

7/9/2018
Mr. Curt Lueckenhoff
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill
Project #:
Workorder #: 1806510

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 6/25/2018 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 #: 1806510

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. #	186517-CFL-A
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	06/25/2018	CONTACT:	Brian Whittaker
DATE COMPLETED:	07/09/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (182083)	Modified TO-15	6.9 "Hg	5.2 psi
02A	U1 (182084)	Modified TO-15	8.2 "Hg	5.4 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: 07/09/18

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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LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1806510

Two 6 Liter Summa Canister (100% Certified) samples were received on June 25, 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	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	$\leq 30\%$ 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 (182083)

Lab ID#: 1806510-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	0.88	0.98	1.6	1.8
Acetone	0.88	8.3	2.1	20
2-Propanol	0.88	5.4	2.2	13
Hexane	0.18	0.38	0.62	1.3
2-Butanone (Methyl Ethyl Ketone)	0.88	1.2	2.6	3.6
Heptane	0.18	0.37	0.72	1.5

Client Sample ID: U1 (182084)

Lab ID#: 1806510-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	0.94	3.1	1.8	5.8
Acetone	0.94	6.0	2.2	14
2-Propanol	0.94	3.7	2.3	9.1



Air Toxics

Client Sample ID: D1 (182083)

Lab ID#: 1806510-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070320	Date of Collection:	6/19/18 1:25:00 PM
Dil. Factor:	1.76	Date of Analysis:	7/3/18 09:49 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	Not Detected	0.99	Not Detected
Ethanol	0.88	0.98	1.6	1.8
Freon 113	0.18	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Acetone	0.88	8.3	2.1	20
2-Propanol	0.88	5.4	2.2	13
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	0.38	0.62	1.3
1,1-Dichloroethane	0.18	Not Detected	0.71	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.88	1.2	2.6	3.6
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	0.37	0.72	1.5
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: D1 (182083)

Lab ID#: 1806510-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070320	Date of Collection:	6/19/18 1:25:00 PM
Dil. Factor:	1.76	Date of Analysis:	7/3/18 09:49 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	125	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	87	70-130



Air Toxics

Client Sample ID: U1 (182084)

Lab ID#: 1806510-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070321	Date of Collection:	6/19/18 1:15:00 PM
Dil. Factor:	1.88	Date of Analysis:	7/3/18 10:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.94	Not Detected	4.6	Not Detected
Freon 114	0.19	Not Detected	1.3	Not Detected
Chloromethane	0.94	Not Detected	1.9	Not Detected
Vinyl Chloride	0.19	Not Detected	0.48	Not Detected
1,3-Butadiene	0.19	Not Detected	0.42	Not Detected
Bromomethane	0.94	Not Detected	3.6	Not Detected
Chloroethane	0.94	Not Detected	2.5	Not Detected
Freon 11	0.19	Not Detected	1.0	Not Detected
Ethanol	0.94	3.1	1.8	5.8
Freon 113	0.19	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Acetone	0.94	6.0	2.2	14
2-Propanol	0.94	3.7	2.3	9.1
Carbon Disulfide	0.94	Not Detected	2.9	Not Detected
3-Chloropropene	0.94	Not Detected	2.9	Not Detected
Methylene Chloride	0.38	Not Detected	1.3	Not Detected
Methyl tert-butyl ether	0.19	Not Detected	0.68	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Hexane	0.19	Not Detected	0.66	Not Detected
1,1-Dichloroethane	0.19	Not Detected	0.76	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.94	Not Detected	2.8	Not Detected
cis-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Tetrahydrofuran	0.94	Not Detected	2.8	Not Detected
Chloroform	0.19	Not Detected	0.92	Not Detected
1,1,1-Trichloroethane	0.19	Not Detected	1.0	Not Detected
Cyclohexane	0.19	Not Detected	0.65	Not Detected
Carbon Tetrachloride	0.19	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	0.94	Not Detected	4.4	Not Detected
Benzene	0.19	Not Detected	0.60	Not Detected
1,2-Dichloroethane	0.19	Not Detected	0.76	Not Detected
Heptane	0.19	Not Detected	0.77	Not Detected
Trichloroethene	0.19	Not Detected	1.0	Not Detected
1,2-Dichloropropane	0.19	Not Detected	0.87	Not Detected
1,4-Dioxane	0.19	Not Detected	0.68	Not Detected
Bromodichloromethane	0.19	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.19	Not Detected	0.85	Not Detected
4-Methyl-2-pentanone	0.19	Not Detected	0.77	Not Detected
Toluene	0.19	Not Detected	0.71	Not Detected
trans-1,3-Dichloropropene	0.19	Not Detected	0.85	Not Detected
1,1,2-Trichloroethane	0.19	Not Detected	1.0	Not Detected
Tetrachloroethene	0.19	Not Detected	1.3	Not Detected
2-Hexanone	0.94	Not Detected	3.8	Not Detected



