



Air Toxics

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind; Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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) Kir Mitchell

Company MDNR

Email Nickel.paris@delaware.gov

Address P.O. Box 176

City Wilmington State MD Zip 21202

Phone 5735263918

Fax

Project Info:

P.O. # 355400007

Project #

Project Name Reduction Lead Hill

Turn Around Time:

Normal

Rush

Lab Use Only

Pressurized by:

Date:

Pressurization Gas:

Specify 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)
01A	U1 (151357)	12871	3-25-15	1007-1412	TD-15	295	5		
02A	D2 (151766)	22509	3-25-15	0937-1422	TD-15	30	8		
03A	D1 (151767)	57333	3-25-15	0936-1430	TD-15	30	5		

Relinquished by: (signature) Kir Mitchell Date/Time 3-27-15 1030

Received by: (signature) Michael Paris Date/Time 3/27/15 1030

Relinquished by: (signature) Kir Mitchell Date/Time 3/27/15 1105

Received by: (signature) Michael Paris Date/Time 3/27/15 1105

Relinquished by: (signature) Kir Mitchell Date/Time 3/27/15 1105

Received by: (signature) Michael Paris Date/Time 3/27/15 1105

Notes:

Shipped via UPS
Tracking # 1ZU127880343123097

Lab Use Only

Shipper Name UPS Air Bill # NA Temp (°C) NA Condition Good Custody Seals Intact? Yes No None Work Order # 1504071

5/4/2015

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

Jefferson City MO 65109

Project Name: Bridgeton LF

Project #:

Workorder #: 1504352

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 4/21/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker
Project Manager

WORK ORDER #: 1504352

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:	04/21/2015	CONTACT:	Brian Whittaker
DATE COMPLETED:	05/04/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	U1 (152220)	Modified TO-15	9.4 "Hg	5.2 psi
02A	U2 (152219)	Modified TO-15	9.2 "Hg	5.1 psi
03A	D1 (152218)	Modified TO-15	7.6 "Hg	4.9 psi
04A	D2 (152217)	Modified TO-15	11.2 "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: 05/04/15

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

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

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# 1504352

Four 6 Liter Summa Canister (100% Certified) samples were received on April 21, 2015. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

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

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

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Initial Calibration	$\leq 30\%$ 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 MDL study performed on instrument MSD-V, the reporting limit for 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.

Ethanol exceeded the instrument's calibration range for sample D1 (152218) and was flagged accordingly.

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: U1 (152220)

Lab ID#: 1504352-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.20	0.52	0.97	2.6
Freon 11	0.20	0.23	1.1	1.3
Ethanol	0.98	1.2	1.8	2.2
Acetone	0.98	3.1	2.3	7.3

Client Sample ID: U2 (152219)

Lab ID#: 1504352-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.19	0.52	0.96	2.5
Freon 11	0.19	0.21	1.1	1.2
Ethanol	0.97	4.2	1.8	8.0
Acetone	0.97	2.4	2.3	5.8
Toluene	0.19	0.45	0.73	1.7

Client Sample ID: D1 (152218)

Lab ID#: 1504352-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.47	0.88	2.3
Freon 11	0.18	0.22	1.0	1.2
Ethanol	0.89	150 E	1.7	280 E
Acetone	0.89	7.2	2.1	17
2-Propanol	0.89	4.8	2.2	12
Hexane	0.18	0.49	0.63	1.7
2,2,4-Trimethylpentane	0.89	1.4	4.2	6.5
Benzene	0.18	0.21	0.57	0.67
Heptane	0.18	0.35	0.73	1.4
Trichloroethene	0.18	0.23	0.96	1.2
Toluene	0.18	1.9	0.67	7.2
Tetrachloroethene	0.18	0.36	1.2	2.4
Ethyl Benzene	0.18	0.22	0.77	0.98
m,p-Xylene	0.18	0.75	0.77	3.3

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

Client Sample ID: D1 (152218)

