

1/25/2017

Mr. Curt Lueckenhoff
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1701210

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 1/17/2017 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker
Project Manager

WORK ORDER #: 1701210

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. #	3ESP170552
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	01/17/2017	CONTACT:	Brian Whittaker
DATE COMPLETED:	01/25/2017		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (170784)	Modified TO-15	6.0 "Hg	5 psi
02A	D2 (170785)	Modified TO-15	6.0 "Hg	5 psi
03A	U1 (170786)	Modified TO-15	7.5 "Hg	5 psi
04A	Lab Blank	Modified TO-15	NA	NA
05A	CCV	Modified TO-15	NA	NA
06A	LCS	Modified TO-15	NA	NA
06AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 01/25/17

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

Eurofins Air Toxics Inc. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1701210

Three 6 Liter Summa Canister (100% Cert Ambient) samples were received on January 17, 2017. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: D1 (170784)

Lab ID#: 1701210-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.36	0.83	1.8
Freon 11	0.17	0.20	0.94	1.1
Ethanol	0.84	1.8	1.6	3.4
Acetone	0.84	6.0	2.0	14
2-Propanol	0.84	0.84	2.1	2.1
Hexane	0.17	0.22	0.59	0.77
2-Butanone (Methyl Ethyl Ketone)	0.84	1.4	2.5	4.2
Benzene	0.17	0.18	0.54	0.56
Toluene	0.17	0.22	0.63	0.84

Client Sample ID: D2 (170785)

Lab ID#: 1701210-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.38	0.83	1.9
Freon 11	0.17	0.21	0.94	1.2
Ethanol	0.84	2.1	1.6	3.9
Acetone	0.84	5.5	2.0	13
Hexane	0.17	0.25	0.59	0.87
2-Butanone (Methyl Ethyl Ketone)	0.84	1.2	2.5	3.6
Toluene	0.17	0.20	0.63	0.77

Client Sample ID: U1 (170786)

Lab ID#: 1701210-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.38	0.88	1.9
Freon 11	0.18	0.18	1.0	1.0
Ethanol	0.90	1.8	1.7	3.3
Acetone	0.90	5.0	2.1	12
Hexane	0.18	0.24	0.63	0.84
2-Butanone (Methyl Ethyl Ketone)	0.90	1.2	2.6	3.6
Toluene	0.18	0.20	0.67	0.75

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

Client Sample ID: U1 (170786)

Lab ID#: 1701210-03A



Air Toxics

Client Sample ID: D1 (170784)

Lab ID#: 1701210-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012309	Date of Collection:	1/11/17 12:50:00 PM
Dil. Factor:	1.68	Date of Analysis:	1/23/17 01:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.36	0.83	1.8
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	0.20	0.94	1.1
Ethanol	0.84	1.8	1.6	3.4
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	6.0	2.0	14
2-Propanol	0.84	0.84	2.1	2.1
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
3-Chloropropene	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.34	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	0.67	Not Detected
Hexane	0.17	0.22	0.59	0.77
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	1.4	2.5	4.2
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	0.18	0.54	0.56
1,2-Dichloroethane	0.17	Not Detected	0.68	Not Detected
Heptane	0.17	Not Detected	0.69	Not Detected
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	0.22	0.63	0.84
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	Not Detected	1.1	Not Detected
2-Hexanone	0.84	Not Detected	3.4	Not Detected

Client Sample ID: D1 (170784)

Lab ID#: 1701210-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012309	Date of Collection: 1/11/17 12:50:00 PM
Dil. Factor:	1.68	Date of Analysis: 1/23/17 01:37 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	0.73	Not Detected
m,p-Xylene	0.17	Not Detected	0.73	Not Detected
o-Xylene	0.17	Not Detected	0.73	Not Detected
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% Cert Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	116	70-130



Air Toxics

Client Sample ID: D2 (170785)

