

Air Toxics

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(916) 985-1000 FAX (916) 985-1020

Project Manager DAN MORRIS

Collected by: (Print and Sign) CHRIS HEINSOFT

Company MISSOURI DNR Email chris.heinsoft@dnr.mo.gov

Address PO BOX 1716 City JEFFERSON State MO Zip 65102

Phone 573-526-3915 Fax \_\_\_\_\_

**Project Info:**

P.O. # \_\_\_\_\_

Project # \_\_\_\_\_

Project Name BRIDGESTON LANDFILL

**Turn Around Time:**

Normal

Rush

**Lab Use Only**

Pressurized by: \_\_\_\_\_

Date: \_\_\_\_\_

Pressurization Gas: \_\_\_\_\_

specify N<sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum		
						Initial	Final	Receipt (psi)
01A	D1 (134657)	35290	11/19/13	105-1630	TO-15	-30	-5	
02A	D2 (134658)	32127	11/19/13	1130-1647	TO-15	-30	-5	
03A	U1 (134659)	34253	11/19/13	1150-1740	TO-15	-30	-4	
04A	U2 (134660)	25238	11/19/13	1210-1747	TO-15	-30	-45	

Relinquished by: (signature) Chris Heinsoft Date/Time 11/21/13 0800 Received by: (signature) [Signature] Date/Time 11/21/13 1415

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_ Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_ Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Lab Use Only Shipper Name 0119 Air Bill # \_\_\_\_\_ Temp (°C) NA Condition Seal Custody Seals Intact? Yes No None Work Order # 1311505

Notes: Sent via UPS Ground Tracking #: 1Z6727880345896268

12/20/2013

Mr. Dennis Schroeder  
Missouri Dept. of Natural Resources  
2710 West Main

Jefferson City MO 65109

Project Name: BRIDGETON LANDFILL

Project #:

Workorder #: 1311505R1

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 11/26/2013 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 Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner  
Project Manager

**WORK ORDER #: 1311505R1**

Work Order Summary

<b>CLIENT:</b>	Mr. Dennis Schroeder Missouri Dept. of Natural Resources 2710 West Main Jefferson City, MO 65109	<b>BILL TO:</b>	Accounts Payable Missouri Dept. of Natural Resources P.O Box 176 Jefferson City, MO 65102
<b>PHONE:</b>	573-526-4428	<b>P.O. #</b>	3ESP1301039
<b>FAX:</b>	573-526-3350	<b>PROJECT #</b>	BRIDGETON LANDFILL
<b>DATE RECEIVED:</b>	11/26/2013	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/16/2013		
<b>DATE REISSUED:</b>	12/20/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (134657)	Modified TO-15	2.6 "Hg	5.1 psi
02A	D2 (134658)	Modified TO-15	3.7 "Hg	5.2 psi
03A	U1 (134659)	Modified TO-15	2.6 "Hg	5.6 psi
04A	U2 (134660)	Modified TO-15	3.1 "Hg	5.1 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: 12/20/13

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-13-6, UT NELAP CA009332013-4, VA NELAP - 460197, WA NELAP - C935  
 Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.

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 - 9562  
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**LABORATORY NARRATIVE**  
**Modified TO-15**  
**Missouri Dept. of Natural Resources**  
**Workorder# 1311505R1**

Four 6 Liter Summa Canister (100% Certified) samples were received on November 26, 2013. 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.

The work order was reissued on 12/20/13 to correct identification of sample U2 (134660) due to laboratory transcription error.

**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.

The Relative Percent Difference (RPD) of the LCS/LCSD exceeded acceptance limits for Ethanol.

**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 (134657)**

**Lab ID#: 1311505R1-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.52	0.73	2.6
Freon 11	0.15	0.27	0.83	1.5
Ethanol	0.74	3.5	1.4	6.5
Acetone	0.74	2.6	1.8	6.2

**Client Sample ID: D2 (134658)**

**Lab ID#: 1311505R1-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.38	0.76	1.9
Freon 11	0.15	0.20	0.86	1.1
Ethanol	0.77	3.4	1.4	6.5
Acetone	0.77	2.6	1.8	6.1
Benzene	0.15	0.22	0.49	0.69
Toluene	0.15	0.36	0.58	1.4
Tetrachloroethene	0.15	0.44	1.0	3.0

**Client Sample ID: U1 (134659)**

**Lab ID#: 1311505R1-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.39	0.75	1.9
Freon 11	0.15	0.21	0.85	1.2
Ethanol	0.76	3.9	1.4	7.3
Acetone	0.76	16	1.8	39
Benzene	0.15	0.22	0.48	0.71
Toluene	0.15	0.39	0.57	1.4

