

7/25/2017

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1707265

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 7/18/2017 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 #: 1707265**

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>	3ESP171181/3ESP171236
<b>FAX:</b>	573-526-3350	<b>PROJECT #</b>	Bridgeton Landfill
<b>DATE RECEIVED:</b>	07/18/2017	<b>CONTACT:</b>	Brian Whittaker
<b>DATE COMPLETED:</b>	07/25/2017		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (172348)	Modified TO-15	6.7 "Hg	5 psi
02A	U1 (172348)	Modified TO-15	7.3 "Hg	4.9 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: 07/25/17

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 Low Level**  
**Missouri Dept. of Natural Resources**  
**Workorder# 1707265**

Two 6 Liter Summa Canister (100% Cert Ambient) samples were received on July 18, 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**

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 (172348)**

**Lab ID#: 1707265-01A**

<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	0.17	0.46	0.86	2.3
Freon 11	0.17	0.26	0.97	1.4
Ethanol	0.86	4.5	1.6	8.5
Acetone	0.86	19	2.0	44
2-Propanol	0.86	5.6	2.1	14
Methylene Chloride	0.35	2.6	1.2	9.0
Hexane	0.17	0.36	0.61	1.3
2-Butanone (Methyl Ethyl Ketone)	0.86	1.4	2.6	4.2
Heptane	0.17	0.53	0.71	2.2
m,p-Xylene	0.17	0.42	0.75	1.8

**Client Sample ID: U1 (172348)**

**Lab ID#: 1707265-02A**

<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	0.18	0.44	0.87	2.2
Freon 11	0.18	0.18	0.99	1.0
Ethanol	0.88	5.1	1.6	9.6
Acetone	0.88	18	2.1	44
2-Propanol	0.88	5.5	2.2	14
Methylene Chloride	0.35	1.8	1.2	6.3
2-Butanone (Methyl Ethyl Ketone)	0.88	2.4	2.6	7.2
Heptane	0.18	0.24	0.72	1.0
m,p-Xylene	0.18	0.38	0.76	1.6



Air Toxics

Client Sample ID: D1 (172348)

Lab ID#: 1707265-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v072022	Date of Collection:	7/12/17 1:25:00 PM
Dil. Factor:	1.73	Date of Analysis:	7/20/17 08:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.46	0.86	2.3
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	0.26	0.97	1.4
Ethanol	0.86	4.5	1.6	8.5
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	19	2.0	44
2-Propanol	0.86	5.6	2.1	14
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.35	2.6	1.2	9.0
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	0.36	0.61	1.3
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	1.4	2.6	4.2
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	0.53	0.71	2.2
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



Air Toxics

Client Sample ID: D1 (172348)

Lab ID#: 1707265-01A

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

File Name:	v072022	Date of Collection:	7/12/17 1:25:00 PM
Dil. Factor:	1.73	Date of Analysis:	7/20/17 08:43 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	0.42	0.75	1.8
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	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: U1 (172348)

Lab ID#: 1707265-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v072023	Date of Collection:	7/12/17 1:35:00 PM
Dil. Factor:	1.76	Date of Analysis:	7/20/17 09:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.44	0.87	2.2
Freon 114	0.18	Not Detected	1.2	Not Detected
Chloromethane	0.88	Not Detected	1.8	Not Detected
Vinyl Chloride	0.18	Not Detected	0.45	Not Detected
1,3-Butadiene	0.18	Not Detected	0.39	Not Detected
Bromomethane	0.88	Not Detected	3.4	Not Detected
Chloroethane	0.88	Not Detected	2.3	Not Detected
Freon 11	0.18	0.18	0.99	1.0
Ethanol	0.88	5.1	1.6	9.6
Freon 113	0.18	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Acetone	0.88	18	2.1	44
2-Propanol	0.88	5.5	2.2	14
Carbon Disulfide	0.88	Not Detected	2.7	Not Detected
3-Chloropropene	0.88	Not Detected	2.8	Not Detected
Methylene Chloride	0.35	1.8	1.2	6.3
Methyl tert-butyl ether	0.18	Not Detected	0.63	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Hexane	0.18	Not Detected	0.62	Not Detected
1,1-Dichloroethane	0.18	Not Detected	0.71	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.88	2.4	2.6	7.2
cis-1,2-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Tetrahydrofuran	0.88	Not Detected	2.6	Not Detected
Chloroform	0.18	Not Detected	0.86	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.96	Not Detected
Cyclohexane	0.18	Not Detected	0.60	Not Detected
Carbon Tetrachloride	0.18	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.88	Not Detected	4.1	Not Detected
Benzene	0.18	Not Detected	0.56	Not Detected
1,2-Dichloroethane	0.18	Not Detected	0.71	Not Detected
Heptane	0.18	0.24	0.72	1.0
Trichloroethene	0.18	Not Detected	0.94	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.81	Not Detected
1,4-Dioxane	0.18	Not Detected	0.63	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.80	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.72	Not Detected
Toluene	0.18	Not Detected	0.66	Not Detected
trans-1,3-Dichloropropene	0.18	Not Detected	0.80	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	0.96	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
2-Hexanone	0.88	Not Detected	3.6	Not Detected