Lab ID#: 1504352-03A

o-Xylene	0.18	0.27	0.77	1.2
4-Ethyltoluene	0.18	0.22	0.88	1.1
1,2,4-Trimethylbenzene	0.18	0.21	0.88	1.0

Client Sample ID: D2 (152217)

Lab ID#: 1504352-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.21	0.46	1.0	2.3
Freon 11	0.21	0.22	1.2	1.3
Ethanol	1.1	24	2.0	46
Acetone	1.1	3.1	2.5	7.4
Hexane	0.21	0.25	0.75	0.88
Toluene	0.21	0.55	0.81	2.1



Air Toxics

Client Sample ID: U1 (152220)

Lab ID#: 1504352-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042207	Date of Collection:	4/14/15 2:11:00 PM
Dil. Factor:	1.97	Date of Analysis:	4/22/15 11:15 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.20	0.52	0.97	2.6
Freon 114	0.20	Not Detected	1.4	Not Detected
Chloromethane	0.98	Not Detected	2.0	Not Detected
Vinyl Chloride	0.20	Not Detected	0.50	Not Detected
1,3-Butadiene	0.20	Not Detected	0.44	Not Detected
Bromomethane	0.98	Not Detected	3.8	Not Detected
Chloroethane	0.98	Not Detected	2.6	Not Detected
Freon 11	0.20	0.23	1.1	1.3
Ethanol	0.98	1.2	1.8	2.2
Freon 113	0.20	Not Detected	1.5	Not Detected
1,1-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Acetone	0.98	3.1	2.3	7.3
2-Propanol	0.98	Not Detected	2.4	Not Detected
Carbon Disulfide	0.98	Not Detected	3.1	Not Detected
3-Chloropropene	0.98	Not Detected	3.1	Not Detected
Methylene Chloride	0.39	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.20	Not Detected	0.71	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Hexane	0.20	Not Detected	0.69	Not Detected
1,1-Dichloroethane	0.20	Not Detected	0.80	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.98	Not Detected	2.9	Not Detected
cis-1,2-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Tetrahydrofuran	0.98	Not Detected	2.9	Not Detected
Chloroform	0.20	Not Detected	0.96	Not Detected
1,1,1-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Cyclohexane	0.20	Not Detected	0.68	Not Detected
Carbon Tetrachloride	0.20	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	0.98	Not Detected	4.6	Not Detected
Benzene	0.20	Not Detected	0.63	Not Detected
1,2-Dichloroethane	0.20	Not Detected	0.80	Not Detected
Heptane	0.20	Not Detected	0.81	Not Detected
Trichloroethene	0.20	Not Detected	1.0	Not Detected
1,2-Dichloropropane	0.20	Not Detected	0.91	Not Detected
1,4-Dioxane	0.20	Not Detected	0.71	Not Detected
Bromodichloromethane	0.20	Not Detected	1.3	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected	0.89	Not Detected
4-Methyl-2-pentanone	0.20	Not Detected	0.81	Not Detected
Toluene	0.20	Not Detected	0.74	Not Detected
trans-1,3-Dichloropropene	0.20	Not Detected	0.89	Not Detected
1,1,2-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Tetrachloroethene	0.20	Not Detected	1.3	Not Detected
2-Hexanone	0.98	Not Detected	4.0	Not Detected



Client Sample ID: U1 (152220)

