

3/8/2016

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1602459

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 2/24/2016 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 #: 1602459

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. #	3ESP160577
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	02/24/2016	CONTACT:	Brian Whittaker
DATE COMPLETED:	03/08/2016		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (160336)	Modified TO-15	4.1 "Hg	5.2 psi
02A	D2 (160337)	Modified TO-15	4.9 "Hg	5.1 psi
03A	D3 (160338)	Modified TO-15	4.3 "Hg	5.1 psi
04A	U1 (160339)	Modified TO-15	5.3 "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: 03/08/16

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# 1602459

Four 6 Liter Summa Canister (100% Certified) samples were received on February 24, 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 (160336)

Lab ID#: 1602459-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.78	2.5
Freon 11	0.16	0.22	0.88	1.2
Ethanol	0.78	2.7	1.5	5.0
Acetone	0.78	3.9	1.9	9.3
Benzene	0.16	0.23	0.50	0.74
Toluene	0.16	0.20	0.59	0.74

Client Sample ID: D2 (160337)

Lab ID#: 1602459-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.80	2.4
Freon 11	0.16	0.22	0.90	1.3
Ethanol	0.80	3.1	1.5	5.9
Acetone	0.80	4.0	1.9	9.6
Benzene	0.16	0.23	0.51	0.73
Toluene	0.16	0.20	0.61	0.75

Client Sample ID: D3 (160338)

Lab ID#: 1602459-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.78	2.4
Freon 11	0.16	0.22	0.88	1.2
Ethanol	0.78	4.8	1.5	9.0
Acetone	0.78	3.9	1.9	9.4
Carbon Disulfide	0.78	0.96	2.4	3.0
Hexane	0.16	0.47	0.55	1.7
2-Butanone (Methyl Ethyl Ketone)	0.78	1.5	2.3	4.3
Cyclohexane	0.16	3.7	0.54	13
Benzene	0.16	0.24	0.50	0.78
1,2-Dichloroethane	0.16	0.17	0.64	0.69
Heptane	0.16	0.35	0.64	1.4

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

Client Sample ID: D3 (160338)

Lab ID#: 1602459-03A

4-Methyl-2-pentanone	0.16	0.18	0.64	0.75
Toluene	0.16	7.5	0.59	28
Tetrachloroethene	0.16	0.15 J	1.1	1.0 J
Ethyl Benzene	0.16	0.16	0.68	0.68
<u>m,p-Xylene</u>	0.16	0.34	0.68	1.5

Client Sample ID: U1 (160339)

Lab ID#: 1602459-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.81	2.4
Chloromethane	0.82	0.82	1.7	1.7
Freon 11	0.16	0.25	0.92	1.4
Ethanol	0.82	9.0	1.5	17
<u>Acetone</u>	0.82	6.2	1.9	15
2-Propanol	0.82	1.1	2.0	2.7
Carbon Disulfide	0.82	2.8	2.6	8.8
Methylene Chloride	0.33	0.33	1.1	1.2
Hexane	0.16	0.64	0.58	2.2
<u>2-Butanone (Methyl Ethyl Ketone)</u>	0.82	3.4	2.4	10
Cyclohexane	0.16	12	0.56	41
Benzene	0.16	0.23	0.52	0.74
1,2-Dichloroethane	0.16	0.49	0.66	2.0
Heptane	0.16	0.37	0.67	1.5
<u>4-Methyl-2-pentanone</u>	0.16	0.42	0.67	1.7
Toluene	0.16	20	0.62	76
Tetrachloroethene	0.16	0.32	1.1	2.2
Ethyl Benzene	0.16	0.36	0.71	1.6
m,p-Xylene	0.16	0.80	0.71	3.5
<u>o-Xylene</u>	0.16	0.31	0.71	1.4



Air Toxics

Client Sample ID: D1 (160336)

