

8/12/2016

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1608070

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 8/1/2016 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 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 #: 1608070

Work Order Summary

CLIENT: PHONE: FAX: DATE RECEIVED: DATE COMPLETED:	Mr. Curt Lueckenhoff Missouri Dept. of Natural Resources 2710 West Main Jefferson City, MO 65109 573-526-3363 573-526-3350 08/01/2016 08/12/2016	BILL TO: P.O. # PROJECT # CONTACT:	Accounts Payable Missouri Dept. of Natural Resources P.O Box 176 Jefferson City, MO 65102 3ESP161130 Bridgeton Landfill Brian Whittaker
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<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (162944)	Modified TO-15	4.7 "Hg	5 psi
02A	D2 (162945)	Modified TO-15	6.5 "Hg	5 psi
03A	U1 (162946)	Modified TO-15	7.1 "Hg	4.9 psi
04A	U1 (162947)	Modified TO-15	7.6 "Hg	5 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: 08/12/16

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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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# 1608070

Four 6 Liter Summa Canister (100% Certified) samples were received on August 01, 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	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	$\leq 30\%$ RSD with 4 compounds allowed out to $< 40\%$ RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

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.

2-Propanol exceeded the instrument's calibration range for sample D1 (162944) and was flagged accordingly.

2-Propanol was detected at a concentration less than 5 times the reporting limit in sample D2 (162945). Because the preceding sample contained concentrations of 2-Propanol exceeding the calibration range, the result for this compound in sample D2 (162945) may be biased high.

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 (162944)

Lab ID#: 1608070-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.67	0.79	3.3
Freon 11	0.16	0.99	0.89	5.5
Ethanol	0.80	64	1.5	120
Acetone	0.80	32	1.9	75
2-Propanol	0.80	300 E	2.0	740 E
Carbon Disulfide	0.80	11	2.5	35
Methylene Chloride	0.32	1.3	1.1	4.6
Hexane	0.16	0.36	0.56	1.3
2-Butanone (Methyl Ethyl Ketone)	0.80	8.1	2.3	24
Cyclohexane	0.16	0.74	0.55	2.5
Benzene	0.16	0.22	0.51	0.72
1,2-Dichloroethane	0.16	0.32	0.64	1.3
Heptane	0.16	1.6	0.65	6.6
4-Methyl-2-pentanone	0.16	0.68	0.65	2.8
Toluene	0.16	18	0.60	67
Tetrachloroethene	0.16	0.24	1.1	1.6
Ethyl Benzene	0.16	0.86	0.69	3.7
m,p-Xylene	0.16	2.4	0.69	10
o-Xylene	0.16	1.0	0.69	4.4
Styrene	0.16	0.77	0.68	3.3
4-Ethyltoluene	0.16	0.37	0.78	1.8
1,2,4-Trimethylbenzene	0.16	0.38	0.78	1.9
1,4-Dichlorobenzene	0.16	0.50	0.96	3.0

Client Sample ID: D2 (162945)

Lab ID#: 1608070-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.63	0.84	3.1
Freon 11	0.17	0.32	0.96	1.8
Ethanol	0.86	8.1	1.6	15
Acetone	0.86	18	2.0	43
2-Propanol	0.86	1.2	2.1	2.8

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: D2 (162945)

Lab ID#: 1608070-02A

Methylene Chloride	0.34	0.44	1.2	1.5
2-Butanone (Methyl Ethyl Ketone)	0.86	3.0	2.5	8.9

Client Sample ID: U1 (162946)

Lab ID#: 1608070-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.79	0.86	3.9
Freon 11	0.18	0.36	0.98	2.0
Ethanol	0.88	7.8	1.6	15
Acetone	0.88	8.9	2.1	21
Methylene Chloride	0.35	4.4	1.2	15
Hexane	0.18	0.19	0.62	0.68
2-Butanone (Methyl Ethyl Ketone)	0.88	1.1	2.6	3.3
Toluene	0.18	1.7	0.66	6.5

Client Sample ID: U1 (162947)

