

2/26/2014

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

Jefferson City MO 65109

Project Name: Bridgeton LF

Project #:

Workorder #: 1402247

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 2/18/2014 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: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

WORK ORDER #: 1402247

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. #	3ESP140620
FAX:	573-526-3350	PROJECT #	Bridgeton LF
DATE RECEIVED:	02/18/2014	CONTACT:	Kelly Buettner
DATE COMPLETED:	02/25/2014		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (149065)	Modified TO-15	4.0 "Hg	5 psi
02A	D2 (149066)	Modified TO-15	2.0 "Hg	5 psi
03A	U1 (149067)	Modified TO-15	2.5 "Hg	5 psi
04A	U2 (149068)	Modified TO-15	1.0 psi	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: 02/26/14

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-13-6, UT NELAP CA009332013-4, VA NELAP - 460197, WA NELAP - C935
 Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.

Eurofins Air Toxics Inc. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1402247

Four 6 Liter Summa Canister (100% Certified) samples were received on February 18, 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

There were no analytical discrepancies.

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 (149065)

Lab ID#: 1402247-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.44	0.77	2.2
Freon 11	0.16	0.21	0.87	1.2
Ethanol	0.78	2.0	1.5	3.8
Acetone	0.78	2.5	1.8	6.0
Carbon Disulfide	0.78	2.2	2.4	6.8
Benzene	0.16	0.56	0.50	1.8
Toluene	0.16	0.32	0.58	1.2
m,p-Xylene	0.16	0.19	0.67	0.81

Client Sample ID: D2 (149066)

Lab ID#: 1402247-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.14	0.46	0.71	2.3
Freon 11	0.14	0.19	0.81	1.0
Ethanol	0.72	1.9	1.4	3.6
Acetone	0.72	1.4	1.7	3.4
Benzene	0.14	0.44	0.46	1.4
Toluene	0.14	0.31	0.54	1.2
m,p-Xylene	0.14	0.16	0.62	0.71

Client Sample ID: U1 (149067)

Lab ID#: 1402247-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.41	0.72	2.0
Chloromethane	0.73	1.1	1.5	2.3
Freon 11	0.15	0.22	0.82	1.2
Ethanol	0.73	9.4	1.4	18
Acetone	0.73	6.2	1.7	15
2-Propanol	0.73	2.0	1.8	5.0
Hexane	0.15	0.21	0.51	0.73
Cyclohexane	0.15	1.6	0.50	5.5

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

Client Sample ID: U1 (149067)

Lab ID#: 1402247-03A

Benzene	0.15	0.29	0.47	0.93
Heptane	0.15	0.34	0.60	1.4
Toluene	0.15	7.4	0.55	28
Ethyl Benzene	0.15	0.15	0.63	0.63
m,p-Xylene	0.15	0.41	0.63	1.8

Client Sample ID: U2 (149068)

Lab ID#: 1402247-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.12	0.46	0.62	2.2
Freon 11	0.12	0.20	0.70	1.1
Ethanol	0.62	0.99	1.2	1.9
Acetone	0.62	1.2	1.5	2.9
Benzene	0.12	0.34	0.40	1.1
Toluene	0.12	0.24	0.47	0.90



Air Toxics

Client Sample ID: D1 (149065)

Lab ID#: 1402247-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022209	Date of Collection:	2/7/14 1:00:00 AM
Dil. Factor:	1.55	Date of Analysis:	2/23/14 08:03 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.44	0.77	2.2
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	0.21	0.87	1.2
Ethanol	0.78	2.0	1.5	3.8
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Acetone	0.78	2.5	1.8	6.0
2-Propanol	0.78	Not Detected	1.9	Not Detected
Carbon Disulfide	0.78	2.2	2.4	6.8
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	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	0.61	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	0.56	0.50	1.8
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	Not Detected	0.56	Not Detected
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	0.32	0.58	1.2
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



Client Sample ID: D1 (149065)

