

5/8/2017

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1704404

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 4/25/2017 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 #: 1704404**

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>	3ESP170855
<b>FAX:</b>	573-526-3350	<b>PROJECT #</b>	Bridgeton Landfill
<b>DATE RECEIVED:</b>	04/25/2017	<b>CONTACT:</b>	Brian Whittaker
<b>DATE COMPLETED:</b>	05/01/2017		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (170819)	Modified TO-15	6.5 "Hg	5.2 psi
02A	U1 (170820)	Modified TO-15	0.1 psi	5.1 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: 05/08/17

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

**LABORATORY NARRATIVE  
Modified TO-15  
Missouri Dept. of Natural Resources  
Workorder# 1704404**

Two 6 Liter Summa Canister (100% Cert Ambient) samples were received on April 25, 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**

The canister valve on sample U1 (170820) was received open and a brass plug was present. Sample vented to ambient pressure during shipment. The client was informed and analysis proceeded. Reported analyte concentrations are considered to be estimated.

**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 (170819)**

**Lab ID#: 1704404-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.41	0.86	2.0
Freon 11	0.17	0.35	0.97	2.0
Ethanol	0.86	5.6	1.6	10
Acetone	0.86	10	2.0	24
2-Propanol	0.86	2.9	2.1	7.1
Hexane	0.17	0.25	0.61	0.88
2-Butanone (Methyl Ethyl Ketone)	0.86	2.3	2.6	6.8
Heptane	0.17	0.23	0.71	0.94

**Client Sample ID: U1 (170820)**

**Lab ID#: 1704404-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.13	0.44	0.66	2.2
Freon 11	0.13	0.20	0.75	1.2
Ethanol	0.67	31	1.3	58
Acetone	0.67	120 E	1.6	280 E
2-Propanol	0.67	8.9	1.6	22
Methylene Chloride	0.27	0.54	0.93	1.9
trans-1,2-Dichloroethene	0.13	0.82	0.53	3.2
Hexane	0.13	0.16	0.47	0.55
2-Butanone (Methyl Ethyl Ketone)	0.67	10	2.0	30
Tetrahydrofuran	0.67	1.1	2.0	3.3
Benzene	0.13	0.15	0.43	0.48
Heptane	0.13	0.19	0.55	0.78
4-Methyl-2-pentanone	0.13	0.35	0.55	1.4
Toluene	0.13	5.5	0.50	20
Ethyl Benzene	0.13	0.63	0.58	2.7
m,p-Xylene	0.13	1.5	0.58	6.4
o-Xylene	0.13	0.59	0.58	2.6
Styrene	0.13	1.2	0.57	5.3
4-Ethyltoluene	0.13	0.34	0.66	1.7
1,3,5-Trimethylbenzene	0.13	0.19	0.66	0.92

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

**Client Sample ID: U1 (170820)**

**Lab ID#: 1704404-02A**

1,2,4-Trimethylbenzene	0.13	0.75	0.66	3.7
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Air Toxics

Client Sample ID: D1 (170819)

Lab ID#: 1704404-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e042707	Date of Collection:	4/19/17 1:20:00 PM
Dil. Factor:	1.73	Date of Analysis:	4/27/17 05:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.41	0.86	2.0
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.86	Not Detected	1.8	Not Detected
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.86	Not Detected	3.4	Not Detected
Chloroethane	0.86	Not Detected	2.3	Not Detected
Freon 11	0.17	0.35	0.97	2.0
Ethanol	0.86	5.6	1.6	10
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	10	2.0	24
2-Propanol	0.86	2.9	2.1	7.1
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.35	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Hexane	0.17	0.25	0.61	0.88
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	2.3	2.6	6.8
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.6	Not Detected
Chloroform	0.17	Not Detected	0.84	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Cyclohexane	0.17	Not Detected	0.60	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.86	Not Detected	4.0	Not Detected
Benzene	0.17	Not Detected	0.55	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.70	Not Detected
Heptane	0.17	0.23	0.71	0.94
Trichloroethene	0.17	Not Detected	0.93	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.80	Not Detected
1,4-Dioxane	0.17	Not Detected	0.62	Not Detected
Bromodichloromethane	0.17	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.71	Not Detected
Toluene	0.17	Not Detected	0.65	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Tetrachloroethene	0.17	Not Detected	1.2	Not Detected
2-Hexanone	0.86	Not Detected	3.5	Not Detected

Client Sample ID: D1 (170819)