Lab ID#: 1608070-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.40	0.88	2.0
Freon 11	0.18	0.29	1.0	1.6
Ethanol	0.90	7.3	1.7	14
Acetone	0.90	6.4	2.1	15
2-Butanone (Methyl Ethyl Ketone)	0.90	0.94	2.6	2.8
Toluene	0.18	0.20	0.67	0.73



Air Toxics

Client Sample ID: D1 (162944)

Lab ID#: 1608070-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080510	Date of Collection:	7/26/16 1:25:00 PM
Dil. Factor:	1.59	Date of Analysis:	8/5/16 06:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.67	0.79	3.3
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.99	0.89	5.5
Ethanol	0.80	64	1.5	120
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	32	1.9	75
2-Propanol	0.80	300 E	2.0	740 E
Carbon Disulfide	0.80	11	2.5	35
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	1.3	1.1	4.6
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	0.36	0.56	1.3
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	8.1	2.3	24
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.78	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Cyclohexane	0.16	0.74	0.55	2.5
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.80	Not Detected	3.7	Not Detected
Benzene	0.16	0.22	0.51	0.72
1,2-Dichloroethane	0.16	0.32	0.64	1.3
Heptane	0.16	1.6	0.65	6.6
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	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
4-Methyl-2-pentanone	0.16	0.68	0.65	2.8
Toluene	0.16	18	0.60	67
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Tetrachloroethene	0.16	0.24	1.1	1.6
2-Hexanone	0.80	Not Detected	3.2	Not Detected



Air Toxics

Client Sample ID: D1 (162944)

Lab ID#: 1608070-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080510	Date of Collection: 7/26/16 1:25:00 PM
Dil. Factor:	1.59	Date of Analysis: 8/5/16 06:07 PM

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	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.73	Not Detected
Ethyl Benzene	0.16	0.86	0.69	3.7
m,p-Xylene	0.16	2.4	0.69	10
o-Xylene	0.16	1.0	0.69	4.4
Styrene	0.16	0.77	0.68	3.3
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	0.37	0.78	1.8
1,3,5-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,2,4-Trimethylbenzene	0.16	0.38	0.78	1.9
1,3-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,4-Dichlorobenzene	0.16	0.50	0.96	3.0
alpha-Chlorotoluene	0.16	Not Detected	0.82	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.5	Not Detected

E = Exceeds instrument calibration range.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: D2 (162945)

Lab ID#: 1608070-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080511	Date of Collection:	7/26/16 1:10:00 PM
Dil. Factor:	1.71	Date of Analysis:	8/5/16 07:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.63	0.84	3.1
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	2.2	Not Detected
Freon 11	0.17	0.32	0.96	1.8
Ethanol	0.86	8.1	1.6	15
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	18	2.0	43
2-Propanol	0.86	1.2	2.1	2.8
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	0.44	1.2	1.5
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	Not Detected	0.60	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.69	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	3.0	2.5	8.9
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	0.83	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.93	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	Not Detected	0.55	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.69	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	1.1	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	Not Detected	0.64	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.93	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: D2 (162945)

Lab ID#: 1608070-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080511	Date of Collection: 7/26/16 1:10:00 PM
Dil. Factor:	1.71	Date of Analysis: 8/5/16 07:22 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	0.79	Not Detected
Ethyl Benzene	0.17	Not Detected	0.74	Not Detected
m,p-Xylene	0.17	Not Detected	0.74	Not Detected
o-Xylene	0.17	Not Detected	0.74	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	0.88	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.3	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.1	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: U1 (162946)

Lab ID#: 1608070-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080512	Date of Collection: 7/26/16 1:45:00 PM
Dil. Factor:	1.75	Date of Analysis: 8/5/16 07:59 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.79	0.86	3.9
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	0.36	0.98	2.0
Ethanol	0.88	7.8	1.6	15
Freon 113	0.18	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Acetone	0.88	8.9	2.1	21
2-Propanol	0.88	Not Detected	2.2	Not Detected
Carbon Disulfide	0.88	Not Detected	2.7	Not Detected
3-Chloropropene	0.88	Not Detected	2.7	Not Detected
Methylene Chloride	0.35	4.4	1.2	15
Methyl tert-butyl ether	0.18	Not Detected	0.63	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Hexane	0.18	0.19	0.62	0.68
1,1-Dichloroethane	0.18	Not Detected	0.71	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.88	1.1	2.6	3.3
cis-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Tetrahydrofuran	0.88	Not Detected	2.6	Not Detected
Chloroform	0.18	Not Detected	0.85	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.95	Not Detected
Cyclohexane	0.18	Not Detected	0.60	Not Detected
Carbon Tetrachloride	0.18	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.88	Not Detected	4.1	Not Detected
Benzene	0.18	Not Detected	0.56	Not Detected
1,2-Dichloroethane	0.18	Not Detected	0.71	Not Detected
Heptane	0.18	Not Detected	0.72	Not Detected
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	0.79	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.72	Not Detected
Toluene	0.18	1.7	0.66	6.5
trans-1,3-Dichloropropene	0.18	Not Detected	0.79	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	0.95	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
2-Hexanone	0.88	Not Detected	3.6	Not Detected