Lab ID#: 1504352-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042207	Date of Collection: 4/14/15 2:11:00 PM
Dil. Factor:	1.97	Date of Analysis: 4/22/15 11:15 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.20	Not Detected	1.7	Not Detected
1,2-Dibromoethane (EDB)	0.20	Not Detected	1.5	Not Detected
Chlorobenzene	0.20	Not Detected	0.91	Not Detected
Ethyl Benzene	0.20	Not Detected	0.86	Not Detected
m,p-Xylene	0.20	Not Detected	0.86	Not Detected
o-Xylene	0.20	Not Detected	0.86	Not Detected
Styrene	0.20	Not Detected	0.84	Not Detected
Bromoform	0.20	Not Detected	2.0	Not Detected
Cumene	0.20	Not Detected	0.97	Not Detected
1,1,2,2-Tetrachloroethane	0.20	Not Detected	1.4	Not Detected
Propylbenzene	0.20	Not Detected	0.97	Not Detected
4-Ethyltoluene	0.20	Not Detected	0.97	Not Detected
1,3,5-Trimethylbenzene	0.20	Not Detected	0.97	Not Detected
1,2,4-Trimethylbenzene	0.20	Not Detected	0.97	Not Detected
1,3-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.98	Not Detected	5.1	Not Detected
1,2-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	0.98	Not Detected	7.3	Not Detected
Hexachlorobutadiene	0.98	Not Detected	10	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	88	70-130



Air Toxics

Client Sample ID: U2 (152219)

Lab ID#: 1504352-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042208	Date of Collection:	4/14/15 1:51:00 PM
Dil. Factor:	1.94	Date of Analysis:	4/22/15 11:51 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.19	0.52	0.96	2.5
Freon 114	0.19	Not Detected	1.4	Not Detected
Chloromethane	0.97	Not Detected	2.0	Not Detected
Vinyl Chloride	0.19	Not Detected	0.50	Not Detected
1,3-Butadiene	0.19	Not Detected	0.43	Not Detected
Bromomethane	0.97	Not Detected	3.8	Not Detected
Chloroethane	0.97	Not Detected	2.6	Not Detected
Freon 11	0.19	0.21	1.1	1.2
Ethanol	0.97	4.2	1.8	8.0
Freon 113	0.19	Not Detected	1.5	Not Detected
1,1-Dichloroethene	0.19	Not Detected	0.77	Not Detected
Acetone	0.97	2.4	2.3	5.8
2-Propanol	0.97	Not Detected	2.4	Not Detected
Carbon Disulfide	0.97	Not Detected	3.0	Not Detected
3-Chloropropene	0.97	Not Detected	3.0	Not Detected
Methylene Chloride	0.39	Not Detected	1.3	Not Detected
Methyl tert-butyl ether	0.19	Not Detected	0.70	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.77	Not Detected
Hexane	0.19	Not Detected	0.68	Not Detected
1,1-Dichloroethane	0.19	Not Detected	0.78	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.97	Not Detected	2.9	Not Detected
cis-1,2-Dichloroethene	0.19	Not Detected	0.77	Not Detected
Tetrahydrofuran	0.97	Not Detected	2.9	Not Detected
Chloroform	0.19	Not Detected	0.95	Not Detected
1,1,1-Trichloroethane	0.19	Not Detected	1.0	Not Detected
Cyclohexane	0.19	Not Detected	0.67	Not Detected
Carbon Tetrachloride	0.19	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	0.97	Not Detected	4.5	Not Detected
Benzene	0.19	Not Detected	0.62	Not Detected
1,2-Dichloroethane	0.19	Not Detected	0.78	Not Detected
Heptane	0.19	Not Detected	0.80	Not Detected
Trichloroethene	0.19	Not Detected	1.0	Not Detected
1,2-Dichloropropane	0.19	Not Detected	0.90	Not Detected
1,4-Dioxane	0.19	Not Detected	0.70	Not Detected
Bromodichloromethane	0.19	Not Detected	1.3	Not Detected
cis-1,3-Dichloropropene	0.19	Not Detected	0.88	Not Detected
4-Methyl-2-pentanone	0.19	Not Detected	0.79	Not Detected
Toluene	0.19	0.45	0.73	1.7
trans-1,3-Dichloropropene	0.19	Not Detected	0.88	Not Detected
1,1,2-Trichloroethane	0.19	Not Detected	1.0	Not Detected
Tetrachloroethene	0.19	Not Detected	1.3	Not Detected
2-Hexanone	0.97	Not Detected	4.0	Not Detected



