

8/26/2016
Mr. Curt Lueckenhoff
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill
Project #:
Workorder #: 1608327

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 8/15/2016 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 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 #: 1608327

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. #	3ESP170030
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	08/15/2016	CONTACT:	Brian Whittaker
DATE COMPLETED:	08/26/2016		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (163440)	Modified TO-15	7.3 "Hg	5 psi
02A	D2 (163441)	Modified TO-15	7.1 "Hg	5 psi
03A	U1 (163442)	Modified TO-15	6.5 "Hg	5.1 psi
04A	U2 (163443)	Modified TO-15	6.1 "Hg	5 psi
05A	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 08/26/16

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.

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# 1608327

Four 6 Liter Summa Canister (100% Certified) samples were received on August 15, 2016. 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 EATL 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. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

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 (163440)

Lab ID#: 1608327-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.62	0.88	3.1
Freon 11	0.18	0.52	0.99	2.9
Ethanol	0.88	21	1.7	40
Acetone	0.88	16	2.1	37
2-Propanol	0.88	43	2.2	100
Methylene Chloride	0.35	0.68	1.2	2.4
Hexane	0.18	0.40	0.62	1.4
2-Butanone (Methyl Ethyl Ketone)	0.88	1.4	2.6	4.1
Benzene	0.18	0.24	0.56	0.75
1,2-Dichloroethane	0.18	0.48	0.72	1.9
Heptane	0.18	0.41	0.72	1.7
Toluene	0.18	2.8	0.67	10
Tetrachloroethene	0.18	0.26	1.2	1.7
Ethyl Benzene	0.18	0.18	0.77	0.78
m,p-Xylene	0.18	0.51	0.77	2.2
o-Xylene	0.18	0.18 J	0.77	0.76 J

Client Sample ID: D2 (163441)

Lab ID#: 1608327-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.66	0.87	3.2
Freon 11	0.18	0.35	0.99	2.0
Ethanol	0.88	12	1.6	24
Acetone	0.88	20	2.1	48
2-Propanol	0.88	16	2.2	39
Methylene Chloride	0.35	0.45	1.2	1.6
Hexane	0.18	0.26	0.62	0.94
2-Butanone (Methyl Ethyl Ketone)	0.88	2.8	2.6	8.1
Benzene	0.18	0.18	0.56	0.59
Heptane	0.18	0.34	0.72	1.4
Toluene	0.18	1.5	0.66	5.7
m,p-Xylene	0.18	0.18	0.76	0.80

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: U1 (163442)

Lab ID#: 1608327-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.64	0.85	3.2
Freon 11	0.17	0.72	0.97	4.0
Ethanol	0.86	9.3	1.6	18
Acetone	0.86	10	2.0	24
2-Propanol	0.86	26	2.1	64
Methylene Chloride	0.34	0.61	1.2	2.1
Hexane	0.17	0.24	0.61	0.86
2-Butanone (Methyl Ethyl Ketone)	0.86	1.6	2.5	4.7
Benzene	0.17	0.25	0.55	0.79
1,2-Dichloroethane	0.17	1.1	0.70	4.3
Heptane	0.17	0.17 J	0.70	0.69 J
Toluene	0.17	3.3	0.65	12
Tetrachloroethene	0.17	0.56	1.2	3.8
Ethyl Benzene	0.17	0.25	0.75	1.1
m,p-Xylene	0.17	0.45	0.75	2.0
o-Xylene	0.17	0.17 J	0.75	0.74 J

Client Sample ID: U2 (163443)

Lab ID#: 1608327-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.66	0.83	3.3
Freon 11	0.17	0.87	0.94	4.9
Ethanol	0.84	18	1.6	35
Acetone	0.84	19	2.0	44
2-Propanol	0.84	36	2.1	89
Methylene Chloride	0.34	0.70	1.2	2.4
Hexane	0.17	0.38	0.59	1.3
2-Butanone (Methyl Ethyl Ketone)	0.84	2.2	2.5	6.5
Benzene	0.17	0.22	0.54	0.69
1,2-Dichloroethane	0.17	0.91	0.68	3.7
Heptane	0.17	0.34	0.69	1.4
Toluene	0.17	3.9	0.63	15

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: U2 (163443)

Lab ID#: 1608327-04A

Tetrachloroethene	0.17	0.48	1.1	3.2
Ethyl Benzene	0.17	0.22	0.73	0.97
m,p-Xylene	0.17	0.48	0.73	2.1
o-Xylene	0.17	0.18	0.73	0.77

Client Sample ID: D1 (163440)