Air Toxics

Client Sample ID: U1 (182084)

Lab ID#: 1806510-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070321	Date of Collection:	6/19/18 1:15:00 PM
Dil. Factor:	1.88	Date of Analysis:	7/3/18 10:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.19	Not Detected	1.6	Not Detected
1,2-Dibromoethane (EDB)	0.19	Not Detected	1.4	Not Detected
Chlorobenzene	0.19	Not Detected	0.86	Not Detected
Ethyl Benzene	0.19	Not Detected	0.82	Not Detected
m,p-Xylene	0.19	Not Detected	0.82	Not Detected
o-Xylene	0.19	Not Detected	0.82	Not Detected
Styrene	0.19	Not Detected	0.80	Not Detected
Bromoform	0.19	Not Detected	1.9	Not Detected
Cumene	0.19	Not Detected	0.92	Not Detected
1,1,2,2-Tetrachloroethane	0.19	Not Detected	1.3	Not Detected
Propylbenzene	0.19	Not Detected	0.92	Not Detected
4-Ethyltoluene	0.19	Not Detected	0.92	Not Detected
1,3,5-Trimethylbenzene	0.19	Not Detected	0.92	Not Detected
1,2,4-Trimethylbenzene	0.19	Not Detected	0.92	Not Detected
1,3-Dichlorobenzene	0.19	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.19	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.19	Not Detected	0.97	Not Detected
1,2-Dichlorobenzene	0.19	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.94	Not Detected	7.0	Not Detected
Hexachlorobutadiene	0.94	Not Detected	10	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	89	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1806510-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070305	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/3/18 10:22 AM

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#: 1806510-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/3/18 10:22 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	115	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1806510-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/3/18 07:59 AM

Compound	%Recovery
Freon 12	99
Freon 114	92
Chloromethane	90
Vinyl Chloride	95
1,3-Butadiene	100
Bromomethane	105
Chloroethane	99
Freon 11	93
Ethanol	91
Freon 113	94
1,1-Dichloroethene	95
Acetone	91
2-Propanol	97
Carbon Disulfide	101
3-Chloropropene	113
Methylene Chloride	94
Methyl tert-butyl ether	99
trans-1,2-Dichloroethene	96
Hexane	101
1,1-Dichloroethane	99
2-Butanone (Methyl Ethyl Ketone)	103
cis-1,2-Dichloroethene	97
Tetrahydrofuran	104
Chloroform	98
1,1,1-Trichloroethane	99
Cyclohexane	103
Carbon Tetrachloride	92
2,2,4-Trimethylpentane	128
Benzene	100
1,2-Dichloroethane	98
Heptane	106
Trichloroethene	94
1,2-Dichloropropane	102
1,4-Dioxane	106
Bromodichloromethane	104
cis-1,3-Dichloropropene	106
4-Methyl-2-pentanone	112
Toluene	101
trans-1,3-Dichloropropene	105
1,1,2-Trichloroethane	103
Tetrachloroethene	96
2-Hexanone	109



Air Toxics

Client Sample ID: CCV

Lab ID#: 1806510-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/3/18 07:59 AM

Compound	%Recovery
Dibromochloromethane	112
1,2-Dibromoethane (EDB)	108
Chlorobenzene	96
Ethyl Benzene	102
m,p-Xylene	104
o-Xylene	103
Styrene	107
Bromoform	114
Cumene	106
1,1,2,2-Tetrachloroethane	111
Propylbenzene	102
4-Ethyltoluene	104
1,3,5-Trimethylbenzene	109
1,2,4-Trimethylbenzene	111
1,3-Dichlorobenzene	92
1,4-Dichlorobenzene	92
alpha-Chlorotoluene	107
1,2-Dichlorobenzene	93
1,2,4-Trichlorobenzene	112
Hexachlorobutadiene	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1806510-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/3/18 08:51 AM

