

2/10/2016
Mr. Dennis Schroeder
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill
Project #:
Workorder #: 1602008

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 2/1/2016 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 to 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 #: 1602008

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. #	3ESP160539
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	02/01/2016	CONTACT:	Brian Whittaker
DATE COMPLETED:	02/10/2016		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (160325)	Modified TO-15	4.7 "Hg	5.1 psi
02A	D2 (160326)	Modified TO-15	3.9 "Hg	5 psi
03A	U1 (160327)	Modified TO-15	3.1 "Hg	5.1 psi
04A	U2 (160328)	Modified TO-15	4.1 "Hg	4.9 psi
05A	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 02/10/16

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# 1602008

Four 6 Liter Summa Canister (100% Certified) samples were received on February 01, 2016. 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 (160325)

Lab ID#: 1602008-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.37	0.79	1.8
Freon 11	0.16	0.20	0.90	1.1
Ethanol	0.80	1.1	1.5	2.1
Acetone	0.80	1.5	1.9	3.6
Benzene	0.16	0.17	0.51	0.55
Toluene	0.16	0.16	0.60	0.61

Client Sample ID: D2 (160326)

Lab ID#: 1602008-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.40	0.76	2.0
Freon 11	0.15	0.28	0.86	1.6
Ethanol	0.77	4.8	1.4	9.0
Acetone	0.77	3.7	1.8	8.8
Methylene Chloride	0.31	0.31	1.1	1.1
Hexane	0.15	0.31	0.54	1.1
Benzene	0.15	0.16	0.49	0.52
Heptane	0.15	0.35	0.63	1.4
4-Methyl-2-pentanone	0.15	0.17	0.63	0.71
Toluene	0.15	1.4	0.58	5.1
Ethyl Benzene	0.15	0.16	0.67	0.70
m,p-Xylene	0.15	0.43	0.67	1.9

Client Sample ID: U1 (160327)

Lab ID#: 1602008-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.40	0.74	2.0
Freon 11	0.15	0.21	0.84	1.2
Ethanol	0.75	0.77	1.4	1.4
Acetone	0.75	1.2	1.8	3.0
Benzene	0.15	0.15 J	0.48	0.47 J

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

Client Sample ID: U1 (160327)

Lab ID#: 1602008-03A

Client Sample ID: U2 (160328)

Lab ID#: 1602008-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.39	0.76	2.0
Freon 11	0.15	0.20	0.86	1.2
Ethanol	0.77	0.95	1.4	1.8
Acetone	0.77	1.1	1.8	2.6
Hexane	0.15	0.16	0.54	0.55
Benzene	0.15	0.15 J	0.49	0.47 J



Air Toxics

Client Sample ID: D1 (160325)

Lab ID#: 1602008-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020308	Date of Collection:	1/26/16 1:21:00 PM
Dil. Factor:	1.60	Date of Analysis:	2/3/16 04:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.37	0.79	1.8
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	0.20	0.90	1.1
Ethanol	0.80	1.1	1.5	2.1
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	1.5	1.9	3.6
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	0.17	0.51	0.55
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	0.61
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



Air Toxics

Client Sample ID: D1 (160325)

Lab ID#: 1602008-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020308	Date of Collection:	1/26/16 1:21:00 PM
Dil. Factor:	1.60	Date of Analysis:	2/3/16 04:30 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	100	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: D2 (160326)

Lab ID#: 1602008-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020309	Date of Collection:	1/26/16 1:47:00 PM
Dil. Factor:	1.54	Date of Analysis:	2/3/16 05:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.40	0.76	2.0
Freon 114	0.15	Not Detected	1.1	Not Detected
Chloromethane	0.77	Not Detected	1.6	Not Detected
Vinyl Chloride	0.15	Not Detected	0.39	Not Detected
1,3-Butadiene	0.15	Not Detected	0.34	Not Detected
Bromomethane	0.77	Not Detected	3.0	Not Detected
Chloroethane	0.77	Not Detected	2.0	Not Detected
Freon 11	0.15	0.28	0.86	1.6
Ethanol	0.77	4.8	1.4	9.0
Freon 113	0.15	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Acetone	0.77	3.7	1.8	8.8
2-Propanol	0.77	Not Detected	1.9	Not Detected
Carbon Disulfide	0.77	Not Detected	2.4	Not Detected
3-Chloropropene	0.77	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	0.31	1.1	1.1
Methyl tert-butyl ether	0.15	Not Detected	0.56	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Hexane	0.15	0.31	0.54	1.1
1,1-Dichloroethane	0.15	Not Detected	0.62	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.77	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Tetrahydrofuran	0.77	Not Detected	2.3	Not Detected
Chloroform	0.15	Not Detected	0.75	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.84	Not Detected
Cyclohexane	0.15	Not Detected	0.53	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.97	Not Detected
2,2,4-Trimethylpentane	0.77	Not Detected	3.6	Not Detected
Benzene	0.15	0.16	0.49	0.52
1,2-Dichloroethane	0.15	Not Detected	0.62	Not Detected
Heptane	0.15	0.35	0.63	1.4
Trichloroethene	0.15	Not Detected	0.83	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.71	Not Detected
1,4-Dioxane	0.15	Not Detected	0.55	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.70	Not Detected
4-Methyl-2-pentanone	0.15	0.17	0.63	0.71
Toluene	0.15	1.4	0.58	5.1
trans-1,3-Dichloropropene	0.15	Not Detected	0.70	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.84	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.77	Not Detected	3.2	Not Detected