Client Sample ID: U2 (152219)

Lab ID#: 1504352-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042208	Date of Collection:	4/14/15 1:51:00 PM
Dil. Factor:	1.94	Date of Analysis:	4/22/15 11:51 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.19	Not Detected	1.6	Not Detected
1,2-Dibromoethane (EDB)	0.19	Not Detected	1.5	Not Detected
Chlorobenzene	0.19	Not Detected	0.89	Not Detected
Ethyl Benzene	0.19	Not Detected	0.84	Not Detected
m,p-Xylene	0.19	Not Detected	0.84	Not Detected
o-Xylene	0.19	Not Detected	0.84	Not Detected
Styrene	0.19	Not Detected	0.83	Not Detected
Bromoform	0.19	Not Detected	2.0	Not Detected
Cumene	0.19	Not Detected	0.95	Not Detected
1,1,2,2-Tetrachloroethane	0.19	Not Detected	1.3	Not Detected
Propylbenzene	0.19	Not Detected	0.95	Not Detected
4-Ethyltoluene	0.19	Not Detected	0.95	Not Detected
1,3,5-Trimethylbenzene	0.19	Not Detected	0.95	Not Detected
1,2,4-Trimethylbenzene	0.19	Not Detected	0.95	Not Detected
1,3-Dichlorobenzene	0.19	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.19	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.97	Not Detected	5.0	Not Detected
1,2-Dichlorobenzene	0.19	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	0.97	Not Detected	7.2	Not Detected
Hexachlorobutadiene	0.97	Not Detected	10	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: D1 (152218)

Lab ID#: 1504352-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042209	Date of Collection:	4/14/15 2:25:00 PM
Dil. Factor:	1.78	Date of Analysis:	4/22/15 12:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.47	0.88	2.3
Freon 114	0.18	Not Detected	1.2	Not Detected
Chloromethane	0.89	Not Detected	1.8	Not Detected
Vinyl Chloride	0.18	Not Detected	0.46	Not Detected
1,3-Butadiene	0.18	Not Detected	0.39	Not Detected
Bromomethane	0.89	Not Detected	3.4	Not Detected
Chloroethane	0.89	Not Detected	2.3	Not Detected
Freon 11	0.18	0.22	1.0	1.2
Ethanol	0.89	150 E	1.7	280 E
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Acetone	0.89	7.2	2.1	17
2-Propanol	0.89	4.8	2.2	12
Carbon Disulfide	0.89	Not Detected	2.8	Not Detected
3-Chloropropene	0.89	Not Detected	2.8	Not Detected
Methylene Chloride	0.36	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.64	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Hexane	0.18	0.49	0.63	1.7
1,1-Dichloroethane	0.18	Not Detected	0.72	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.89	Not Detected	2.6	Not Detected
cis-1,2-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Tetrahydrofuran	0.89	Not Detected	2.6	Not Detected
Chloroform	0.18	Not Detected	0.87	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.97	Not Detected
Cyclohexane	0.18	Not Detected	0.61	Not Detected
Carbon Tetrachloride	0.18	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.89	1.4	4.2	6.5
Benzene	0.18	0.21	0.57	0.67
1,2-Dichloroethane	0.18	Not Detected	0.72	Not Detected
Heptane	0.18	0.35	0.73	1.4
Trichloroethene	0.18	0.23	0.96	1.2
1,2-Dichloropropane	0.18	Not Detected	0.82	Not Detected
1,4-Dioxane	0.18	Not Detected	0.64	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.81	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.73	Not Detected
Toluene	0.18	1.9	0.67	7.2
trans-1,3-Dichloropropene	0.18	Not Detected	0.81	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	0.97	Not Detected
Tetrachloroethene	0.18	0.36	1.2	2.4
2-Hexanone	0.89	Not Detected	3.6	Not Detected



Client Sample ID: D1 (152218)