Client Sample ID: U1 (172348)

Lab ID#: 1707265-02A

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

<b>File Name:</b>	<b>v072023</b>	<b>Date of Collection:</b> 7/12/17 1:35:00 PM
<b>Dil. Factor:</b>	<b>1.76</b>	<b>Date of Analysis:</b> 7/20/17 09:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.18	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.81	Not Detected
Ethyl Benzene	0.18	Not Detected	0.76	Not Detected
m,p-Xylene	0.18	0.38	0.76	1.6
o-Xylene	0.18	Not Detected	0.76	Not Detected
Styrene	0.18	Not Detected	0.75	Not Detected
Bromoform	0.18	Not Detected	1.8	Not Detected
Cumene	0.18	Not Detected	0.86	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
Propylbenzene	0.18	Not Detected	0.86	Not Detected
4-Ethyltoluene	0.18	Not Detected	0.86	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.86	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.86	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.18	Not Detected	0.91	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.88	Not Detected	6.5	Not Detected
Hexachlorobutadiene	0.88	Not Detected	9.4	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130





Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1707265-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v072006	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/20/17 10:12 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#: 1707265-03A

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

<b>File Name:</b>	<b>v072006</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 7/20/17 10:12 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	96	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1707265-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v072002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/20/17 07:35 AM

Compound	%Recovery
Freon 12	94
Freon 114	88
Chloromethane	95
Vinyl Chloride	91
1,3-Butadiene	89
Bromomethane	92
Chloroethane	92
Freon 11	89
Ethanol	105
Freon 113	86
1,1-Dichloroethene	86
Acetone	88
2-Propanol	101
Carbon Disulfide	91
3-Chloropropene	96
Methylene Chloride	83
Methyl tert-butyl ether	91
trans-1,2-Dichloroethene	88
Hexane	94
1,1-Dichloroethane	89
2-Butanone (Methyl Ethyl Ketone)	96
cis-1,2-Dichloroethene	93
Tetrahydrofuran	108
Chloroform	90
1,1,1-Trichloroethane	87
Cyclohexane	88
Carbon Tetrachloride	94
2,2,4-Trimethylpentane	97
Benzene	94
1,2-Dichloroethane	95
Heptane	97
Trichloroethene	93
1,2-Dichloropropane	98
1,4-Dioxane	95
Bromodichloromethane	92
cis-1,3-Dichloropropene	96
4-Methyl-2-pentanone	104
Toluene	94
trans-1,3-Dichloropropene	96
1,1,2-Trichloroethane	94
Tetrachloroethene	92
2-Hexanone	100

Client Sample ID: CCV

Lab ID#: 1707265-04A

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

<b>File Name:</b>	<b>v072002</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 7/20/17 07:35 AM

<b>Compound</b>	<b>%Recovery</b>
Dibromochloromethane	95
1,2-Dibromoethane (EDB)	90
Chlorobenzene	93
Ethyl Benzene	92
m,p-Xylene	83
o-Xylene	88
Styrene	84
Bromoform	92
Cumene	83
1,1,2,2-Tetrachloroethane	87
Propylbenzene	81
4-Ethyltoluene	83
1,3,5-Trimethylbenzene	84
1,2,4-Trimethylbenzene	85
1,3-Dichlorobenzene	79
1,4-Dichlorobenzene	84
alpha-Chlorotoluene	85
1,2-Dichlorobenzene	86
1,2,4-Trichlorobenzene	79
Hexachlorobutadiene	77

**Container Type: NA - Not Applicable**

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



Air Toxics

Client Sample ID: LCS

Lab ID#: 1707265-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v072003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/20/17 08:20 AM