Lab ID#: 1402247-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022209	Date of Collection:	2/7/14 1:00:00 AM
Dil. Factor:	1.55	Date of Analysis:	2/23/14 08:03 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	0.71	Not Detected
Ethyl Benzene	0.16	Not Detected	0.67	Not Detected
m,p-Xylene	0.16	0.19	0.67	0.81
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	0.16	Not Detected	0.80	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	96	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: D2 (149066)

Lab ID#: 1402247-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022210	Date of Collection:	2/7/14 2:00:00 AM
Dil. Factor:	1.44	Date of Analysis:	2/23/14 08:51 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.14	0.46	0.71	2.3
Freon 114	0.14	Not Detected	1.0	Not Detected
Chloromethane	0.72	Not Detected	1.5	Not Detected
Vinyl Chloride	0.14	Not Detected	0.37	Not Detected
1,3-Butadiene	0.14	Not Detected	0.32	Not Detected
Bromomethane	0.72	Not Detected	2.8	Not Detected
Chloroethane	0.72	Not Detected	1.9	Not Detected
Freon 11	0.14	0.19	0.81	1.0
Ethanol	0.72	1.9	1.4	3.6
Freon 113	0.14	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.14	Not Detected	0.57	Not Detected
Acetone	0.72	1.4	1.7	3.4
2-Propanol	0.72	Not Detected	1.8	Not Detected
Carbon Disulfide	0.72	Not Detected	2.2	Not Detected
3-Chloropropene	0.72	Not Detected	2.2	Not Detected
Methylene Chloride	0.29	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.14	Not Detected	0.52	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.57	Not Detected
Hexane	0.14	Not Detected	0.51	Not Detected
1,1-Dichloroethane	0.14	Not Detected	0.58	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.72	Not Detected	2.1	Not Detected
cis-1,2-Dichloroethene	0.14	Not Detected	0.57	Not Detected
Tetrahydrofuran	0.72	Not Detected	2.1	Not Detected
Chloroform	0.14	Not Detected	0.70	Not Detected
1,1,1-Trichloroethane	0.14	Not Detected	0.78	Not Detected
Cyclohexane	0.14	Not Detected	0.50	Not Detected
Carbon Tetrachloride	0.14	Not Detected	0.91	Not Detected
2,2,4-Trimethylpentane	0.72	Not Detected	3.4	Not Detected
Benzene	0.14	0.44	0.46	1.4
1,2-Dichloroethane	0.14	Not Detected	0.58	Not Detected
Heptane	0.14	Not Detected	0.59	Not Detected
Trichloroethene	0.14	Not Detected	0.77	Not Detected
1,2-Dichloropropane	0.14	Not Detected	0.66	Not Detected
1,4-Dioxane	0.14	Not Detected	0.52	Not Detected
Bromodichloromethane	0.14	Not Detected	0.96	Not Detected
cis-1,3-Dichloropropene	0.14	Not Detected	0.65	Not Detected
4-Methyl-2-pentanone	0.14	Not Detected	0.59	Not Detected
Toluene	0.14	0.31	0.54	1.2
trans-1,3-Dichloropropene	0.14	Not Detected	0.65	Not Detected
1,1,2-Trichloroethane	0.14	Not Detected	0.78	Not Detected
Tetrachloroethene	0.14	Not Detected	0.98	Not Detected
2-Hexanone	0.72	Not Detected	2.9	Not Detected

Client Sample ID: D2 (149066)