Lab ID#: 1602459-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030110	Date of Collection:	2/18/16 1:23:00 PM
Dil. Factor:	1.57	Date of Analysis:	3/1/16 12:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.78	2.5
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.78	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.78	Not Detected	3.0	Not Detected
Chloroethane	0.78	Not Detected	2.1	Not Detected
Freon 11	0.16	0.22	0.88	1.2
Ethanol	0.78	2.7	1.5	5.0
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Acetone	0.78	3.9	1.9	9.3
2-Propanol	0.78	Not Detected	1.9	Not Detected
Carbon Disulfide	0.78	Not Detected	2.4	Not Detected
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.57	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Hexane	0.16	Not Detected	0.55	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Tetrahydrofuran	0.78	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	0.78	Not Detected	3.7	Not Detected
Benzene	0.16	0.23	0.50	0.74
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Heptane	0.16	Not Detected	0.64	Not Detected
Trichloroethene	0.16	Not Detected	0.84	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
1,4-Dioxane	0.16	Not Detected	0.56	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.71	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.64	Not Detected
Toluene	0.16	0.20	0.59	0.74
trans-1,3-Dichloropropene	0.16	Not Detected	0.71	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	0.78	Not Detected	3.2	Not Detected



Air Toxics

Client Sample ID: D1 (160336)

Lab ID#: 1602459-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030110	Date of Collection:	2/18/16 1:23:00 PM
Dil. Factor:	1.57	Date of Analysis:	3/1/16 12:07 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	0.72	Not Detected
Ethyl Benzene	0.16	Not Detected	0.68	Not Detected
m,p-Xylene	0.16	Not Detected	0.68	Not Detected
o-Xylene	0.16	Not Detected	0.68	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	0.77	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.77	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.77	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.77	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.77	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.81	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,2,4-Trichlorobenzene	0.78	Not Detected	5.8	Not Detected
Hexachlorobutadiene	0.78	Not Detected	8.4	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: D2 (160337)

Lab ID#: 1602459-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030111	Date of Collection:	2/18/16 2:07:00 PM
Dil. Factor:	1.61	Date of Analysis:	3/1/16 12:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.80	2.4
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	0.22	0.90	1.3
Ethanol	0.80	3.1	1.5	5.9
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	4.0	1.9	9.6
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	0.64	Not Detected
Hexane	0.16	Not Detected	0.57	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	0.64	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	0.23	0.51	0.73
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	0.20	0.61	0.75
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: D2 (160337)

Lab ID#: 1602459-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030111	Date of Collection:	2/18/16 2:07:00 PM
Dil. Factor:	1.61	Date of Analysis:	3/1/16 12:47 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	95	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: D3 (160338)

Lab ID#: 1602459-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030112	Date of Collection:	2/18/16 1:58:00 PM
Dil. Factor:	1.57	Date of Analysis:	3/1/16 01:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.78	2.4
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.78	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.78	Not Detected	3.0	Not Detected
Chloroethane	0.78	Not Detected	2.1	Not Detected
Freon 11	0.16	0.22	0.88	1.2
Ethanol	0.78	4.8	1.5	9.0
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Acetone	0.78	3.9	1.9	9.4
2-Propanol	0.78	Not Detected	1.9	Not Detected
Carbon Disulfide	0.78	0.96	2.4	3.0
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.57	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Hexane	0.16	0.47	0.55	1.7
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	1.5	2.3	4.3
cis-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Tetrahydrofuran	0.78	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	3.7	0.54	13
Carbon Tetrachloride	0.16	Not Detected	0.99	Not Detected
2,2,4-Trimethylpentane	0.78	Not Detected	3.7	Not Detected
Benzene	0.16	0.24	0.50	0.78
1,2-Dichloroethane	0.16	0.17	0.64	0.69
Heptane	0.16	0.35	0.64	1.4
Trichloroethene	0.16	Not Detected	0.84	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
1,4-Dioxane	0.16	Not Detected	0.56	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.71	Not Detected
4-Methyl-2-pentanone	0.16	0.18	0.64	0.75
Toluene	0.16	7.5	0.59	28
trans-1,3-Dichloropropene	0.16	Not Detected	0.71	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Tetrachloroethene	0.16	0.15 J	1.1	1.0 J
2-Hexanone	0.78	Not Detected	3.2	Not Detected



Air Toxics

Client Sample ID: D3 (160338)