Compound	%Recovery	Method Limits
Freon 12	107	70-130
Freon 114	102	70-130
Chloromethane	106	70-130
Vinyl Chloride	103	70-130
1,3-Butadiene	98	70-130
Bromomethane	108	70-130
Chloroethane	106	70-130
Freon 11	102	70-130
Ethanol	113	70-130
Freon 113	93	70-130
1,1-Dichloroethene	94	70-130
Acetone	98	70-130
2-Propanol	115	70-130
Carbon Disulfide	90	70-130
3-Chloropropene	100	70-130
Methylene Chloride	91	70-130
Methyl tert-butyl ether	99	70-130
trans-1,2-Dichloroethene	85	70-130
Hexane	103	70-130
1,1-Dichloroethane	99	70-130
2-Butanone (Methyl Ethyl Ketone)	104	70-130
cis-1,2-Dichloroethene	112	70-130
Tetrahydrofuran	94	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	95	70-130
Cyclohexane	100	70-130
Carbon Tetrachloride	88	70-130
2,2,4-Trimethylpentane	106	70-130
Benzene	99	70-130
1,2-Dichloroethane	100	70-130
Heptane	101	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	101	70-130
1,4-Dioxane	92	70-130
Bromodichloromethane	99	70-130
cis-1,3-Dichloropropene	94	70-130
4-Methyl-2-pentanone	105	70-130
Toluene	97	70-130
trans-1,3-Dichloropropene	100	70-130
1,1,2-Trichloroethane	99	70-130
Tetrachloroethene	97	70-130
2-Hexanone	101	70-130

Client Sample ID: LCS

Lab ID#: 1707265-05A

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

<b>File Name:</b>	<b>v072003</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 7/20/17 08:20 AM

<b>Compound</b>	<b>%Recovery</b>	<b>Method Limits</b>
Dibromochloromethane	99	70-130
1,2-Dibromoethane (EDB)	97	70-130
Chlorobenzene	96	70-130
Ethyl Benzene	94	70-130
m,p-Xylene	87	70-130
o-Xylene	91	70-130
Styrene	87	70-130
Bromoform	94	70-130
Cumene	85	70-130
1,1,2,2-Tetrachloroethane	88	70-130
Propylbenzene	85	70-130
4-Ethyltoluene	84	70-130
1,3,5-Trimethylbenzene	85	70-130
1,2,4-Trimethylbenzene	86	70-130
1,3-Dichlorobenzene	80	70-130
1,4-Dichlorobenzene	87	70-130
alpha-Chlorotoluene	91	70-130
1,2-Dichlorobenzene	86	70-130
1,2,4-Trichlorobenzene	75	70-130
Hexachlorobutadiene	74	70-130

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1707265-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v072004	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/20/17 09:00 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	99	70-130
Chloromethane	105	70-130
Vinyl Chloride	102	70-130
1,3-Butadiene	95	70-130
Bromomethane	109	70-130
Chloroethane	102	70-130
Freon 11	100	70-130
Ethanol	114	70-130
Freon 113	92	70-130
1,1-Dichloroethene	95	70-130
Acetone	95	70-130
2-Propanol	109	70-130
Carbon Disulfide	88	70-130
3-Chloropropene	99	70-130
Methylene Chloride	90	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	84	70-130
Hexane	101	70-130
1,1-Dichloroethane	97	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
cis-1,2-Dichloroethene	109	70-130
Tetrahydrofuran	92	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	94	70-130
Cyclohexane	98	70-130
Carbon Tetrachloride	88	70-130
2,2,4-Trimethylpentane	102	70-130
Benzene	98	70-130
1,2-Dichloroethane	100	70-130
Heptane	101	70-130
Trichloroethene	101	70-130
1,2-Dichloropropane	103	70-130
1,4-Dioxane	94	70-130
Bromodichloromethane	100	70-130
cis-1,3-Dichloropropene	95	70-130
4-Methyl-2-pentanone	105	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	103	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	99	70-130
2-Hexanone	103	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1707265-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v072004	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/20/17 09:00 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	100	70-130
1,2-Dibromoethane (EDB)	97	70-130
Chlorobenzene	98	70-130
Ethyl Benzene	95	70-130
m,p-Xylene	87	70-130
o-Xylene	92	70-130
Styrene	87	70-130
Bromoform	97	70-130
Cumene	84	70-130
1,1,2,2-Tetrachloroethane	90	70-130
Propylbenzene	87	70-130
4-Ethyltoluene	88	70-130
1,3,5-Trimethylbenzene	89	70-130
1,2,4-Trimethylbenzene	92	70-130
1,3-Dichlorobenzene	83	70-130
1,4-Dichlorobenzene	89	70-130
alpha-Chlorotoluene	90	70-130
1,2-Dichlorobenzene	88	70-130
1,2,4-Trichlorobenzene	81	70-130
Hexachlorobutadiene	80	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	92	70-130