Lab ID#: 1402247-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022210	Date of Collection: 2/7/14 2:00:00 AM
Dil. Factor:	1.44	Date of Analysis: 2/23/14 08:51 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.14	Not Detected	1.2	Not Detected
1,2-Dibromoethane (EDB)	0.14	Not Detected	1.1	Not Detected
Chlorobenzene	0.14	Not Detected	0.66	Not Detected
Ethyl Benzene	0.14	Not Detected	0.62	Not Detected
m,p-Xylene	0.14	0.16	0.62	0.71
o-Xylene	0.14	Not Detected	0.62	Not Detected
Styrene	0.14	Not Detected	0.61	Not Detected
Bromoform	0.14	Not Detected	1.5	Not Detected
Cumene	0.14	Not Detected	0.71	Not Detected
1,1,2,2-Tetrachloroethane	0.14	Not Detected	0.99	Not Detected
Propylbenzene	0.14	Not Detected	0.71	Not Detected
4-Ethyltoluene	0.14	Not Detected	0.71	Not Detected
1,3,5-Trimethylbenzene	0.14	Not Detected	0.71	Not Detected
1,2,4-Trimethylbenzene	0.14	Not Detected	0.71	Not Detected
1,3-Dichlorobenzene	0.14	Not Detected	0.86	Not Detected
1,4-Dichlorobenzene	0.14	Not Detected	0.86	Not Detected
alpha-Chlorotoluene	0.14	Not Detected	0.74	Not Detected
1,2-Dichlorobenzene	0.14	Not Detected	0.86	Not Detected
1,2,4-Trichlorobenzene	0.72	Not Detected	5.3	Not Detected
Hexachlorobutadiene	0.72	Not Detected	7.7	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: U1 (149067)

Lab ID#: 1402247-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022211	Date of Collection:	2/7/14 2:12:00 AM
Dil. Factor:	1.46	Date of Analysis:	2/23/14 09:42 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.41	0.72	2.0
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.73	1.1	1.5	2.3
Vinyl Chloride	0.15	Not Detected	0.37	Not Detected
1,3-Butadiene	0.15	Not Detected	0.32	Not Detected
Bromomethane	0.73	Not Detected	2.8	Not Detected
Chloroethane	0.73	Not Detected	1.9	Not Detected
Freon 11	0.15	0.22	0.82	1.2
Ethanol	0.73	9.4	1.4	18
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Acetone	0.73	6.2	1.7	15
2-Propanol	0.73	2.0	1.8	5.0
Carbon Disulfide	0.73	Not Detected	2.3	Not Detected
3-Chloropropene	0.73	Not Detected	2.3	Not Detected
Methylene Chloride	0.29	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.53	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Hexane	0.15	0.21	0.51	0.73
1,1-Dichloroethane	0.15	Not Detected	0.59	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.73	Not Detected	2.2	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Tetrahydrofuran	0.73	Not Detected	2.2	Not Detected
Chloroform	0.15	Not Detected	0.71	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.80	Not Detected
Cyclohexane	0.15	1.6	0.50	5.5
Carbon Tetrachloride	0.15	Not Detected	0.92	Not Detected
2,2,4-Trimethylpentane	0.73	Not Detected	3.4	Not Detected
Benzene	0.15	0.29	0.47	0.93
1,2-Dichloroethane	0.15	Not Detected	0.59	Not Detected
Heptane	0.15	0.34	0.60	1.4
Trichloroethene	0.15	Not Detected	0.78	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.67	Not Detected
1,4-Dioxane	0.15	Not Detected	0.53	Not Detected
Bromodichloromethane	0.15	Not Detected	0.98	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.66	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.60	Not Detected
Toluene	0.15	7.4	0.55	28
trans-1,3-Dichloropropene	0.15	Not Detected	0.66	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.80	Not Detected
Tetrachloroethene	0.15	Not Detected	0.99	Not Detected
2-Hexanone	0.73	Not Detected	3.0	Not Detected



Air Toxics

Client Sample ID: U1 (149067)

Lab ID#: 1402247-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022211	Date of Collection: 2/7/14 2:12:00 AM
Dil. Factor:	1.46	Date of Analysis: 2/23/14 09:42 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.2	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.1	Not Detected
Chlorobenzene	0.15	Not Detected	0.67	Not Detected
Ethyl Benzene	0.15	0.15	0.63	0.63
m,p-Xylene	0.15	0.41	0.63	1.8
o-Xylene	0.15	Not Detected	0.63	Not Detected
Styrene	0.15	Not Detected	0.62	Not Detected
Bromoform	0.15	Not Detected	1.5	Not Detected
Cumene	0.15	Not Detected	0.72	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.72	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.72	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.72	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.72	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.76	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
1,2,4-Trichlorobenzene	0.73	Not Detected	5.4	Not Detected
Hexachlorobutadiene	0.73	Not Detected	7.8	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: U2 (149068)

