



Air Toxics

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager: Mitchell Parns

Collected by: (Print and Sign) Kirk Mitchell

Company: MDNR Email: Mitchell.Parns@mdnr.gov

Address: P.O. Box 176 City: Jefferson City State: MO Zip: 65102

Phone: 573-526-3918 Fax: _____

Project Info:
P.O. # 955400007
Project # _____
Project Name Bridgeton 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 (psi)
01A	D1 (152944X)	4378	7-27-15	1030-1500	TD-15	-30	-6.5	
02A	D2 (152945)	611273	7-27-15	1939-1953	TD-15	-30	-6	
03A	U1 (152946)	34022	7-27-15	1852-1109	TD-15	-30	-6.5	
04A	U2 (152947)	33584	7-27-15	1619	TD-15	-27	-6	
Notes: Shipping via UPS Tracking # 1Z727830245182038								

Relinquished by: (signature) [Signature] Date/Time 7-29-15 1000
 Received by: (signature) [Signature] Date/Time 7-29-15 1600
 Relinquished by: (signature) [Signature] Date/Time 7-29-15 1545
 Received by: (signature) [Signature] Date/Time 8/1/15 0935

Shipper Name: UPS Air Bill # _____ Temp (°C) 74 Condition Good Custody Seals Intact? Yes No None Work Order # 1508043

8/17/2015

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1508048

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 8/4/2015 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 #: 1508048

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. #	3ESP400007
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	08/04/2015	CONTACT:	Brian Whittaker
DATE COMPLETED:	08/17/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (152944X)	Modified TO-15	7.5 "Hg	5 psi
02A	D2 (152945)	Modified TO-15	6.5 "Hg	5 psi
03A	U1 (152946)	Modified TO-15	6.0 "Hg	5 psi
04A	U2 (152947)	Modified TO-15	6.0 "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: 08/17/15

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# 1508048

Four 6 Liter Summa Canister (100% Certified) samples were received on August 04, 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

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Due to the linear calibration range of the instrument, the reporting limit for Freon 12, 4-Methyl-2-pentanone and alpha-Chlorotoluene was raised from 0.1ppbv to 0.5ppbv.

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 (152944X)

Lab ID#: 1508048-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.18	0.21	1.0	1.2
Ethanol	0.90	11	1.7	20
Acetone	0.90	7.6	2.1	18
2-Propanol	0.90	0.96	2.2	2.4
Hexane	0.18	0.23	0.63	0.81
2-Butanone (Methyl Ethyl Ketone)	0.90	1.2	2.6	3.4
Toluene	0.18	0.22	0.67	0.82

Client Sample ID: D2 (152945)

Lab ID#: 1508048-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.22	0.96	1.2
Ethanol	0.86	6.4	1.6	12
Acetone	0.86	16	2.0	37
2-Propanol	0.86	0.93	2.1	2.3
Methylene Chloride	0.34	4.1	1.2	14
Hexane	0.17	0.23	0.60	0.82
2-Butanone (Methyl Ethyl Ketone)	0.86	2.1	2.5	6.2
Toluene	0.17	0.62	0.64	2.3

Client Sample ID: U1 (152946)

Lab ID#: 1508048-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.22	0.94	1.2
Ethanol	0.84	3.3	1.6	6.3
Acetone	0.84	13	2.0	31
Carbon Disulfide	0.84	2.9	2.6	9.0
2-Butanone (Methyl Ethyl Ketone)	0.84	2.1	2.5	6.1

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

Client Sample ID: U2 (152947)

Lab ID#: 1508048-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.20	0.94	1.1
Ethanol	0.84	9.6	1.6	18
Acetone	0.84	12	2.0	29
2-Propanol	0.84	2.6	2.1	6.4
Methylene Chloride	0.34	1.6	1.2	5.4
Hexane	0.17	0.34	0.59	1.2
2-Butanone (Methyl Ethyl Ketone)	0.84	2.0	2.5	5.8
Cyclohexane	0.17	0.43	0.58	1.5
Benzene	0.17	0.24	0.54	0.75
1,2-Dichloroethane	0.17	0.46	0.68	1.9
Heptane	0.17	0.18	0.69	0.75
Toluene	0.17	2.6	0.63	9.8
Tetrachloroethene	0.17	1.4	1.1	9.2
Ethyl Benzene	0.17	0.23	0.73	1.0
m,p-Xylene	0.17	0.59	0.73	2.6
o-Xylene	0.17	0.27	0.73	1.2
Styrene	0.17	0.20	0.72	0.87



Air Toxics

Client Sample ID: D1 (152944X)