Lab ID#: 1701210-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012310	Date of Collection:	1/11/17 1:00:00 PM
Dil. Factor:	1.68	Date of Analysis:	1/23/17 02:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.38	0.83	1.9
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	0.21	0.94	1.2
Ethanol	0.84	2.1	1.6	3.9
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	5.5	2.0	13
2-Propanol	0.84	Not Detected	2.1	Not Detected
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
3-Chloropropene	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.34	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	0.67	Not Detected
Hexane	0.17	0.25	0.59	0.87
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	0.67	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	Not Detected	0.54	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.68	Not Detected
Heptane	0.17	Not Detected	0.69	Not Detected
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	0.20	0.63	0.77
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	Not Detected	1.1	Not Detected
2-Hexanone	0.84	Not Detected	3.4	Not Detected

Client Sample ID: D2 (170785)

Lab ID#: 1701210-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012310	Date of Collection: 1/11/17 1:00:00 PM
Dil. Factor:	1.68	Date of Analysis: 1/23/17 02:20 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	0.73	Not Detected
m,p-Xylene	0.17	Not Detected	0.73	Not Detected
o-Xylene	0.17	Not Detected	0.73	Not Detected
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% Cert Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	116	70-130



Air Toxics

Client Sample ID: U1 (170786)

Lab ID#: 1701210-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012311	Date of Collection:	1/11/17 12:40:00 PM
Dil. Factor:	1.79	Date of Analysis:	1/23/17 03:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.38	0.88	1.9
Freon 114	0.18	Not Detected	1.2	Not Detected
Chloromethane	0.90	Not Detected	1.8	Not Detected
Vinyl Chloride	0.18	Not Detected	0.46	Not Detected
1,3-Butadiene	0.18	Not Detected	0.40	Not Detected
Bromomethane	0.90	Not Detected	3.5	Not Detected
Chloroethane	0.90	Not Detected	2.4	Not Detected
Freon 11	0.18	0.18	1.0	1.0
Ethanol	0.90	1.8	1.7	3.3
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Acetone	0.90	5.0	2.1	12
2-Propanol	0.90	Not Detected	2.2	Not Detected
Carbon Disulfide	0.90	Not Detected	2.8	Not Detected
3-Chloropropene	0.90	Not Detected	2.8	Not Detected
Methylene Chloride	0.36	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.64	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Hexane	0.18	0.24	0.63	0.84
1,1-Dichloroethane	0.18	Not Detected	0.72	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.90	1.2	2.6	3.6
cis-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Tetrahydrofuran	0.90	Not Detected	2.6	Not Detected
Chloroform	0.18	Not Detected	0.87	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.98	Not Detected
Cyclohexane	0.18	Not Detected	0.62	Not Detected
Carbon Tetrachloride	0.18	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.90	Not Detected	4.2	Not Detected
Benzene	0.18	Not Detected	0.57	Not Detected
1,2-Dichloroethane	0.18	Not Detected	0.72	Not Detected
Heptane	0.18	Not Detected	0.73	Not Detected
Trichloroethene	0.18	Not Detected	0.96	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.83	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	0.81	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.73	Not Detected
Toluene	0.18	0.20	0.67	0.75
trans-1,3-Dichloropropene	0.18	Not Detected	0.81	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	0.98	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
2-Hexanone	0.90	Not Detected	3.7	Not Detected



Air Toxics

Client Sample ID: U1 (170786)

Lab ID#: 1701210-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012311	Date of Collection: 1/11/17 12:40:00 PM
Dil. Factor:	1.79	Date of Analysis: 1/23/17 03:04 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	0.82	Not Detected
Ethyl Benzene	0.18	Not Detected	0.78	Not Detected
m,p-Xylene	0.18	Not Detected	0.78	Not Detected
o-Xylene	0.18	Not Detected	0.78	Not Detected
Styrene	0.18	Not Detected	0.76	Not Detected
Bromoform	0.18	Not Detected	1.8	Not Detected
Cumene	0.18	Not Detected	0.88	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
Propylbenzene	0.18	Not Detected	0.88	Not Detected
4-Ethyltoluene	0.18	Not Detected	0.88	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.88	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.88	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	0.93	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.90	Not Detected	6.6	Not Detected
Hexachlorobutadiene	0.90	Not Detected	9.5	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	113	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1701210-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/23/17 11:05 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

