



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

Dan Norris

Collected by: (Print and Sign)

Dan Norris

Company

Missouri DNR

Email

dan.norris@dnr.mo.gov

Address

P.O. Box 176

City

Jefferson City

State

Mo

Zip

65102

Phone

573-526-3915

Fax

Project Info:

P.O. #

Project #

Project Name

Bridgeton Landfill

Turn Around Time:

Normal

Rush

specify

Lab Use Only

Pressurized by:

Date:

Pressurization Gas:

N2 He

Table with columns: Lab I.D., Field Sample I.D. (Location), Can #, Date of Collection, Time of Collection, Analyses Requested, Canister Pressure/Vacuum (Initial, Final, Receipt, Final psi). Contains handwritten data for samples D1, U1, U2, D2.

Relinquished by: (signature) Date/Time

[Signature] 11/4/13 1429

Received by: (signature) Date/Time

Notes:

Sent via UPS Ground Tracking # 1Z6727880345780383

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Table with columns: Lab Use Only, Shipper Name, Air Bill #, Temp (°C), Condition, Custody Seals Intact? (Yes, No, None), Work Order #.

11/19/2013
Ms. Celeste Koon
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill
Project #:
Workorder #: 1311177

Dear Ms. Celeste Koon

The following report includes the data for the above referenced project for sample(s) received on 11/11/2013 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 #: 1311177

Work Order Summary

CLIENT:	Ms. Celeste Koon 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:	573-526-3363	P.O. #	3ESP1301039
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	11/11/2013	CONTACT:	Kelly Buettner
DATE COMPLETED:	11/19/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (132094)	Modified TO-15	5.1 "Hg	5.1 psi
02A	U1 (132095)	Modified TO-15	4.3 "Hg	5.3 psi
03A	U2 (132096)	Modified TO-15	4.9 "Hg	5 psi
04A	D2 (132097)	Modified TO-15	3.7 "Hg	5.3 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: 11/19/13

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

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# 1311177

Four 6 Liter Summa Canister (100% Certified) samples were received on November 11, 2013. 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.

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 (132094)

Lab ID#: 1311177-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.80	2.5
Freon 11	0.16	0.26	0.91	1.5
Ethanol	0.81	3.6	1.5	6.8
Acetone	0.81	2.4	1.9	5.6
Benzene	0.16	0.39	0.52	1.2
Toluene	0.16	0.22	0.61	0.81

Client Sample ID: U1 (132095)

Lab ID#: 1311177-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.79	2.5
Freon 11	0.16	0.28	0.89	1.6
Ethanol	0.80	2.7	1.5	5.2
Acetone	0.80	2.1	1.9	5.0
Toluene	0.16	0.18	0.60	0.68

Client Sample ID: U2 (132096)

Lab ID#: 1311177-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.49	0.79	2.4
Freon 11	0.16	0.28	0.90	1.6
Ethanol	0.80	3.8	1.5	7.1
Acetone	0.80	4.1	1.9	9.8
Benzene	0.16	0.16	0.51	0.51
Toluene	0.16	0.16	0.60	0.62

Client Sample ID: D2 (132097)

Lab ID#: 1311177-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
----------	-------------------	---------------	--------------------	----------------

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

Client Sample ID: D2 (132097)

Lab ID#: 1311177-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.77	2.4
Freon 11	0.16	0.29	0.87	1.6
Ethanol	0.78	6.0	1.5	11
Acetone	0.78	3.2	1.8	7.7
Tetrahydrofuran	0.78	1.8	2.3	5.2
Toluene	0.16	0.26	0.58	0.99



Air Toxics

Client Sample ID: D1 (132094)

Lab ID#: 1311177-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111408	Date of Collection:	11/1/13 12:38:00 PM
Dil. Factor:	1.62	Date of Analysis:	11/14/13 05:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.80	2.5
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.81	Not Detected	1.7	Not Detected
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.81	Not Detected	3.1	Not Detected
Chloroethane	0.81	Not Detected	2.1	Not Detected
Freon 11	0.16	0.26	0.91	1.5
Ethanol	0.81	3.6	1.5	6.8
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.81	2.4	1.9	5.6
2-Propanol	0.81	Not Detected	2.0	Not Detected
Carbon Disulfide	0.81	Not Detected	2.5	Not Detected
3-Chloropropene	0.81	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Hexane	0.16	Not Detected	0.57	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.81	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Tetrahydrofuran	0.81	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.79	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Cyclohexane	0.16	Not Detected	0.56	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.81	Not Detected	3.8	Not Detected
Benzene	0.16	0.39	0.52	1.2
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	Not Detected	0.66	Not Detected
Trichloroethene	0.16	Not Detected	0.87	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.75	Not Detected
1,4-Dioxane	0.16	Not Detected	0.58	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.66	Not Detected
Toluene	0.16	0.22	0.61	0.81
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.81	Not Detected	3.3	Not Detected