Lab ID#: 1608327-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082207	Date of Collection:	8/9/16 1:05:00 PM
Dil. Factor:	1.77	Date of Analysis:	8/22/16 12:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.62	0.88	3.1
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	0.52	0.99	2.9
Ethanol	0.88	21	1.7	40
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Acetone	0.88	16	2.1	37
2-Propanol	0.88	43	2.2	100
Carbon Disulfide	0.88	Not Detected	2.8	Not Detected
3-Chloropropene	0.88	Not Detected	2.8	Not Detected
Methylene Chloride	0.35	0.68	1.2	2.4
Methyl tert-butyl ether	0.18	Not Detected	0.64	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Hexane	0.18	0.40	0.62	1.4
1,1-Dichloroethane	0.18	Not Detected	0.72	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.88	1.4	2.6	4.1
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	0.61	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	0.24	0.56	0.75
1,2-Dichloroethane	0.18	0.48	0.72	1.9
Heptane	0.18	0.41	0.72	1.7
Trichloroethene	0.18	Not Detected	0.95	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.82	Not Detected
1,4-Dioxane	0.18	Not Detected	0.64	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	2.8	0.67	10
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	0.26	1.2	1.7
2-Hexanone	0.88	Not Detected	3.6	Not Detected



Air Toxics

Client Sample ID: D1 (163440)

Lab ID#: 1608327-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082207	Date of Collection:	8/9/16 1:05:00 PM
Dil. Factor:	1.77	Date of Analysis:	8/22/16 12:46 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	0.18	0.77	0.78
m,p-Xylene	0.18	0.51	0.77	2.2
o-Xylene	0.18	0.18 J	0.77	0.76 J
Styrene	0.18	Not Detected	0.75	Not Detected
Bromoform	0.18	Not Detected	1.8	Not Detected
Cumene	0.18	Not Detected	0.87	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
Propylbenzene	0.18	Not Detected	0.87	Not Detected
4-Ethyltoluene	0.18	Not Detected	0.87	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.87	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.87	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.18	Not Detected	0.92	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.88	Not Detected	6.6	Not Detected
Hexachlorobutadiene	0.88	Not Detected	9.4	Not Detected

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: D2 (163441)

Lab ID#: 1608327-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082208	Date of Collection:	8/9/16 1:50:00 PM
Dil. Factor:	1.76	Date of Analysis:	8/22/16 01:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.66	0.87	3.2
Freon 114	0.18	Not Detected	1.2	Not Detected
Chloromethane	0.88	Not Detected	1.8	Not Detected
Vinyl Chloride	0.18	Not Detected	0.45	Not Detected
1,3-Butadiene	0.18	Not Detected	0.39	Not Detected
Bromomethane	0.88	Not Detected	3.4	Not Detected
Chloroethane	0.88	Not Detected	2.3	Not Detected
Freon 11	0.18	0.35	0.99	2.0
Ethanol	0.88	12	1.6	24
Freon 113	0.18	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Acetone	0.88	20	2.1	48
2-Propanol	0.88	16	2.2	39
Carbon Disulfide	0.88	Not Detected	2.7	Not Detected
3-Chloropropene	0.88	Not Detected	2.8	Not Detected
Methylene Chloride	0.35	0.45	1.2	1.6
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	0.26	0.62	0.94
1,1-Dichloroethane	0.18	Not Detected	0.71	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.88	2.8	2.6	8.1
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	0.18	0.56	0.59
1,2-Dichloroethane	0.18	Not Detected	0.71	Not Detected
Heptane	0.18	0.34	0.72	1.4
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	1.5	0.66	5.7
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: D2 (163441)

Lab ID#: 1608327-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082208	Date of Collection:	8/9/16 1:50:00 PM
Dil. Factor:	1.76	Date of Analysis:	8/22/16 01:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.18	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.81	Not Detected
Ethyl Benzene	0.18	Not Detected	0.76	Not Detected
m,p-Xylene	0.18	0.18	0.76	0.80
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	117	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: U1 (163442)

Lab ID#: 1608327-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082209	Date of Collection:	8/9/16 2:00:00 PM
Dil. Factor:	1.72	Date of Analysis:	8/22/16 02:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.64	0.85	3.2
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.86	Not Detected	1.8	Not Detected
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.86	Not Detected	3.3	Not Detected
Chloroethane	0.86	Not Detected	2.3	Not Detected
Freon 11	0.17	0.72	0.97	4.0
Ethanol	0.86	9.3	1.6	18
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	10	2.0	24
2-Propanol	0.86	26	2.1	64
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	0.61	1.2	2.1
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Hexane	0.17	0.24	0.61	0.86
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	1.6	2.5	4.7
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.84	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Cyclohexane	0.17	Not Detected	0.59	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.86	Not Detected	4.0	Not Detected
Benzene	0.17	0.25	0.55	0.79
1,2-Dichloroethane	0.17	1.1	0.70	4.3
Heptane	0.17	0.17 J	0.70	0.69 J
Trichloroethene	0.17	Not Detected	0.92	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.79	Not Detected
1,4-Dioxane	0.17	Not Detected	0.62	Not Detected
Bromodichloromethane	0.17	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.70	Not Detected
Toluene	0.17	3.3	0.65	12
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Tetrachloroethene	0.17	0.56	1.2	3.8
2-Hexanone	0.86	Not Detected	3.5	Not Detected