Client Sample ID: Lab Blank

Lab ID#: 1701210-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/23/17 11:05 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	110	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	112	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1701210-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/23/17 07:45 AM

Compound	%Recovery
Freon 12	94
Freon 114	96
Chloromethane	72
Vinyl Chloride	71
1,3-Butadiene	82
Bromomethane	79
Chloroethane	78
Freon 11	101
Ethanol	74
Freon 113	96
1,1-Dichloroethene	90
Acetone	78
2-Propanol	85
Carbon Disulfide	100
3-Chloropropene	94
Methylene Chloride	80
Methyl tert-butyl ether	110
trans-1,2-Dichloroethene	88
Hexane	86
1,1-Dichloroethane	83
2-Butanone (Methyl Ethyl Ketone)	92
cis-1,2-Dichloroethene	94
Tetrahydrofuran	83
Chloroform	89
1,1,1-Trichloroethane	93
Cyclohexane	96
Carbon Tetrachloride	109
2,2,4-Trimethylpentane	86
Benzene	78
1,2-Dichloroethane	87
Heptane	82
Trichloroethene	90
1,2-Dichloropropane	70
1,4-Dioxane	91
Bromodichloromethane	84
cis-1,3-Dichloropropene	89
4-Methyl-2-pentanone	81
Toluene	88
trans-1,3-Dichloropropene	96
1,1,2-Trichloroethane	81
Tetrachloroethene	101
2-Hexanone	87



Air Toxics

Client Sample ID: CCV

Lab ID#: 1701210-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/23/17 07:45 AM

Compound	%Recovery
Dibromochloromethane	92
1,2-Dibromoethane (EDB)	91
Chlorobenzene	92
Ethyl Benzene	99
m,p-Xylene	104
o-Xylene	104
Styrene	106
Bromoform	101
Cumene	108
1,1,2,2-Tetrachloroethane	76
Propylbenzene	100
4-Ethyltoluene	107
1,3,5-Trimethylbenzene	106
1,2,4-Trimethylbenzene	107
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	100
alpha-Chlorotoluene	102
1,2-Dichlorobenzene	95
1,2,4-Trichlorobenzene	98
Hexachlorobutadiene	105

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	112	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1701210-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012303	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/23/17 08:35 AM

Compound	%Recovery	Method Limits
Freon 12	89	70-130
Freon 114	90	70-130
Chloromethane	71	70-130
Vinyl Chloride	70	70-130
1,3-Butadiene	74	70-130
Bromomethane	82	70-130
Chloroethane	76	70-130
Freon 11	95	70-130
Ethanol	64 Q	70-130
Freon 113	89	70-130
1,1-Dichloroethene	82	70-130
Acetone	72	70-130
2-Propanol	85	70-130
Carbon Disulfide	79	70-130
3-Chloropropene	89	70-130
Methylene Chloride	73	70-130
Methyl tert-butyl ether	101	70-130
trans-1,2-Dichloroethene	91	70-130
Hexane	82	70-130
1,1-Dichloroethane	79	70-130
2-Butanone (Methyl Ethyl Ketone)	88	70-130
cis-1,2-Dichloroethene	83	70-130
Tetrahydrofuran	80	70-130
Chloroform	83	70-130
1,1,1-Trichloroethane	87	70-130
Cyclohexane	94	70-130
Carbon Tetrachloride	65 Q	70-130
2,2,4-Trimethylpentane	79	70-130
Benzene	73	70-130
1,2-Dichloroethane	82	70-130
Heptane	79	70-130
Trichloroethene	87	70-130
1,2-Dichloropropane	67 Q	70-130
1,4-Dioxane	92	70-130
Bromodichloromethane	82	70-130
cis-1,3-Dichloropropene	92	70-130
4-Methyl-2-pentanone	80	70-130
Toluene	86	70-130
trans-1,3-Dichloropropene	97	70-130
1,1,2-Trichloroethane	84	70-130
Tetrachloroethene	100	70-130
2-Hexanone	88	70-130