Lab ID#: 1504352-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042209	Date of Collection:	4/14/15 2:25:00 PM
Dil. Factor:	1.78	Date of Analysis:	4/22/15 12:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.18	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.82	Not Detected
Ethyl Benzene	0.18	0.22	0.77	0.98
m,p-Xylene	0.18	0.75	0.77	3.3
o-Xylene	0.18	0.27	0.77	1.2
Styrene	0.18	Not Detected	0.76	Not Detected
Bromoform	0.18	Not Detected	1.8	Not Detected
Cumene	0.18	Not Detected	0.88	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
Propylbenzene	0.18	Not Detected	0.88	Not Detected
4-Ethyltoluene	0.18	0.22	0.88	1.1
1,3,5-Trimethylbenzene	0.18	Not Detected	0.88	Not Detected
1,2,4-Trimethylbenzene	0.18	0.21	0.88	1.0
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.89	Not Detected	4.6	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.89	Not Detected	6.6	Not Detected
Hexachlorobutadiene	0.89	Not Detected	9.5	Not Detected

E = Exceeds instrument calibration range.

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

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



Air Toxics

Client Sample ID: D2 (152217)

Lab ID#: 1504352-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042210	Date of Collection:	4/14/15 2:51:00 PM
Dil. Factor:	2.14	Date of Analysis:	4/22/15 01:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.21	0.46	1.0	2.3
Freon 114	0.21	Not Detected	1.5	Not Detected
Chloromethane	1.1	Not Detected	2.2	Not Detected
Vinyl Chloride	0.21	Not Detected	0.55	Not Detected
1,3-Butadiene	0.21	Not Detected	0.47	Not Detected
Bromomethane	1.1	Not Detected	4.2	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
Freon 11	0.21	0.22	1.2	1.3
Ethanol	1.1	24	2.0	46
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.85	Not Detected
Acetone	1.1	3.1	2.5	7.4
2-Propanol	1.1	Not Detected	2.6	Not Detected
Carbon Disulfide	1.1	Not Detected	3.3	Not Detected
3-Chloropropene	1.1	Not Detected	3.3	Not Detected
Methylene Chloride	0.43	Not Detected	1.5	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.77	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.85	Not Detected
Hexane	0.21	0.25	0.75	0.88
1,1-Dichloroethane	0.21	Not Detected	0.87	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.85	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	0.21	Not Detected	1.0	Not Detected
1,1,1-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Cyclohexane	0.21	Not Detected	0.74	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	0.21	Not Detected	0.68	Not Detected
1,2-Dichloroethane	0.21	Not Detected	0.87	Not Detected
Heptane	0.21	Not Detected	0.88	Not Detected
Trichloroethene	0.21	Not Detected	1.2	Not Detected
1,2-Dichloropropane	0.21	Not Detected	0.99	Not Detected
1,4-Dioxane	0.21	Not Detected	0.77	Not Detected
Bromodichloromethane	0.21	Not Detected	1.4	Not Detected
cis-1,3-Dichloropropene	0.21	Not Detected	0.97	Not Detected
4-Methyl-2-pentanone	0.21	Not Detected	0.88	Not Detected
Toluene	0.21	0.55	0.81	2.1
trans-1,3-Dichloropropene	0.21	Not Detected	0.97	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Tetrachloroethene	0.21	Not Detected	1.4	Not Detected
2-Hexanone	1.1	Not Detected	4.4	Not Detected

Client Sample ID: D2 (152217)

Lab ID#: 1504352-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042210	Date of Collection:	4/14/15 2:51:00 PM
Dil. Factor:	2.14	Date of Analysis:	4/22/15 01:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.98	Not Detected
Ethyl Benzene	0.21	Not Detected	0.93	Not Detected
m,p-Xylene	0.21	Not Detected	0.93	Not Detected
o-Xylene	0.21	Not Detected	0.93	Not Detected
Styrene	0.21	Not Detected	0.91	Not Detected
Bromoform	0.21	Not Detected	2.2	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.5	Not Detected
Propylbenzene	0.21	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.21	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,2,4-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,3-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.5	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected	7.9	Not Detected
Hexachlorobutadiene	1.1	Not Detected	11	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1504352-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042206	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/22/15 09:41 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 1504352-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042206	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/22/15 09:41 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1504352-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/22/15 06:30 AM