Lab ID#: 1508048-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081408	Date of Collection:	7/27/15 3:06:00 PM
Dil. Factor:	1.79	Date of Analysis:	8/14/15 12:39 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.90	Not Detected	4.4	Not Detected
Freon 114	0.18	Not Detected	1.2	Not Detected
Chloromethane	0.90	Not Detected	1.8	Not Detected
Vinyl Chloride	0.18	Not Detected	0.46	Not Detected
1,3-Butadiene	0.18	Not Detected	0.40	Not Detected
Bromomethane	0.90	Not Detected	3.5	Not Detected
Chloroethane	0.90	Not Detected	2.4	Not Detected
Freon 11	0.18	0.21	1.0	1.2
Ethanol	0.90	11	1.7	20
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Acetone	0.90	7.6	2.1	18
2-Propanol	0.90	0.96	2.2	2.4
Carbon Disulfide	0.90	Not Detected	2.8	Not Detected
3-Chloropropene	0.90	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	0.71	Not Detected
Hexane	0.18	0.23	0.63	0.81
1,1-Dichloroethane	0.18	Not Detected	0.72	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.90	1.2	2.6	3.4
cis-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Tetrahydrofuran	0.90	Not Detected	2.6	Not Detected
Chloroform	0.18	Not Detected	0.87	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.98	Not Detected
Cyclohexane	0.18	Not Detected	0.62	Not Detected
Carbon Tetrachloride	0.18	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.90	Not Detected	4.2	Not Detected
Benzene	0.18	Not Detected	0.57	Not Detected
1,2-Dichloroethane	0.18	Not Detected	0.72	Not Detected
Heptane	0.18	Not Detected	0.73	Not Detected
Trichloroethene	0.18	Not Detected	0.96	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.83	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	0.90	Not Detected	3.7	Not Detected
Toluene	0.18	0.22	0.67	0.82
trans-1,3-Dichloropropene	0.18	Not Detected	0.81	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	0.98	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
2-Hexanone	0.90	Not Detected	3.7	Not Detected



Client Sample ID: D1 (152944X)

Lab ID#: 1508048-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081408	Date of Collection:	7/27/15 3:06:00 PM
Dil. Factor:	1.79	Date of Analysis:	8/14/15 12:39 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	Not Detected	0.78	Not Detected
m,p-Xylene	0.18	Not Detected	0.78	Not Detected
o-Xylene	0.18	Not Detected	0.78	Not Detected
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	Not Detected	0.88	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.88	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.88	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.90	Not Detected	4.6	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.90	Not Detected	6.6	Not Detected
Hexachlorobutadiene	0.90	Not Detected	9.5	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: D2 (152945)

Lab ID#: 1508048-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081409	Date of Collection:	7/27/15 3:39:00 PM
Dil. Factor:	1.71	Date of Analysis:	8/14/15 01:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.86	Not Detected	4.2	Not Detected
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	2.2	Not Detected
Freon 11	0.17	0.22	0.96	1.2
Ethanol	0.86	6.4	1.6	12
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	16	2.0	37
2-Propanol	0.86	0.93	2.1	2.3
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	4.1	1.2	14
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	0.23	0.60	0.82
1,1-Dichloroethane	0.17	Not Detected	0.69	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	2.1	2.5	6.2
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	0.83	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.93	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	Not Detected	0.55	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.69	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	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.86	Not Detected	3.5	Not Detected
Toluene	0.17	0.62	0.64	2.3
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.93	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 (152945)

Lab ID#: 1508048-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081409	Date of Collection:	7/27/15 3:39:00 PM
Dil. Factor:	1.71	Date of Analysis:	8/14/15 01:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.4	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	0.74	Not Detected
m,p-Xylene	0.17	Not Detected	0.74	Not Detected
o-Xylene	0.17	Not Detected	0.74	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	0.86	Not Detected	4.4	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.3	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.1	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: U1 (152946)

Lab ID#: 1508048-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081410	Date of Collection:	7/27/15 3:56:00 PM
Dil. Factor:	1.68	Date of Analysis:	8/14/15 01:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.84	Not Detected	4.2	Not Detected
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.84	Not Detected	1.7	Not Detected
Vinyl Chloride	0.17	Not Detected	0.43	Not Detected
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected
Bromomethane	0.84	Not Detected	3.3	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Freon 11	0.17	0.22	0.94	1.2
Ethanol	0.84	3.3	1.6	6.3
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	13	2.0	31
2-Propanol	0.84	Not Detected	2.1	Not Detected
Carbon Disulfide	0.84	2.9	2.6	9.0
3-Chloropropene	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.60	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Hexane	0.17	Not Detected	0.59	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	2.1	2.5	6.1
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Tetrahydrofuran	0.84	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.82	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Cyclohexane	0.17	Not Detected	0.58	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
Benzene	0.17	Not Detected	0.54	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.68	Not Detected
Heptane	0.17	Not Detected	0.69	Not Detected
Trichloroethene	0.17	Not Detected	0.90	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.78	Not Detected
1,4-Dioxane	0.17	Not Detected	0.60	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
4-Methyl-2-pentanone	0.84	Not Detected	3.4	Not Detected
Toluene	0.17	Not Detected	0.63	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
2-Hexanone	0.84	Not Detected	3.4	Not Detected