**Client Sample ID: U2 (134660)**

**Lab ID#: 1311505R1-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: U2 (134660)**

**Lab ID#: 1311505R1-04A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	0.15	0.39	0.74	1.9
Freon 11	0.15	0.18	0.84	0.98
Ethanol	0.75	3.9	1.4	7.4
Acetone	0.75	1.7	1.8	4.1
Hexane	0.15	0.18	0.53	0.65
Benzene	0.15	0.21	0.48	0.68
Toluene	0.15	0.45	0.56	1.7

Client Sample ID: D1 (134657)

Lab ID#: 1311505R1-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c121119	Date of Collection:	11/19/13 4:30:00 PM
Dil. Factor:	1.48	Date of Analysis:	12/11/13 09:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.52	0.73	2.6
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.74	Not Detected	1.5	Not Detected
Vinyl Chloride	0.15	Not Detected	0.38	Not Detected
1,3-Butadiene	0.15	Not Detected	0.33	Not Detected
Bromomethane	0.74	Not Detected	2.9	Not Detected
Chloroethane	0.74	Not Detected	2.0	Not Detected
Freon 11	0.15	0.27	0.83	1.5
Ethanol	0.74	3.5	1.4	6.5
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Acetone	0.74	2.6	1.8	6.2
2-Propanol	0.74	Not Detected	1.8	Not Detected
Carbon Disulfide	0.74	Not Detected	2.3	Not Detected
3-Chloropropene	0.74	Not Detected	2.3	Not Detected
Methylene Chloride	0.30	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.53	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Hexane	0.15	Not Detected	0.52	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.60	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.74	Not Detected	2.2	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Tetrahydrofuran	0.74	Not Detected	2.2	Not Detected
Chloroform	0.15	Not Detected	0.72	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.81	Not Detected
Cyclohexane	0.15	Not Detected	0.51	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.93	Not Detected
2,2,4-Trimethylpentane	0.74	Not Detected	3.4	Not Detected
Benzene	0.15	Not Detected	0.47	Not Detected
1,2-Dichloroethane	0.15	Not Detected	0.60	Not Detected
Heptane	0.15	Not Detected	0.61	Not Detected
Trichloroethene	0.15	Not Detected	0.80	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.68	Not Detected
1,4-Dioxane	0.15	Not Detected	0.53	Not Detected
Bromodichloromethane	0.15	Not Detected	0.99	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.67	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.61	Not Detected
Toluene	0.15	Not Detected	0.56	Not Detected
trans-1,3-Dichloropropene	0.15	Not Detected	0.67	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.81	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.74	Not Detected	3.0	Not Detected





Air Toxics

Client Sample ID: D1 (134657)

Lab ID#: 1311505R1-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c121119	Date of Collection:	11/19/13 4:30:00 PM
Dil. Factor:	1.48	Date of Analysis:	12/11/13 09:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.1	Not Detected
Chlorobenzene	0.15	Not Detected	0.68	Not Detected
Ethyl Benzene	0.15	Not Detected	0.64	Not Detected
m,p-Xylene	0.15	Not Detected	0.64	Not Detected
o-Xylene	0.15	Not Detected	0.64	Not Detected
Styrene	0.15	Not Detected	0.63	Not Detected
Bromoform	0.15	Not Detected	1.5	Not Detected
Cumene	0.15	Not Detected	0.73	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.73	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.73	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.73	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.73	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.89	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.89	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.77	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.89	Not Detected
1,2,4-Trichlorobenzene	0.74	Not Detected UJ	5.5	Not Detected UJ
Hexachlorobutadiene	0.74	Not Detected UJ	7.9	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: D2 (134658)

Lab ID#: 1311505R1-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121208	Date of Collection:	11/19/13 4:47:00 PM
Dil. Factor:	1.54	Date of Analysis:	12/12/13 02:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.38	0.76	1.9
Freon 114	0.15	Not Detected	1.1	Not Detected
Chloromethane	0.77	Not Detected	1.6	Not Detected
Vinyl Chloride	0.15	Not Detected	0.39	Not Detected
1,3-Butadiene	0.15	Not Detected	0.34	Not Detected
Bromomethane	0.77	Not Detected	3.0	Not Detected
Chloroethane	0.77	Not Detected	2.0	Not Detected
Freon 11	0.15	0.20	0.86	1.1
Ethanol	0.77	3.4	1.4	6.5
Freon 113	0.15	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Acetone	0.77	2.6	1.8	6.1
2-Propanol	0.77	Not Detected	1.9	Not Detected
Carbon Disulfide	0.77	Not Detected	2.4	Not Detected
3-Chloropropene	0.77	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.56	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Hexane	0.15	Not Detected	0.54	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.62	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.77	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Tetrahydrofuran	0.77	Not Detected	2.3	Not Detected
Chloroform	0.15	Not Detected	0.75	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.84	Not Detected
Cyclohexane	0.15	Not Detected	0.53	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.97	Not Detected
2,2,4-Trimethylpentane	0.77	Not Detected	3.6	Not Detected
Benzene	0.15	0.22	0.49	0.69
1,2-Dichloroethane	0.15	Not Detected	0.62	Not Detected
Heptane	0.15	Not Detected	0.63	Not Detected
Trichloroethene	0.15	Not Detected	0.83	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.71	Not Detected
1,4-Dioxane	0.15	Not Detected	0.55	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.70	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.63	Not Detected
Toluene	0.15	0.36	0.58	1.4
trans-1,3-Dichloropropene	0.15	Not Detected	0.70	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.84	Not Detected
Tetrachloroethene	0.15	0.44	1.0	3.0
2-Hexanone	0.77	Not Detected	3.2	Not Detected

