovery
Dibromochloromethane	90
1,2-Dibromoethane (EDB)	87
Chlorobenzene	84
Ethyl Benzene	98
m,p-Xylene	98
o-Xylene	101
Styrene	98
Bromoform	83
Cumene	102
1,1,2,2-Tetrachloroethane	74
Propylbenzene	88
4-Ethyltoluene	96
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	92
1,3-Dichlorobenzene	79
1,4-Dichlorobenzene	78
alpha-Chlorotoluene	74
1,2-Dichlorobenzene	75
1,2,4-Trichlorobenzene	74
Hexachlorobutadiene	73

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1412343-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/26/14 07:05 AM

Compound	%Recovery	Method Limits
Freon 12	97	70-130
Freon 114	92	70-130
Chloromethane	82	70-130
Vinyl Chloride	88	70-130
1,3-Butadiene	85	70-130
Bromomethane	86	70-130
Chloroethane	82	70-130
Freon 11	96	70-130
Ethanol	89	70-130
Freon 113	95	70-130
1,1-Dichloroethene	98	70-130
Acetone	73	70-130
2-Propanol	99	70-130
Carbon Disulfide	79	70-130
3-Chloropropene	92	70-130
Methylene Chloride	88	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	94	70-130
Hexane	99	70-130
1,1-Dichloroethane	89	70-130
2-Butanone (Methyl Ethyl Ketone)	88	70-130
cis-1,2-Dichloroethene	94	70-130
Tetrahydrofuran	91	70-130
Chloroform	92	70-130
1,1,1-Trichloroethane	99	70-130
Cyclohexane	100	70-130
Carbon Tetrachloride	112	70-130
2,2,4-Trimethylpentane	94	70-130
Benzene	83	70-130
1,2-Dichloroethane	95	70-130
Heptane	93	70-130
Trichloroethene	91	70-130
1,2-Dichloropropane	82	70-130
1,4-Dioxane	95	70-130
Bromodichloromethane	90	70-130
cis-1,3-Dichloropropene	96	70-130
4-Methyl-2-pentanone	96	70-130
Toluene	91	70-130
trans-1,3-Dichloropropene	91	70-130
1,1,2-Trichloroethane	84	70-130
Tetrachloroethene	88	70-130
2-Hexanone	98	70-130

Client Sample ID: LCS

Lab ID#: 1412343-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/26/14 07:05 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	97	70-130
1,2-Dibromoethane (EDB)	90	70-130
Chlorobenzene	87	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	104	70-130
o-Xylene	106	70-130
Styrene	114	70-130
Bromoform	94	70-130
Cumene	108	70-130
1,1,2,2-Tetrachloroethane	80	70-130
Propylbenzene	99	70-130
4-Ethyltoluene	111	70-130
1,3,5-Trimethylbenzene	123	70-130
1,2,4-Trimethylbenzene	121	70-130
1,3-Dichlorobenzene	101	70-130
1,4-Dichlorobenzene	102	70-130
alpha-Chlorotoluene	169 Q	70-130
1,2-Dichlorobenzene	107	70-130
1,2,4-Trichlorobenzene	143 Q	70-130
Hexachlorobutadiene	137 Q	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1412343-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122604	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/26/14 07:48 AM

Compound	%Recovery	Method Limits
Freon 12	95	70-130
Freon 114	92	70-130
Chloromethane	78	70-130
Vinyl Chloride	87	70-130
1,3-Butadiene	85	70-130
Bromomethane	83	70-130
Chloroethane	81	70-130
Freon 11	93	70-130
Ethanol	86	70-130
Freon 113	93	70-130
1,1-Dichloroethene	95	70-130
Acetone	76	70-130
2-Propanol	97	70-130
Carbon Disulfide	77	70-130
3-Chloropropene	94	70-130
Methylene Chloride	88	70-130
Methyl tert-butyl ether	98	70-130
trans-1,2-Dichloroethene	90	70-130
Hexane	99	70-130
1,1-Dichloroethane	88	70-130
2-Butanone (Methyl Ethyl Ketone)	90	70-130
cis-1,2-Dichloroethene	95	70-130
Tetrahydrofuran	91	70-130
Chloroform	92	70-130
1,1,1-Trichloroethane	100	70-130
Cyclohexane	102	70-130
Carbon Tetrachloride	111	70-130
2,2,4-Trimethylpentane	90	70-130
Benzene	84	70-130
1,2-Dichloroethane	95	70-130
Heptane	92	70-130
Trichloroethene	90	70-130
1,2-Dichloropropane	80	70-130
1,4-Dioxane	94	70-130
Bromodichloromethane	88	70-130
cis-1,3-Dichloropropene	94	70-130
4-Methyl-2-pentanone	96	70-130
Toluene	88	70-130
trans-1,3-Dichloropropene	92	70-130
1,1,2-Trichloroethane	84	70-130
Tetrachloroethene	89	70-130
2-Hexanone	98	70-130

Client Sample ID: LCSD

Lab ID#: 1412343-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e122604	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/26/14 07:48 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	97	70-130
1,2-Dibromoethane (EDB)	91	70-130
Chlorobenzene	87	70-130
Ethyl Benzene	101	70-130
m,p-Xylene	104	70-130
o-Xylene	106	70-130
Styrene	112	70-130
Bromoform	93	70-130
Cumene	108	70-130
1,1,2,2-Tetrachloroethane	79	70-130
Propylbenzene	99	70-130
4-Ethyltoluene	109	70-130
1,3,5-Trimethylbenzene	121	70-130
1,2,4-Trimethylbenzene	121	70-130
1,3-Dichlorobenzene	100	70-130
1,4-Dichlorobenzene	100	70-130
alpha-Chlorotoluene	170 Q	70-130
1,2-Dichlorobenzene	104	70-130
1,2,4-Trichlorobenzene	136 Q	70-130
Hexachlorobutadiene	132 Q	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130