

11/19/2016
Mr. Curt Lueckenhoff
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill
Project #:
Workorder #: 1611151

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 11/8/2016 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 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 #: 1611151

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. #	3ESP170267
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	11/08/2016	CONTACT:	Brian Whittaker
DATE COMPLETED:	11/19/2016		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (163916)	Modified TO-15	4.5 "Hg	5 psi
02A	D2 (163917)	Modified TO-15	6.1 "Hg	4.9 psi
03A	U1 (163918)	Modified TO-15	6.3 "Hg	5.2 psi
04A	U2 (163919)	Modified TO-15	5.7 "Hg	4.9 psi
05A	Lab Blank	Modified TO-15	NA	NA
05B	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
06B	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA
07B	LCS	Modified TO-15	NA	NA
07BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 11/19/16

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

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**LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1611151**

Four 6 Liter Summa Canister (100% Certified) samples were received on November 08, 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 ATL modifications.

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

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

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: D1 (163916)

Lab ID#: 1611151-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.52	0.78	2.6
Chloromethane	0.79	0.79	1.6	1.6
Freon 11	0.16	0.41	0.89	2.3
Ethanol	0.79	26	1.5	49
Acetone	0.79	7.2	1.9	17
2-Propanol	0.79	0.97	1.9	2.4
Methylene Chloride	0.32	0.33	1.1	1.2
Hexane	0.16	0.26	0.56	0.90
2-Butanone (Methyl Ethyl Ketone)	0.79	0.89	2.3	2.6
Benzene	0.16	0.31	0.50	1.0
Toluene	0.16	0.68	0.60	2.6
m,p-Xylene	0.16	0.22	0.69	0.96

Client Sample ID: D2 (163917)

Lab ID#: 1611151-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.56	0.83	2.8
Freon 11	0.17	0.36	0.94	2.0
Ethanol	0.84	6.4	1.6	12
Acetone	0.84	4.8	2.0	11
2-Propanol	0.84	6.6	2.1	16
Hexane	0.17	0.25	0.59	0.88
Benzene	0.17	0.30	0.54	0.97
Heptane	0.17	0.21	0.69	0.86
Toluene	0.17	0.38	0.63	1.4
m,p-Xylene	0.17	0.20	0.73	0.85

Client Sample ID: U1 (163918)

Lab ID#: 1611151-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.61	0.85	3.0

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

Client Sample ID: U1 (163918)

Lab ID#: 1611151-03A

Freon 11	0.17	0.53	0.97	3.0
Ethanol	0.86	10	1.6	19
Acetone	0.86	6.5	2.0	16
Methylene Chloride	0.34	0.35	1.2	1.2
Hexane	0.17	0.19	0.61	0.68
Benzene	0.17	0.24	0.55	0.78
Toluene	0.17	0.46	0.65	1.7
m,p-Xylene	0.17	0.20	0.75	0.86

Client Sample ID: U2 (163919)

Lab ID#: 1611151-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.59	0.82	2.9
Freon 11	0.16	0.50	0.93	2.8
Ethanol	0.82	8.0	1.6	15
Acetone	0.82	7.4	2.0	17
2-Propanol	0.82	11	2.0	28
Hexane	0.16	0.43	0.58	1.5
Benzene	0.16	0.21	0.53	0.67
Heptane	0.16	0.36	0.68	1.5
1,4-Dioxane	0.16	0.17	0.59	0.60
Toluene	0.16	1.8	0.62	6.7
m,p-Xylene	0.16	0.41	0.72	1.8



Air Toxics

Client Sample ID: D1 (163916)