Lab ID#: 1602459-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030112	Date of Collection:	2/18/16 1:58:00 PM
Dil. Factor:	1.57	Date of Analysis:	3/1/16 01:27 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	0.72	Not Detected
Ethyl Benzene	0.16	0.16	0.68	0.68
m,p-Xylene	0.16	0.34	0.68	1.5
o-Xylene	0.16	Not Detected	0.68	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	0.77	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.77	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.77	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.77	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.77	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.81	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,2,4-Trichlorobenzene	0.78	Not Detected	5.8	Not Detected
Hexachlorobutadiene	0.78	Not Detected	8.4	Not Detected

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: U1 (160339)

Lab ID#: 1602459-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030113	Date of Collection:	2/18/16 1:12:00 PM
Dil. Factor:	1.64	Date of Analysis:	3/1/16 02:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.81	2.4
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	0.82	1.7	1.7
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	0.25	0.92	1.4
Ethanol	0.82	9.0	1.5	17
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	6.2	1.9	15
2-Propanol	0.82	1.1	2.0	2.7
Carbon Disulfide	0.82	2.8	2.6	8.8
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	0.33	1.1	1.2
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	0.64	0.58	2.2
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	3.4	2.4	10
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	12	0.56	41
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	0.23	0.52	0.74
1,2-Dichloroethane	0.16	0.49	0.66	2.0
Heptane	0.16	0.37	0.67	1.5
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	0.42	0.67	1.7
Toluene	0.16	20	0.62	76
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	0.32	1.1	2.2
2-Hexanone	0.82	Not Detected	3.4	Not Detected



Air Toxics

Client Sample ID: U1 (160339)

Lab ID#: 1602459-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030113	Date of Collection:	2/18/16 1:12:00 PM
Dil. Factor:	1.64	Date of Analysis:	3/1/16 02:06 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	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	0.36	0.71	1.6
m,p-Xylene	0.16	0.80	0.71	3.5
o-Xylene	0.16	0.31	0.71	1.4
Styrene	0.16	Not Detected	0.70	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.81	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.81	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.81	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1602459-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030109	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/1/16 11:27 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



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1602459-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030109	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/1/16 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	0.10	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	99	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1602459-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030105	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/1/16 08:42 AM

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

Client Sample ID: CCV

Lab ID#: 1602459-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030105	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/1/16 08:42 AM

Compound	%Recovery
Dibromochloromethane	114
1,2-Dibromoethane (EDB)	112
Chlorobenzene	107
Ethyl Benzene	113
m,p-Xylene	109
o-Xylene	110
Styrene	110
Bromoform	114
Cumene	111
1,1,2,2-Tetrachloroethane	107
Propylbenzene	98
4-Ethyltoluene	91
1,3,5-Trimethylbenzene	105
1,2,4-Trimethylbenzene	104
1,3-Dichlorobenzene	92
1,4-Dichlorobenzene	91
alpha-Chlorotoluene	100
1,2-Dichlorobenzene	92
1,2,4-Trichlorobenzene	99
Hexachlorobutadiene	92

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: LCS

Lab ID#: 1602459-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030106	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/1/16 09:25 AM

Compound	%Recovery	Method Limits
Freon 12	103	70-130
Freon 114	110	70-130
Chloromethane	101	70-130
Vinyl Chloride	107	70-130
1,3-Butadiene	99	70-130
Bromomethane	113	70-130
Chloroethane	106	70-130
Freon 11	102	70-130
Ethanol	108	70-130
Freon 113	103	70-130
1,1-Dichloroethene	105	70-130
Acetone	98	70-130
2-Propanol	98	70-130
Carbon Disulfide	94	70-130
3-Chloropropene	99	70-130
Methylene Chloride	102	70-130
Methyl tert-butyl ether	101	70-130
trans-1,2-Dichloroethene	104	70-130
Hexane	105	70-130
1,1-Dichloroethane	98	70-130
2-Butanone (Methyl Ethyl Ketone)	102	70-130
cis-1,2-Dichloroethene	102	70-130
Tetrahydrofuran	100	70-130
Chloroform	101	70-130
1,1,1-Trichloroethane	98	70-130
Cyclohexane	106	70-130
Carbon Tetrachloride	105	70-130
2,2,4-Trimethylpentane	109	70-130
Benzene	109	70-130
1,2-Dichloroethane	105	70-130
Heptane	110	70-130
Trichloroethene	110	70-130
1,2-Dichloropropane	108	70-130
1,4-Dioxane	108	70-130
Bromodichloromethane	110	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	106	70-130
Toluene	110	70-130
trans-1,3-Dichloropropene	110	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	114	70-130
2-Hexanone	104	70-130