Compound	%Recovery
Freon 12	99
Freon 114	96
Chloromethane	94
Vinyl Chloride	99
1,3-Butadiene	94
Bromomethane	105
Chloroethane	102
Freon 11	98
Ethanol	100
Freon 113	97
1,1-Dichloroethene	95
Acetone	91
2-Propanol	101
Carbon Disulfide	96
3-Chloropropene	97
Methylene Chloride	92
Methyl tert-butyl ether	99
trans-1,2-Dichloroethene	91
Hexane	88
1,1-Dichloroethane	98
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	98
Tetrahydrofuran	100
Chloroform	98
1,1,1-Trichloroethane	96
Cyclohexane	94
Carbon Tetrachloride	98
2,2,4-Trimethylpentane	97
Benzene	94
1,2-Dichloroethane	96
Heptane	97
Trichloroethene	99
1,2-Dichloropropane	98
1,4-Dioxane	97
Bromodichloromethane	100
cis-1,3-Dichloropropene	102
4-Methyl-2-pentanone	105
Toluene	98
trans-1,3-Dichloropropene	94
1,1,2-Trichloroethane	93
Tetrachloroethene	90
2-Hexanone	91



Air Toxics

Client Sample ID: CCV

Lab ID#: 1504352-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/22/15 06:30 AM

Compound	%Recovery
Dibromochloromethane	94
1,2-Dibromoethane (EDB)	94
Chlorobenzene	90
Ethyl Benzene	92
m,p-Xylene	95
o-Xylene	90
Styrene	91
Bromoform	95
Cumene	91
1,1,2,2-Tetrachloroethane	93
Propylbenzene	81
4-Ethyltoluene	79
1,3,5-Trimethylbenzene	77
1,2,4-Trimethylbenzene	82
1,3-Dichlorobenzene	86
1,4-Dichlorobenzene	84
alpha-Chlorotoluene	87
1,2-Dichlorobenzene	81
1,2,4-Trichlorobenzene	92
Hexachlorobutadiene	78

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	120	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1504352-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042203	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/22/15 07:15 AM

Compound	%Recovery	Method Limits
Freon 12	118	70-130
Freon 114	120	70-130
Chloromethane	111	70-130
Vinyl Chloride	120	70-130
1,3-Butadiene	113	70-130
Bromomethane	125	70-130
Chloroethane	123	70-130
Freon 11	117	70-130
Ethanol	124	70-130
Freon 113	114	70-130
1,1-Dichloroethene	114	70-130
Acetone	115	70-130
2-Propanol	128	70-130
Carbon Disulfide	103	70-130
3-Chloropropene	112	70-130
Methylene Chloride	111	70-130
Methyl tert-butyl ether	118	70-130
trans-1,2-Dichloroethene	96	70-130
Hexane	104	70-130
1,1-Dichloroethane	117	70-130
2-Butanone (Methyl Ethyl Ketone)	125	70-130
cis-1,2-Dichloroethene	127	70-130
Tetrahydrofuran	120	70-130
Chloroform	115	70-130
1,1,1-Trichloroethane	113	70-130
Cyclohexane	117	70-130
Carbon Tetrachloride	122	70-130
2,2,4-Trimethylpentane	118	70-130
Benzene	114	70-130
1,2-Dichloroethane	112	70-130
Heptane	120	70-130
Trichloroethene	119	70-130
1,2-Dichloropropane	117	70-130
1,4-Dioxane	125	70-130
Bromodichloromethane	121	70-130
cis-1,3-Dichloropropene	114	70-130
4-Methyl-2-pentanone	132 Q	70-130
Toluene	117	70-130
trans-1,3-Dichloropropene	117	70-130
1,1,2-Trichloroethane	115	70-130
Tetrachloroethene	112	70-130
2-Hexanone	126	70-130

