

1/16/2017

Mr. Curt Lueckenhoff
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1701074

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 1/9/2017 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 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 #: 1701074

Work Order Summary

CLIENT:	Mr. Curt Lueckenhoff Missouri Dept. of Natural Resources 2710 West Main Jefferson City, MO 65109	BILL TO:	Accounts Payable Missouri Dept. of Natural Resources P.O Box 176 Jefferson City, MO 65102
PHONE:	573-526-3363	P.O. #	ESP170552
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	01/09/2017	CONTACT:	Brian Whittaker
DATE COMPLETED:	01/16/2017		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (170781)	Modified TO-15	4.7 "Hg	5.1 psi
02A	D2 (170782)	Modified TO-15	4.9 "Hg	5 psi
03A	U1 (170783)	Modified TO-15	4.9 "Hg	5 psi
04A	Lab Blank	Modified TO-15	NA	NA
05A	CCV	Modified TO-15	NA	NA
06A	LCS	Modified TO-15	NA	NA
06AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 01/16/17

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

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# 1701074

Three 6 Liter Summa Canister (100% Cert Ambient) samples were received on January 09, 2017. 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 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 (170781)

Lab ID#: 1701074-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.79	2.4
Freon 11	0.16	0.23	0.90	1.3
Acetone	0.80	1.5	1.9	3.5

Client Sample ID: D2 (170782)

Lab ID#: 1701074-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.49	0.79	2.4
Freon 11	0.16	0.23	0.90	1.3
Acetone	0.80	3.0	1.9	7.2

Client Sample ID: U1 (170783)

Lab ID#: 1701074-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.79	2.4
Freon 11	0.16	0.22	0.90	1.2
Acetone	0.80	3.5	1.9	8.3
Tetrachloroethene	0.16	0.18	1.1	1.2



Air Toxics

Client Sample ID: D1 (170781)

Lab ID#: 1701074-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011018	Date of Collection:	1/4/17 12:50:00 PM
Dil. Factor:	1.60	Date of Analysis:	1/10/17 08:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.79	2.4
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.23	0.90	1.3
Ethanol	0.80	Not Detected	1.5	Not Detected
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	3.5
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	Not Detected	0.51	Not Detected
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	Not Detected	0.60	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.80	Not Detected	3.3	Not Detected



Client Sample ID: D1 (170781)

Lab ID#: 1701074-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011018	Date of Collection:	1/4/17 12:50:00 PM
Dil. Factor:	1.60	Date of Analysis:	1/10/17 08:45 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	0.80	Not Detected	4.1	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% Cert Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: D2 (170782)

Lab ID#: 1701074-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011019	Date of Collection:	1/4/17 12:40:00 PM
Dil. Factor:	1.60	Date of Analysis:	1/10/17 09:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.49	0.79	2.4
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.23	0.90	1.3
Ethanol	0.80	Not Detected	1.5	Not Detected
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	3.0	1.9	7.2
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	Not Detected	0.51	Not Detected
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	Not Detected	0.60	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.80	Not Detected	3.3	Not Detected

Client Sample ID: D2 (170782)

Lab ID#: 1701074-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011019	Date of Collection:	1/4/17 12:40:00 PM
Dil. Factor:	1.60	Date of Analysis:	1/10/17 09:24 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	0.80	Not Detected	4.1	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% Cert Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: U1 (170783)

Lab ID#: 1701074-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011020	Date of Collection:	1/4/17 1:00:00 PM
Dil. Factor:	1.60	Date of Analysis:	1/10/17 10:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.79	2.4
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.22	0.90	1.2
Ethanol	0.80	Not Detected	1.5	Not Detected
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	3.5	1.9	8.3
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	Not Detected	0.51	Not Detected
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	Not Detected	0.60	Not Detected
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	0.18	1.1	1.2
2-Hexanone	0.80	Not Detected	3.3	Not Detected