Client Sample ID: U1 (163442)

Lab ID#: 1608327-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082209	Date of Collection:	8/9/16 2:00:00 PM
Dil. Factor:	1.72	Date of Analysis:	8/22/16 02:24 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	0.79	Not Detected
Ethyl Benzene	0.17	0.25	0.75	1.1
m,p-Xylene	0.17	0.45	0.75	2.0
o-Xylene	0.17	0.17 J	0.75	0.74 J
Styrene	0.17	Not Detected	0.73	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.84	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.84	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.84	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.84	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.84	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	0.89	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.4	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.2	Not Detected

J = Estimated value.

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	97	70-130



Air Toxics

Client Sample ID: U2 (163443)

Lab ID#: 1608327-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082210	Date of Collection:	8/9/16 2:10:00 PM
Dil. Factor:	1.68	Date of Analysis:	8/22/16 03:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.66	0.83	3.3
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	3.3	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Freon 11	0.17	0.87	0.94	4.9
Ethanol	0.84	18	1.6	35
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	19	2.0	44
2-Propanol	0.84	36	2.1	89
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
3-Chloropropene	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.34	0.70	1.2	2.4
Methyl tert-butyl ether	0.17	Not Detected	0.60	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Hexane	0.17	0.38	0.59	1.3
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	2.2	2.5	6.5
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	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	0.92	Not Detected
Cyclohexane	0.17	Not Detected	0.58	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	0.22	0.54	0.69
1,2-Dichloroethane	0.17	0.91	0.68	3.7
Heptane	0.17	0.34	0.69	1.4
Trichloroethene	0.17	Not Detected	0.90	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.78	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	0.69	Not Detected
Toluene	0.17	3.9	0.63	15
trans-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Tetrachloroethene	0.17	0.48	1.1	3.2
2-Hexanone	0.84	Not Detected	3.4	Not Detected

Client Sample ID: U2 (163443)

Lab ID#: 1608327-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082210	Date of Collection:	8/9/16 2:10:00 PM
Dil. Factor:	1.68	Date of Analysis:	8/22/16 03:03 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	0.22	0.73	0.97
m,p-Xylene	0.17	0.48	0.73	2.1
o-Xylene	0.17	0.18	0.73	0.77
Styrene	0.17	Not Detected	0.72	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	1.2	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	0.87	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	9.0	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1608327-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082206	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/22/16 11:48 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1608327-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082206	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/16 11:48 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	111	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1608327-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/16 08:49 AM

Compound	%Recovery
Freon 12	107
Freon 114	103
Chloromethane	105
Vinyl Chloride	105
1,3-Butadiene	104
Bromomethane	108
Chloroethane	104
Freon 11	101
Ethanol	111
Freon 113	96
1,1-Dichloroethene	100
Acetone	105
2-Propanol	109
Carbon Disulfide	110
3-Chloropropene	112
Methylene Chloride	100
Methyl tert-butyl ether	106
trans-1,2-Dichloroethene	101
Hexane	105
1,1-Dichloroethane	105
2-Butanone (Methyl Ethyl Ketone)	108
cis-1,2-Dichloroethene	105
Tetrahydrofuran	110
Chloroform	108
1,1,1-Trichloroethane	107
Cyclohexane	104
Carbon Tetrachloride	115
2,2,4-Trimethylpentane	110
Benzene	102
1,2-Dichloroethane	109
Heptane	112
Trichloroethene	104
1,2-Dichloropropane	108
1,4-Dioxane	106
Bromodichloromethane	117
cis-1,3-Dichloropropene	117
4-Methyl-2-pentanone	122
Toluene	107
trans-1,3-Dichloropropene	124
1,1,2-Trichloroethane	107
Tetrachloroethene	104
2-Hexanone	119



Air Toxics

Client Sample ID: CCV

Lab ID#: 1608327-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/16 08:49 AM

Compound	%Recovery
Dibromochloromethane	127
1,2-Dibromoethane (EDB)	114
Chlorobenzene	108
Ethyl Benzene	113
m,p-Xylene	113
o-Xylene	114
Styrene	116
Bromoform	135 Q
Cumene	121
1,1,2,2-Tetrachloroethane	118
Propylbenzene	112
4-Ethyltoluene	105
1,3,5-Trimethylbenzene	115
1,2,4-Trimethylbenzene	112
1,3-Dichlorobenzene	106
1,4-Dichlorobenzene	101
alpha-Chlorotoluene	133 Q
1,2-Dichlorobenzene	107
1,2,4-Trichlorobenzene	99
Hexachlorobutadiene	95