Client Sample ID: D1 (132094)

Lab ID#: 1311177-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111408	Date of Collection:	11/1/13 12:38:00 PM
Dil. Factor:	1.62	Date of Analysis:	11/14/13 05:02 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	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	Not Detected	0.70	Not Detected
o-Xylene	0.16	Not Detected	0.70	Not Detected
Styrene	0.16	Not Detected	0.69	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.80	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.80	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.80	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.80	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.80	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.84	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.81	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.81	Not Detected	8.6	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: U1 (132095)

Lab ID#: 1311177-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111411	Date of Collection:	11/1/13 1:25:00 PM
Dil. Factor:	1.59	Date of Analysis:	11/14/13 07:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.79	2.5
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.28	0.89	1.6
Ethanol	0.80	2.7	1.5	5.2
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	2.1	1.9	5.0
2-Propanol	0.80	Not Detected	2.0	Not Detected
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	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	0.63	Not Detected
Hexane	0.16	Not Detected	0.56	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.78	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Cyclohexane	0.16	Not Detected	0.55	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.80	Not Detected	3.7	Not Detected
Benzene	0.16	Not Detected	0.51	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Heptane	0.16	Not Detected	0.65	Not Detected
Trichloroethene	0.16	Not Detected	0.85	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.73	Not Detected
1,4-Dioxane	0.16	Not Detected	0.57	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.65	Not Detected
Toluene	0.16	0.18	0.60	0.68
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.80	Not Detected	3.2	Not Detected

Client Sample ID: U1 (132095)

Lab ID#: 1311177-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111411	Date of Collection: 11/1/13 1:25:00 PM
Dil. Factor:	1.59	Date of Analysis: 11/14/13 07:11 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	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.73	Not Detected
Ethyl Benzene	0.16	Not Detected	0.69	Not Detected
m,p-Xylene	0.16	Not Detected	0.69	Not Detected
o-Xylene	0.16	Not Detected	0.69	Not Detected
Styrene	0.16	Not Detected	0.68	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.78	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.78	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.78	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.82	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.5	Not Detected

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

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



Air Toxics

Client Sample ID: U2 (132096)

Lab ID#: 1311177-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111409	Date of Collection:	11/1/13 1:08:00 PM
Dil. Factor:	1.60	Date of Analysis:	11/14/13 05:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.49	0.79	2.4
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.28	0.90	1.6
Ethanol	0.80	3.8	1.5	7.1
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	4.1	1.9	9.8
2-Propanol	0.80	Not Detected	2.0	Not Detected
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Hexane	0.16	Not Detected	0.56	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.78	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Cyclohexane	0.16	Not Detected	0.55	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.80	Not Detected	3.7	Not Detected
Benzene	0.16	0.16	0.51	0.51
1,2-Dichloroethane	0.16	Not Detected	0.65	Not Detected
Heptane	0.16	Not Detected	0.66	Not Detected
Trichloroethene	0.16	Not Detected	0.86	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.74	Not Detected
1,4-Dioxane	0.16	Not Detected	0.58	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.66	Not Detected
Toluene	0.16	0.16	0.60	0.62
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.80	Not Detected	3.3	Not Detected

Client Sample ID: U2 (132096)

Lab ID#: 1311177-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111409	Date of Collection:	11/1/13 1:08:00 PM
Dil. Factor:	1.60	Date of Analysis:	11/14/13 05:46 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	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.69	Not Detected
m,p-Xylene	0.16	Not Detected	0.69	Not Detected
o-Xylene	0.16	Not Detected	0.69	Not Detected
Styrene	0.16	Not Detected	0.68	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.79	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.79	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.79	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.83	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.5	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: D2 (132097)