Lab ID#: 1402247-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022208	Date of Collection:	2/6/14 10:23:00 PM
Dil. Factor:	1.25	Date of Analysis:	2/22/14 09:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.12	0.46	0.62	2.2
Freon 114	0.12	Not Detected	0.87	Not Detected
Chloromethane	0.62	Not Detected	1.3	Not Detected
Vinyl Chloride	0.12	Not Detected	0.32	Not Detected
1,3-Butadiene	0.12	Not Detected	0.28	Not Detected
Bromomethane	0.62	Not Detected	2.4	Not Detected
Chloroethane	0.62	Not Detected	1.6	Not Detected
Freon 11	0.12	0.20	0.70	1.1
Ethanol	0.62	0.99	1.2	1.9
Freon 113	0.12	Not Detected	0.96	Not Detected
1,1-Dichloroethene	0.12	Not Detected	0.50	Not Detected
Acetone	0.62	1.2	1.5	2.9
2-Propanol	0.62	Not Detected	1.5	Not Detected
Carbon Disulfide	0.62	Not Detected	1.9	Not Detected
3-Chloropropene	0.62	Not Detected	2.0	Not Detected
Methylene Chloride	0.25	Not Detected	0.87	Not Detected
Methyl tert-butyl ether	0.12	Not Detected	0.45	Not Detected
trans-1,2-Dichloroethene	0.12	Not Detected	0.50	Not Detected
Hexane	0.12	Not Detected	0.44	Not Detected
1,1-Dichloroethane	0.12	Not Detected	0.50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.62	Not Detected	1.8	Not Detected
cis-1,2-Dichloroethene	0.12	Not Detected	0.50	Not Detected
Tetrahydrofuran	0.62	Not Detected	1.8	Not Detected
Chloroform	0.12	Not Detected	0.61	Not Detected
1,1,1-Trichloroethane	0.12	Not Detected	0.68	Not Detected
Cyclohexane	0.12	Not Detected	0.43	Not Detected
Carbon Tetrachloride	0.12	Not Detected	0.79	Not Detected
2,2,4-Trimethylpentane	0.62	Not Detected	2.9	Not Detected
Benzene	0.12	0.34	0.40	1.1
1,2-Dichloroethane	0.12	Not Detected	0.50	Not Detected
Heptane	0.12	Not Detected	0.51	Not Detected
Trichloroethene	0.12	Not Detected	0.67	Not Detected
1,2-Dichloropropane	0.12	Not Detected	0.58	Not Detected
1,4-Dioxane	0.12	Not Detected	0.45	Not Detected
Bromodichloromethane	0.12	Not Detected	0.84	Not Detected
cis-1,3-Dichloropropene	0.12	Not Detected	0.57	Not Detected
4-Methyl-2-pentanone	0.12	Not Detected	0.51	Not Detected
Toluene	0.12	0.24	0.47	0.90
trans-1,3-Dichloropropene	0.12	Not Detected	0.57	Not Detected
1,1,2-Trichloroethane	0.12	Not Detected	0.68	Not Detected
Tetrachloroethene	0.12	Not Detected	0.85	Not Detected
2-Hexanone	0.62	Not Detected	2.6	Not Detected



Client Sample ID: U2 (149068)