Client Sample ID: LCS

Lab ID#: 1602459-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030106	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/1/16 09:25 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	116	70-130
1,2-Dibromoethane (EDB)	119	70-130
Chlorobenzene	108	70-130
Ethyl Benzene	113	70-130
m,p-Xylene	110	70-130
o-Xylene	111	70-130
Styrene	112	70-130
Bromoform	122	70-130
Cumene	112	70-130
1,1,2,2-Tetrachloroethane	111	70-130
Propylbenzene	99	70-130
4-Ethyltoluene	92	70-130
1,3,5-Trimethylbenzene	106	70-130
1,2,4-Trimethylbenzene	103	70-130
1,3-Dichlorobenzene	96	70-130
1,4-Dichlorobenzene	95	70-130
alpha-Chlorotoluene	110	70-130
1,2-Dichlorobenzene	96	70-130
1,2,4-Trichlorobenzene	112	70-130
Hexachlorobutadiene	103	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	87	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: LCSD

Lab ID#: 1602459-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030107	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/1/16 10:07 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	110	70-130
Chloromethane	101	70-130
Vinyl Chloride	107	70-130
1,3-Butadiene	99	70-130
Bromomethane	104	70-130
Chloroethane	103	70-130
Freon 11	102	70-130
Ethanol	107	70-130
Freon 113	105	70-130
1,1-Dichloroethene	105	70-130
Acetone	102	70-130
2-Propanol	101	70-130
Carbon Disulfide	95	70-130
3-Chloropropene	102	70-130
Methylene Chloride	104	70-130
Methyl tert-butyl ether	103	70-130
trans-1,2-Dichloroethene	108	70-130
Hexane	107	70-130
1,1-Dichloroethane	102	70-130
2-Butanone (Methyl Ethyl Ketone)	104	70-130
cis-1,2-Dichloroethene	104	70-130
Tetrahydrofuran	102	70-130
Chloroform	103	70-130
1,1,1-Trichloroethane	100	70-130
Cyclohexane	106	70-130
Carbon Tetrachloride	106	70-130
2,2,4-Trimethylpentane	110	70-130
Benzene	108	70-130
1,2-Dichloroethane	100	70-130
Heptane	115	70-130
Trichloroethene	107	70-130
1,2-Dichloropropane	108	70-130
1,4-Dioxane	110	70-130
Bromodichloromethane	109	70-130
cis-1,3-Dichloropropene	103	70-130
4-Methyl-2-pentanone	107	70-130
Toluene	108	70-130
trans-1,3-Dichloropropene	112	70-130
1,1,2-Trichloroethane	107	70-130
Tetrachloroethene	114	70-130
2-Hexanone	106	70-130

Client Sample ID: LCSD

Lab ID#: 1602459-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20030107	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/1/16 10:07 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	119	70-130
1,2-Dibromoethane (EDB)	117	70-130
Chlorobenzene	108	70-130
Ethyl Benzene	114	70-130
m,p-Xylene	110	70-130
o-Xylene	113	70-130
Styrene	115	70-130
Bromoform	122	70-130
Cumene	111	70-130
1,1,2,2-Tetrachloroethane	111	70-130
Propylbenzene	101	70-130
4-Ethyltoluene	93	70-130
1,3,5-Trimethylbenzene	106	70-130
1,2,4-Trimethylbenzene	105	70-130
1,3-Dichlorobenzene	98	70-130
1,4-Dichlorobenzene	96	70-130
alpha-Chlorotoluene	111	70-130
1,2-Dichlorobenzene	97	70-130
1,2,4-Trichlorobenzene	107	70-130
Hexachlorobutadiene	105	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	102	70-130