Lab ID#: 1611151-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111420	Date of Collection:	11/2/16 1:00:00 PM
Dil. Factor:	1.58	Date of Analysis:	11/14/16 09:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.52	0.78	2.6
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.79	0.79	1.6	1.6
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.79	Not Detected	3.1	Not Detected
Chloroethane	0.79	Not Detected	2.1	Not Detected
Freon 11	0.16	0.41	0.89	2.3
Ethanol	0.79	26	1.5	49
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.79	7.2	1.9	17
2-Propanol	0.79	0.97	1.9	2.4
Carbon Disulfide	0.79	Not Detected	2.5	Not Detected
3-Chloropropene	0.79	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	0.33	1.1	1.2
Methyl tert-butyl ether	0.16	Not Detected	0.57	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Hexane	0.16	0.26	0.56	0.90
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	0.89	2.3	2.6
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.79	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.77	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.99	Not Detected
2,2,4-Trimethylpentane	0.79	Not Detected	3.7	Not Detected
Benzene	0.16	0.31	0.50	1.0
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Heptane	0.16	Not Detected	0.65	Not Detected
Trichloroethene	0.16	Not Detected	0.85	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.73	Not Detected
1,4-Dioxane	0.16	Not Detected	0.57	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.65	Not Detected
Toluene	0.16	0.68	0.60	2.6
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.79	Not Detected	3.2	Not Detected

Client Sample ID: D1 (163916)

Lab ID#: 1611151-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111420	Date of Collection:	11/2/16 1:00:00 PM
Dil. Factor:	1.58	Date of Analysis:	11/14/16 09:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.73	Not Detected
Ethyl Benzene	0.16	Not Detected	0.69	Not Detected
m,p-Xylene	0.16	0.22	0.69	0.96
o-Xylene	0.16	Not Detected	0.69	Not Detected
Styrene	0.16	Not Detected	0.67	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.78	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.78	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.78	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.82	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,2,4-Trichlorobenzene	0.79	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.79	Not Detected	8.4	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: D2 (163917)

Lab ID#: 1611151-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111421	Date of Collection:	11/2/16 1:20:00 PM
Dil. Factor:	1.68	Date of Analysis:	11/14/16 10:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.56	0.83	2.8
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	0.36	0.94	2.0
Ethanol	0.84	6.4	1.6	12
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	4.8	2.0	11
2-Propanol	0.84	6.6	2.1	16
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	0.88
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	Not Detected	2.5	Not Detected
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	0.30	0.54	0.97
1,2-Dichloroethane	0.17	Not Detected	0.68	Not Detected
Heptane	0.17	0.21	0.69	0.86
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	0.38	0.63	1.4
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 (163917)

Lab ID#: 1611151-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111421	Date of Collection:	11/2/16 1:20:00 PM
Dil. Factor:	1.68	Date of Analysis:	11/14/16 10:33 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	0.20	0.73	0.85
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% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: U1 (163918)

Lab ID#: 1611151-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111422	Date of Collection:	11/2/16 1:30:00 PM
Dil. Factor:	1.72	Date of Analysis:	11/14/16 11:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.61	0.85	3.0
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	0.53	0.97	3.0
Ethanol	0.86	10	1.6	19
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	6.5	2.0	16
2-Propanol	0.86	Not Detected	2.1	Not Detected
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	0.35	1.2	1.2
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	0.19	0.61	0.68
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	Not Detected	2.5	Not Detected
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	0.24	0.55	0.78
1,2-Dichloroethane	0.17	Not Detected	0.70	Not Detected
Heptane	0.17	Not Detected	0.70	Not Detected
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	0.46	0.65	1.7
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	Not Detected	1.2	Not Detected
2-Hexanone	0.86	Not Detected	3.5	Not Detected



Air Toxics

Client Sample ID: U1 (163918)

Lab ID#: 1611151-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111422	Date of Collection:	11/2/16 1:30:00 PM
Dil. Factor:	1.72	Date of Analysis:	11/14/16 11:12 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	Not Detected	0.75	Not Detected
m,p-Xylene	0.17	0.20	0.75	0.86
o-Xylene	0.17	Not Detected	0.75	Not Detected
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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: U2 (163919)