Lab ID#: 1311177-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111410	Date of Collection:	11/1/13 2:22:00 PM
Dil. Factor:	1.55	Date of Analysis:	11/14/13 06:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.77	2.4
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	0.29	0.87	1.6
Ethanol	0.78	6.0	1.5	11
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Acetone	0.78	3.2	1.8	7.7
2-Propanol	0.78	Not Detected	1.9	Not Detected
Carbon Disulfide	0.78	Not Detected	2.4	Not Detected
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.56	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Hexane	0.16	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	1.8	2.3	5.2
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	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	0.83	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	0.26	0.58	0.99
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: D2 (132097)

Lab ID#: 1311177-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111410	Date of Collection:	11/1/13 2:22:00 PM
Dil. Factor:	1.55	Date of Analysis:	11/14/13 06:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.71	Not Detected
Ethyl Benzene	0.16	Not Detected	0.67	Not Detected
m,p-Xylene	0.16	Not Detected	0.67	Not Detected
o-Xylene	0.16	Not Detected	0.67	Not Detected
Styrene	0.16	Not Detected	0.66	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.76	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.76	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.76	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.76	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.76	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
alpha-Chlorotoluene	0.16	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	93	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1311177-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111405a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/14/13 02:40 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#: 1311177-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111405a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/13 02:40 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	93	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1311177-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/13 12:11 PM

Compound	%Recovery
Freon 12	106
Freon 114	100
Chloromethane	101
Vinyl Chloride	105
1,3-Butadiene	104
Bromomethane	130
Chloroethane	112
Freon 11	120
Ethanol	110
Freon 113	114
1,1-Dichloroethene	110
Acetone	89
2-Propanol	90
Carbon Disulfide	96
3-Chloropropene	94
Methylene Chloride	87
Methyl tert-butyl ether	85
trans-1,2-Dichloroethene	87
Hexane	89
1,1-Dichloroethane	96
2-Butanone (Methyl Ethyl Ketone)	92
cis-1,2-Dichloroethene	86
Tetrahydrofuran	92
Chloroform	93
1,1,1-Trichloroethane	91
Cyclohexane	87
Carbon Tetrachloride	96
2,2,4-Trimethylpentane	89
Benzene	106
1,2-Dichloroethane	111
Heptane	106
Trichloroethene	97
1,2-Dichloropropane	106
1,4-Dioxane	99
Bromodichloromethane	106
cis-1,3-Dichloropropene	99
4-Methyl-2-pentanone	98
Toluene	99
trans-1,3-Dichloropropene	101
1,1,2-Trichloroethane	98
Tetrachloroethene	99
2-Hexanone	99

Client Sample ID: CCV

Lab ID#: 1311177-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/13 12:11 PM

Compound	%Recovery
Dibromochloromethane	105
1,2-Dibromoethane (EDB)	101
Chlorobenzene	99
Ethyl Benzene	97
m,p-Xylene	94
o-Xylene	94
Styrene	93
Bromoform	100
Cumene	98
1,1,2,2-Tetrachloroethane	102
Propylbenzene	101
4-Ethyltoluene	96
1,3,5-Trimethylbenzene	111
1,2,4-Trimethylbenzene	98
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	101
1,2-Dichlorobenzene	97
1,2,4-Trichlorobenzene	78
Hexachlorobutadiene	88

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: LCS

Lab ID#: 1311177-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/13 01:04 PM

Compound	%Recovery	Method Limits
Freon 12	102	70-130
Freon 114	94	70-130
Chloromethane	98	70-130
Vinyl Chloride	101	70-130
1,3-Butadiene	101	70-130
Bromomethane	136 Q	70-130
Chloroethane	110	70-130
Freon 11	117	70-130
Ethanol	110	70-130
Freon 113	122	70-130
1,1-Dichloroethene	118	70-130
Acetone	88	70-130
2-Propanol	86	70-130
Carbon Disulfide	99	70-130
3-Chloropropene	95	70-130
Methylene Chloride	91	70-130
Methyl tert-butyl ether	82	70-130
trans-1,2-Dichloroethene	88	70-130
Hexane	88	70-130
1,1-Dichloroethane	90	70-130
2-Butanone (Methyl Ethyl Ketone)	91	70-130
cis-1,2-Dichloroethene	84	70-130
Tetrahydrofuran	87	70-130
Chloroform	91	70-130
1,1,1-Trichloroethane	87	70-130
Cyclohexane	85	70-130
Carbon Tetrachloride	112	70-130
2,2,4-Trimethylpentane	87	70-130
Benzene	100	70-130
1,2-Dichloroethane	102	70-130
Heptane	102	70-130
Trichloroethene	90	70-130
1,2-Dichloropropane	96	70-130
1,4-Dioxane	94	70-130
Bromodichloromethane	104	70-130
cis-1,3-Dichloropropene	87	70-130
4-Methyl-2-pentanone	96	70-130
Toluene	92	70-130
trans-1,3-Dichloropropene	84	70-130
1,1,2-Trichloroethane	86	70-130
Tetrachloroethene	84	70-130
2-Hexanone	91	70-130