Client Sample ID: U1 (170783)

Lab ID#: 1701074-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011020	Date of Collection:	1/4/17 1:00:00 PM
Dil. Factor:	1.60	Date of Analysis:	1/10/17 10:03 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	0.80	Not Detected	4.1	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% Cert Ambient)

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



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1701074-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011005a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/10/17 10:14 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 1701074-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011005a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/10/17 10:14 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	105	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1701074-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/10/17 07:39 AM

Compound	%Recovery
Freon 12	102
Freon 114	99
Chloromethane	100
Vinyl Chloride	101
1,3-Butadiene	101
Bromomethane	114
Chloroethane	112
Freon 11	100
Ethanol	85
Freon 113	100
1,1-Dichloroethene	99
Acetone	96
2-Propanol	96
Carbon Disulfide	107
3-Chloropropene	89
Methylene Chloride	93
Methyl tert-butyl ether	109
trans-1,2-Dichloroethene	101
Hexane	104
1,1-Dichloroethane	100
2-Butanone (Methyl Ethyl Ketone)	105
cis-1,2-Dichloroethene	103
Tetrahydrofuran	104
Chloroform	101
1,1,1-Trichloroethane	103
Cyclohexane	106
Carbon Tetrachloride	97
2,2,4-Trimethylpentane	106
Benzene	102
1,2-Dichloroethane	104
Heptane	104
Trichloroethene	106
1,2-Dichloropropane	105
1,4-Dioxane	107
Bromodichloromethane	109
cis-1,3-Dichloropropene	113
4-Methyl-2-pentanone	111
Toluene	105
trans-1,3-Dichloropropene	112
1,1,2-Trichloroethane	107
Tetrachloroethene	108
2-Hexanone	110

Client Sample ID: CCV

Lab ID#: 1701074-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/10/17 07:39 AM

Compound	%Recovery
Dibromochloromethane	116
1,2-Dibromoethane (EDB)	110
Chlorobenzene	105
Ethyl Benzene	113
m,p-Xylene	114
o-Xylene	116
Styrene	115
Bromoform	116
Cumene	117
1,1,2,2-Tetrachloroethane	106
Propylbenzene	106
4-Ethyltoluene	104
1,3,5-Trimethylbenzene	108
1,2,4-Trimethylbenzene	104
1,3-Dichlorobenzene	99
1,4-Dichlorobenzene	97
alpha-Chlorotoluene	121
1,2-Dichlorobenzene	100
1,2,4-Trichlorobenzene	104
Hexachlorobutadiene	101

Container Type: NA - Not Applicable

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



Air Toxics

Client Sample ID: LCS

Lab ID#: 1701074-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011003	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/10/17 08:29 AM

Compound	%Recovery	Method Limits
Freon 12	103	70-130
Freon 114	102	70-130
Chloromethane	102	70-130
Vinyl Chloride	105	70-130
1,3-Butadiene	100	70-130
Bromomethane	116	70-130
Chloroethane	116	70-130
Freon 11	101	70-130
Ethanol	79	70-130
Freon 113	100	70-130
1,1-Dichloroethene	100	70-130
Acetone	95	70-130
2-Propanol	105	70-130
Carbon Disulfide	110	70-130
3-Chloropropene	121	70-130
Methylene Chloride	93	70-130
Methyl tert-butyl ether	111	70-130
trans-1,2-Dichloroethene	114	70-130
Hexane	108	70-130
1,1-Dichloroethane	101	70-130
2-Butanone (Methyl Ethyl Ketone)	110	70-130
cis-1,2-Dichloroethene	96	70-130
Tetrahydrofuran	110	70-130
Chloroform	101	70-130
1,1,1-Trichloroethane	105	70-130
Cyclohexane	110	70-130
Carbon Tetrachloride	63 Q	70-130
2,2,4-Trimethylpentane	108	70-130
Benzene	103	70-130
1,2-Dichloroethane	103	70-130
Heptane	110	70-130
Trichloroethene	108	70-130
1,2-Dichloropropane	106	70-130
1,4-Dioxane	121	70-130
Bromodichloromethane	110	70-130
cis-1,3-Dichloropropene	122	70-130
4-Methyl-2-pentanone	128	70-130
Toluene	107	70-130
trans-1,3-Dichloropropene	119	70-130
1,1,2-Trichloroethane	110	70-130
Tetrachloroethene	108	70-130
2-Hexanone	138 Q	70-130

