



Air Toxics

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Project Manager Michael Penn

Collected by: (Print and Sign) Teresa Trevino

Company MO DNR

Address P.O. Box 176

Phone (573) 526-3918

Email teresa.trevino@dnr.mo.gov

City Jefferson City State MO Zip 65102

Project Info:

P.O. # 3658160421

Project #

Project Name Bricklayer Landfill

Turn Around Time:

Normal Rush

Lab Use Only

Pressurized by:

Date:

Pressurization Gas:

N₂ He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum		
						Initial	Final	Receipt Final (psi)
01A	D1 (154590)	34200	12/8/15	0837-1347	TO-15	-30	-6	
09A	B2 (154591)	23986	12/8/15	0844-1333	TO-15	-30	-6	
03A	V1 (154592)	33589	12/8/15	0857-1412	TO-15	-30	-6	
04A	V2 (154593)	N0425	12/8/15	0911-1423	TO-15	-30	-6	

Relinquished by: (signature) [Signature] Date/Time 12/8/15 1455

Received by: (signature) [Signature] Date/Time 12/11/15 1045

Notes: Shipped via UPS
Tracking # 1ZK4F0W6039502 6300

Relinquished by: (signature) _____ Date/Time _____

Received by: (signature) _____ Date/Time _____

Shipper Name UPS Air Bill # _____ Temp (°C) N/A Condition Good Custody Seals Intact? Yes No None Work Order # 1512282

12/22/2015

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1512282

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 12/14/2015 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 Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free 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 #: 1512282

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. #	3ESP160421
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	12/14/2015	CONTACT:	Brian Whittaker
DATE COMPLETED:	12/22/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1(154590)	Modified TO-15	5.3 "Hg	4.8 psi
02A	D2(154591)	Modified TO-15	6.3 "Hg	5.3 psi
03A	U1(154592)	Modified TO-15	4.9 "Hg	5 psi
04A	U2(154593)	Modified TO-15	4.5 "Hg	5.1 psi
05A	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 12/22/15

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

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

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LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1512282

Four 6 Liter Summa Canister (100% Certified) samples were received on December 14, 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	</=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(154590)

Lab ID#: 1512282-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.60	0.80	3.0
Freon 11	0.16	0.34	0.90	1.9
Ethanol	0.80	5.7	1.5	11
Acetone	0.80	5.1	1.9	12
2-Propanol	0.80	0.96	2.0	2.4
Hexane	0.16	0.23	0.57	0.80
Benzene	0.16	0.24	0.51	0.77
Toluene	0.16	0.47	0.61	1.8

Client Sample ID: D2(154591)

Lab ID#: 1512282-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.61	0.85	3.0
Freon 11	0.17	0.32	0.97	1.8
Ethanol	0.86	3.2	1.6	6.0
Acetone	0.86	2.9	2.0	7.0
Hexane	0.17	0.20	0.61	0.72
Benzene	0.17	0.35	0.55	1.1
Toluene	0.17	0.28	0.65	1.0

Client Sample ID: U1(154592)

Lab ID#: 1512282-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.57	0.79	2.8
Freon 11	0.16	0.27	0.90	1.5
Ethanol	0.80	2.6	1.5	4.8
Acetone	0.80	3.8	1.9	9.0
2-Propanol	0.80	0.89	2.0	2.2
Hexane	0.16	0.20	0.56	0.70
2-Butanone (Methyl Ethyl Ketone)	0.80	0.83	2.4	2.4
Benzene	0.16	0.34	0.51	1.1

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

Client Sample ID: U1(154592)

Lab ID#: 1512282-03A

Toluene	0.16	0.23	0.60	0.86
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Client Sample ID: U2(154593)

Lab ID#: 1512282-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.60	0.78	3.0
Freon 11	0.16	0.44	0.89	2.5
Ethanol	0.79	5.2	1.5	9.9
Acetone	0.79	9.5	1.9	22
Hexane	0.16	0.40	0.56	1.4
2-Butanone (Methyl Ethyl Ketone)	0.79	1.3	2.3	3.8
Benzene	0.16	0.32	0.50	1.0
Heptane	0.16	0.28	0.65	1.2
Toluene	0.16	0.43	0.60	1.6