Client Sample ID: D2 (134658)

Lab ID#: 1311505R1-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121208	Date of Collection:	11/19/13 4:47:00 PM
Dil. Factor:	1.54	Date of Analysis:	12/12/13 02:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Chlorobenzene	0.15	Not Detected	0.71	Not Detected
Ethyl Benzene	0.15	Not Detected	0.67	Not Detected
m,p-Xylene	0.15	Not Detected	0.67	Not Detected
o-Xylene	0.15	Not Detected	0.67	Not Detected
Styrene	0.15	Not Detected	0.66	Not Detected
Bromoform	0.15	Not Detected	1.6	Not Detected
Cumene	0.15	Not Detected	0.76	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.76	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.76	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.76	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.76	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.80	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.92	Not Detected
1,2,4-Trichlorobenzene	0.77	Not Detected	5.7	Not Detected
Hexachlorobutadiene	0.77	Not Detected	8.2	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: U1 (134659)

Lab ID#: 1311505R1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121209	Date of Collection:	11/19/13 5:40:00 PM
Dil. Factor:	1.51	Date of Analysis:	12/12/13 03:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.39	0.75	1.9
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.76	Not Detected	1.6	Not Detected
Vinyl Chloride	0.15	Not Detected	0.38	Not Detected
1,3-Butadiene	0.15	Not Detected	0.33	Not Detected
Bromomethane	0.76	Not Detected	2.9	Not Detected
Chloroethane	0.76	Not Detected	2.0	Not Detected
Freon 11	0.15	0.21	0.85	1.2
Ethanol	0.76	3.9	1.4	7.3
Freon 113	0.15	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Acetone	0.76	16	1.8	39
2-Propanol	0.76	Not Detected	1.8	Not Detected
Carbon Disulfide	0.76	Not Detected	2.4	Not Detected
3-Chloropropene	0.76	Not Detected	2.4	Not Detected
Methylene Chloride	0.30	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.54	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Hexane	0.15	Not Detected	0.53	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.61	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.76	Not Detected	2.2	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Tetrahydrofuran	0.76	Not Detected	2.2	Not Detected
Chloroform	0.15	Not Detected	0.74	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.82	Not Detected
Cyclohexane	0.15	Not Detected	0.52	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.95	Not Detected
2,2,4-Trimethylpentane	0.76	Not Detected	3.5	Not Detected
Benzene	0.15	0.22	0.48	0.71
1,2-Dichloroethane	0.15	Not Detected	0.61	Not Detected
Heptane	0.15	Not Detected	0.62	Not Detected
Trichloroethene	0.15	Not Detected	0.81	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.70	Not Detected
1,4-Dioxane	0.15	Not Detected	0.54	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.62	Not Detected
Toluene	0.15	0.39	0.57	1.4
trans-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.82	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.76	Not Detected	3.1	Not Detected

Client Sample ID: U1 (134659)

Lab ID#: 1311505R1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121209	Date of Collection:	11/19/13 5:40:00 PM
Dil. Factor:	1.51	Date of Analysis:	12/12/13 03:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Chlorobenzene	0.15	Not Detected	0.70	Not Detected
Ethyl Benzene	0.15	Not Detected	0.66	Not Detected
m,p-Xylene	0.15	Not Detected	0.66	Not Detected
o-Xylene	0.15	Not Detected	0.66	Not Detected
Styrene	0.15	Not Detected	0.64	Not Detected
Bromoform	0.15	Not Detected	1.6	Not Detected
Cumene	0.15	Not Detected	0.74	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.74	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.74	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.74	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.74	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.78	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
1,2,4-Trichlorobenzene	0.76	Not Detected	5.6	Not Detected
Hexachlorobutadiene	0.76	Not Detected	8.0	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: U2 (134660)