Client Sample ID: LCS

Lab ID#: 1311177-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/13 01:04 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	93	70-130
1,2-Dibromoethane (EDB)	88	70-130
Chlorobenzene	85	70-130
Ethyl Benzene	88	70-130
m,p-Xylene	84	70-130
o-Xylene	85	70-130
Styrene	83	70-130
Bromoform	93	70-130
Cumene	90	70-130
1,1,2,2-Tetrachloroethane	91	70-130
Propylbenzene	90	70-130
4-Ethyltoluene	89	70-130
1,3,5-Trimethylbenzene	84	70-130
1,2,4-Trimethylbenzene	80	70-130
1,3-Dichlorobenzene	87	70-130
1,4-Dichlorobenzene	88	70-130
alpha-Chlorotoluene	88	70-130
1,2-Dichlorobenzene	88	70-130
1,2,4-Trichlorobenzene	67 Q	70-130
Hexachlorobutadiene	81	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1311177-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/13 01:50 PM

Compound	%Recovery	Method Limits
Freon 12	98	70-130
Freon 114	93	70-130
Chloromethane	96	70-130
Vinyl Chloride	97	70-130
1,3-Butadiene	98	70-130
Bromomethane	134 Q	70-130
Chloroethane	108	70-130
Freon 11	116	70-130
Ethanol	114	70-130
Freon 113	113	70-130
1,1-Dichloroethene	110	70-130
Acetone	86	70-130
2-Propanol	82	70-130
Carbon Disulfide	97	70-130
3-Chloropropene	99	70-130
Methylene Chloride	88	70-130
Methyl tert-butyl ether	80	70-130
trans-1,2-Dichloroethene	86	70-130
Hexane	85	70-130
1,1-Dichloroethane	90	70-130
2-Butanone (Methyl Ethyl Ketone)	87	70-130
cis-1,2-Dichloroethene	83	70-130
Tetrahydrofuran	84	70-130
Chloroform	91	70-130
1,1,1-Trichloroethane	86	70-130
Cyclohexane	84	70-130
Carbon Tetrachloride	110	70-130
2,2,4-Trimethylpentane	86	70-130
Benzene	100	70-130
1,2-Dichloroethane	104	70-130
Heptane	101	70-130
Trichloroethene	90	70-130
1,2-Dichloropropane	97	70-130
1,4-Dioxane	92	70-130
Bromodichloromethane	105	70-130
cis-1,3-Dichloropropene	89	70-130
4-Methyl-2-pentanone	93	70-130
Toluene	91	70-130
trans-1,3-Dichloropropene	86	70-130
1,1,2-Trichloroethane	87	70-130
Tetrachloroethene	86	70-130
2-Hexanone	90	70-130

Client Sample ID: LCSD

Lab ID#: 1311177-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/13 01:50 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	97	70-130
1,2-Dibromoethane (EDB)	88	70-130
Chlorobenzene	85	70-130
Ethyl Benzene	86	70-130
m,p-Xylene	82	70-130
o-Xylene	83	70-130
Styrene	81	70-130
Bromoform	94	70-130
Cumene	86	70-130
1,1,2,2-Tetrachloroethane	90	70-130
Propylbenzene	84	70-130
4-Ethyltoluene	82	70-130
1,3,5-Trimethylbenzene	78	70-130
1,2,4-Trimethylbenzene	72	70-130
1,3-Dichlorobenzene	80	70-130
1,4-Dichlorobenzene	82	70-130
alpha-Chlorotoluene	83	70-130
1,2-Dichlorobenzene	82	70-130
1,2,4-Trichlorobenzene	58 Q	70-130
Hexachlorobutadiene	67 Q	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	101	70-130