Lab ID#: 1611151-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111508	Date of Collection:	11/2/16 12:45:00 PM
Dil. Factor:	1.65	Date of Analysis:	11/15/16 11:12 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.59	0.82	2.9
Freon 114	0.16	Not Detected	1.2	Not Detected
Chloromethane	0.82	Not Detected	1.7	Not Detected
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	0.50	0.93	2.8
Ethanol	0.82	8.0	1.6	15
Freon 113	0.16	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	7.4	2.0	17
2-Propanol	0.82	11	2.0	28
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	0.43	0.58	1.5
1,1-Dichloroethane	0.16	Not Detected	0.67	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.90	Not Detected
Cyclohexane	0.16	Not Detected	0.57	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	0.21	0.53	0.67
1,2-Dichloroethane	0.16	Not Detected	0.67	Not Detected
Heptane	0.16	0.36	0.68	1.5
Trichloroethene	0.16	Not Detected	0.89	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	0.17	0.59	0.60
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.75	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.68	Not Detected
Toluene	0.16	1.8	0.62	6.7
trans-1,3-Dichloropropene	0.16	Not Detected	0.75	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.90	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	Not Detected	3.4	Not Detected

Client Sample ID: U2 (163919)

Lab ID#: 1611151-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111508	Date of Collection:	11/2/16 12:45:00 PM
Dil. Factor:	1.65	Date of Analysis:	11/15/16 11:12 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	Not Detected	0.72	Not Detected
m,p-Xylene	0.16	0.41	0.72	1.8
o-Xylene	0.16	Not Detected	0.72	Not Detected
Styrene	0.16	Not Detected	0.70	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.81	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.81	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.81	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.8	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1611151-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111407	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/14/16 09:43 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#: 1611151-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111407	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/16 09:43 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	90	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1611151-05B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111506	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/15/16 09:35 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#: 1611151-05B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111506	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/15/16 09:35 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	95	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1611151-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/16 05:58 AM

Compound	%Recovery
Freon 12	108
Freon 114	100
Chloromethane	101
Vinyl Chloride	99
1,3-Butadiene	93
Bromomethane	115
Chloroethane	106
Freon 11	98
Ethanol	91
Freon 113	98
1,1-Dichloroethene	97
Acetone	100
2-Propanol	82
Carbon Disulfide	101
3-Chloropropene	102
Methylene Chloride	98
Methyl tert-butyl ether	91
trans-1,2-Dichloroethene	100
Hexane	94
1,1-Dichloroethane	97
2-Butanone (Methyl Ethyl Ketone)	96
cis-1,2-Dichloroethene	97
Tetrahydrofuran	91
Chloroform	102
1,1,1-Trichloroethane	98
Cyclohexane	96
Carbon Tetrachloride	101
2,2,4-Trimethylpentane	90
Benzene	100
1,2-Dichloroethane	97
Heptane	91
Trichloroethene	100
1,2-Dichloropropane	100
1,4-Dioxane	96
Bromodichloromethane	104
cis-1,3-Dichloropropene	99
4-Methyl-2-pentanone	89
Toluene	100
trans-1,3-Dichloropropene	106
1,1,2-Trichloroethane	107
Tetrachloroethene	106
2-Hexanone	89



Air Toxics

Client Sample ID: CCV

Lab ID#: 1611151-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/16 05:58 AM

Compound	%Recovery
Dibromochloromethane	108
1,2-Dibromoethane (EDB)	105
Chlorobenzene	109
Ethyl Benzene	102
m,p-Xylene	103
o-Xylene	104
Styrene	90
Bromoform	118
Cumene	106
1,1,2,2-Tetrachloroethane	111
Propylbenzene	99
4-Ethyltoluene	92
1,3,5-Trimethylbenzene	97
1,2,4-Trimethylbenzene	94
1,3-Dichlorobenzene	102
1,4-Dichlorobenzene	94
alpha-Chlorotoluene	110
1,2-Dichlorobenzene	100
1,2,4-Trichlorobenzene	99
Hexachlorobutadiene	92