Lab ID#: 1311505R1-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121210	Date of Collection:	11/19/13 5:47:00 PM
Dil. Factor:	1.50	Date of Analysis:	12/12/13 04:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.39	0.74	1.9
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.75	Not Detected	1.5	Not Detected
Vinyl Chloride	0.15	Not Detected	0.38	Not Detected
1,3-Butadiene	0.15	Not Detected	0.33	Not Detected
Bromomethane	0.75	Not Detected	2.9	Not Detected
Chloroethane	0.75	Not Detected	2.0	Not Detected
Freon 11	0.15	0.18	0.84	0.98
Ethanol	0.75	3.9	1.4	7.4
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Acetone	0.75	1.7	1.8	4.1
2-Propanol	0.75	Not Detected	1.8	Not Detected
Carbon Disulfide	0.75	Not Detected	2.3	Not Detected
3-Chloropropene	0.75	Not Detected	2.3	Not Detected
Methylene Chloride	0.30	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.54	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Hexane	0.15	0.18	0.53	0.65
1,1-Dichloroethane	0.15	Not Detected	0.61	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.75	Not Detected	2.2	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Tetrahydrofuran	0.75	Not Detected	2.2	Not Detected
Chloroform	0.15	Not Detected	0.73	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.82	Not Detected
Cyclohexane	0.15	Not Detected	0.52	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.94	Not Detected
2,2,4-Trimethylpentane	0.75	Not Detected	3.5	Not Detected
Benzene	0.15	0.21	0.48	0.68
1,2-Dichloroethane	0.15	Not Detected	0.61	Not Detected
Heptane	0.15	Not Detected	0.61	Not Detected
Trichloroethene	0.15	Not Detected	0.81	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.69	Not Detected
1,4-Dioxane	0.15	Not Detected	0.54	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.61	Not Detected
Toluene	0.15	0.45	0.56	1.7
trans-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.82	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.75	Not Detected	3.1	Not Detected



Air Toxics

Client Sample ID: U2 (134660)

Lab ID#: 1311505R1-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121210	Date of Collection:	11/19/13 5:47:00 PM
Dil. Factor:	1.50	Date of Analysis:	12/12/13 04:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Chlorobenzene	0.15	Not Detected	0.69	Not Detected
Ethyl Benzene	0.15	Not Detected	0.65	Not Detected
m,p-Xylene	0.15	Not Detected	0.65	Not Detected
o-Xylene	0.15	Not Detected	0.65	Not Detected
Styrene	0.15	Not Detected	0.64	Not Detected
Bromoform	0.15	Not Detected	1.6	Not Detected
Cumene	0.15	Not Detected	0.74	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.74	Not Detected
4-Ethyltoluene	0.15	Not Detected	0.74	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.74	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.74	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.78	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected	5.6	Not Detected
Hexachlorobutadiene	0.75	Not Detected	8.0	Not Detected

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

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



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1311505R1-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c121106	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/11/13 11:11 AM

Compound	Rot. 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#: 1311505R1-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c121106	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/11/13 11:11 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 UJ	3.7	Not Detected UJ
Hexachlorobutadiene	0.50	Not Detected UJ	5.3	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	88	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1311505R1-05B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121207	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/12/13 01:52 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



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1311505R1-05B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121207	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/12/13 01:52 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	96	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1311505R1-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c121102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/11/13 08:01 AM

Compound	%Recovery
Freon 12	100
Freon 114	102
Chloromethane	88
Vinyl Chloride	102
1,3-Butadiene	98
Bromomethane	118
Chloroethane	99
Freon 11	96
Ethanol	105
Freon 113	100
1,1-Dichloroethene	92
Acetone	92
2-Propanol	100
Carbon Disulfide	96
3-Chloropropene	104
Methylene Chloride	96
Methyl tert-butyl ether	107
trans-1,2-Dichloroethene	100
Hexane	102
1,1-Dichloroethane	95
2-Butanone (Methyl Ethyl Ketone)	97
cis-1,2-Dichloroethene	101
Tetrahydrofuran	99
Chloroform	98
1,1,1-Trichloroethane	96
Cyclohexane	105
Carbon Tetrachloride	86
2,2,4-Trimethylpentane	102
Benzene	95
1,2-Dichloroethane	96
Heptane	99
Trichloroethene	92
1,2-Dichloropropane	95
1,4-Dioxane	95
Bromodichloromethane	98
cis-1,3-Dichloropropene	99
4-Methyl-2-pentanone	104
Toluene	98
trans-1,3-Dichloropropene	98
1,1,2-Trichloroethane	103
Tetrachloroethene	101
2-Hexanone	104



Air Toxics

Client Sample ID: CCV

Lab ID#: 1311505R1-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c121102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/11/13 08:01 AM

