

6/18/2018
Mr. Curt Lueckenhoff
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill
Project #:
Workorder #: 1806125

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 6/6/2018 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 #: 1806125

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. #	180507-CFL-A
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	06/06/2018	CONTACT:	Brian Whittaker
DATE COMPLETED:	06/18/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (181399)	Modified TO-15	5.9 "Hg	5 psi
02A	U1 (181400)	Modified TO-15	7.1 "Hg	4.8 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: 06/18/18

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

LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1806125

Two 6 Liter Summa Canister (100% Certified) samples were received on June 06, 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

The Chain of Custody (COC) information for samples D1 (181399) and U1 (181400) did not match the entries on the sample tags with regard to sample identification. Therefore the information on the COC was used to process and report the samples.

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 (181399)

Lab ID#: 1806125-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.24	0.94	1.3
Ethanol	0.84	4.2	1.6	7.9
Acetone	0.84	6.5	2.0	15
2-Butanone (Methyl Ethyl Ketone)	0.84	1.2	2.5	3.6

Client Sample ID: U1 (181400)

Lab ID#: 1806125-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.23	0.98	1.3
Ethanol	0.87	21	1.6	39
Acetone	0.87	6.0	2.1	14
2-Propanol	0.87	1.0	2.1	2.6
2-Butanone (Methyl Ethyl Ketone)	0.87	1.2	2.6	3.5



Air Toxics

Client Sample ID: D1 (181399)

Lab ID#: 1806125-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061419	Date of Collection:	5/29/18 4:22:00 PM
Dil. Factor:	1.67	Date of Analysis:	6/14/18 09:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.84	Not Detected	4.1	Not Detected
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.84	Not Detected	1.7	Not Detected
Vinyl Chloride	0.17	Not Detected	0.43	Not Detected
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected
Bromomethane	0.84	Not Detected	3.2	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Freon 11	0.17	0.24	0.94	1.3
Ethanol	0.84	4.2	1.6	7.9
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Acetone	0.84	6.5	2.0	15
2-Propanol	0.84	Not Detected	2.0	Not Detected
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
3-Chloropropene	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.60	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Hexane	0.17	Not Detected	0.59	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	1.2	2.5	3.6
cis-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Tetrahydrofuran	0.84	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.82	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.91	Not Detected
Cyclohexane	0.17	Not Detected	0.57	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
Benzene	0.17	Not Detected	0.53	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.68	Not Detected
Heptane	0.17	Not Detected	0.68	Not Detected
Trichloroethene	0.17	Not Detected	0.90	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.77	Not Detected
1,4-Dioxane	0.17	Not Detected	0.60	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.68	Not Detected
Toluene	0.17	Not Detected	0.63	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.91	Not Detected
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
2-Hexanone	0.84	Not Detected	3.4	Not Detected



Air Toxics

Client Sample ID: D1 (181399)

Lab ID#: 1806125-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061419	Date of Collection:	5/29/18 4:22:00 PM
Dil. Factor:	1.67	Date of Analysis:	6/14/18 09:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.77	Not Detected
Ethyl Benzene	0.17	Not Detected	0.72	Not Detected
m,p-Xylene	0.17	Not Detected	0.72	Not Detected
o-Xylene	0.17	Not Detected	0.72	Not Detected
Styrene	0.17	Not Detected	0.71	Not Detected
Bromoform	0.17	Not Detected	1.7	Not Detected
Cumene	0.17	Not Detected	0.82	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.1	Not Detected
Propylbenzene	0.17	Not Detected	0.82	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.82	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.82	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.82	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	0.86	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.2	Not Detected
Hexachlorobutadiene	0.84	Not Detected	8.9	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	109	70-130



Air Toxics

Client Sample ID: U1 (181400)

Lab ID#: 1806125-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061420	Date of Collection:	5/29/18 3:46:00 PM
Dil. Factor:	1.74	Date of Analysis:	6/14/18 10:13 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	0.23	0.98	1.3
Ethanol	0.87	21	1.6	39
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.69	Not Detected
Acetone	0.87	6.0	2.1	14
2-Propanol	0.87	1.0	2.1	2.6
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	Not Detected	0.61	Not Detected
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	Not Detected	0.71	Not Detected
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: U1 (181400)

Lab ID#: 1806125-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061420	Date of Collection:	5/29/18 3:46:00 PM
Dil. Factor:	1.74	Date of Analysis:	6/14/18 10:13 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	98	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1806125-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061406	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	6/14/18 12:36 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#: 1806125-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061406	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	6/14/18 12:36 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	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1806125-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/14/18 09:40 AM

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



Air Toxics

Client Sample ID: CCV

Lab ID#: 1806125-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/14/18 09:40 AM

Compound	%Recovery
Dibromochloromethane	100
1,2-Dibromoethane (EDB)	100
Chlorobenzene	96
Ethyl Benzene	94
m,p-Xylene	92
o-Xylene	94
Styrene	93
Bromoform	99
Cumene	91
1,1,2,2-Tetrachloroethane	93
Propylbenzene	94
4-Ethyltoluene	91
1,3,5-Trimethylbenzene	93
1,2,4-Trimethylbenzene	92
1,3-Dichlorobenzene	90
1,4-Dichlorobenzene	90
alpha-Chlorotoluene	94
1,2-Dichlorobenzene	85
1,2,4-Trichlorobenzene	98
Hexachlorobutadiene	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1806125-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061403	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	6/14/18 10:16 AM