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1611151-06B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/15/16 06:20 AM

Compound	%Recovery
Freon 12	99
Freon 114	90
Chloromethane	92
Vinyl Chloride	89
1,3-Butadiene	83
Bromomethane	96
Chloroethane	95
Freon 11	89
Ethanol	77
Freon 113	87
1,1-Dichloroethene	85
Acetone	87
2-Propanol	73
Carbon Disulfide	90
3-Chloropropene	90
Methylene Chloride	87
Methyl tert-butyl ether	81
trans-1,2-Dichloroethene	91
Hexane	86
1,1-Dichloroethane	88
2-Butanone (Methyl Ethyl Ketone)	87
cis-1,2-Dichloroethene	88
Tetrahydrofuran	82
Chloroform	93
1,1,1-Trichloroethane	88
Cyclohexane	86
Carbon Tetrachloride	90
2,2,4-Trimethylpentane	82
Benzene	96
1,2-Dichloroethane	93
Heptane	87
Trichloroethene	94
1,2-Dichloropropane	96
1,4-Dioxane	90
Bromodichloromethane	93
cis-1,3-Dichloropropene	91
4-Methyl-2-pentanone	84
Toluene	95
trans-1,3-Dichloropropene	92
1,1,2-Trichloroethane	97
Tetrachloroethene	96
2-Hexanone	80

Client Sample ID: CCV

Lab ID#: 1611151-06B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/15/16 06:20 AM

Compound	%Recovery
Dibromochloromethane	96
1,2-Dibromoethane (EDB)	96
Chlorobenzene	97
Ethyl Benzene	94
m,p-Xylene	92
o-Xylene	94
Styrene	80
Bromoform	104
Cumene	96
1,1,2,2-Tetrachloroethane	102
Propylbenzene	89
4-Ethyltoluene	82
1,3,5-Trimethylbenzene	84
1,2,4-Trimethylbenzene	82
1,3-Dichlorobenzene	92
1,4-Dichlorobenzene	85
alpha-Chlorotoluene	96
1,2-Dichlorobenzene	91
1,2,4-Trichlorobenzene	96
Hexachlorobutadiene	89

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1611151-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111403	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/14/16 06:45 AM

Compound	%Recovery	Method Limits
Freon 12	111	70-130
Freon 114	103	70-130
Chloromethane	105	70-130
Vinyl Chloride	104	70-130
1,3-Butadiene	94	70-130
Bromomethane	110	70-130
Chloroethane	113	70-130
Freon 11	101	70-130
Ethanol	78	70-130
Freon 113	98	70-130
1,1-Dichloroethene	96	70-130
Acetone	96	70-130
2-Propanol	84	70-130
Carbon Disulfide	101	70-130
3-Chloropropene	101	70-130
Methylene Chloride	97	70-130
Methyl tert-butyl ether	92	70-130
trans-1,2-Dichloroethene	101	70-130
Hexane	97	70-130
1,1-Dichloroethane	94	70-130
2-Butanone (Methyl Ethyl Ketone)	96	70-130
cis-1,2-Dichloroethene	94	70-130
Tetrahydrofuran	94	70-130
Chloroform	102	70-130
1,1,1-Trichloroethane	98	70-130
Cyclohexane	99	70-130
Carbon Tetrachloride	100	70-130
2,2,4-Trimethylpentane	94	70-130
Benzene	103	70-130
1,2-Dichloroethane	97	70-130
Heptane	94	70-130
Trichloroethene	104	70-130
1,2-Dichloropropane	102	70-130
1,4-Dioxane	102	70-130
Bromodichloromethane	102	70-130
cis-1,3-Dichloropropene	100	70-130
4-Methyl-2-pentanone	95	70-130
Toluene	103	70-130
trans-1,3-Dichloropropene	102	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	106	70-130
2-Hexanone	94	70-130