Compound	%Recovery
Dibromochloromethane	100
1,2-Dibromoethane (EDB)	102
Chlorobenzene	101
Ethyl Benzene	101
m,p-Xylene	110
o-Xylene	107
Styrene	106
Bromoform	101
Cumene	102
1,1,2,2-Tetrachloroethane	94
Propylbenzene	98
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	96
1,2,4-Trimethylbenzene	92
1,3-Dichlorobenzene	83
1,4-Dichlorobenzene	92
alpha-Chlorotoluene	101
1,2-Dichlorobenzene	89
1,2,4-Trichlorobenzene	65 Q
Hexachlorobutadiene	64 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1311505R1-06B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/12/13 09:40 AM

Compound	%Recovery
Freon 12	80
Freon 114	84
Chloromethane	81
Vinyl Chloride	86
1,3-Butadiene	90
Bromomethane	88
Chloroethane	93
Freon 11	78
Ethanol	107
Freon 113	84
1,1-Dichloroethene	91
Acetone	72
2-Propanol	94
Carbon Disulfide	92
3-Chloropropene	105
Methylene Chloride	88
Methyl tert-butyl ether	97
trans-1,2-Dichloroethene	90
Hexane	98
1,1-Dichloroethane	84
2-Butanone (Methyl Ethyl Ketone)	98
cis-1,2-Dichloroethene	91
Tetrahydrofuran	98
Chloroform	83
1,1,1-Trichloroethane	85
Cyclohexane	100
Carbon Tetrachloride	90
2,2,4-Trimethylpentane	97
Benzene	81
1,2-Dichloroethane	76
Heptane	92
Trichloroethene	83
1,2-Dichloropropane	81
1,4-Dioxane	87
Bromodichloromethane	78
cis-1,3-Dichloropropene	90
4-Methyl-2-pentanone	92
Toluene	86
trans-1,3-Dichloropropene	86
1,1,2-Trichloroethane	85
Tetrachloroethene	83
2-Hexanone	96

Client Sample ID: CCV

Lab ID#: 1311505R1-06B

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>e121202</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 12/12/13 09:40 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Dibromochloromethane	82
1,2-Dibromoethane (EDB)	88
Chlorobenzene	81
Ethyl Benzene	87
m,p-Xylene	93
o-Xylene	95
Styrene	94
Bromoform	82
Cumene	94
1,1,2,2-Tetrachloroethane	79
Propylbenzene	87
4-Ethyltoluene	90
1,3,5-Trimethylbenzene	82
1,2,4-Trimethylbenzene	92
1,3-Dichlorobenzene	79
1,4-Dichlorobenzene	79
alpha-Chlorotoluene	89
1,2-Dichlorobenzene	80
1,2,4-Trichlorobenzene	78
Hexachlorobutadiene	76

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: LCS

Lab ID#: 1311505R1-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c121103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/11/13 09:09 AM

Compound	%Recovery	Method Limits
Freon 12	98	70-130
Freon 114	99	70-130
Chloromethane	86	70-130
Vinyl Chloride	101	70-130
1,3-Butadiene	96	70-130
Bromomethane	109	70-130
Chloroethane	99	70-130
Freon 11	93	70-130
Ethanol	101	70-130
Freon 113	113	70-130
1,1-Dichloroethene	110	70-130
Acetone	96	70-130
2-Propanol	99	70-130
Carbon Disulfide	89	70-130
3-Chloropropene	106	70-130
Methylene Chloride	104	70-130
Methyl tert-butyl ether	102	70-130
trans-1,2-Dichloroethene	84	70-130
Hexane	103	70-130
1,1-Dichloroethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	102	70-130
cis-1,2-Dichloroethene	114	70-130
Tetrahydrofuran	105	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	113	70-130
Carbon Tetrachloride	93	70-130
2,2,4-Trimethylpentane	97	70-130
Benzene	101	70-130
1,2-Dichloroethane	102	70-130
Heptane	106	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	101	70-130
1,4-Dioxane	104	70-130
Bromodichloromethane	106	70-130
cis-1,3-Dichloropropene	111	70-130
4-Methyl-2-pentanone	111	70-130
Toluene	98	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	102	70-130
Tetrachloroethene	100	70-130
2-Hexanone	105	70-130





Air Toxics

Client Sample ID: LCS

Lab ID#: 1311505R1-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c121103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/11/13 09:09 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	106	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	96	70-130
Ethyl Benzene	97	70-130
m,p-Xylene	101	70-130
o-Xylene	98	70-130
Styrene	98	70-130
Bromoform	103	70-130
Cumene	100	70-130
1,1,2,2-Tetrachloroethane	91	70-130
Propylbenzene	93	70-130
4-Ethyltoluene	92	70-130
1,3,5-Trimethylbenzene	82	70-130
1,2,4-Trimethylbenzene	76	70-130
1,3-Dichlorobenzene	76	70-130
1,4-Dichlorobenzene	82	70-130
alpha-Chlorotoluene	99	70-130
1,2-Dichlorobenzene	80	70-130
1,2,4-Trichlorobenzene	62 Q	70-130
Hexachlorobutadiene	64 Q	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	100	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1311505R1-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c121104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/11/13 09:50 AM