Air Toxics

Client Sample ID: D2 (160326)

Lab ID#: 1602008-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020309	Date of Collection:	1/26/16 1:47:00 PM
Dil. Factor:	1.54	Date of Analysis:	2/3/16 05:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Chlorobenzene	0.15	Not Detected	0.71	Not Detected
Ethyl Benzene	0.15	0.16	0.67	0.70
m,p-Xylene	0.15	0.43	0.67	1.9
o-Xylene	0.15	Not Detected	0.67	Not Detected
Styrene	0.15	Not Detected	0.66	Not Detected
Bromoform	0.15	Not Detected	1.6	Not Detected
Cumene	0.15	Not Detected	0.76	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.76	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.76	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.76	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.76	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.80	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
1,2,4-Trichlorobenzene	0.77	Not Detected	5.7	Not Detected
Hexachlorobutadiene	0.77	Not Detected	8.2	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: U1 (160327)

Lab ID#: 1602008-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020310	Date of Collection:	1/26/16 2:22:00 PM
Dil. Factor:	1.50	Date of Analysis:	2/3/16 06:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.40	0.74	2.0
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.75	Not Detected	1.5	Not Detected
Vinyl Chloride	0.15	Not Detected	0.38	Not Detected
1,3-Butadiene	0.15	Not Detected	0.33	Not Detected
Bromomethane	0.75	Not Detected	2.9	Not Detected
Chloroethane	0.75	Not Detected	2.0	Not Detected
Freon 11	0.15	0.21	0.84	1.2
Ethanol	0.75	0.77	1.4	1.4
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Acetone	0.75	1.2	1.8	3.0
2-Propanol	0.75	Not Detected	1.8	Not Detected
Carbon Disulfide	0.75	Not Detected	2.3	Not Detected
3-Chloropropene	0.75	Not Detected	2.3	Not Detected
Methylene Chloride	0.30	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.54	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Hexane	0.15	Not Detected	0.53	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.61	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.75	Not Detected	2.2	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Tetrahydrofuran	0.75	Not Detected	2.2	Not Detected
Chloroform	0.15	Not Detected	0.73	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.82	Not Detected
Cyclohexane	0.15	Not Detected	0.52	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.94	Not Detected
2,2,4-Trimethylpentane	0.75	Not Detected	3.5	Not Detected
Benzene	0.15	0.15 J	0.48	0.47 J
1,2-Dichloroethane	0.15	Not Detected	0.61	Not Detected
Heptane	0.15	Not Detected	0.61	Not Detected
Trichloroethene	0.15	Not Detected	0.81	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.69	Not Detected
1,4-Dioxane	0.15	Not Detected	0.54	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.61	Not Detected
Toluene	0.15	Not Detected	0.56	Not Detected
trans-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.82	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.75	Not Detected	3.1	Not Detected

Client Sample ID: U1 (160327)

Lab ID#: 1602008-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020310	Date of Collection:	1/26/16 2:22:00 PM
Dil. Factor:	1.50	Date of Analysis:	2/3/16 06:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Chlorobenzene	0.15	Not Detected	0.69	Not Detected
Ethyl Benzene	0.15	Not Detected	0.65	Not Detected
m,p-Xylene	0.15	Not Detected	0.65	Not Detected
o-Xylene	0.15	Not Detected	0.65	Not Detected
Styrene	0.15	Not Detected	0.64	Not Detected
Bromoform	0.15	Not Detected	1.6	Not Detected
Cumene	0.15	Not Detected	0.74	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.74	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.74	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.74	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.74	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.78	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected	5.6	Not Detected
Hexachlorobutadiene	0.75	Not Detected	8.0	Not Detected

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: U2 (160328)