Air Toxics

Client Sample ID: U1 (162946)

Lab ID#: 1608070-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080512	Date of Collection: 7/26/16 1:45:00 PM
Dil. Factor:	1.75	Date of Analysis: 8/5/16 07:59 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	1.3	Not Detected
Chlorobenzene	0.18	Not Detected	0.80	Not Detected
Ethyl Benzene	0.18	Not Detected	0.76	Not Detected
m,p-Xylene	0.18	Not Detected	0.76	Not Detected
o-Xylene	0.18	Not Detected	0.76	Not Detected
Styrene	0.18	Not Detected	0.74	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	0.90	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	9.3	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	130	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: U1 (162947)

Lab ID#: 1608070-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080811	Date of Collection:	7/26/16 1:35:00 PM
Dil. Factor:	1.79	Date of Analysis:	8/8/16 03:32 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.40	0.88	2.0
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	0.29	1.0	1.6
Ethanol	0.90	7.3	1.7	14
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Acetone	0.90	6.4	2.1	15
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	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.18	Not Detected	0.72	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.90	0.94	2.6	2.8
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	0.73
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 (162947)

Lab ID#: 1608070-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080811	Date of Collection: 7/26/16 1:35:00 PM
Dil. Factor:	1.79	Date of Analysis: 8/8/16 03:32 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% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1608070-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080506	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/5/16 02:33 PM

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#: 1608070-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080506	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/5/16 02:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1608070-05B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: e080810

Date of Collection: NA

Dil. Factor: 1.00

Date of Analysis: 8/8/16 02:44 PM

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#: 1608070-05B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080810	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/8/16 02:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130

Client Sample ID: CCV

Lab ID#: 1608070-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/5/16 11:39 AM

Compound	%Recovery
Freon 12	107
Freon 114	95
Chloromethane	99
Vinyl Chloride	99
1,3-Butadiene	96
Bromomethane	107
Chloroethane	96
Freon 11	101
Ethanol	97
Freon 113	90
1,1-Dichloroethene	91
Acetone	96
2-Propanol	96
Carbon Disulfide	103
3-Chloropropene	99
Methylene Chloride	93
Methyl tert-butyl ether	98
trans-1,2-Dichloroethene	95
Hexane	97
1,1-Dichloroethane	103
2-Butanone (Methyl Ethyl Ketone)	99
cis-1,2-Dichloroethene	97
Tetrahydrofuran	104
Chloroform	104
1,1,1-Trichloroethane	104
Cyclohexane	95
Carbon Tetrachloride	121
2,2,4-Trimethylpentane	101
Benzene	104
1,2-Dichloroethane	114
Heptane	111
Trichloroethene	101
1,2-Dichloropropane	108
1,4-Dioxane	103
Bromodichloromethane	117
cis-1,3-Dichloropropene	112
4-Methyl-2-pentanone	120
Toluene	106
trans-1,3-Dichloropropene	116
1,1,2-Trichloroethane	104
Tetrachloroethene	98
2-Hexanone	109

Client Sample ID: CCV

Lab ID#: 1608070-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/5/16 11:39 AM