Air Toxics

Client Sample ID: D1(154590)

Lab ID#: 1512282-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121812	Date of Collection:	12/8/15 1:41:00 PM
Dil. Factor:	1.61	Date of Analysis:	12/18/15 04:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.60	0.80	3.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	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	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.34	0.90	1.9
Ethanol	0.80	5.7	1.5	11
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	5.1	1.9	12
2-Propanol	0.80	0.96	2.0	2.4
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	0.64	Not Detected
Hexane	0.16	0.23	0.57	0.80
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	0.64	Not Detected
Tetrahydrofuran	0.80	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	0.55	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.80	Not Detected	3.8	Not Detected
Benzene	0.16	0.24	0.51	0.77
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	0.47	0.61	1.8
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	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	0.80	Not Detected	3.3	Not Detected

Client Sample ID: D1(154590)

Lab ID#: 1512282-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121812	Date of Collection:	12/8/15 1:41:00 PM
Dil. Factor:	1.61	Date of Analysis:	12/18/15 04:05 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	0.68	Not Detected
Bromoform	0.16	Not Detected	1.7	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	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.83	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.6	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: D2(154591)

Lab ID#: 1512282-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121813	Date of Collection:	12/8/15 1:31:00 PM
Dil. Factor:	1.72	Date of Analysis:	12/18/15 05:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.61	0.85	3.0
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.86	Not Detected	1.8	Not Detected
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.86	Not Detected	3.3	Not Detected
Chloroethane	0.86	Not Detected	2.3	Not Detected
Freon 11	0.17	0.32	0.97	1.8
Ethanol	0.86	3.2	1.6	6.0
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	2.9	2.0	7.0
2-Propanol	0.86	Not Detected	2.1	Not Detected
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Hexane	0.17	0.20	0.61	0.72
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	Not Detected	2.5	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.84	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Cyclohexane	0.17	Not Detected	0.59	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.86	Not Detected	4.0	Not Detected
Benzene	0.17	0.35	0.55	1.1
1,2-Dichloroethane	0.17	Not Detected	0.70	Not Detected
Heptane	0.17	Not Detected	0.70	Not Detected
Trichloroethene	0.17	Not Detected	0.92	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.79	Not Detected
1,4-Dioxane	0.17	Not Detected	0.62	Not Detected
Bromodichloromethane	0.17	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.70	Not Detected
Toluene	0.17	0.28	0.65	1.0
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Tetrachloroethene	0.17	Not Detected	1.2	Not Detected
2-Hexanone	0.86	Not Detected	3.5	Not Detected



Client Sample ID: D2(154591)

Lab ID#: 1512282-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121813	Date of Collection:	12/8/15 1:31:00 PM
Dil. Factor:	1.72	Date of Analysis:	12/18/15 05:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.79	Not Detected
Ethyl Benzene	0.17	Not Detected	0.75	Not Detected
m,p-Xylene	0.17	Not Detected	0.75	Not Detected
o-Xylene	0.17	Not Detected	0.75	Not Detected
Styrene	0.17	Not Detected	0.73	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.84	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.84	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.84	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.84	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.84	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.17	Not Detected	0.89	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.4	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.2	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: U1(154592)

Lab ID#: 1512282-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121814	Date of Collection:	12/8/15 2:12:00 PM
Dil. Factor:	1.60	Date of Analysis:	12/18/15 06:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.57	0.79	2.8
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	0.27	0.90	1.5
Ethanol	0.80	2.6	1.5	4.8
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	3.8	1.9	9.0
2-Propanol	0.80	0.89	2.0	2.2
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	0.20	0.56	0.70
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	0.83	2.4	2.4
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	0.34	0.51	1.1
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	0.23	0.60	0.86
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: U1(154592)

Lab ID#: 1512282-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121814	Date of Collection:	12/8/15 2:12:00 PM
Dil. Factor:	1.60	Date of Analysis:	12/18/15 06:25 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	125	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: U2(154593)

