

6/11/2018
Mr. Curt Lueckenhoff
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill
Project #:
Workorder #: 1805549

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 5/30/2018 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 #: 1805549

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. #	180419-CFL-A
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	05/30/2018	CONTACT:	Brian Whittaker
DATE COMPLETED:	06/11/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (181394)	Modified TO-15	6.7 "Hg	5.2 psi
02A	U1 (181395)	Modified TO-15	6.9 "Hg	5.2 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: 06/11/18

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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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# 1805549

Two 6 Liter Summa Canister (100% Certified) samples were received on May 30, 2018. 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 (181394)

Lab ID#: 1805549-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.21	0.98	1.2
Ethanol	0.87	2.8	1.6	5.3
Acetone	0.87	6.5	2.1	16
2-Propanol	0.87	2.8	2.1	7.0
Hexane	0.17	0.35	0.61	1.2
2-Butanone (Methyl Ethyl Ketone)	0.87	1.2	2.6	3.5
Heptane	0.17	0.38	0.71	1.5

Client Sample ID: U1 (181395)

Lab ID#: 1805549-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.18	0.20	0.99	1.1
Ethanol	0.88	6.8	1.6	13
Acetone	0.88	9.3	2.1	22
2-Propanol	0.88	33	2.2	82
Hexane	0.18	0.47	0.62	1.7
2-Butanone (Methyl Ethyl Ketone)	0.88	1.0	2.6	3.1
Heptane	0.18	0.78	0.72	3.2
Toluene	0.18	0.20	0.66	0.75
Tetrachloroethene	0.18	0.30	1.2	2.1



Air Toxics

Client Sample ID: D1 (181394)

Lab ID#: 1805549-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053119	Date of Collection:	5/22/18 2:00:00 PM
Dil. Factor:	1.74	Date of Analysis:	5/31/18 09:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.87	Not Detected	4.3	Not Detected
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.87	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	0.87	Not Detected	3.4	Not Detected
Chloroethane	0.87	Not Detected	2.3	Not Detected
Freon 11	0.17	0.21	0.98	1.2
Ethanol	0.87	2.8	1.6	5.3
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.69	Not Detected
Acetone	0.87	6.5	2.1	16
2-Propanol	0.87	2.8	2.1	7.0
Carbon Disulfide	0.87	Not Detected	2.7	Not Detected
3-Chloropropene	0.87	Not Detected	2.7	Not Detected
Methylene Chloride	0.35	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.63	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.69	Not Detected
Hexane	0.17	0.35	0.61	1.2
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.87	1.2	2.6	3.5
cis-1,2-Dichloroethene	0.17	Not Detected	0.69	Not Detected
Tetrahydrofuran	0.87	Not Detected	2.6	Not Detected
Chloroform	0.17	Not Detected	0.85	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.95	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	0.87	Not Detected	4.1	Not Detected
Benzene	0.17	Not Detected	0.56	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.70	Not Detected
Heptane	0.17	0.38	0.71	1.5
Trichloroethene	0.17	Not Detected	0.94	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.80	Not Detected
1,4-Dioxane	0.17	Not Detected	0.63	Not Detected
Bromodichloromethane	0.17	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.79	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.71	Not Detected
Toluene	0.17	Not Detected	0.66	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.79	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.95	Not Detected
Tetrachloroethene	0.17	Not Detected	1.2	Not Detected
2-Hexanone	0.87	Not Detected	3.6	Not Detected



Air Toxics

Client Sample ID: D1 (181394)

Lab ID#: 1805549-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053119	Date of Collection:	5/22/18 2:00:00 PM
Dil. Factor:	1.74	Date of Analysis:	5/31/18 09:04 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	0.76	Not Detected
m,p-Xylene	0.17	Not Detected	0.76	Not Detected
o-Xylene	0.17	Not Detected	0.76	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	0.86	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.86	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.86	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.86	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.86	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	0.87	Not Detected	6.4	Not Detected
Hexachlorobutadiene	0.87	Not Detected	9.3	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: U1 (181395)