Compound	%Recovery
Dibromochloromethane	121
1,2-Dibromoethane (EDB)	109
Chlorobenzene	102
Ethyl Benzene	107
m,p-Xylene	105
o-Xylene	107
Styrene	113
Bromoform	127
Cumene	114
1,1,2,2-Tetrachloroethane	116
Propylbenzene	108
4-Ethyltoluene	99
1,3,5-Trimethylbenzene	106
1,2,4-Trimethylbenzene	101
1,3-Dichlorobenzene	102
1,4-Dichlorobenzene	96
alpha-Chlorotoluene	118
1,2-Dichlorobenzene	103
1,2,4-Trichlorobenzene	94
Hexachlorobutadiene	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: CCV

Lab ID#: 1608070-06B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/8/16 09:23 AM

Compound	%Recovery
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Freon 12	120
Freon 114	115
Chloromethane	100
Vinyl Chloride	105
1,3-Butadiene	98
Bromomethane	117
Chloroethane	128
Freon 11	126
Ethanol	128
Freon 113	107
1,1-Dichloroethene	110
Acetone	93
2-Propanol	104
Carbon Disulfide	110
3-Chloropropene	137 Q
Methylene Chloride	101
Methyl tert-butyl ether	113
trans-1,2-Dichloroethene	114
Hexane	97
1,1-Dichloroethane	112
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	112
Tetrahydrofuran	81
Chloroform	112
1,1,1-Trichloroethane	115
Cyclohexane	112
Carbon Tetrachloride	123
2,2,4-Trimethylpentane	106
Benzene	111
1,2-Dichloroethane	124
Heptane	110
Trichloroethene	116
1,2-Dichloropropane	103
1,4-Dioxane	119
Bromodichloromethane	122
cis-1,3-Dichloropropene	110
4-Methyl-2-pentanone	110
Toluene	111
trans-1,3-Dichloropropene	116
1,1,2-Trichloroethane	108
Tetrachloroethene	127
2-Hexanone	113

Client Sample ID: CCV

Lab ID#: 1608070-06B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/8/16 09:23 AM

Compound	%Recovery
Dibromochloromethane	127
1,2-Dibromoethane (EDB)	119
Chlorobenzene	118
Ethyl Benzene	118
m,p-Xylene	124
o-Xylene	124
Styrene	125
Bromoform	128
Cumene	114
1,1,2,2-Tetrachloroethane	93
Propylbenzene	103
4-Ethyltoluene	107
1,3,5-Trimethylbenzene	96
1,2,4-Trimethylbenzene	91
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	104
alpha-Chlorotoluene	108
1,2-Dichlorobenzene	104
1,2,4-Trichlorobenzene	116
Hexachlorobutadiene	115

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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

Client Sample ID: LCS

Lab ID#: 1608070-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/5/16 12:17 PM

Compound	%Recovery	Method Limits
Freon 12	113	70-130
Freon 114	106	70-130
Chloromethane	104	70-130
Vinyl Chloride	108	70-130
1,3-Butadiene	104	70-130
Bromomethane	109	70-130
Chloroethane	106	70-130
Freon 11	108	70-130
Ethanol	108	70-130
Freon 113	92	70-130
1,1-Dichloroethene	96	70-130
Acetone	104	70-130
2-Propanol	104	70-130
Carbon Disulfide	95	70-130
3-Chloropropene	97	70-130
Methylene Chloride	97	70-130
Methyl tert-butyl ether	98	70-130
trans-1,2-Dichloroethene	100	70-130
Hexane	100	70-130
1,1-Dichloroethane	102	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
cis-1,2-Dichloroethene	97	70-130
Tetrahydrofuran	106	70-130
Chloroform	106	70-130
1,1,1-Trichloroethane	106	70-130
Cyclohexane	99	70-130
Carbon Tetrachloride	96	70-130
2,2,4-Trimethylpentane	105	70-130
Benzene	106	70-130
1,2-Dichloroethane	115	70-130
Heptane	113	70-130
Trichloroethene	104	70-130
1,2-Dichloropropane	110	70-130
1,4-Dioxane	100	70-130
Bromodichloromethane	119	70-130
cis-1,3-Dichloropropene	107	70-130
4-Methyl-2-pentanone	119	70-130
Toluene	107	70-130
trans-1,3-Dichloropropene	116	70-130
1,1,2-Trichloroethane	103	70-130
Tetrachloroethene	98	70-130
2-Hexanone	106	70-130