Client Sample ID: LCS

Lab ID#: 1701210-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/23/17 08:35 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	91	70-130
1,2-Dibromoethane (EDB)	91	70-130
Chlorobenzene	94	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	105	70-130
o-Xylene	105	70-130
Styrene	109	70-130
Bromoform	100	70-130
Cumene	109	70-130
1,1,2,2-Tetrachloroethane	78	70-130
Propylbenzene	105	70-130
4-Ethyltoluene	117	70-130
1,3,5-Trimethylbenzene	110	70-130
1,2,4-Trimethylbenzene	115	70-130
1,3-Dichlorobenzene	101	70-130
1,4-Dichlorobenzene	104	70-130
alpha-Chlorotoluene	109	70-130
1,2-Dichlorobenzene	99	70-130
1,2,4-Trichlorobenzene	110	70-130
Hexachlorobutadiene	114	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	119	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1701210-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/23/17 09:21 AM

Compound	%Recovery	Method Limits
Freon 12	85	70-130
Freon 114	87	70-130
Chloromethane	65 Q	70-130
Vinyl Chloride	66 Q	70-130
1,3-Butadiene	72	70-130
Bromomethane	80	70-130
Chloroethane	71	70-130
Freon 11	90	70-130
Ethanol	60 Q	70-130
Freon 113	84	70-130
1,1-Dichloroethene	79	70-130
Acetone	68 Q	70-130
2-Propanol	80	70-130
Carbon Disulfide	75	70-130
3-Chloropropene	86	70-130
Methylene Chloride	71	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	88	70-130
Hexane	80	70-130
1,1-Dichloroethane	74	70-130
2-Butanone (Methyl Ethyl Ketone)	83	70-130
cis-1,2-Dichloroethene	80	70-130
Tetrahydrofuran	76	70-130
Chloroform	81	70-130
1,1,1-Trichloroethane	85	70-130
Cyclohexane	89	70-130
Carbon Tetrachloride	64 Q	70-130
2,2,4-Trimethylpentane	75	70-130
Benzene	73	70-130
1,2-Dichloroethane	83	70-130
Heptane	79	70-130
Trichloroethene	86	70-130
1,2-Dichloropropane	66 Q	70-130
1,4-Dioxane	93	70-130
Bromodichloromethane	83	70-130
cis-1,3-Dichloropropene	93	70-130
4-Methyl-2-pentanone	79	70-130
Toluene	84	70-130
trans-1,3-Dichloropropene	93	70-130
1,1,2-Trichloroethane	81	70-130
Tetrachloroethene	99	70-130
2-Hexanone	90	70-130

Client Sample ID: LCSD

Lab ID#: 1701210-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e012304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/23/17 09:21 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	90	70-130
1,2-Dibromoethane (EDB)	88	70-130
Chlorobenzene	91	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	103	70-130
o-Xylene	101	70-130
Styrene	105	70-130
Bromoform	96	70-130
Cumene	104	70-130
1,1,2,2-Tetrachloroethane	73	70-130
Propylbenzene	98	70-130
4-Ethyltoluene	108	70-130
1,3,5-Trimethylbenzene	104	70-130
1,2,4-Trimethylbenzene	107	70-130
1,3-Dichlorobenzene	96	70-130
1,4-Dichlorobenzene	98	70-130
alpha-Chlorotoluene	104	70-130
1,2-Dichlorobenzene	94	70-130
1,2,4-Trichlorobenzene	106	70-130
Hexachlorobutadiene	111	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	117	70-130