Compound	%Recovery	Method Limits
Freon 12	96	70-130
Freon 114	95	70-130
Chloromethane	82	70-130
Vinyl Chloride	101	70-130
1,3-Butadiene	97	70-130
Bromomethane	123	70-130
Chloroethane	106	70-130
Freon 11	98	70-130
Ethanol	134 Q	70-130
Freon 113	120	70-130
1,1-Dichloroethene	113	70-130
Acetone	105	70-130
2-Propanol	105	70-130
Carbon Disulfide	95	70-130
3-Chloropropene	116	70-130
Methylene Chloride	109	70-130
Methyl tert-butyl ether	110	70-130
trans-1,2-Dichloroethene	89	70-130
Hexane	109	70-130
1,1-Dichloroethane	100	70-130
2-Butanone (Methyl Ethyl Ketone)	106	70-130
cis-1,2-Dichloroethene	117	70-130
Tetrahydrofuran	103	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	113	70-130
Carbon Tetrachloride	93	70-130
2,2,4-Trimethylpentane	100	70-130
Benzene	100	70-130
1,2-Dichloroethane	98	70-130
Heptane	109	70-130
Trichloroethene	96	70-130
1,2-Dichloropropane	98	70-130
1,4-Dioxane	103	70-130
Bromodichloromethane	100	70-130
cis-1,3-Dichloropropene	107	70-130
4-Methyl-2-pentanone	112	70-130
Toluene	99	70-130
trans-1,3-Dichloropropene	99	70-130
1,1,2-Trichloroethane	105	70-130
Tetrachloroethene	104	70-130
2-Hexanone	113	70-130

Client Sample ID: LCSD

Lab ID#: 1311505R1-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c121104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/11/13 09:50 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	109	70-130
1,2-Dibromoethane (EDB)	104	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	113	70-130
o-Xylene	109	70-130
Styrene	112	70-130
Bromoform	107	70-130
Cumene	110	70-130
1,1,2,2-Tetrachloroethane	95	70-130
Propylbenzene	106	70-130
4-Ethyltoluene	108	70-130
1,3,5-Trimethylbenzene	101	70-130
1,2,4-Trimethylbenzene	97	70-130
1,3-Dichlorobenzene	91	70-130
1,4-Dichlorobenzene	99	70-130
alpha-Chlorotoluene	121	70-130
1,2-Dichlorobenzene	98	70-130
1,2,4-Trichlorobenzene	80	70-130
Hexachlorobutadiene	77	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	99	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: LCS

Lab ID#: 1311505R1-07B

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>e121203</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 12/12/13 10:39 AM</b>

<b>Compound</b>	<b>%Recovery</b>	<b>Method Limits</b>
Freon 12	86	70-130
Freon 114	90	70-130
Chloromethane	86	70-130
Vinyl Chloride	93	70-130
1,3-Butadiene	96	70-130
Bromomethane	92	70-130
Chloroethane	99	70-130
Freon 11	83	70-130
Ethanol	97	70-130
Freon 113	100	70-130
1,1-Dichloroethene	110	70-130
Acetone	75	70-130
2-Propanol	102	70-130
Carbon Disulfide	85	70-130
3-Chloropropene	113	70-130
Methylene Chloride	100	70-130
Methyl tert-butyl ether	102	70-130
trans-1,2-Dichloroethene	83	70-130
Hexane	108	70-130
1,1-Dichloroethane	92	70-130
2-Butanone (Methyl Ethyl Ketone)	102	70-130
cis-1,2-Dichloroethene	110	70-130
Tetrahydrofuran	107	70-130
Chloroform	91	70-130
1,1,1-Trichloroethane	92	70-130
Cyclohexane	106	70-130
Carbon Tetrachloride	116	70-130
2,2,4-Trimethylpentane	102	70-130
Benzene	87	70-130
1,2-Dichloroethane	82	70-130
Heptane	102	70-130
Trichloroethene	88	70-130
1,2-Dichloropropane	88	70-130
1,4-Dioxane	100	70-130
Bromodichloromethane	88	70-130
cis-1,3-Dichloropropene	101	70-130
4-Methyl-2-pentanone	94	70-130
Toluene	91	70-130
trans-1,3-Dichloropropene	86	70-130
1,1,2-Trichloroethane	88	70-130
Tetrachloroethene	89	70-130
2-Hexanone	106	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1311505R1-07B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/12/13 10:39 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	91	70-130
1,2-Dibromoethane (EDB)	91	70-130
Chlorobenzene	84	70-130
Ethyl Benzene	89	70-130
m,p-Xylene	99	70-130
o-Xylene	97	70-130
Styrene	99	70-130
Bromoform	93	70-130
Cumene	100	70-130
1,1,2,2-Tetrachloroethane	83	70-130
Propylbenzene	93	70-130
4-Ethyltoluene	99	70-130
1,3,5-Trimethylbenzene	87	70-130
1,2,4-Trimethylbenzene	95	70-130
1,3-Dichlorobenzene	84	70-130
1,4-Dichlorobenzene	84	70-130
alpha-Chlorotoluene	102	70-130
1,2-Dichlorobenzene	84	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	95	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: LCSD