Lab ID#: 1602008-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020311	Date of Collection:	1/26/16 2:00:00 PM
Dil. Factor:	1.54	Date of Analysis:	2/3/16 07:08 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.39	0.76	2.0
Freon 114	0.15	Not Detected	1.1	Not Detected
Chloromethane	0.77	Not Detected	1.6	Not Detected
Vinyl Chloride	0.15	Not Detected	0.39	Not Detected
1,3-Butadiene	0.15	Not Detected	0.34	Not Detected
Bromomethane	0.77	Not Detected	3.0	Not Detected
Chloroethane	0.77	Not Detected	2.0	Not Detected
Freon 11	0.15	0.20	0.86	1.2
Ethanol	0.77	0.95	1.4	1.8
Freon 113	0.15	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Acetone	0.77	1.1	1.8	2.6
2-Propanol	0.77	Not Detected	1.9	Not Detected
Carbon Disulfide	0.77	Not Detected	2.4	Not Detected
3-Chloropropene	0.77	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.56	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Hexane	0.15	0.16	0.54	0.55
1,1-Dichloroethane	0.15	Not Detected	0.62	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.77	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Tetrahydrofuran	0.77	Not Detected	2.3	Not Detected
Chloroform	0.15	Not Detected	0.75	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.84	Not Detected
Cyclohexane	0.15	Not Detected	0.53	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.97	Not Detected
2,2,4-Trimethylpentane	0.77	Not Detected	3.6	Not Detected
Benzene	0.15	0.15 J	0.49	0.47 J
1,2-Dichloroethane	0.15	Not Detected	0.62	Not Detected
Heptane	0.15	Not Detected	0.63	Not Detected
Trichloroethene	0.15	Not Detected	0.83	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.71	Not Detected
1,4-Dioxane	0.15	Not Detected	0.55	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.70	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.63	Not Detected
Toluene	0.15	Not Detected	0.58	Not Detected
trans-1,3-Dichloropropene	0.15	Not Detected	0.70	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.84	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.77	Not Detected	3.2	Not Detected

Client Sample ID: U2 (160328)

Lab ID#: 1602008-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020311	Date of Collection:	1/26/16 2:00:00 PM
Dil. Factor:	1.54	Date of Analysis:	2/3/16 07:08 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Chlorobenzene	0.15	Not Detected	0.71	Not Detected
Ethyl Benzene	0.15	Not Detected	0.67	Not Detected
m,p-Xylene	0.15	Not Detected	0.67	Not Detected
o-Xylene	0.15	Not Detected	0.67	Not Detected
Styrene	0.15	Not Detected	0.66	Not Detected
Bromoform	0.15	Not Detected	1.6	Not Detected
Cumene	0.15	Not Detected	0.76	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.76	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.76	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.76	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.76	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.80	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
1,2,4-Trichlorobenzene	0.77	Not Detected	5.7	Not Detected
Hexachlorobutadiene	0.77	Not Detected	8.2	Not Detected

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1602008-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/3/16 01:08 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#: 1602008-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020306	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/3/16 01:08 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	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1602008-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/3/16 08:48 AM

Compound	%Recovery
Freon 12	89
Freon 114	90
Chloromethane	86
Vinyl Chloride	86
1,3-Butadiene	82
Bromomethane	91
Chloroethane	93
Freon 11	90
Ethanol	83
Freon 113	87
1,1-Dichloroethene	85
Acetone	86
2-Propanol	82
Carbon Disulfide	110
3-Chloropropene	82
Methylene Chloride	86
Methyl tert-butyl ether	86
trans-1,2-Dichloroethene	90
Hexane	84
1,1-Dichloroethane	85
2-Butanone (Methyl Ethyl Ketone)	85
cis-1,2-Dichloroethene	87
Tetrahydrofuran	83
Chloroform	86
1,1,1-Trichloroethane	85
Cyclohexane	84
Carbon Tetrachloride	88
2,2,4-Trimethylpentane	85
Benzene	84
1,2-Dichloroethane	85
Heptane	86
Trichloroethene	91
1,2-Dichloropropane	86
1,4-Dioxane	85
Bromodichloromethane	86
cis-1,3-Dichloropropene	84
4-Methyl-2-pentanone	85
Toluene	87
trans-1,3-Dichloropropene	87
1,1,2-Trichloroethane	87
Tetrachloroethene	90
2-Hexanone	84

Client Sample ID: CCV

Lab ID#: 1602008-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/3/16 08:48 AM

Compound	%Recovery
Dibromochloromethane	94
1,2-Dibromoethane (EDB)	89
Chlorobenzene	90
Ethyl Benzene	88
m,p-Xylene	87
o-Xylene	89
Styrene	85
Bromoform	94
Cumene	90
1,1,2,2-Tetrachloroethane	87
Propylbenzene	90
4-Ethyltoluene	96
1,3,5-Trimethylbenzene	84
1,2,4-Trimethylbenzene	89
1,3-Dichlorobenzene	91
1,4-Dichlorobenzene	90
alpha-Chlorotoluene	89
1,2-Dichlorobenzene	91
1,2,4-Trichlorobenzene	82
Hexachlorobutadiene	98

