

12/18/2017
Mr. Curt Lueckenhoff
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill
Project #:
Workorder #: 1712112

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 12/6/2017 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 #: 1712112

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. #	3ESP180371
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	12/06/2017	CONTACT:	Brian Whittaker
DATE COMPLETED:	12/18/2017		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (174044)	Modified TO-15	5.5 "Hg	5 psi
02A	U1 (174045)	Modified TO-15	4.7 "Hg	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: 12/18/17

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

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1712112

Two 6 Liter Summa Canister (100% Certified) samples were received on December 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 (174044)

Lab ID#: 1712112-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.43	0.81	2.1
Freon 11	0.16	0.19	0.92	1.1
Ethanol	0.82	1.1	1.5	2.1
Acetone	0.82	1.4	1.9	3.4

Client Sample ID: U1 (174045)

Lab ID#: 1712112-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.37	0.79	1.8
Freon 11	0.16	0.18	0.90	1.0
Ethanol	0.80	0.96	1.5	1.8
Acetone	0.80	1.8	1.9	4.2
Hexane	0.16	0.20	0.56	0.72



Air Toxics

Client Sample ID: D1 (174044)

Lab ID#: 1712112-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120718	Date of Collection:	11/30/17 1:05:00 PM
Dil. Factor:	1.64	Date of Analysis:	12/7/17 09:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.43	0.81	2.1
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	0.19	0.92	1.1
Ethanol	0.82	1.1	1.5	2.1
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	1.4	1.9	3.4
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	Not Detected	0.67	Not Detected
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	Not Detected	0.62	Not Detected
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 (174044)

Lab ID#: 1712112-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120718	Date of Collection:	11/30/17 1:05:00 PM
Dil. Factor:	1.64	Date of Analysis:	12/7/17 09:38 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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	113	70-130



Air Toxics

Client Sample ID: U1 (174045)

Lab ID#: 1712112-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120719	Date of Collection:	11/30/17 1:30:00 PM
Dil. Factor:	1.60	Date of Analysis:	12/7/17 10:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.37	0.79	1.8
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	0.18	0.90	1.0
Ethanol	0.80	0.96	1.5	1.8
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	1.8	1.9	4.2
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	0.20	0.56	0.72
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



Air Toxics

Client Sample ID: U1 (174045)

Lab ID#: 1712112-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120719	Date of Collection:	11/30/17 1:30:00 PM
Dil. Factor:	1.60	Date of Analysis:	12/7/17 10:13 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	0.16	Not Detected	0.83	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% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	112	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1712112-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120706	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/7/17 01:35 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#: 1712112-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120706	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/7/17 01:35 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	92	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	109	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1712112-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/7/17 11:08 AM

Compound	%Recovery
Freon 12	97
Freon 114	96
Chloromethane	90
Vinyl Chloride	91
1,3-Butadiene	90
Bromomethane	99
Chloroethane	109
Freon 11	97
Ethanol	98
Freon 113	96
1,1-Dichloroethene	94
Acetone	84
2-Propanol	96
Carbon Disulfide	89
3-Chloropropene	95
Methylene Chloride	91
Methyl tert-butyl ether	96
trans-1,2-Dichloroethene	96
Hexane	93
1,1-Dichloroethane	90
2-Butanone (Methyl Ethyl Ketone)	100
cis-1,2-Dichloroethene	91
Tetrahydrofuran	87
Chloroform	92
1,1,1-Trichloroethane	96
Cyclohexane	96
Carbon Tetrachloride	100
2,2,4-Trimethylpentane	96
Benzene	87
1,2-Dichloroethane	93
Heptane	94
Trichloroethene	97
1,2-Dichloropropane	93
1,4-Dioxane	95
Bromodichloromethane	95
cis-1,3-Dichloropropene	94
4-Methyl-2-pentanone	92
Toluene	91
trans-1,3-Dichloropropene	98
1,1,2-Trichloroethane	91
Tetrachloroethene	103
2-Hexanone	98

Client Sample ID: CCV

Lab ID#: 1712112-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/7/17 11:08 AM

Compound	%Recovery
Dibromochloromethane	103
1,2-Dibromoethane (EDB)	99
Chlorobenzene	94
Ethyl Benzene	95
m,p-Xylene	89
o-Xylene	92
Styrene	94
Bromoform	112
Cumene	88
1,1,2,2-Tetrachloroethane	95
Propylbenzene	89
4-Ethyltoluene	94
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	102
1,3-Dichlorobenzene	93
1,4-Dichlorobenzene	95
alpha-Chlorotoluene	94
1,2-Dichlorobenzene	93
1,2,4-Trichlorobenzene	91
Hexachlorobutadiene	92

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1712112-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/7/17 11:43 AM