Lab ID#: 1311505R1-07BB

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/12/13 11:28 AM

Compound	%Recovery	Method Limits
Freon 12	88	70-130
Freon 114	93	70-130
Chloromethane	89	70-130
Vinyl Chloride	95	70-130
1,3-Butadiene	98	70-130
Bromomethane	96	70-130
Chloroethane	100	70-130
Freon 11	84	70-130
Ethanol	105	70-130
Freon 113	104	70-130
1,1-Dichloroethene	118	70-130
Acetone	78	70-130
2-Propanol	106	70-130
Carbon Disulfide	86	70-130
3-Chloropropene	116	70-130
Methylene Chloride	104	70-130
Methyl tert-butyl ether	105	70-130
trans-1,2-Dichloroethene	86	70-130
Hexane	111	70-130
1,1-Dichloroethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	108	70-130
cis-1,2-Dichloroethene	113	70-130
Tetrahydrofuran	109	70-130
Chloroform	92	70-130
1,1,1-Trichloroethane	94	70-130
Cyclohexane	111	70-130
Carbon Tetrachloride	121	70-130
2,2,4-Trimethylpentane	105	70-130
Benzene	88	70-130
1,2-Dichloroethane	83	70-130
Heptane	100	70-130
Trichloroethene	88	70-130
1,2-Dichloropropane	90	70-130
1,4-Dioxane	99	70-130
Bromodichloromethane	87	70-130
cis-1,3-Dichloropropene	101	70-130
4-Methyl-2-pentanone	96	70-130
Toluene	92	70-130
trans-1,3-Dichloropropene	85	70-130
1,1,2-Trichloroethane	86	70-130
Tetrachloroethene	87	70-130
2-Hexanone	105	70-130

Client Sample ID: LCSD

Lab ID#: 1311505R1-07BB

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e121204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/12/13 11:28 AM

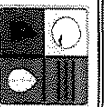
Compound	%Recovery	Method Limits
Dibromochloromethane	90	70-130
1,2-Dibromoethane (EDB)	91	70-130
Chlorobenzene	84	70-130
Ethyl Benzene	90	70-130
m,p-Xylene	98	70-130
o-Xylene	97	70-130
Styrene	100	70-130
Bromoform	92	70-130
Cumene	101	70-130
1,1,2,2-Tetrachloroethane	82	70-130
Propylbenzene	93	70-130
4-Ethyltoluene	96	70-130
1,3,5-Trimethylbenzene	84	70-130
1,2,4-Trimethylbenzene	94	70-130
1,3-Dichlorobenzene	81	70-130
1,4-Dichlorobenzene	83	70-130
alpha-Chlorotoluene	99	70-130
1,2-Dichlorobenzene	84	70-130
1,2,4-Trichlorobenzene	87	70-130
Hexachlorobutadiene	84	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	98	70-130



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD



Description of Delivery  
Total No. of Containers: 4  
Carrier: UPS GROUND  
Tape sealed and initialed  
 Shipped  
 Hand Delivered  
LAB USE ONLY!  
LABORATORY ID: \_\_\_\_\_

Location: \_\_\_\_\_  
TEXAS 126727880345896268

Collector's Name: CHRIS HELMSOTH

Affiliation: KCRO NERO SERO SLRO SWRO WPP DGLS HWP  
(circle one) ESP MODOT  
MDC DHSS Other: \_\_\_\_\_

