

2/10/2017

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1702075

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 2/6/2017 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 #: 1702075**

Work Order Summary

<b>CLIENT:</b>	Mr. Curt Lueckenhoff Missouri Dept. of Natural Resources 2710 West Main Jefferson City, MO 65109	<b>BILL TO:</b>	Accounts Payable Missouri Dept. of Natural Resources P.O Box 176 Jefferson City, MO 65102
<b>PHONE:</b>	573-526-3363	<b>P.O. #</b>	3ESP170636 + 3ESP170587
<b>FAX:</b>	573-526-3350	<b>PROJECT #</b>	Bridgeton Landfill
<b>DATE RECEIVED:</b>	02/06/2017	<b>CONTACT:</b>	Brian Whittaker
<b>DATE COMPLETED:</b>	02/10/2017		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (170791)	Modified TO-15	5.5 "Hg	5 psi
02A	U1 (170792)	Modified TO-15	5.0 "Hg	5 psi
03A	Lab Blank	Modified TO-15	NA	NA
04A	CCV	Modified TO-15	NA	NA
05A	LCS	Modified TO-15	NA	NA
05AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 02/10/17

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# 1702075**

Two 6 Liter Summa Canister (100% Cert Ambient) samples were received on February 06, 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.

**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 (170791)**

**Lab ID#: 1702075-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	0.16	0.48	0.81	2.4
Freon 11	0.16	0.21	0.92	1.2
Ethanol	0.82	2.4	1.5	4.6
Acetone	0.82	2.1	1.9	5.0
Heptane	0.16	0.16 J	0.67	0.64 J
Toluene	0.16	0.31	0.62	1.2

**Client Sample ID: U1 (170792)**

**Lab ID#: 1702075-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	0.16	0.46	0.80	2.3
Freon 11	0.16	0.21	0.90	1.2
Ethanol	0.80	1.4	1.5	2.6
Acetone	0.80	3.7	1.9	8.9
Hexane	0.16	0.19	0.57	0.66
2-Butanone (Methyl Ethyl Ketone)	0.80	1.0	2.4	3.0



Air Toxics

Client Sample ID: D1 (170791)

Lab ID#: 1702075-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020818	Date of Collection:	1/31/17 1:00:00 PM
Dil. Factor:	1.64	Date of Analysis:	2/8/17 07:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.81	2.4
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	Not Detected	1.7	Not Detected
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	0.21	0.92	1.2
Ethanol	0.82	2.4	1.5	4.6
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	2.1	1.9	5.0
2-Propanol	0.82	Not Detected	2.0	Not Detected
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
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	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	Not Detected	2.4	Not Detected
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	Not Detected	0.56	Not Detected
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	Not Detected	0.52	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	0.16 J	0.67	0.64 J
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	Not Detected	0.67	Not Detected
Toluene	0.16	0.31	0.62	1.2
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	Not Detected	1.1	Not Detected
2-Hexanone	0.82	Not Detected	3.4	Not Detected

Client Sample ID: D1 (170791)

Lab ID#: 1702075-01A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	e020818	Date of Collection:	1/31/17 1:00:00 PM
Dil. Factor:	1.64	Date of Analysis:	2/8/17 07:27 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	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
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

J = Estimated value.

**Container Type: 6 Liter Summa Canister (100% Cert Ambient)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: U1 (170792)

Lab ID#: 1702075-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020819	Date of Collection:	1/31/17 1:15:00 PM
Dil. Factor:	1.61	Date of Analysis:	2/8/17 08:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.46	0.80	2.3
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	0.21	0.90	1.2
Ethanol	0.80	1.4	1.5	2.6
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	3.7	1.9	8.9
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	0.19	0.57	0.66
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	1.0	2.4	3.0
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	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	0.61	Not Detected
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: U1 (170792)

Lab ID#: 1702075-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020819	Date of Collection:	1/31/17 1:15:00 PM
Dil. Factor:	1.61	Date of Analysis:	2/8/17 08:14 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% Cert Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130





Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1702075-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020813	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/8/17 03:13 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#: 1702075-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>e020813</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 2/8/17 03:13 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
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

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1702075-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020807	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/17 10:33 AM

Compound	%Recovery
Freon 12	101
Freon 114	97
Chloromethane	99
Vinyl Chloride	92
1,3-Butadiene	98
Bromomethane	99
Chloroethane	97
Freon 11	99
Ethanol	82
Freon 113	96
1,1-Dichloroethene	95
Acetone	90
2-Propanol	98
Carbon Disulfide	94
3-Chloropropene	100
Methylene Chloride	80
Methyl tert-butyl ether	102
trans-1,2-Dichloroethene	97
Hexane	102
1,1-Dichloroethane	100
2-Butanone (Methyl Ethyl Ketone)	99
cis-1,2-Dichloroethene	96
Tetrahydrofuran	98
Chloroform	91
1,1,1-Trichloroethane	96
Cyclohexane	100
Carbon Tetrachloride	104
2,2,4-Trimethylpentane	102
Benzene	91
1,2-Dichloroethane	95
Heptane	97
Trichloroethene	96
1,2-Dichloropropane	93
1,4-Dioxane	96
Bromodichloromethane	96
cis-1,3-Dichloropropene	102
4-Methyl-2-pentanone	100
Toluene	99
trans-1,3-Dichloropropene	104
1,1,2-Trichloroethane	100
Tetrachloroethene	95
2-Hexanone	106

Client Sample ID: CCV

Lab ID#: 1702075-04A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>e020807</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 2/8/17 10:33 AM

<b>Compound</b>	<b>%Recovery</b>
Dibromochloromethane	100
1,2-Dibromoethane (EDB)	94
Chlorobenzene	96
Ethyl Benzene	105
m,p-Xylene	106
o-Xylene	107
Styrene	109
Bromoform	102
Cumene	110
1,1,2,2-Tetrachloroethane	88
Propylbenzene	106
4-Ethyltoluene	111
1,3,5-Trimethylbenzene	110
1,2,4-Trimethylbenzene	110
1,3-Dichlorobenzene	100
1,4-Dichlorobenzene	95
alpha-Chlorotoluene	105
1,2-Dichlorobenzene	99
1,2,4-Trichlorobenzene	91
Hexachlorobutadiene	91

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1702075-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020808	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/17 11:17 AM

Compound	%Recovery	Method Limits
Freon 12	121	70-130
Freon 114	116	70-130
Chloromethane	118	70-130
Vinyl Chloride	113	70-130
1,3-Butadiene	112	70-130
Bromomethane	123	70-130
Chloroethane	118	70-130
Freon 11	122	70-130
Ethanol	91	70-130
Freon 113	115	70-130
1,1-Dichloroethene	118	70-130
Acetone	110	70-130
2-Propanol	126	70-130
Carbon Disulfide	113	70-130
3-Chloropropene	119	70-130
Methylene Chloride	100	70-130
Methyl tert-butyl ether	125	70-130
trans-1,2-Dichloroethene	129	70-130
Hexane	122	70-130
1,1-Dichloroethane	118	70-130
2-Butanone (Methyl Ethyl Ketone)	123	70-130
cis-1,2-Dichloroethene	108	70-130
Tetrahydrofuran	123	70-130
Chloroform	113	70-130
1,1,1-Trichloroethane	118	70-130
Cyclohexane	126	70-130
Carbon Tetrachloride	107	70-130
2,2,4-Trimethylpentane	120	70-130
Benzene	107	70-130
1,2-Dichloroethane	111	70-130
Heptane	115	70-130
Trichloroethene	114	70-130
1,2-Dichloropropane	112	70-130
1,4-Dioxane	115	70-130
Bromodichloromethane	116	70-130
cis-1,3-Dichloropropene	127	70-130
4-Methyl-2-pentanone	121	70-130
Toluene	117	70-130
trans-1,3-Dichloropropene	123	70-130
1,1,2-Trichloroethane	116	70-130
Tetrachloroethene	115	70-130
2-Hexanone	126	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1702075-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020808	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/17 11:17 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	120	70-130
1,2-Dibromoethane (EDB)	111	70-130
Chlorobenzene	114	70-130
Ethyl Benzene	122	70-130
m,p-Xylene	125	70-130
o-Xylene	124	70-130
Styrene	132 Q	70-130
Bromoform	124	70-130
Cumene	128	70-130
1,1,2,2-Tetrachloroethane	107	70-130
Propylbenzene	124	70-130
4-Ethyltoluene	130	70-130
1,3,5-Trimethylbenzene	127	70-130
1,2,4-Trimethylbenzene	125	70-130
1,3-Dichlorobenzene	113	70-130
1,4-Dichlorobenzene	110	70-130
alpha-Chlorotoluene	123	70-130
1,2-Dichlorobenzene	113	70-130
1,2,4-Trichlorobenzene	103	70-130
Hexachlorobutadiene	104	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1702075-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e020809	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/17 12:00 PM