Lab ID#: 1402247-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022208	Date of Collection:	2/6/14 10:23:00 PM
Dil. Factor:	1.25	Date of Analysis:	2/22/14 09:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.12	Not Detected	1.1	Not Detected
1,2-Dibromoethane (EDB)	0.12	Not Detected	0.96	Not Detected
Chlorobenzene	0.12	Not Detected	0.58	Not Detected
Ethyl Benzene	0.12	Not Detected	0.54	Not Detected
m,p-Xylene	0.12	Not Detected	0.54	Not Detected
o-Xylene	0.12	Not Detected	0.54	Not Detected
Styrene	0.12	Not Detected	0.53	Not Detected
Bromoform	0.12	Not Detected	1.3	Not Detected
Cumene	0.12	Not Detected	0.61	Not Detected
1,1,2,2-Tetrachloroethane	0.12	Not Detected	0.86	Not Detected
Propylbenzene	0.12	Not Detected	0.61	Not Detected
4-Ethyltoluene	0.12	Not Detected	0.61	Not Detected
1,3,5-Trimethylbenzene	0.12	Not Detected	0.61	Not Detected
1,2,4-Trimethylbenzene	0.12	Not Detected	0.61	Not Detected
1,3-Dichlorobenzene	0.12	Not Detected	0.75	Not Detected
1,4-Dichlorobenzene	0.12	Not Detected	0.75	Not Detected
alpha-Chlorotoluene	0.12	Not Detected	0.65	Not Detected
1,2-Dichlorobenzene	0.12	Not Detected	0.75	Not Detected
1,2,4-Trichlorobenzene	0.62	Not Detected	4.6	Not Detected
Hexachlorobutadiene	0.62	Not Detected	6.7	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1402247-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022207	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/22/14 08:38 PM

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#: 1402247-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022207	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/22/14 08:38 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	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1402247-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/22/14 04:43 PM

Compound	%Recovery
Freon 12	95
Freon 114	91
Chloromethane	105
Vinyl Chloride	102
1,3-Butadiene	104
Bromomethane	97
Chloroethane	103
Freon 11	89
Ethanol	97
Freon 113	83
1,1-Dichloroethene	90
Acetone	86
2-Propanol	100
Carbon Disulfide	88
3-Chloropropene	91
Methylene Chloride	95
Methyl tert-butyl ether	88
trans-1,2-Dichloroethene	87
Hexane	93
1,1-Dichloroethane	90
2-Butanone (Methyl Ethyl Ketone)	90
cis-1,2-Dichloroethene	84
Tetrahydrofuran	106
Chloroform	89
1,1,1-Trichloroethane	87
Cyclohexane	89
Carbon Tetrachloride	100
2,2,4-Trimethylpentane	102
Benzene	93
1,2-Dichloroethane	93
Heptane	98
Trichloroethene	90
1,2-Dichloropropane	99
1,4-Dioxane	92
Bromodichloromethane	89
cis-1,3-Dichloropropene	92
4-Methyl-2-pentanone	103
Toluene	94
trans-1,3-Dichloropropene	91
1,1,2-Trichloroethane	98
Tetrachloroethene	87
2-Hexanone	100



Air Toxics

Client Sample ID: CCV

Lab ID#: 1402247-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/22/14 04:43 PM

Compound	%Recovery
Dibromochloromethane	92
1,2-Dibromoethane (EDB)	91
Chlorobenzene	92
Ethyl Benzene	94
m,p-Xylene	90
o-Xylene	96
Styrene	92
Bromoform	90
Cumene	95
1,1,2,2-Tetrachloroethane	100
Propylbenzene	101
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	90
1,3-Dichlorobenzene	96
1,4-Dichlorobenzene	96
alpha-Chlorotoluene	104
1,2-Dichlorobenzene	94
1,2,4-Trichlorobenzene	80
Hexachlorobutadiene	88

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1402247-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/22/14 05:33 PM