Lab ID#: 1805549-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053120	Date of Collection:	5/22/18 12:55:00 PM
Dil. Factor:	1.76	Date of Analysis:	5/31/18 09:39 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.88	Not Detected	4.4	Not Detected
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	0.20	0.99	1.1
Ethanol	0.88	6.8	1.6	13
Freon 113	0.18	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Acetone	0.88	9.3	2.1	22
2-Propanol	0.88	33	2.2	82
Carbon Disulfide	0.88	Not Detected	2.7	Not Detected
3-Chloropropene	0.88	Not Detected	2.8	Not Detected
Methylene Chloride	0.35	Not Detected	1.2	Not Detected
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	0.47	0.62	1.7
1,1-Dichloroethane	0.18	Not Detected	0.71	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.88	1.0	2.6	3.1
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	0.78	0.72	3.2
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	0.20	0.66	0.75
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	0.30	1.2	2.1
2-Hexanone	0.88	Not Detected	3.6	Not Detected



Air Toxics

Client Sample ID: U1 (181395)

Lab ID#: 1805549-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053120	Date of Collection:	5/22/18 12:55:00 PM
Dil. Factor:	1.76	Date of Analysis:	5/31/18 09:39 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	Not Detected	0.76	Not Detected
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% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1805549-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053107	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/31/18 01:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	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#: 1805549-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053107	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/31/18 01:30 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	102	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1805549-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/31/18 08:39 AM

Compound	%Recovery
Freon 12	98
Freon 114	90
Chloromethane	98
Vinyl Chloride	94
1,3-Butadiene	90
Bromomethane	112
Chloroethane	97
Freon 11	99
Ethanol	116
Freon 113	89
1,1-Dichloroethene	94
Acetone	98
2-Propanol	104
Carbon Disulfide	98
3-Chloropropene	106
Methylene Chloride	87
Methyl tert-butyl ether	97
trans-1,2-Dichloroethene	92
Hexane	91
1,1-Dichloroethane	94
2-Butanone (Methyl Ethyl Ketone)	105
cis-1,2-Dichloroethene	92
Tetrahydrofuran	127
Chloroform	95
1,1,1-Trichloroethane	98
Cyclohexane	91
Carbon Tetrachloride	83
2,2,4-Trimethylpentane	92
Benzene	94
1,2-Dichloroethane	101
Heptane	95
Trichloroethene	91
1,2-Dichloropropane	89
1,4-Dioxane	89
Bromodichloromethane	93
cis-1,3-Dichloropropene	98
4-Methyl-2-pentanone	106
Toluene	88
trans-1,3-Dichloropropene	98
1,1,2-Trichloroethane	93
Tetrachloroethene	86
2-Hexanone	97



Air Toxics

Client Sample ID: CCV

Lab ID#: 1805549-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/31/18 08:39 AM

Compound	%Recovery
Dibromochloromethane	93
1,2-Dibromoethane (EDB)	96
Chlorobenzene	90
Ethyl Benzene	87
m,p-Xylene	86
o-Xylene	88
Styrene	87
Bromoform	94
Cumene	84
1,1,2,2-Tetrachloroethane	88
Propylbenzene	88
4-Ethyltoluene	90
1,3,5-Trimethylbenzene	88
1,2,4-Trimethylbenzene	90
1,3-Dichlorobenzene	87
1,4-Dichlorobenzene	83
alpha-Chlorotoluene	87
1,2-Dichlorobenzene	87
1,2,4-Trichlorobenzene	101
Hexachlorobutadiene	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1805549-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053103	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/31/18 09:28 AM

Compound	%Recovery	Method Limits
Freon 12	99	70-130
Freon 114	89	70-130
Chloromethane	99	70-130
Vinyl Chloride	98	70-130
1,3-Butadiene	92	70-130
Bromomethane	118	70-130
Chloroethane	102	70-130
Freon 11	98	70-130
Ethanol	119	70-130
Freon 113	88	70-130
1,1-Dichloroethene	93	70-130
Acetone	98	70-130
2-Propanol	106	70-130
Carbon Disulfide	100	70-130
3-Chloropropene	104	70-130
Methylene Chloride	85	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	101	70-130
Hexane	92	70-130
1,1-Dichloroethane	95	70-130
2-Butanone (Methyl Ethyl Ketone)	107	70-130
cis-1,2-Dichloroethene	86	70-130
Tetrahydrofuran	102	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	98	70-130
Cyclohexane	90	70-130
Carbon Tetrachloride	101	70-130
2,2,4-Trimethylpentane	92	70-130
Benzene	92	70-130
1,2-Dichloroethane	96	70-130
Heptane	94	70-130
Trichloroethene	90	70-130
1,2-Dichloropropane	89	70-130
1,4-Dioxane	94	70-130
Bromodichloromethane	99	70-130
cis-1,3-Dichloropropene	106	70-130
4-Methyl-2-pentanone	113	70-130
Toluene	90	70-130
trans-1,3-Dichloropropene	101	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	92	70-130
2-Hexanone	110	70-130