Sample Number	Sample Collected	Analyses Requested	Disinfect. Type	Field Parameters (include units)	Matrix (circle one)	Container Type	Preservative Type	Number of Containers
134657 (Sample A) For Lab Use Only	Date: 11/19/13 Time: 11:05- 1630	TO-15	(circle one) <input checked="" type="radio"/> None Cl <sub>2</sub> UV Ozone Other:	D.O. Flow pH Cond. Temp. Other:	Water Soil Organic Sludge Other:			
134658 (Sample B) For Lab Use Only	Date: 11/19/13 Time: 11:30- 1647	TO-15	(circle one) <input checked="" type="radio"/> None Cl <sub>2</sub> UV Ozone Other:	D.O. Flow pH Cond. Temp. Other:	Water Soil Organic Sludge Other:			
134659 (Sample C) For Lab Use Only	Date: 11/19/13 Time: 11:50	TO-15	(circle one) <input checked="" type="radio"/> None Cl <sub>2</sub> UV Ozone Other:	D.O. Flow pH Cond. Temp. Other:	Water Soil Organic Sludge Other:			
134660 (Sample D) For Lab Use Only	Date: 11/19/13 Time: 12:10	TO-15	(circle one) <input checked="" type="radio"/> None Cl <sub>2</sub> UV Ozone Other:	D.O. Flow pH Cond. Temp. Other:	Water Soil Organic Sludge Other:			
Relinquished By: _____ Date: _____		Received By: <u>MAK</u> Date: <u>11/26/13</u>		Date: <u>11/26/13</u>		Time: <u>10:15</u>		
Relinquished By: _____ Date: _____		Received By: _____ Date: _____		Date: _____		Time: _____		
Relinquished By: _____ Date: _____		Received By: _____ Date: _____		Date: _____		Time: _____		

MDNR Environmental Services Program  
2710 West Main, Jefferson City, MO 65109 (573) 526-3315  
Custody Seal Intact? Y N None Temp  
Page 1 of 2





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD



Sample A	LDPR: FEABL	Site/Study Name: BRIDGETON SANITARY LANDFILL	County: ST. LOUIS	Sample Reference ID: D1
Facility ID: 118912				
Sample Comment (where and how the sample was collected): D1 Canister 35290, Flow 35290, MAP 33-DODGE MOVING + STORAGE, MILD ODOR AT START START @ 11:05, -30 in Hg. MODERATE ODOORS WHITE SAMPLING. END 16:30 @ -5 in Hg.				
GPS Coordinates (UTM Zone 15 NAD83 Only)	X Easting: 721297	Y Northing: 4294010	Accuracy: 2.56	(circle one) EPE (meters) PDOP
Sample B	LDPR: FEABL	Site/Study Name: BRIDGETON SANITARY LANDFILL	County: ST. LOUIS	Sample Reference ID: D2
Facility ID: 118912				
Sample Comment (where and how the sample was collected): D2 Canister 32127, Flow 32127, MAP 2-AAATRAILER SERVICES, SLIGHT ODOR AT START. START @ 11:30, -30 in Hg. END 16:47 @ -5 in Hg. NO odor.				
GPS Coordinates (UTM Zone 15 NAD83 Only)	X Easting: 721444	Y Northing: 4294922	Accuracy: 2.04	(circle one) EPE (meters) PDOP

Sample C	LDPR: FEABL	Site/Study Name: BRIDGETON SANITARY LANDFILL	County: ST. LOUIS	Sample Reference ID: U1
Facility ID: 118912				
Sample Comment (where and how the sample was collected): U1 Canister 34253, Flow 34253, MAP 34-NOTRUBA ROCK ROAD TRAILER, NO ODOR AT START. START @ 11:50, -30 in Hg. END 17:40 @ -4 in Hg.				
GPS Coordinates (UTM Zone 15 NAD83 Only)	X Easting: 722887	Y Northing: 4293466	Accuracy: 2.01	(circle one) EPE (meters) PDOP

Sample D	LDPR: FEABL	Site/Study Name: BRIDGETON SANITARY LANDFILL	County: ST. LOUIS	Sample Reference ID: U2
Facility ID: 118912				
Sample Comment (where and how the sample was collected): U2 Canister 25238, Flow 25238, MAP 25-FR SERVICES CORP. NO ODOR AT START. START @ 12:10, -30 in Hg. END 17:47 @ -4.5 in Hg. Waterline excavation 70 yards opened. began early during sampling.				
GPS Coordinates (UTM Zone 15 NAD83 Only)	X Easting: 722290	Y Northing: 4293326	Accuracy: 2.56	(circle one) EPE (meters) PDOP

Sample Event Type: (circle one)	Sample Type: (circle one)
Bypass/SSO	Air
Complaint	Container
Emergency Response	Discharge
Investigation	Groundwater
Monitoring	Organic
Special Project	Sediment
	Sludge
	Drinking Water Supply

Remarks: **SONNY, VERY LIGHT WINDS ALL DAY-SE @ 6-9 mph PER NOAA WEBSITE. STRONGEST ODOORS AT D1 (DODGE MOVING). SOME ODOR AT D2 BUT ONLY SLIGHT. -CH 11/20/13**