Compound	%Recovery	Method Limits
Freon 12	94	70-130
Freon 114	94	70-130
Chloromethane	86	70-130
Vinyl Chloride	90	70-130
1,3-Butadiene	84	70-130
Bromomethane	106	70-130
Chloroethane	105	70-130
Freon 11	93	70-130
Ethanol	85	70-130
Freon 113	89	70-130
1,1-Dichloroethene	88	70-130
Acetone	76	70-130
2-Propanol	89	70-130
Carbon Disulfide	73	70-130
3-Chloropropene	88	70-130
Methylene Chloride	84	70-130
Methyl tert-butyl ether	88	70-130
trans-1,2-Dichloroethene	77	70-130
Hexane	87	70-130
1,1-Dichloroethane	85	70-130
2-Butanone (Methyl Ethyl Ketone)	89	70-130
cis-1,2-Dichloroethene	96	70-130
Tetrahydrofuran	80	70-130
Chloroform	86	70-130
1,1,1-Trichloroethane	90	70-130
Cyclohexane	89	70-130
Carbon Tetrachloride	96	70-130
2,2,4-Trimethylpentane	91	70-130
Benzene	85	70-130
1,2-Dichloroethane	88	70-130
Heptane	94	70-130
Trichloroethene	94	70-130
1,2-Dichloropropane	88	70-130
1,4-Dioxane	86	70-130
Bromodichloromethane	87	70-130
cis-1,3-Dichloropropene	85	70-130
4-Methyl-2-pentanone	88	70-130
Toluene	90	70-130
trans-1,3-Dichloropropene	88	70-130
1,1,2-Trichloroethane	83	70-130
Tetrachloroethene	94	70-130
2-Hexanone	89	70-130

Client Sample ID: LCS

Lab ID#: 1712112-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/7/17 11:43 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	94	70-130
1,2-Dibromoethane (EDB)	92	70-130
Chlorobenzene	86	70-130
Ethyl Benzene	90	70-130
m,p-Xylene	85	70-130
o-Xylene	88	70-130
Styrene	89	70-130
Bromoform	105	70-130
Cumene	84	70-130
1,1,2,2-Tetrachloroethane	85	70-130
Propylbenzene	88	70-130
4-Ethyltoluene	90	70-130
1,3,5-Trimethylbenzene	90	70-130
1,2,4-Trimethylbenzene	94	70-130
1,3-Dichlorobenzene	88	70-130
1,4-Dichlorobenzene	90	70-130
alpha-Chlorotoluene	87	70-130
1,2-Dichlorobenzene	86	70-130
1,2,4-Trichlorobenzene	65 Q	70-130
Hexachlorobutadiene	70	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1712112-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/7/17 12:19 PM

Compound	%Recovery	Method Limits
Freon 12	92	70-130
Freon 114	92	70-130
Chloromethane	85	70-130
Vinyl Chloride	88	70-130
1,3-Butadiene	85	70-130
Bromomethane	105	70-130
Chloroethane	104	70-130
Freon 11	92	70-130
Ethanol	84	70-130
Freon 113	88	70-130
1,1-Dichloroethene	87	70-130
Acetone	76	70-130
2-Propanol	86	70-130
Carbon Disulfide	72	70-130
3-Chloropropene	86	70-130
Methylene Chloride	84	70-130
Methyl tert-butyl ether	88	70-130
trans-1,2-Dichloroethene	76	70-130
Hexane	86	70-130
1,1-Dichloroethane	84	70-130
2-Butanone (Methyl Ethyl Ketone)	88	70-130
cis-1,2-Dichloroethene	93	70-130
Tetrahydrofuran	78	70-130
Chloroform	84	70-130
1,1,1-Trichloroethane	89	70-130
Cyclohexane	89	70-130
Carbon Tetrachloride	94	70-130
2,2,4-Trimethylpentane	89	70-130
Benzene	83	70-130
1,2-Dichloroethane	89	70-130
Heptane	92	70-130
Trichloroethene	94	70-130
1,2-Dichloropropane	89	70-130
1,4-Dioxane	86	70-130
Bromodichloromethane	89	70-130
cis-1,3-Dichloropropene	84	70-130
4-Methyl-2-pentanone	87	70-130
Toluene	89	70-130
trans-1,3-Dichloropropene	91	70-130
1,1,2-Trichloroethane	86	70-130
Tetrachloroethene	98	70-130
2-Hexanone	90	70-130

Client Sample ID: LCSD

Lab ID#: 1712112-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/7/17 12:19 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	98	70-130
1,2-Dibromoethane (EDB)	93	70-130
Chlorobenzene	89	70-130
Ethyl Benzene	91	70-130
m,p-Xylene	85	70-130
o-Xylene	90	70-130
Styrene	91	70-130
Bromoform	106	70-130
Cumene	86	70-130
1,1,2,2-Tetrachloroethane	88	70-130
Propylbenzene	87	70-130
4-Ethyltoluene	90	70-130
1,3,5-Trimethylbenzene	90	70-130
1,2,4-Trimethylbenzene	95	70-130
1,3-Dichlorobenzene	89	70-130
1,4-Dichlorobenzene	91	70-130
alpha-Chlorotoluene	90	70-130
1,2-Dichlorobenzene	89	70-130
1,2,4-Trichlorobenzene	78	70-130
Hexachlorobutadiene	81	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130