Lab ID#: 1512282-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121815	Date of Collection:	12/8/15 2:23:00 PM
Dil. Factor:	1.58	Date of Analysis:	12/18/15 07:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.60	0.78	3.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.79	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.79	Not Detected	3.1	Not Detected
Chloroethane	0.79	Not Detected	2.1	Not Detected
Freon 11	0.16	0.44	0.89	2.5
Ethanol	0.79	5.2	1.5	9.9
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.79	9.5	1.9	22
2-Propanol	0.79	Not Detected	1.9	Not Detected
Carbon Disulfide	0.79	Not Detected	2.5	Not Detected
3-Chloropropene	0.79	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	0.40	0.56	1.4
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	1.3	2.3	3.8
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.79	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.77	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.99	Not Detected
2,2,4-Trimethylpentane	0.79	Not Detected	3.7	Not Detected
Benzene	0.16	0.32	0.50	1.0
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Heptane	0.16	0.28	0.65	1.2
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	1.0	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	0.43	0.60	1.6
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.79	Not Detected	3.2	Not Detected



Client Sample ID: U2(154593)

Lab ID#: 1512282-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121815	Date of Collection:	12/8/15 2:23:00 PM
Dil. Factor:	1.58	Date of Analysis:	12/18/15 07:27 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	0.73	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	0.67	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	0.95	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.82	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,2,4-Trichlorobenzene	0.79	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.79	Not Detected	8.4	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1512282-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121806	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/18/15 11:11 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#: 1512282-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121806	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/18/15 11:11 AM

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

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1512282-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/18/15 08:32 AM

Compound	%Recovery
Freon 12	112
Freon 114	100
Chloromethane	114
Vinyl Chloride	110
1,3-Butadiene	98
Bromomethane	113
Chloroethane	119
Freon 11	108
Ethanol	96
Freon 113	92
1,1-Dichloroethene	97
Acetone	103
2-Propanol	100
Carbon Disulfide	103
3-Chloropropene	99
Methylene Chloride	101
Methyl tert-butyl ether	101
trans-1,2-Dichloroethene	98
Hexane	104
1,1-Dichloroethane	108
2-Butanone (Methyl Ethyl Ketone)	99
cis-1,2-Dichloroethene	102
Tetrahydrofuran	109
Chloroform	108
1,1,1-Trichloroethane	101
Cyclohexane	99
Carbon Tetrachloride	108
2,2,4-Trimethylpentane	103
Benzene	101
1,2-Dichloroethane	111
Heptane	101
Trichloroethene	98
1,2-Dichloropropane	107
1,4-Dioxane	100
Bromodichloromethane	105
cis-1,3-Dichloropropene	101
4-Methyl-2-pentanone	105
Toluene	104
trans-1,3-Dichloropropene	105
1,1,2-Trichloroethane	95
Tetrachloroethene	93
2-Hexanone	99



Air Toxics

Client Sample ID: CCV

Lab ID#: 1512282-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/18/15 08:32 AM

Compound	%Recovery
Dibromochloromethane	100
1,2-Dibromoethane (EDB)	99
Chlorobenzene	100
Ethyl Benzene	97
m,p-Xylene	96
o-Xylene	96
Styrene	89
Bromoform	100
Cumene	100
1,1,2,2-Tetrachloroethane	106
Propylbenzene	97
4-Ethyltoluene	90
1,3,5-Trimethylbenzene	94
1,2,4-Trimethylbenzene	94
1,3-Dichlorobenzene	90
1,4-Dichlorobenzene	85
alpha-Chlorotoluene	103
1,2-Dichlorobenzene	87
1,2,4-Trichlorobenzene	76
Hexachlorobutadiene	77

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1512282-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121803	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/18/15 09:12 AM