Client Sample ID: LCS

Lab ID#: 1701074-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/10/17 08:29 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	117	70-130
1,2-Dibromoethane (EDB)	112	70-130
Chlorobenzene	108	70-130
Ethyl Benzene	116	70-130
m,p-Xylene	117	70-130
o-Xylene	119	70-130
Styrene	122	70-130
Bromoform	119	70-130
Cumene	118	70-130
1,1,2,2-Tetrachloroethane	109	70-130
Propylbenzene	108	70-130
4-Ethyltoluene	108	70-130
1,3,5-Trimethylbenzene	112	70-130
1,2,4-Trimethylbenzene	108	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	100	70-130
alpha-Chlorotoluene	129	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	112	70-130
Hexachlorobutadiene	104	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1701074-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011004	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/10/17 09:19 AM

Compound	%Recovery	Method Limits
Freon 12	100	70-130
Freon 114	99	70-130
Chloromethane	99	70-130
Vinyl Chloride	102	70-130
1,3-Butadiene	97	70-130
Bromomethane	114	70-130
Chloroethane	113	70-130
Freon 11	99	70-130
Ethanol	78	70-130
Freon 113	98	70-130
1,1-Dichloroethene	98	70-130
Acetone	92	70-130
2-Propanol	102	70-130
Carbon Disulfide	108	70-130
3-Chloropropene	118	70-130
Methylene Chloride	92	70-130
Methyl tert-butyl ether	109	70-130
trans-1,2-Dichloroethene	110	70-130
Hexane	105	70-130
1,1-Dichloroethane	98	70-130
2-Butanone (Methyl Ethyl Ketone)	108	70-130
cis-1,2-Dichloroethene	94	70-130
Tetrahydrofuran	107	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	103	70-130
Cyclohexane	107	70-130
Carbon Tetrachloride	61 Q	70-130
2,2,4-Trimethylpentane	104	70-130
Benzene	100	70-130
1,2-Dichloroethane	101	70-130
Heptane	108	70-130
Trichloroethene	105	70-130
1,2-Dichloropropane	103	70-130
1,4-Dioxane	118	70-130
Bromodichloromethane	107	70-130
cis-1,3-Dichloropropene	119	70-130
4-Methyl-2-pentanone	125	70-130
Toluene	104	70-130
trans-1,3-Dichloropropene	116	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	106	70-130
2-Hexanone	132 Q	70-130

Client Sample ID: LCSD

Lab ID#: 1701074-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20011004	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/10/17 09:19 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	113	70-130
1,2-Dibromoethane (EDB)	109	70-130
Chlorobenzene	104	70-130
Ethyl Benzene	112	70-130
m,p-Xylene	112	70-130
o-Xylene	114	70-130
Styrene	116	70-130
Bromoform	116	70-130
Cumene	112	70-130
1,1,2,2-Tetrachloroethane	106	70-130
Propylbenzene	103	70-130
4-Ethyltoluene	103	70-130
1,3,5-Trimethylbenzene	107	70-130
1,2,4-Trimethylbenzene	104	70-130
1,3-Dichlorobenzene	99	70-130
1,4-Dichlorobenzene	95	70-130
alpha-Chlorotoluene	124	70-130
1,2-Dichlorobenzene	98	70-130
1,2,4-Trichlorobenzene	107	70-130
Hexachlorobutadiene	99	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	103	70-130