Client Sample ID: LCS

Lab ID#: 1611151-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/16 06:45 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	108	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	108	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	103	70-130
o-Xylene	106	70-130
Styrene	94	70-130
Bromoform	118	70-130
Cumene	106	70-130
1,1,2,2-Tetrachloroethane	107	70-130
Propylbenzene	99	70-130
4-Ethyltoluene	92	70-130
1,3,5-Trimethylbenzene	98	70-130
1,2,4-Trimethylbenzene	94	70-130
1,3-Dichlorobenzene	100	70-130
1,4-Dichlorobenzene	93	70-130
alpha-Chlorotoluene	105	70-130
1,2-Dichlorobenzene	96	70-130
1,2,4-Trichlorobenzene	86	70-130
Hexachlorobutadiene	82	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1611151-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111404	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/14/16 07:23 AM

Compound	%Recovery	Method Limits
Freon 12	109	70-130
Freon 114	102	70-130
Chloromethane	104	70-130
Vinyl Chloride	102	70-130
1,3-Butadiene	93	70-130
Bromomethane	108	70-130
Chloroethane	110	70-130
Freon 11	101	70-130
Ethanol	75	70-130
Freon 113	98	70-130
1,1-Dichloroethene	97	70-130
Acetone	96	70-130
2-Propanol	85	70-130
Carbon Disulfide	101	70-130
3-Chloropropene	101	70-130
Methylene Chloride	97	70-130
Methyl tert-butyl ether	91	70-130
trans-1,2-Dichloroethene	100	70-130
Hexane	98	70-130
1,1-Dichloroethane	94	70-130
2-Butanone (Methyl Ethyl Ketone)	97	70-130
cis-1,2-Dichloroethene	96	70-130
Tetrahydrofuran	93	70-130
Chloroform	102	70-130
1,1,1-Trichloroethane	98	70-130
Cyclohexane	98	70-130
Carbon Tetrachloride	100	70-130
2,2,4-Trimethylpentane	94	70-130
Benzene	102	70-130
1,2-Dichloroethane	97	70-130
Heptane	95	70-130
Trichloroethene	103	70-130
1,2-Dichloropropane	102	70-130
1,4-Dioxane	101	70-130
Bromodichloromethane	101	70-130
cis-1,3-Dichloropropene	100	70-130
4-Methyl-2-pentanone	95	70-130
Toluene	102	70-130
trans-1,3-Dichloropropene	100	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	105	70-130
2-Hexanone	93	70-130

Client Sample ID: LCSD

Lab ID#: 1611151-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/16 07:23 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	108	70-130
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	106	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	100	70-130
o-Xylene	103	70-130
Styrene	93	70-130
Bromoform	116	70-130
Cumene	103	70-130
1,1,2,2-Tetrachloroethane	107	70-130
Propylbenzene	96	70-130
4-Ethyltoluene	89	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	93	70-130
1,3-Dichlorobenzene	97	70-130
1,4-Dichlorobenzene	92	70-130
alpha-Chlorotoluene	103	70-130
1,2-Dichlorobenzene	96	70-130
1,2,4-Trichlorobenzene	91	70-130
Hexachlorobutadiene	84	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1611151-07B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/15/16 07:04 AM