Compound	%Recovery	Method Limits
Freon 12	110	70-130
Freon 114	104	70-130
Chloromethane	121	70-130
Vinyl Chloride	118	70-130
1,3-Butadiene	117	70-130
Bromomethane	111	70-130
Chloroethane	121	70-130
Freon 11	102	70-130
Ethanol	112	70-130
Freon 113	103	70-130
1,1-Dichloroethene	118	70-130
Acetone	102	70-130
2-Propanol	113	70-130
Carbon Disulfide	94	70-130
3-Chloropropene	96	70-130
Methylene Chloride	115	70-130
Methyl tert-butyl ether	100	70-130
trans-1,2-Dichloroethene	86	70-130
Hexane	107	70-130
1,1-Dichloroethane	108	70-130
2-Butanone (Methyl Ethyl Ketone)	102	70-130
cis-1,2-Dichloroethene	111	70-130
Tetrahydrofuran	116	70-130
Chloroform	102	70-130
1,1,1-Trichloroethane	100	70-130
Cyclohexane	103	70-130
Carbon Tetrachloride	96	70-130
2,2,4-Trimethylpentane	111	70-130
Benzene	102	70-130
1,2-Dichloroethane	102	70-130
Heptane	108	70-130
Trichloroethene	96	70-130
1,2-Dichloropropane	108	70-130
1,4-Dioxane	103	70-130
Bromodichloromethane	101	70-130
cis-1,3-Dichloropropene	103	70-130
4-Methyl-2-pentanone	107	70-130
Toluene	100	70-130
trans-1,3-Dichloropropene	94	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	98	70-130
2-Hexanone	112	70-130

Client Sample ID: LCS

Lab ID#: 1402247-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/22/14 05:33 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	103	70-130
1,2-Dibromoethane (EDB)	100	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	101	70-130
m,p-Xylene	102	70-130
o-Xylene	100	70-130
Styrene	101	70-130
Bromoform	98	70-130
Cumene	105	70-130
1,1,2,2-Tetrachloroethane	108	70-130
Propylbenzene	111	70-130
4-Ethyltoluene	107	70-130
1,3,5-Trimethylbenzene	102	70-130
1,2,4-Trimethylbenzene	97	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	116	70-130
1,2-Dichlorobenzene	102	70-130
1,2,4-Trichlorobenzene	88	70-130
Hexachlorobutadiene	89	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1402247-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/22/14 06:14 PM

Compound	%Recovery	Method Limits
Freon 12	107	70-130
Freon 114	101	70-130
Chloromethane	120	70-130
Vinyl Chloride	113	70-130
1,3-Butadiene	115	70-130
Bromomethane	110	70-130
Chloroethane	116	70-130
Freon 11	100	70-130
Ethanol	114	70-130
Freon 113	108	70-130
1,1-Dichloroethene	113	70-130
Acetone	101	70-130
2-Propanol	112	70-130
Carbon Disulfide	93	70-130
3-Chloropropene	94	70-130
Methylene Chloride	115	70-130
Methyl tert-butyl ether	98	70-130
trans-1,2-Dichloroethene	90	70-130
Hexane	108	70-130
1,1-Dichloroethane	108	70-130
2-Butanone (Methyl Ethyl Ketone)	102	70-130
cis-1,2-Dichloroethene	112	70-130
Tetrahydrofuran	119	70-130
Chloroform	101	70-130
1,1,1-Trichloroethane	100	70-130
Cyclohexane	102	70-130
Carbon Tetrachloride	97	70-130
2,2,4-Trimethylpentane	107	70-130
Benzene	108	70-130
1,2-Dichloroethane	106	70-130
Heptane	112	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	110	70-130
1,4-Dioxane	103	70-130
Bromodichloromethane	103	70-130
cis-1,3-Dichloropropene	130	70-130
4-Methyl-2-pentanone	111	70-130
Toluene	100	70-130
trans-1,3-Dichloropropene	95	70-130
1,1,2-Trichloroethane	109	70-130
Tetrachloroethene	100	70-130
2-Hexanone	112	70-130

Client Sample ID: LCSD

Lab ID#: 1402247-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e022204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/22/14 06:14 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	107	70-130
1,2-Dibromoethane (EDB)	100	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	103	70-130
o-Xylene	102	70-130
Styrene	100	70-130
Bromoform	99	70-130
Cumene	106	70-130
1,1,2,2-Tetrachloroethane	108	70-130
Propylbenzene	109	70-130
4-Ethyltoluene	108	70-130
1,3,5-Trimethylbenzene	102	70-130
1,2,4-Trimethylbenzene	93	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	104	70-130
alpha-Chlorotoluene	114	70-130
1,2-Dichlorobenzene	100	70-130
1,2,4-Trichlorobenzene	86	70-130
Hexachlorobutadiene	95	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130