Lab ID#: 1704404-01A

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

<b>File Name:</b>	<b>e042707</b>	<b>Date of Collection:</b> 4/19/17 1:20:00 PM
<b>Dil. Factor:</b>	<b>1.73</b>	<b>Date of Analysis:</b> 4/27/17 05:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.80	Not Detected
Ethyl Benzene	0.17	Not Detected	0.75	Not Detected
m,p-Xylene	0.17	Not Detected	0.75	Not Detected
o-Xylene	0.17	Not Detected	0.75	Not Detected
Styrene	0.17	Not Detected	0.74	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.85	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.85	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.85	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.85	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.85	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.17	Not Detected	0.90	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.4	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.2	Not Detected

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

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





Air Toxics

Client Sample ID: U1 (170820)

Lab ID#: 1704404-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e042708	Date of Collection:	4/19/17 1:25:00 PM
Dil. Factor:	1.34	Date of Analysis:	4/27/17 06:26 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.13	0.44	0.66	2.2
Freon 114	0.13	Not Detected	0.94	Not Detected
Chloromethane	0.67	Not Detected	1.4	Not Detected
Vinyl Chloride	0.13	Not Detected	0.34	Not Detected
1,3-Butadiene	0.13	Not Detected	0.30	Not Detected
Bromomethane	0.67	Not Detected	2.6	Not Detected
Chloroethane	0.67	Not Detected	1.8	Not Detected
Freon 11	0.13	0.20	0.75	1.2
Ethanol	0.67	31	1.3	58
Freon 113	0.13	Not Detected	1.0	Not Detected
1,1-Dichloroethene	0.13	Not Detected	0.53	Not Detected
Acetone	0.67	120 E	1.6	280 E
2-Propanol	0.67	8.9	1.6	22
Carbon Disulfide	0.67	Not Detected	2.1	Not Detected
3-Chloropropene	0.67	Not Detected	2.1	Not Detected
Methylene Chloride	0.27	0.54	0.93	1.9
Methyl tert-butyl ether	0.13	Not Detected	0.48	Not Detected
trans-1,2-Dichloroethene	0.13	0.82	0.53	3.2
Hexane	0.13	0.16	0.47	0.55
1,1-Dichloroethane	0.13	Not Detected	0.54	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.67	10	2.0	30
cis-1,2-Dichloroethene	0.13	Not Detected	0.53	Not Detected
Tetrahydrofuran	0.67	1.1	2.0	3.3
Chloroform	0.13	Not Detected	0.65	Not Detected
1,1,1-Trichloroethane	0.13	Not Detected	0.73	Not Detected
Cyclohexane	0.13	Not Detected	0.46	Not Detected
Carbon Tetrachloride	0.13	Not Detected	0.84	Not Detected
2,2,4-Trimethylpentane	0.67	Not Detected	3.1	Not Detected
Benzene	0.13	0.15	0.43	0.48
1,2-Dichloroethane	0.13	Not Detected	0.54	Not Detected
Heptane	0.13	0.19	0.55	0.78
Trichloroethene	0.13	Not Detected	0.72	Not Detected
1,2-Dichloropropane	0.13	Not Detected	0.62	Not Detected
1,4-Dioxane	0.13	Not Detected	0.48	Not Detected
Bromodichloromethane	0.13	Not Detected	0.90	Not Detected
cis-1,3-Dichloropropene	0.13	Not Detected	0.61	Not Detected
4-Methyl-2-pentanone	0.13	0.35	0.55	1.4
Toluene	0.13	5.5	0.50	20
trans-1,3-Dichloropropene	0.13	Not Detected	0.61	Not Detected
1,1,2-Trichloroethane	0.13	Not Detected	0.73	Not Detected
Tetrachloroethene	0.13	Not Detected	0.91	Not Detected
2-Hexanone	0.67	Not Detected	2.7	Not Detected

Client Sample ID: U1 (170820)