Container Type: NA - Not Applicable

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

Client Sample ID: LCS

Lab ID#: 1602008-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/3/16 09:48 AM

Compound	%Recovery	Method Limits
Freon 12	102	70-130
Freon 114	109	70-130
Chloromethane	95	70-130
Vinyl Chloride	101	70-130
1,3-Butadiene	90	70-130
Bromomethane	105	70-130
Chloroethane	106	70-130
Freon 11	107	70-130
Ethanol	127	70-130
Freon 113	95	70-130
1,1-Dichloroethene	95	70-130
Acetone	95	70-130
2-Propanol	97	70-130
Carbon Disulfide	87	70-130
3-Chloropropene	91	70-130
Methylene Chloride	97	70-130
Methyl tert-butyl ether	94	70-130
trans-1,2-Dichloroethene	103	70-130
Hexane	93	70-130
1,1-Dichloroethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	98	70-130
cis-1,2-Dichloroethene	95	70-130
Tetrahydrofuran	95	70-130
Chloroform	97	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	95	70-130
Carbon Tetrachloride	99	70-130
2,2,4-Trimethylpentane	98	70-130
Benzene	95	70-130
1,2-Dichloroethane	97	70-130
Heptane	97	70-130
Trichloroethene	103	70-130
1,2-Dichloropropane	97	70-130
1,4-Dioxane	101	70-130
Bromodichloromethane	101	70-130
cis-1,3-Dichloropropene	91	70-130
4-Methyl-2-pentanone	100	70-130
Toluene	98	70-130
trans-1,3-Dichloropropene	96	70-130
1,1,2-Trichloroethane	96	70-130
Tetrachloroethene	99	70-130
2-Hexanone	102	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1602008-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/3/16 09:48 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	106	70-130
1,2-Dibromoethane (EDB)	99	70-130
Chlorobenzene	97	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	97	70-130
o-Xylene	99	70-130
Styrene	97	70-130
Bromoform	108	70-130
Cumene	100	70-130
1,1,2,2-Tetrachloroethane	98	70-130
Propylbenzene	101	70-130
4-Ethyltoluene	105	70-130
1,3,5-Trimethylbenzene	92	70-130
1,2,4-Trimethylbenzene	98	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	101	70-130
alpha-Chlorotoluene	107	70-130
1,2-Dichlorobenzene	102	70-130
1,2,4-Trichlorobenzene	100	70-130
Hexachlorobutadiene	109	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1602008-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/3/16 10:32 AM

Compound	%Recovery	Method Limits
Freon 12	100	70-130
Freon 114	105	70-130
Chloromethane	92	70-130
Vinyl Chloride	99	70-130
1,3-Butadiene	87	70-130
Bromomethane	100	70-130
Chloroethane	106	70-130
Freon 11	104	70-130
Ethanol	105	70-130
Freon 113	93	70-130
1,1-Dichloroethene	93	70-130
Acetone	93	70-130
2-Propanol	96	70-130
Carbon Disulfide	81	70-130
3-Chloropropene	88	70-130
Methylene Chloride	95	70-130
Methyl tert-butyl ether	91	70-130
trans-1,2-Dichloroethene	100	70-130
Hexane	90	70-130
1,1-Dichloroethane	93	70-130
2-Butanone (Methyl Ethyl Ketone)	93	70-130
cis-1,2-Dichloroethene	93	70-130
Tetrahydrofuran	92	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	94	70-130
Cyclohexane	94	70-130
Carbon Tetrachloride	97	70-130
2,2,4-Trimethylpentane	96	70-130
Benzene	94	70-130
1,2-Dichloroethane	96	70-130
Heptane	95	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	96	70-130
1,4-Dioxane	100	70-130
Bromodichloromethane	100	70-130
cis-1,3-Dichloropropene	91	70-130
4-Methyl-2-pentanone	99	70-130
Toluene	98	70-130
trans-1,3-Dichloropropene	96	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	99	70-130
2-Hexanone	101	70-130

Client Sample ID: LCSD

Lab ID#: 1602008-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/3/16 10:32 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	104	70-130
1,2-Dibromoethane (EDB)	99	70-130
Chlorobenzene	99	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	96	70-130
o-Xylene	100	70-130
Styrene	97	70-130
Bromoform	108	70-130
Cumene	99	70-130
1,1,2,2-Tetrachloroethane	98	70-130
Propylbenzene	102	70-130
4-Ethyltoluene	107	70-130
1,3,5-Trimethylbenzene	94	70-130
1,2,4-Trimethylbenzene	99	70-130
1,3-Dichlorobenzene	104	70-130
1,4-Dichlorobenzene	102	70-130
alpha-Chlorotoluene	109	70-130
1,2-Dichlorobenzene	106	70-130
1,2,4-Trichlorobenzene	107	70-130
Hexachlorobutadiene	117	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130