Client Sample ID: LCS

Lab ID#: 1504352-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/22/15 07:15 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	116	70-130
1,2-Dibromoethane (EDB)	115	70-130
Chlorobenzene	110	70-130
Ethyl Benzene	116	70-130
m,p-Xylene	114	70-130
o-Xylene	117	70-130
Styrene	115	70-130
Bromoform	118	70-130
Cumene	116	70-130
1,1,2,2-Tetrachloroethane	116	70-130
Propylbenzene	108	70-130
4-Ethyltoluene	101	70-130
1,3,5-Trimethylbenzene	97	70-130
1,2,4-Trimethylbenzene	103	70-130
1,3-Dichlorobenzene	113	70-130
1,4-Dichlorobenzene	106	70-130
alpha-Chlorotoluene	124	70-130
1,2-Dichlorobenzene	106	70-130
1,2,4-Trichlorobenzene	111	70-130
Hexachlorobutadiene	98	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	113	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1504352-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042204	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/22/15 07:52 AM

Compound	%Recovery	Method Limits
Freon 12	113	70-130
Freon 114	114	70-130
Chloromethane	109	70-130
Vinyl Chloride	114	70-130
1,3-Butadiene	105	70-130
Bromomethane	116	70-130
Chloroethane	120	70-130
Freon 11	112	70-130
Ethanol	121	70-130
Freon 113	105	70-130
1,1-Dichloroethene	110	70-130
Acetone	102	70-130
2-Propanol	121	70-130
Carbon Disulfide	97	70-130
3-Chloropropene	104	70-130
Methylene Chloride	101	70-130
Methyl tert-butyl ether	110	70-130
trans-1,2-Dichloroethene	93	70-130
Hexane	101	70-130
1,1-Dichloroethane	112	70-130
2-Butanone (Methyl Ethyl Ketone)	116	70-130
cis-1,2-Dichloroethene	121	70-130
Tetrahydrofuran	116	70-130
Chloroform	110	70-130
1,1,1-Trichloroethane	106	70-130
Cyclohexane	108	70-130
Carbon Tetrachloride	115	70-130
2,2,4-Trimethylpentane	113	70-130
Benzene	114	70-130
1,2-Dichloroethane	115	70-130
Heptane	118	70-130
Trichloroethene	119	70-130
1,2-Dichloropropane	120	70-130
1,4-Dioxane	121	70-130
Bromodichloromethane	123	70-130
cis-1,3-Dichloropropene	114	70-130
4-Methyl-2-pentanone	134 Q	70-130
Toluene	117	70-130
trans-1,3-Dichloropropene	120	70-130
1,1,2-Trichloroethane	121	70-130
Tetrachloroethene	115	70-130
2-Hexanone	127	70-130

Client Sample ID: LCSD

Lab ID#: 1504352-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/22/15 07:52 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	119	70-130
1,2-Dibromoethane (EDB)	122	70-130
Chlorobenzene	113	70-130
Ethyl Benzene	116	70-130
m,p-Xylene	119	70-130
o-Xylene	123	70-130
Styrene	121	70-130
Bromoform	121	70-130
Cumene	118	70-130
1,1,2,2-Tetrachloroethane	122	70-130
Propylbenzene	112	70-130
4-Ethyltoluene	105	70-130
1,3,5-Trimethylbenzene	101	70-130
1,2,4-Trimethylbenzene	108	70-130
1,3-Dichlorobenzene	115	70-130
1,4-Dichlorobenzene	110	70-130
alpha-Chlorotoluene	133 Q	70-130
1,2-Dichlorobenzene	105	70-130
1,2,4-Trichlorobenzene	116	70-130
Hexachlorobutadiene	104	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	112	70-130