Client Sample ID: LCS

Lab ID#: 1805549-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/31/18 09:28 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	100	70-130
1,2-Dibromoethane (EDB)	100	70-130
Chlorobenzene	96	70-130
Ethyl Benzene	96	70-130
m,p-Xylene	94	70-130
o-Xylene	94	70-130
Styrene	94	70-130
Bromoform	106	70-130
Cumene	90	70-130
1,1,2,2-Tetrachloroethane	90	70-130
Propylbenzene	91	70-130
4-Ethyltoluene	92	70-130
1,3,5-Trimethylbenzene	89	70-130
1,2,4-Trimethylbenzene	90	70-130
1,3-Dichlorobenzene	89	70-130
1,4-Dichlorobenzene	86	70-130
alpha-Chlorotoluene	109	70-130
1,2-Dichlorobenzene	90	70-130
1,2,4-Trichlorobenzene	114	70-130
Hexachlorobutadiene	104	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1805549-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053104	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/31/18 10:41 AM

Compound	%Recovery	Method Limits
Freon 12	98	70-130
Freon 114	92	70-130
Chloromethane	98	70-130
Vinyl Chloride	97	70-130
1,3-Butadiene	94	70-130
Bromomethane	120	70-130
Chloroethane	103	70-130
Freon 11	98	70-130
Ethanol	116	70-130
Freon 113	88	70-130
1,1-Dichloroethene	100	70-130
Acetone	100	70-130
2-Propanol	112	70-130
Carbon Disulfide	100	70-130
3-Chloropropene	114	70-130
Methylene Chloride	88	70-130
Methyl tert-butyl ether	98	70-130
trans-1,2-Dichloroethene	101	70-130
Hexane	94	70-130
1,1-Dichloroethane	95	70-130
2-Butanone (Methyl Ethyl Ketone)	106	70-130
cis-1,2-Dichloroethene	87	70-130
Tetrahydrofuran	102	70-130
Chloroform	98	70-130
1,1,1-Trichloroethane	98	70-130
Cyclohexane	94	70-130
Carbon Tetrachloride	98	70-130
2,2,4-Trimethylpentane	94	70-130
Benzene	94	70-130
1,2-Dichloroethane	95	70-130
Heptane	96	70-130
Trichloroethene	92	70-130
1,2-Dichloropropane	90	70-130
1,4-Dioxane	93	70-130
Bromodichloromethane	96	70-130
cis-1,3-Dichloropropene	105	70-130
4-Methyl-2-pentanone	113	70-130
Toluene	89	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	89	70-130
2-Hexanone	110	70-130

Client Sample ID: LCSD

Lab ID#: 1805549-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v053104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/31/18 10:41 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	97	70-130
1,2-Dibromoethane (EDB)	97	70-130
Chlorobenzene	94	70-130
Ethyl Benzene	93	70-130
m,p-Xylene	90	70-130
o-Xylene	90	70-130
Styrene	92	70-130
Bromoform	102	70-130
Cumene	87	70-130
1,1,2,2-Tetrachloroethane	88	70-130
Propylbenzene	89	70-130
4-Ethyltoluene	90	70-130
1,3,5-Trimethylbenzene	95	70-130
1,2,4-Trimethylbenzene	88	70-130
1,3-Dichlorobenzene	85	70-130
1,4-Dichlorobenzene	84	70-130
alpha-Chlorotoluene	105	70-130
1,2-Dichlorobenzene	88	70-130
1,2,4-Trichlorobenzene	112	70-130
Hexachlorobutadiene	101	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130