Lab ID#: 1704404-02A

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

File Name:	e042708	Date of Collection:	4/19/17 1:25:00 PM
Dil. Factor:	1.34	Date of Analysis:	4/27/17 06:26 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.13	Not Detected	1.1	Not Detected
1,2-Dibromoethane (EDB)	0.13	Not Detected	1.0	Not Detected
Chlorobenzene	0.13	Not Detected	0.62	Not Detected
Ethyl Benzene	0.13	0.63	0.58	2.7
m,p-Xylene	0.13	1.5	0.58	6.4
o-Xylene	0.13	0.59	0.58	2.6
Styrene	0.13	1.2	0.57	5.3
Bromoform	0.13	Not Detected	1.4	Not Detected
Cumene	0.13	Not Detected	0.66	Not Detected
1,1,2,2-Tetrachloroethane	0.13	Not Detected	0.92	Not Detected
Propylbenzene	0.13	Not Detected	0.66	Not Detected
4-Ethyltoluene	0.13	0.34	0.66	1.7
1,3,5-Trimethylbenzene	0.13	0.19	0.66	0.92
1,2,4-Trimethylbenzene	0.13	0.75	0.66	3.7
1,3-Dichlorobenzene	0.13	Not Detected	0.80	Not Detected
1,4-Dichlorobenzene	0.13	Not Detected	0.80	Not Detected
alpha-Chlorotoluene	0.13	Not Detected	0.69	Not Detected
1,2-Dichlorobenzene	0.13	Not Detected	0.80	Not Detected
1,2,4-Trichlorobenzene	0.67	Not Detected	5.0	Not Detected
Hexachlorobutadiene	0.67	Not Detected	7.1	Not Detected

E = Exceeds instrument calibration range.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1704404-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e042706	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/27/17 04:40 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#: 1704404-03A

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

<b>File Name:</b>	<b>e042706</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 4/27/17 04:40 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	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1704404-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e042702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/27/17 01:32 PM

Compound	%Recovery
Freon 12	82
Freon 114	84
Chloromethane	92
Vinyl Chloride	85
1,3-Butadiene	86
Bromomethane	89
Chloroethane	86
Freon 11	81
Ethanol	78
Freon 113	78
1,1-Dichloroethene	82
Acetone	81
2-Propanol	84
Carbon Disulfide	84
3-Chloropropene	87
Methylene Chloride	82
Methyl tert-butyl ether	86
trans-1,2-Dichloroethene	81
Hexane	85
1,1-Dichloroethane	82
2-Butanone (Methyl Ethyl Ketone)	88
cis-1,2-Dichloroethene	83
Tetrahydrofuran	86
Chloroform	81
1,1,1-Trichloroethane	80
Cyclohexane	86
Carbon Tetrachloride	81
2,2,4-Trimethylpentane	84
Benzene	80
1,2-Dichloroethane	80
Heptane	88
Trichloroethene	84
1,2-Dichloropropane	86
1,4-Dioxane	86
Bromodichloromethane	84
cis-1,3-Dichloropropene	90
4-Methyl-2-pentanone	88
Toluene	85
trans-1,3-Dichloropropene	88
1,1,2-Trichloroethane	86
Tetrachloroethene	85
2-Hexanone	94

Client Sample ID: CCV

Lab ID#: 1704404-04A

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

<b>File Name:</b>	<b>e042702</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 4/27/17 01:32 PM

Compound	%Recovery
Dibromochloromethane	88
1,2-Dibromoethane (EDB)	88
Chlorobenzene	84
Ethyl Benzene	90
m,p-Xylene	88
o-Xylene	86
Styrene	89
Bromoform	86
Cumene	87
1,1,2,2-Tetrachloroethane	79
Propylbenzene	84
4-Ethyltoluene	84
1,3,5-Trimethylbenzene	79
1,2,4-Trimethylbenzene	80
1,3-Dichlorobenzene	76
1,4-Dichlorobenzene	73
alpha-Chlorotoluene	81
1,2-Dichlorobenzene	74
1,2,4-Trichlorobenzene	70
Hexachlorobutadiene	77

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1704404-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e042703	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/27/17 02:17 PM

Compound	%Recovery	Method Limits
Freon 12	92	70-130
Freon 114	94	70-130
Chloromethane	107	70-130
Vinyl Chloride	97	70-130
1,3-Butadiene	95	70-130
Bromomethane	103	70-130
Chloroethane	100	70-130
Freon 11	92	70-130
Ethanol	109	70-130
Freon 113	88	70-130
1,1-Dichloroethene	93	70-130
Acetone	92	70-130
2-Propanol	100	70-130
Carbon Disulfide	97	70-130
3-Chloropropene	99	70-130
Methylene Chloride	93	70-130
Methyl tert-butyl ether	95	70-130
trans-1,2-Dichloroethene	102	70-130
Hexane	100	70-130
1,1-Dichloroethane	92	70-130
2-Butanone (Methyl Ethyl Ketone)	104	70-130
cis-1,2-Dichloroethene	87	70-130
Tetrahydrofuran	103	70-130
Chloroform	92	70-130
1,1,1-Trichloroethane	91	70-130
Cyclohexane	98	70-130
Carbon Tetrachloride	80	70-130
2,2,4-Trimethylpentane	95	70-130
Benzene	85	70-130
1,2-Dichloroethane	86	70-130
Heptane	98	70-130
Trichloroethene	81	70-130
1,2-Dichloropropane	93	70-130
1,4-Dioxane	98	70-130
Bromodichloromethane	92	70-130
cis-1,3-Dichloropropene	103	70-130
4-Methyl-2-pentanone	102	70-130
Toluene	95	70-130
trans-1,3-Dichloropropene	96	70-130
1,1,2-Trichloroethane	93	70-130
Tetrachloroethene	93	70-130
2-Hexanone	117	70-130