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1608327-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/16 09:34 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	102	70-130
Chloromethane	104	70-130
Vinyl Chloride	104	70-130
1,3-Butadiene	99	70-130
Bromomethane	105	70-130
Chloroethane	102	70-130
Freon 11	99	70-130
Ethanol	106	70-130
Freon 113	89	70-130
1,1-Dichloroethene	95	70-130
Acetone	106	70-130
2-Propanol	100	70-130
Carbon Disulfide	92	70-130
3-Chloropropene	100	70-130
Methylene Chloride	94	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	95	70-130
Hexane	98	70-130
1,1-Dichloroethane	97	70-130
2-Butanone (Methyl Ethyl Ketone)	98	70-130
cis-1,2-Dichloroethene	94	70-130
Tetrahydrofuran	98	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	99	70-130
Cyclohexane	96	70-130
Carbon Tetrachloride	100	70-130
2,2,4-Trimethylpentane	101	70-130
Benzene	98	70-130
1,2-Dichloroethane	101	70-130
Heptane	106	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	101	70-130
1,4-Dioxane	95	70-130
Bromodichloromethane	117	70-130
cis-1,3-Dichloropropene	103	70-130
4-Methyl-2-pentanone	111	70-130
Toluene	102	70-130
trans-1,3-Dichloropropene	116	70-130
1,1,2-Trichloroethane	102	70-130
Tetrachloroethene	100	70-130
2-Hexanone	107	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1608327-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/16 09:34 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	122	70-130
1,2-Dibromoethane (EDB)	108	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	105	70-130
o-Xylene	106	70-130
Styrene	104	70-130
Bromoform	131 Q	70-130
Cumene	110	70-130
1,1,2,2-Tetrachloroethane	110	70-130
Propylbenzene	105	70-130
4-Ethyltoluene	94	70-130
1,3,5-Trimethylbenzene	104	70-130
1,2,4-Trimethylbenzene	100	70-130
1,3-Dichlorobenzene	98	70-130
1,4-Dichlorobenzene	92	70-130
alpha-Chlorotoluene	125	70-130
1,2-Dichlorobenzene	99	70-130
1,2,4-Trichlorobenzene	88	70-130
Hexachlorobutadiene	84	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: LCSD

Lab ID#: 1608327-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/16 10:18 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	102	70-130
Chloromethane	98	70-130
Vinyl Chloride	102	70-130
1,3-Butadiene	97	70-130
Bromomethane	106	70-130
Chloroethane	100	70-130
Freon 11	99	70-130
Ethanol	105	70-130
Freon 113	90	70-130
1,1-Dichloroethene	94	70-130
Acetone	104	70-130
2-Propanol	100	70-130
Carbon Disulfide	91	70-130
3-Chloropropene	100	70-130
Methylene Chloride	94	70-130
Methyl tert-butyl ether	97	70-130
trans-1,2-Dichloroethene	96	70-130
Hexane	98	70-130
1,1-Dichloroethane	98	70-130
2-Butanone (Methyl Ethyl Ketone)	98	70-130
cis-1,2-Dichloroethene	94	70-130
Tetrahydrofuran	99	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	100	70-130
Cyclohexane	97	70-130
Carbon Tetrachloride	100	70-130
2,2,4-Trimethylpentane	101	70-130
Benzene	98	70-130
1,2-Dichloroethane	103	70-130
Heptane	107	70-130
Trichloroethene	97	70-130
1,2-Dichloropropane	102	70-130
1,4-Dioxane	94	70-130
Bromodichloromethane	114	70-130
cis-1,3-Dichloropropene	102	70-130
4-Methyl-2-pentanone	110	70-130
Toluene	101	70-130
trans-1,3-Dichloropropene	115	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	99	70-130
2-Hexanone	106	70-130

Client Sample ID: LCSD

Lab ID#: 1608327-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20082204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/16 10:18 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	120	70-130
1,2-Dibromoethane (EDB)	108	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	105	70-130
m,p-Xylene	104	70-130
o-Xylene	107	70-130
Styrene	101	70-130
Bromoform	127	70-130
Cumene	110	70-130
1,1,2,2-Tetrachloroethane	109	70-130
Propylbenzene	103	70-130
4-Ethyltoluene	94	70-130
1,3,5-Trimethylbenzene	102	70-130
1,2,4-Trimethylbenzene	98	70-130
1,3-Dichlorobenzene	98	70-130
1,4-Dichlorobenzene	92	70-130
alpha-Chlorotoluene	124	70-130
1,2-Dichlorobenzene	98	70-130
1,2,4-Trichlorobenzene	92	70-130
Hexachlorobutadiene	88	70-130

Container Type: NA - Not Applicable

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