Compound	%Recovery	Method Limits
Freon 12	113	70-130
Freon 114	106	70-130
Chloromethane	108	70-130
Vinyl Chloride	111	70-130
1,3-Butadiene	103	70-130
Bromomethane	114	70-130
Chloroethane	118	70-130
Freon 11	108	70-130
Ethanol	105	70-130
Freon 113	108	70-130
1,1-Dichloroethene	102	70-130
Acetone	104	70-130
2-Propanol	115	70-130
Carbon Disulfide	113	70-130
3-Chloropropene	116	70-130
Methylene Chloride	108	70-130
Methyl tert-butyl ether	110	70-130
trans-1,2-Dichloroethene	111	70-130
Hexane	107	70-130
1,1-Dichloroethane	107	70-130
2-Butanone (Methyl Ethyl Ketone)	114	70-130
cis-1,2-Dichloroethene	98	70-130
Tetrahydrofuran	105	70-130
Chloroform	110	70-130
1,1,1-Trichloroethane	106	70-130
Cyclohexane	108	70-130
Carbon Tetrachloride	128	70-130
2,2,4-Trimethylpentane	103	70-130
Benzene	101	70-130
1,2-Dichloroethane	98	70-130
Heptane	97	70-130
Trichloroethene	90	70-130
1,2-Dichloropropane	102	70-130
1,4-Dioxane	107	70-130
Bromodichloromethane	110	70-130
cis-1,3-Dichloropropene	114	70-130
4-Methyl-2-pentanone	112	70-130
Toluene	103	70-130
trans-1,3-Dichloropropene	106	70-130
1,1,2-Trichloroethane	102	70-130
Tetrachloroethene	102	70-130
2-Hexanone	117	70-130

Client Sample ID: LCS

Lab ID#: 1806125-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/14/18 10:16 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	116	70-130
1,2-Dibromoethane (EDB)	110	70-130
Chlorobenzene	107	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	100	70-130
o-Xylene	102	70-130
Styrene	103	70-130
Bromoform	117	70-130
Cumene	96	70-130
1,1,2,2-Tetrachloroethane	113	70-130
Propylbenzene	102	70-130
4-Ethyltoluene	103	70-130
1,3,5-Trimethylbenzene	102	70-130
1,2,4-Trimethylbenzene	101	70-130
1,3-Dichlorobenzene	95	70-130
1,4-Dichlorobenzene	96	70-130
alpha-Chlorotoluene	106	70-130
1,2-Dichlorobenzene	89	70-130
1,2,4-Trichlorobenzene	82	70-130
Hexachlorobutadiene	79	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1806125-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/14/18 11:08 AM

Compound	%Recovery	Method Limits
Freon 12	107	70-130
Freon 114	103	70-130
Chloromethane	103	70-130
Vinyl Chloride	105	70-130
1,3-Butadiene	96	70-130
Bromomethane	106	70-130
Chloroethane	112	70-130
Freon 11	102	70-130
Ethanol	103	70-130
Freon 113	103	70-130
1,1-Dichloroethene	98	70-130
Acetone	106	70-130
2-Propanol	96	70-130
Carbon Disulfide	108	70-130
3-Chloropropene	126	70-130
Methylene Chloride	102	70-130
Methyl tert-butyl ether	105	70-130
trans-1,2-Dichloroethene	110	70-130
Hexane	101	70-130
1,1-Dichloroethane	102	70-130
2-Butanone (Methyl Ethyl Ketone)	110	70-130
cis-1,2-Dichloroethene	95	70-130
Tetrahydrofuran	102	70-130
Chloroform	105	70-130
1,1,1-Trichloroethane	103	70-130
Cyclohexane	103	70-130
Carbon Tetrachloride	122	70-130
2,2,4-Trimethylpentane	102	70-130
Benzene	100	70-130
1,2-Dichloroethane	96	70-130
Heptane	100	70-130
Trichloroethene	88	70-130
1,2-Dichloropropane	103	70-130
1,4-Dioxane	109	70-130
Bromodichloromethane	112	70-130
cis-1,3-Dichloropropene	113	70-130
4-Methyl-2-pentanone	111	70-130
Toluene	102	70-130
trans-1,3-Dichloropropene	106	70-130
1,1,2-Trichloroethane	105	70-130
Tetrachloroethene	104	70-130
2-Hexanone	112	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1806125-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v061404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/14/18 11:08 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	113	70-130
1,2-Dibromoethane (EDB)	112	70-130
Chlorobenzene	106	70-130
Ethyl Benzene	101	70-130
m,p-Xylene	99	70-130
o-Xylene	100	70-130
Styrene	100	70-130
Bromoform	116	70-130
Cumene	94	70-130
1,1,2,2-Tetrachloroethane	111	70-130
Propylbenzene	99	70-130
4-Ethyltoluene	100	70-130
1,3,5-Trimethylbenzene	97	70-130
1,2,4-Trimethylbenzene	99	70-130
1,3-Dichlorobenzene	91	70-130
1,4-Dichlorobenzene	94	70-130
alpha-Chlorotoluene	103	70-130
1,2-Dichlorobenzene	88	70-130
1,2,4-Trichlorobenzene	85	70-130
Hexachlorobutadiene	81	70-130

Container Type: NA - Not Applicable

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