Client Sample ID: U1 (152946)

Lab ID#: 1508048-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081410	Date of Collection: 7/27/15 3:56:00 PM
Dil. Factor:	1.68	Date of Analysis: 8/14/15 01:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.77	Not Detected
Ethyl Benzene	0.17	Not Detected	0.73	Not Detected
m,p-Xylene	0.17	Not Detected	0.73	Not Detected
o-Xylene	0.17	Not Detected	0.73	Not Detected
Styrene	0.17	Not Detected	0.72	Not Detected
Bromoform	0.17	Not Detected	1.7	Not Detected
Cumene	0.17	Not Detected	0.82	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.82	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.82	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.82	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.82	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	0.84	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.2	Not Detected
Hexachlorobutadiene	0.84	Not Detected	9.0	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: U2 (152947)

Lab ID#: 1508048-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081411	Date of Collection:	7/27/15 4:19:00 PM
Dil. Factor:	1.68	Date of Analysis:	8/14/15 02:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.84	Not Detected	4.2	Not Detected
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.84	Not Detected	1.7	Not Detected
Vinyl Chloride	0.17	Not Detected	0.43	Not Detected
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected
Bromomethane	0.84	Not Detected	3.3	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Freon 11	0.17	0.20	0.94	1.1
Ethanol	0.84	9.6	1.6	18
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	12	2.0	29
2-Propanol	0.84	2.6	2.1	6.4
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
3-Chloropropene	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.34	1.6	1.2	5.4
Methyl tert-butyl ether	0.17	Not Detected	0.60	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Hexane	0.17	0.34	0.59	1.2
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	2.0	2.5	5.8
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Tetrahydrofuran	0.84	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.82	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Cyclohexane	0.17	0.43	0.58	1.5
Carbon Tetrachloride	0.17	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
Benzene	0.17	0.24	0.54	0.75
1,2-Dichloroethane	0.17	0.46	0.68	1.9
Heptane	0.17	0.18	0.69	0.75
Trichloroethene	0.17	Not Detected	0.90	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.78	Not Detected
1,4-Dioxane	0.17	Not Detected	0.60	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
4-Methyl-2-pentanone	0.84	Not Detected	3.4	Not Detected
Toluene	0.17	2.6	0.63	9.8
trans-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Tetrachloroethene	0.17	1.4	1.1	9.2
2-Hexanone	0.84	Not Detected	3.4	Not Detected

Client Sample ID: U2 (152947)

Lab ID#: 1508048-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081411	Date of Collection: 7/27/15 4:19:00 PM
Dil. Factor:	1.68	Date of Analysis: 8/14/15 02:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.77	Not Detected
Ethyl Benzene	0.17	0.23	0.73	1.0
m,p-Xylene	0.17	0.59	0.73	2.6
o-Xylene	0.17	0.27	0.73	1.2
Styrene	0.17	0.20	0.72	0.87
Bromoform	0.17	Not Detected	1.7	Not Detected
Cumene	0.17	Not Detected	0.82	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.82	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.82	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.82	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.82	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	0.84	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.2	Not Detected
Hexachlorobutadiene	0.84	Not Detected	9.0	Not Detected

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

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



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1508048-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081406	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/14/15 11:27 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	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	0.50	Not Detected	2.0	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#: 1508048-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081406	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/14/15 11:27 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	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1508048-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/14/15 08:48 AM

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

Client Sample ID: CCV

Lab ID#: 1508048-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/14/15 08:48 AM

Compound	%Recovery
Dibromochloromethane	107
1,2-Dibromoethane (EDB)	113
Chlorobenzene	109
Ethyl Benzene	103
m,p-Xylene	105
o-Xylene	107
Styrene	108
Bromoform	105
Cumene	106
1,1,2,2-Tetrachloroethane	103
Propylbenzene	102
4-Ethyltoluene	101
1,3,5-Trimethylbenzene	99
1,2,4-Trimethylbenzene	106
1,3-Dichlorobenzene	99
1,4-Dichlorobenzene	99
alpha-Chlorotoluene	104
1,2-Dichlorobenzene	92
1,2,4-Trichlorobenzene	88
Hexachlorobutadiene	83

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1508048-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081403	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/14/15 09:27 AM