Client Sample ID: LCS

Lab ID#: 1608070-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/5/16 12:17 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	122	70-130
1,2-Dibromoethane (EDB)	108	70-130
Chlorobenzene	101	70-130
Ethyl Benzene	106	70-130
m,p-Xylene	106	70-130
o-Xylene	107	70-130
Styrene	104	70-130
Bromoform	124	70-130
Cumene	112	70-130
1,1,2,2-Tetrachloroethane	115	70-130
Propylbenzene	107	70-130
4-Ethyltoluene	96	70-130
1,3,5-Trimethylbenzene	99	70-130
1,2,4-Trimethylbenzene	93	70-130
1,3-Dichlorobenzene	100	70-130
1,4-Dichlorobenzene	93	70-130
alpha-Chlorotoluene	126	70-130
1,2-Dichlorobenzene	99	70-130
1,2,4-Trichlorobenzene	97	70-130
Hexachlorobutadiene	99	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: LCSD

Lab ID#: 1608070-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/5/16 01:14 PM

Compound	%Recovery	Method Limits
Freon 12	112	70-130
Freon 114	105	70-130
Chloromethane	102	70-130
Vinyl Chloride	106	70-130
1,3-Butadiene	101	70-130
Bromomethane	108	70-130
Chloroethane	105	70-130
Freon 11	105	70-130
Ethanol	107	70-130
Freon 113	93	70-130
1,1-Dichloroethene	93	70-130
Acetone	103	70-130
2-Propanol	104	70-130
Carbon Disulfide	94	70-130
3-Chloropropene	97	70-130
Methylene Chloride	96	70-130
Methyl tert-butyl ether	98	70-130
trans-1,2-Dichloroethene	99	70-130
Hexane	99	70-130
1,1-Dichloroethane	102	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
cis-1,2-Dichloroethene	95	70-130
Tetrahydrofuran	104	70-130
Chloroform	104	70-130
1,1,1-Trichloroethane	104	70-130
Cyclohexane	98	70-130
Carbon Tetrachloride	95	70-130
2,2,4-Trimethylpentane	105	70-130
Benzene	102	70-130
1,2-Dichloroethane	111	70-130
Heptane	110	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	109	70-130
1,4-Dioxane	97	70-130
Bromodichloromethane	118	70-130
cis-1,3-Dichloropropene	105	70-130
4-Methyl-2-pentanone	118	70-130
Toluene	105	70-130
trans-1,3-Dichloropropene	117	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	98	70-130
2-Hexanone	108	70-130

Client Sample ID: LCSD

Lab ID#: 1608070-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20080504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/5/16 01:14 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	121	70-130
1,2-Dibromoethane (EDB)	107	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	106	70-130
m,p-Xylene	106	70-130
o-Xylene	108	70-130
Styrene	105	70-130
Bromoform	126	70-130
Cumene	114	70-130
1,1,2,2-Tetrachloroethane	114	70-130
Propylbenzene	109	70-130
4-Ethyltoluene	98	70-130
1,3,5-Trimethylbenzene	104	70-130
1,2,4-Trimethylbenzene	96	70-130
1,3-Dichlorobenzene	100	70-130
1,4-Dichlorobenzene	94	70-130
alpha-Chlorotoluene	127	70-130
1,2-Dichlorobenzene	101	70-130
1,2,4-Trichlorobenzene	100	70-130
Hexachlorobutadiene	105	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: LCS

Lab ID#: 1608070-07B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/8/16 10:10 AM