Compound	%Recovery	Method Limits
Freon 12	100	70-130
Freon 114	91	70-130
Chloromethane	93	70-130
Vinyl Chloride	95	70-130
1,3-Butadiene	95	70-130
Bromomethane	101	70-130
Chloroethane	100	70-130
Freon 11	91	70-130
Ethanol	101	70-130
Freon 113	90	70-130
1,1-Dichloroethene	91	70-130
Acetone	89	70-130
2-Propanol	96	70-130
Carbon Disulfide	97	70-130
3-Chloropropene	108	70-130
Methylene Chloride	92	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	102	70-130
Hexane	100	70-130
1,1-Dichloroethane	94	70-130
2-Butanone (Methyl Ethyl Ketone)	103	70-130
cis-1,2-Dichloroethene	88	70-130
Tetrahydrofuran	102	70-130
Chloroform	95	70-130
1,1,1-Trichloroethane	97	70-130
Cyclohexane	103	70-130
Carbon Tetrachloride	95	70-130
2,2,4-Trimethylpentane	125	70-130
Benzene	96	70-130
1,2-Dichloroethane	93	70-130
Heptane	104	70-130
Trichloroethene	91	70-130
1,2-Dichloropropane	100	70-130
1,4-Dioxane	103	70-130
Bromodichloromethane	106	70-130
cis-1,3-Dichloropropene	110	70-130
4-Methyl-2-pentanone	110	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	106	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	96	70-130
2-Hexanone	110	70-130

Client Sample ID: LCS

Lab ID#: 1806510-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/3/18 08:51 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	110	70-130
Chlorobenzene	96	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	107	70-130
o-Xylene	106	70-130
Styrene	112	70-130
Bromoform	122	70-130
Cumene	111	70-130
1,1,2,2-Tetrachloroethane	114	70-130
Propylbenzene	110	70-130
4-Ethyltoluene	115	70-130
1,3,5-Trimethylbenzene	114	70-130
1,2,4-Trimethylbenzene	111	70-130
1,3-Dichlorobenzene	97	70-130
1,4-Dichlorobenzene	99	70-130
alpha-Chlorotoluene	111	70-130
1,2-Dichlorobenzene	96	70-130
1,2,4-Trichlorobenzene	125	70-130
Hexachlorobutadiene	110	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1806510-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/3/18 09:27 AM

Compound	%Recovery	Method Limits
Freon 12	100	70-130
Freon 114	92	70-130
Chloromethane	92	70-130
Vinyl Chloride	96	70-130
1,3-Butadiene	92	70-130
Bromomethane	102	70-130
Chloroethane	100	70-130
Freon 11	93	70-130
Ethanol	106	70-130
Freon 113	91	70-130
1,1-Dichloroethene	94	70-130
Acetone	93	70-130
2-Propanol	102	70-130
Carbon Disulfide	98	70-130
3-Chloropropene	112	70-130
Methylene Chloride	93	70-130
Methyl tert-butyl ether	98	70-130
trans-1,2-Dichloroethene	104	70-130
Hexane	102	70-130
1,1-Dichloroethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	106	70-130
cis-1,2-Dichloroethene	89	70-130
Tetrahydrofuran	104	70-130
Chloroform	97	70-130
1,1,1-Trichloroethane	98	70-130
Cyclohexane	103	70-130
Carbon Tetrachloride	97	70-130
2,2,4-Trimethylpentane	126	70-130
Benzene	97	70-130
1,2-Dichloroethane	94	70-130
Heptane	104	70-130
Trichloroethene	93	70-130
1,2-Dichloropropane	101	70-130
1,4-Dioxane	104	70-130
Bromodichloromethane	108	70-130
cis-1,3-Dichloropropene	112	70-130
4-Methyl-2-pentanone	113	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	110	70-130
1,1,2-Trichloroethane	108	70-130
Tetrachloroethene	95	70-130
2-Hexanone	114	70-130

Client Sample ID: LCSD

Lab ID#: 1806510-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	21070304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/3/18 09:27 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	117	70-130
1,2-Dibromoethane (EDB)	112	70-130
Chlorobenzene	98	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	102	70-130
o-Xylene	105	70-130
Styrene	111	70-130
Bromoform	123	70-130
Cumene	105	70-130
1,1,2,2-Tetrachloroethane	116	70-130
Propylbenzene	102	70-130
4-Ethyltoluene	103	70-130
1,3,5-Trimethylbenzene	105	70-130
1,2,4-Trimethylbenzene	105	70-130
1,3-Dichlorobenzene	94	70-130
1,4-Dichlorobenzene	93	70-130
alpha-Chlorotoluene	115	70-130
1,2-Dichlorobenzene	96	70-130
1,2,4-Trichlorobenzene	120	70-130
Hexachlorobutadiene	104	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130