Compound	%Recovery	Method Limits
Freon 12	113	70-130
Freon 114	105	70-130
Chloromethane	112	70-130
Vinyl Chloride	111	70-130
1,3-Butadiene	96	70-130
Bromomethane	117	70-130
Chloroethane	113	70-130
Freon 11	110	70-130
Ethanol	104	70-130
Freon 113	92	70-130
1,1-Dichloroethene	100	70-130
Acetone	102	70-130
2-Propanol	102	70-130
Carbon Disulfide	93	70-130
3-Chloropropene	99	70-130
Methylene Chloride	102	70-130
Methyl tert-butyl ether	100	70-130
trans-1,2-Dichloroethene	102	70-130
Hexane	106	70-130
1,1-Dichloroethane	106	70-130
2-Butanone (Methyl Ethyl Ketone)	99	70-130
cis-1,2-Dichloroethene	96	70-130
Tetrahydrofuran	107	70-130
Chloroform	106	70-130
1,1,1-Trichloroethane	102	70-130
Cyclohexane	100	70-130
Carbon Tetrachloride	109	70-130
2,2,4-Trimethylpentane	103	70-130
Benzene	108	70-130
1,2-Dichloroethane	116	70-130
Heptane	108	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	114	70-130
1,4-Dioxane	106	70-130
Bromodichloromethane	118	70-130
cis-1,3-Dichloropropene	105	70-130
4-Methyl-2-pentanone	117	70-130
Toluene	109	70-130
trans-1,3-Dichloropropene	113	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	98	70-130
2-Hexanone	109	70-130

Client Sample ID: LCS

Lab ID#: 1512282-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/18/15 09:12 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	105	70-130
Chlorobenzene	105	70-130
Ethyl Benzene	103	70-130
m,p-Xylene	99	70-130
o-Xylene	99	70-130
Styrene	98	70-130
Bromoform	116	70-130
Cumene	101	70-130
1,1,2,2-Tetrachloroethane	113	70-130
Propylbenzene	101	70-130
4-Ethyltoluene	92	70-130
1,3,5-Trimethylbenzene	97	70-130
1,2,4-Trimethylbenzene	97	70-130
1,3-Dichlorobenzene	91	70-130
1,4-Dichlorobenzene	87	70-130
alpha-Chlorotoluene	115	70-130
1,2-Dichlorobenzene	90	70-130
1,2,4-Trichlorobenzene	80	70-130
Hexachlorobutadiene	77	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1512282-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121804	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/18/15 09:52 AM

Compound	%Recovery	Method Limits
Freon 12	115	70-130
Freon 114	104	70-130
Chloromethane	114	70-130
Vinyl Chloride	110	70-130
1,3-Butadiene	96	70-130
Bromomethane	114	70-130
Chloroethane	114	70-130
Freon 11	111	70-130
Ethanol	103	70-130
Freon 113	91	70-130
1,1-Dichloroethene	98	70-130
Acetone	101	70-130
2-Propanol	101	70-130
Carbon Disulfide	93	70-130
3-Chloropropene	94	70-130
Methylene Chloride	102	70-130
Methyl tert-butyl ether	100	70-130
trans-1,2-Dichloroethene	100	70-130
Hexane	105	70-130
1,1-Dichloroethane	106	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
cis-1,2-Dichloroethene	96	70-130
Tetrahydrofuran	106	70-130
Chloroform	108	70-130
1,1,1-Trichloroethane	102	70-130
Cyclohexane	99	70-130
Carbon Tetrachloride	108	70-130
2,2,4-Trimethylpentane	103	70-130
Benzene	105	70-130
1,2-Dichloroethane	115	70-130
Heptane	106	70-130
Trichloroethene	99	70-130
1,2-Dichloropropane	112	70-130
1,4-Dioxane	105	70-130
Bromodichloromethane	113	70-130
cis-1,3-Dichloropropene	100	70-130
4-Methyl-2-pentanone	112	70-130
Toluene	108	70-130
trans-1,3-Dichloropropene	111	70-130
1,1,2-Trichloroethane	98	70-130
Tetrachloroethene	96	70-130
2-Hexanone	108	70-130

Client Sample ID: LCSD

Lab ID#: 1512282-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20121804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/18/15 09:52 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	107	70-130
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	97	70-130
o-Xylene	99	70-130
Styrene	93	70-130
Bromoform	109	70-130
Cumene	101	70-130
1,1,2,2-Tetrachloroethane	112	70-130
Propylbenzene	99	70-130
4-Ethyltoluene	88	70-130
1,3,5-Trimethylbenzene	94	70-130
1,2,4-Trimethylbenzene	94	70-130
1,3-Dichlorobenzene	92	70-130
1,4-Dichlorobenzene	85	70-130
alpha-Chlorotoluene	110	70-130
1,2-Dichlorobenzene	90	70-130
1,2,4-Trichlorobenzene	77	70-130
Hexachlorobutadiene	74	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130