Compound	%Recovery	Method Limits
Freon 12	103	70-130
Freon 114	107	70-130
Chloromethane	91	70-130
Vinyl Chloride	90	70-130
1,3-Butadiene	84	70-130
Bromomethane	108	70-130
Chloroethane	114	70-130
Freon 11	114	70-130
Ethanol	118	70-130
Freon 113	92	70-130
1,1-Dichloroethene	93	70-130
Acetone	84	70-130
2-Propanol	94	70-130
Carbon Disulfide	85	70-130
3-Chloropropene	116	70-130
Methylene Chloride	88	70-130
Methyl tert-butyl ether	90	70-130
trans-1,2-Dichloroethene	92	70-130
Hexane	87	70-130
1,1-Dichloroethane	95	70-130
2-Butanone (Methyl Ethyl Ketone)	91	70-130
cis-1,2-Dichloroethene	86	70-130
Tetrahydrofuran	70	70-130
Chloroform	95	70-130
1,1,1-Trichloroethane	97	70-130
Cyclohexane	94	70-130
Carbon Tetrachloride	95	70-130
2,2,4-Trimethylpentane	90	70-130
Benzene	93	70-130
1,2-Dichloroethane	101	70-130
Heptane	89	70-130
Trichloroethene	101	70-130
1,2-Dichloropropane	88	70-130
1,4-Dioxane	93	70-130
Bromodichloromethane	105	70-130
cis-1,3-Dichloropropene	86	70-130
4-Methyl-2-pentanone	95	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	96	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	110	70-130
2-Hexanone	97	70-130

Client Sample ID: LCS

Lab ID#: 1608070-07B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/8/16 10:10 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	109	70-130
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	106	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	104	70-130
o-Xylene	107	70-130
Styrene	108	70-130
Bromoform	115	70-130
Cumene	98	70-130
1,1,2,2-Tetrachloroethane	83	70-130
Propylbenzene	90	70-130
4-Ethyltoluene	92	70-130
1,3,5-Trimethylbenzene	83	70-130
1,2,4-Trimethylbenzene	79	70-130
1,3-Dichlorobenzene	88	70-130
1,4-Dichlorobenzene	93	70-130
alpha-Chlorotoluene	91	70-130
1,2-Dichlorobenzene	93	70-130
1,2,4-Trichlorobenzene	120	70-130
Hexachlorobutadiene	128	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: LCSD

Lab ID#: 1608070-07BB

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/8/16 10:56 AM

Compound	%Recovery	Method Limits
Freon 12	103	70-130
Freon 114	106	70-130
Chloromethane	85	70-130
Vinyl Chloride	91	70-130
1,3-Butadiene	89	70-130
Bromomethane	104	70-130
Chloroethane	108	70-130
Freon 11	111	70-130
Ethanol	112	70-130
Freon 113	89	70-130
1,1-Dichloroethene	95	70-130
Acetone	84	70-130
2-Propanol	91	70-130
Carbon Disulfide	82	70-130
3-Chloropropene	117	70-130
Methylene Chloride	87	70-130
Methyl tert-butyl ether	88	70-130
trans-1,2-Dichloroethene	99	70-130
Hexane	85	70-130
1,1-Dichloroethane	93	70-130
2-Butanone (Methyl Ethyl Ketone)	93	70-130
cis-1,2-Dichloroethene	88	70-130
Tetrahydrofuran	70	70-130
Chloroform	92	70-130
1,1,1-Trichloroethane	97	70-130
Cyclohexane	93	70-130
Carbon Tetrachloride	95	70-130
2,2,4-Trimethylpentane	93	70-130
Benzene	94	70-130
1,2-Dichloroethane	104	70-130
Heptane	93	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	93	70-130
1,4-Dioxane	96	70-130
Bromodichloromethane	105	70-130
cis-1,3-Dichloropropene	87	70-130
4-Methyl-2-pentanone	95	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	90	70-130
1,1,2-Trichloroethane	92	70-130
Tetrachloroethene	107	70-130
2-Hexanone	89	70-130

Client Sample ID: LCSD

Lab ID#: 1608070-07BB

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/8/16 10:56 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	104	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	99	70-130
Ethyl Benzene	97	70-130
m,p-Xylene	99	70-130
o-Xylene	101	70-130
Styrene	104	70-130
Bromoform	107	70-130
Cumene	94	70-130
1,1,2,2-Tetrachloroethane	81	70-130
Propylbenzene	88	70-130
4-Ethyltoluene	89	70-130
1,3,5-Trimethylbenzene	79	70-130
1,2,4-Trimethylbenzene	77	70-130
1,3-Dichlorobenzene	84	70-130
1,4-Dichlorobenzene	87	70-130
alpha-Chlorotoluene	90	70-130
1,2-Dichlorobenzene	93	70-130
1,2,4-Trichlorobenzene	132 Q	70-130
Hexachlorobutadiene	135 Q	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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