Client Sample ID: LCS

Lab ID#: 1704404-05A

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

<b>File Name:</b>	<b>e042703</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 4/27/17 02:17 PM

<b>Compound</b>	<b>%Recovery</b>	<b>Method Limits</b>
Dibromochloromethane	94	70-130
1,2-Dibromoethane (EDB)	95	70-130
Chlorobenzene	95	70-130
Ethyl Benzene	103	70-130
m,p-Xylene	102	70-130
o-Xylene	99	70-130
Styrene	103	70-130
Bromoform	97	70-130
Cumene	100	70-130
1,1,2,2-Tetrachloroethane	103	70-130
Propylbenzene	98	70-130
4-Ethyltoluene	101	70-130
1,3,5-Trimethylbenzene	95	70-130
1,2,4-Trimethylbenzene	98	70-130
1,3-Dichlorobenzene	91	70-130
1,4-Dichlorobenzene	90	70-130
alpha-Chlorotoluene	92	70-130
1,2-Dichlorobenzene	91	70-130
1,2,4-Trichlorobenzene	89	70-130
Hexachlorobutadiene	98	70-130

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130





Air Toxics

Client Sample ID: LCSD

Lab ID#: 1704404-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e042704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/27/17 03:04 PM

Compound	%Recovery	Method Limits
Freon 12	90	70-130
Freon 114	92	70-130
Chloromethane	104	70-130
Vinyl Chloride	95	70-130
1,3-Butadiene	90	70-130
Bromomethane	99	70-130
Chloroethane	95	70-130
Freon 11	89	70-130
Ethanol	108	70-130
Freon 113	85	70-130
1,1-Dichloroethene	88	70-130
Acetone	94	70-130
2-Propanol	97	70-130
Carbon Disulfide	93	70-130
3-Chloropropene	96	70-130
Methylene Chloride	89	70-130
Methyl tert-butyl ether	92	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	96	70-130
1,1-Dichloroethane	89	70-130
2-Butanone (Methyl Ethyl Ketone)	98	70-130
cis-1,2-Dichloroethene	85	70-130
Tetrahydrofuran	100	70-130
Chloroform	90	70-130
1,1,1-Trichloroethane	88	70-130
Cyclohexane	95	70-130
Carbon Tetrachloride	76	70-130
2,2,4-Trimethylpentane	90	70-130
Benzene	84	70-130
1,2-Dichloroethane	85	70-130
Heptane	96	70-130
Trichloroethene	80	70-130
1,2-Dichloropropane	92	70-130
1,4-Dioxane	97	70-130
Bromodichloromethane	91	70-130
cis-1,3-Dichloropropene	102	70-130
4-Methyl-2-pentanone	100	70-130
Toluene	93	70-130
trans-1,3-Dichloropropene	94	70-130
1,1,2-Trichloroethane	92	70-130
Tetrachloroethene	93	70-130
2-Hexanone	115	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1704404-05AA

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

File Name:	e042704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/27/17 03:04 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	94	70-130
1,2-Dibromoethane (EDB)	96	70-130
Chlorobenzene	94	70-130
Ethyl Benzene	101	70-130
m,p-Xylene	101	70-130
o-Xylene	99	70-130
Styrene	103	70-130
Bromoform	97	70-130
Cumene	100	70-130
1,1,2,2-Tetrachloroethane	102	70-130
Propylbenzene	97	70-130
4-Ethyltoluene	101	70-130
1,3,5-Trimethylbenzene	94	70-130
1,2,4-Trimethylbenzene	95	70-130
1,3-Dichlorobenzene	90	70-130
1,4-Dichlorobenzene	88	70-130
alpha-Chlorotoluene	91	70-130
1,2-Dichlorobenzene	90	70-130
1,2,4-Trichlorobenzene	83	70-130
Hexachlorobutadiene	94	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130