Compound	%Recovery	Method Limits
Freon 12	115	70-130
Freon 114	114	70-130
Chloromethane	108	70-130
Vinyl Chloride	114	70-130
1,3-Butadiene	110	70-130
Bromomethane	111	70-130
Chloroethane	108	70-130
Freon 11	111	70-130
Ethanol	127	70-130
Freon 113	106	70-130
1,1-Dichloroethene	103	70-130
Acetone	107	70-130
2-Propanol	117	70-130
Carbon Disulfide	92	70-130
3-Chloropropene	104	70-130
Methylene Chloride	105	70-130
Methyl tert-butyl ether	106	70-130
trans-1,2-Dichloroethene	93	70-130
Hexane	102	70-130
1,1-Dichloroethane	106	70-130
2-Butanone (Methyl Ethyl Ketone)	107	70-130
cis-1,2-Dichloroethene	120	70-130
Tetrahydrofuran	109	70-130
Chloroform	107	70-130
1,1,1-Trichloroethane	102	70-130
Cyclohexane	112	70-130
Carbon Tetrachloride	113	70-130
2,2,4-Trimethylpentane	108	70-130
Benzene	111	70-130
1,2-Dichloroethane	106	70-130
Heptane	117	70-130
Trichloroethene	110	70-130
1,2-Dichloropropane	114	70-130
1,4-Dioxane	108	70-130
Bromodichloromethane	114	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	115	70-130
Toluene	109	70-130
trans-1,3-Dichloropropene	112	70-130
1,1,2-Trichloroethane	109	70-130
Tetrachloroethene	108	70-130
2-Hexanone	131 Q	70-130



Client Sample ID: LCS

Lab ID#: 1508048-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/14/15 09:27 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	110	70-130
1,2-Dibromoethane (EDB)	116	70-130
Chlorobenzene	110	70-130
Ethyl Benzene	109	70-130
m,p-Xylene	114	70-130
o-Xylene	118	70-130
Styrene	118	70-130
Bromoform	112	70-130
Cumene	114	70-130
1,1,2,2-Tetrachloroethane	104	70-130
Propylbenzene	115	70-130
4-Ethyltoluene	113	70-130
1,3,5-Trimethylbenzene	108	70-130
1,2,4-Trimethylbenzene	114	70-130
1,3-Dichlorobenzene	108	70-130
1,4-Dichlorobenzene	110	70-130
alpha-Chlorotoluene	114	70-130
1,2-Dichlorobenzene	100	70-130
1,2,4-Trichlorobenzene	88	70-130
Hexachlorobutadiene	89	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1508048-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081404	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/14/15 10:03 AM

Compound	%Recovery	Method Limits
Freon 12	112	70-130
Freon 114	115	70-130
Chloromethane	106	70-130
Vinyl Chloride	116	70-130
1,3-Butadiene	108	70-130
Bromomethane	110	70-130
Chloroethane	113	70-130
Freon 11	113	70-130
Ethanol	122	70-130
Freon 113	104	70-130
1,1-Dichloroethene	107	70-130
Acetone	102	70-130
2-Propanol	115	70-130
Carbon Disulfide	98	70-130
3-Chloropropene	114	70-130
Methylene Chloride	110	70-130
Methyl tert-butyl ether	104	70-130
trans-1,2-Dichloroethene	95	70-130
Hexane	102	70-130
1,1-Dichloroethane	106	70-130
2-Butanone (Methyl Ethyl Ketone)	107	70-130
cis-1,2-Dichloroethene	119	70-130
Tetrahydrofuran	110	70-130
Chloroform	110	70-130
1,1,1-Trichloroethane	102	70-130
Cyclohexane	112	70-130
Carbon Tetrachloride	114	70-130
2,2,4-Trimethylpentane	109	70-130
Benzene	114	70-130
1,2-Dichloroethane	108	70-130
Heptane	118	70-130
Trichloroethene	111	70-130
1,2-Dichloropropane	112	70-130
1,4-Dioxane	109	70-130
Bromodichloromethane	116	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	116	70-130
Toluene	110	70-130
trans-1,3-Dichloropropene	115	70-130
1,1,2-Trichloroethane	114	70-130
Tetrachloroethene	109	70-130
2-Hexanone	142 Q	70-130

Client Sample ID: LCS D

Lab ID#: 1508048-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v081404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/14/15 10:03 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	117	70-130
Chlorobenzene	112	70-130
Ethyl Benzene	111	70-130
m,p-Xylene	116	70-130
o-Xylene	123	70-130
Styrene	122	70-130
Bromoform	118	70-130
Cumene	118	70-130
1,1,2,2-Tetrachloroethane	111	70-130
Propylbenzene	118	70-130
4-Ethyltoluene	117	70-130
1,3,5-Trimethylbenzene	112	70-130
1,2,4-Trimethylbenzene	117	70-130
1,3-Dichlorobenzene	111	70-130
1,4-Dichlorobenzene	113	70-130
alpha-Chlorotoluene	119	70-130
1,2-Dichlorobenzene	101	70-130
1,2,4-Trichlorobenzene	88	70-130
Hexachlorobutadiene	90	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	106	70-130