Compound	%Recovery	Method Limits
Freon 12	108	70-130
Freon 114	99	70-130
Chloromethane	103	70-130
Vinyl Chloride	101	70-130
1,3-Butadiene	91	70-130
Bromomethane	103	70-130
Chloroethane	109	70-130
Freon 11	99	70-130
Ethanol	74	70-130
Freon 113	94	70-130
1,1-Dichloroethene	92	70-130
Acetone	94	70-130
2-Propanol	81	70-130
Carbon Disulfide	99	70-130
3-Chloropropene	98	70-130
Methylene Chloride	95	70-130
Methyl tert-butyl ether	88	70-130
trans-1,2-Dichloroethene	100	70-130
Hexane	96	70-130
1,1-Dichloroethane	92	70-130
2-Butanone (Methyl Ethyl Ketone)	95	70-130
cis-1,2-Dichloroethene	93	70-130
Tetrahydrofuran	92	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	95	70-130
Carbon Tetrachloride	96	70-130
2,2,4-Trimethylpentane	92	70-130
Benzene	107	70-130
1,2-Dichloroethane	101	70-130
Heptane	97	70-130
Trichloroethene	106	70-130
1,2-Dichloropropane	104	70-130
1,4-Dioxane	102	70-130
Bromodichloromethane	104	70-130
cis-1,3-Dichloropropene	101	70-130
4-Methyl-2-pentanone	97	70-130
Toluene	105	70-130
trans-1,3-Dichloropropene	100	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	106	70-130
2-Hexanone	94	70-130

Client Sample ID: LCS

Lab ID#: 1611151-07B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/15/16 07:04 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	108	70-130
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	106	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	100	70-130
o-Xylene	101	70-130
Styrene	90	70-130
Bromoform	114	70-130
Cumene	104	70-130
1,1,2,2-Tetrachloroethane	108	70-130
Propylbenzene	96	70-130
4-Ethyltoluene	89	70-130
1,3,5-Trimethylbenzene	94	70-130
1,2,4-Trimethylbenzene	91	70-130
1,3-Dichlorobenzene	97	70-130
1,4-Dichlorobenzene	91	70-130
alpha-Chlorotoluene	102	70-130
1,2-Dichlorobenzene	95	70-130
1,2,4-Trichlorobenzene	90	70-130
Hexachlorobutadiene	85	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: LCS D

Lab ID#: 1611151-07BB

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/15/16 07:43 AM

Compound	%Recovery	Method Limits
Freon 12	106	70-130
Freon 114	99	70-130
Chloromethane	102	70-130
Vinyl Chloride	100	70-130
1,3-Butadiene	91	70-130
Bromomethane	105	70-130
Chloroethane	110	70-130
Freon 11	98	70-130
Ethanol	75	70-130
Freon 113	94	70-130
1,1-Dichloroethene	93	70-130
Acetone	94	70-130
2-Propanol	81	70-130
Carbon Disulfide	99	70-130
3-Chloropropene	97	70-130
Methylene Chloride	96	70-130
Methyl tert-butyl ether	88	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	96	70-130
1,1-Dichloroethane	93	70-130
2-Butanone (Methyl Ethyl Ketone)	93	70-130
cis-1,2-Dichloroethene	93	70-130
Tetrahydrofuran	93	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	96	70-130
Carbon Tetrachloride	96	70-130
2,2,4-Trimethylpentane	92	70-130
Benzene	105	70-130
1,2-Dichloroethane	98	70-130
Heptane	97	70-130
Trichloroethene	103	70-130
1,2-Dichloropropane	102	70-130
1,4-Dioxane	102	70-130
Bromodichloromethane	103	70-130
cis-1,3-Dichloropropene	99	70-130
4-Methyl-2-pentanone	96	70-130
Toluene	103	70-130
trans-1,3-Dichloropropene	101	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	106	70-130
2-Hexanone	95	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1611151-07BB

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20111504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/15/16 07:43 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	108	70-130
1,2-Dibromoethane (EDB)	103	70-130
Chlorobenzene	107	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	100	70-130
o-Xylene	104	70-130
Styrene	93	70-130
Bromoform	116	70-130
Cumene	105	70-130
1,1,2,2-Tetrachloroethane	109	70-130
Propylbenzene	99	70-130
4-Ethyltoluene	94	70-130
1,3,5-Trimethylbenzene	97	70-130
1,2,4-Trimethylbenzene	93	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	95	70-130
alpha-Chlorotoluene	106	70-130
1,2-Dichlorobenzene	100	70-130
1,2,4-Trichlorobenzene	95	70-130
Hexachlorobutadiene	92	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130