Compound	%Recovery	Method Limits
Freon 12	109	70-130
Freon 114	103	70-130
Chloromethane	103	70-130
Vinyl Chloride	102	70-130
1,3-Butadiene	101	70-130
Bromomethane	112	70-130
Chloroethane	104	70-130
Freon 11	110	70-130
Ethanol	82	70-130
Freon 113	103	70-130
1,1-Dichloroethene	106	70-130
Acetone	97	70-130
2-Propanol	108	70-130
Carbon Disulfide	99	70-130
3-Chloropropene	108	70-130
Methylene Chloride	86	70-130
Methyl tert-butyl ether	109	70-130
trans-1,2-Dichloroethene	114	70-130
Hexane	111	70-130
1,1-Dichloroethane	104	70-130
2-Butanone (Methyl Ethyl Ketone)	108	70-130
cis-1,2-Dichloroethene	96	70-130
Tetrahydrofuran	109	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	106	70-130
Cyclohexane	111	70-130
Carbon Tetrachloride	95	70-130
2,2,4-Trimethylpentane	104	70-130
Benzene	110	70-130
1,2-Dichloroethane	115	70-130
Heptane	120	70-130
Trichloroethene	116	70-130
1,2-Dichloropropane	115	70-130
1,4-Dioxane	116	70-130
Bromodichloromethane	120	70-130
cis-1,3-Dichloropropene	131 Q	70-130
4-Methyl-2-pentanone	122	70-130
Toluene	120	70-130
trans-1,3-Dichloropropene	122	70-130
1,1,2-Trichloroethane	114	70-130
Tetrachloroethene	111	70-130
2-Hexanone	125	70-130

Client Sample ID: LCSD

Lab ID#: 1702075-05AA

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>e020809</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 2/8/17 12:00 PM</b>

<b>Compound</b>	<b>%Recovery</b>	<b>Method Limits</b>
Dibromochloromethane	117	70-130
1,2-Dibromoethane (EDB)	110	70-130
Chlorobenzene	113	70-130
Ethyl Benzene	123	70-130
m,p-Xylene	123	70-130
o-Xylene	124	70-130
Styrene	129	70-130
Bromoform	121	70-130
Cumene	128	70-130
1,1,2,2-Tetrachloroethane	105	70-130
Propylbenzene	122	70-130
4-Ethyltoluene	131 Q	70-130
1,3,5-Trimethylbenzene	126	70-130
1,2,4-Trimethylbenzene	128	70-130
1,3-Dichlorobenzene	114	70-130
1,4-Dichlorobenzene	109	70-130
alpha-Chlorotoluene	122	70-130
1,2-Dichlorobenzene	115	70-130
1,2,4-Trichlorobenzene	103	70-130
Hexachlorobutadiene	107	70-130

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	105	70-130