



Air Toxics

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager Michael Kerns

Collected by: (Print and Sign) Teess Tavaary

Company MO DNR

Email michael.kerns@eurofins.com

Address PO Box 176

City Johnson City State MO Zip 65102

Phone (573) 526-3918

Fax

Project Info:

P.O. # 38SP160440

Project #

Project Name Baqtek Landfill

Turn Around Time:

Normal

Rush

Lab Use Only

Pressurized by:

Date:

Pressurization Gas:

N2 He

specify

Lab I.D. Field Sample I.D. (Location)

Can #

Date of Collection

Time of Collection

Analyses Requested

Canister Pressure/Vacuum

Initial

Final

Final (psi)

01A D1 (15H701)

0633

12/15/15

0840-1249

TO-15

-30

-6

02A D2 (15H700)

30888

12/15/15

0855-0909

TO-15

-30

-5.5

03A V1 (15H699)

661296

12/15/15

0909-0933

TO-15

-30

-6.5

N/A

05704

-

-

Insufficient vacuum - do not analyze

-25.5

-

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Notes: Shipped via UPS.

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Tracking # 1ZK04AW60395601330

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Notes:

Work Order # 1512412

Shipper Name

Air Bill #

Temp (°C)

Condition

Custody Seals Intact?

Work Order #

Use Only

PS

NA

Good

Yes No None

1512412

1/2/2016

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1512412

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 12/21/2015 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 #: 1512412

Work Order Summary

CLIENT:	Mr. Dennis Schroeder Missouri Dept. of Natural Resources 2710 West Main Jefferson City, MO 65109	BILL TO:	Accounts Payable Missouri Dept. of Natural Resources P.O Box 176 Jefferson City, MO 65102
PHONE:	573-526-4428	P.O. #	3ESP160440
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	12/21/2015	CONTACT:	Brian Whittaker
DATE COMPLETED:	01/02/2016		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (154701)	Modified TO-15	3.9 "Hg	5.3 psi
02A	D2 (154700)	Modified TO-15	4.7 "Hg	5.3 psi
03A	U1 (154699)	Modified TO-15	4.5 "Hg	5 psi
04A	Lab Blank	Modified TO-15	NA	NA
05A	CCV	Modified TO-15	NA	NA
06A	LCS	Modified TO-15	NA	NA
06AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 01/02/16

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

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

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LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1512412

Three 6 Liter Summa Canister (100% Certified) samples were received on December 21, 2015. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

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

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

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in CCV analyses have not been flagged.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

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

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

Client Sample ID: D1 (154701)

Lab ID#: 1512412-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.51	0.77	2.5
Freon 11	0.16	0.24	0.88	1.4
Ethanol	0.78	2.2	1.5	4.1
Acetone	0.78	2.4	1.8	5.8
2-Propanol	0.78	0.85	1.9	2.1
Methylene Chloride	0.31	0.70	1.1	2.4
Hexane	0.16	0.28	0.55	1.0
Benzene	0.16	0.18	0.50	0.58
Toluene	0.16	0.42	0.59	1.6

Client Sample ID: D2 (154700)

Lab ID#: 1512412-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.16	0.24	0.90	1.3
Ethanol	0.80	1.5	1.5	2.9
Acetone	0.80	3.0	1.9	7.1
Hexane	0.16	0.22	0.57	0.77
Benzene	0.16	0.17	0.51	0.55
Toluene	0.16	0.25	0.61	0.93

Client Sample ID: U1 (154699)

Lab ID#: 1512412-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.54	0.78	2.7
Freon 11	0.16	0.26	0.89	1.4
Ethanol	0.79	2.7	1.5	5.1
Acetone	0.79	2.4	1.9	5.7
Hexane	0.16	0.56	0.56	2.0
Benzene	0.16	0.19	0.50	0.62
Heptane	0.16	0.30	0.65	1.2
Toluene	0.16	0.32	0.60	1.2

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

Client Sample ID: U1 (154699)

Lab ID#: 1512412-03A



Air Toxics

Client Sample ID: D1 (154701)

Lab ID#: 1512412-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122312	Date of Collection:	12/15/15 2:09:00 PM
Dil. Factor:	1.56	Date of Analysis:	12/23/15 03:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.51	0.77	2.5
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.78	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.34	Not Detected
Bromomethane	0.78	Not Detected	3.0	Not Detected
Chloroethane	0.78	Not Detected	2.0	Not Detected
Freon 11	0.16	0.24	0.88	1.4
Ethanol	0.78	2.2	1.5	4.1
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Acetone	0.78	2.4	1.8	5.8
2-Propanol	0.78	0.85	1.9	2.1
Carbon Disulfide	0.78	Not Detected	2.4	Not Detected
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	0.70	1.1	2.4
Methyl tert-butyl ether	0.16	Not Detected	0.56	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Hexane	0.16	0.28	0.55	1.0
1,1-Dichloroethane	0.16	Not Detected	0.63	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Tetrahydrofuran	0.78	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.76	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.85	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.98	Not Detected
2,2,4-Trimethylpentane	0.78	Not Detected	3.6	Not Detected
Benzene	0.16	0.18	0.50	0.58
1,2-Dichloroethane	0.16	Not Detected	0.63	Not Detected
Heptane	0.16	Not Detected	0.64	Not Detected
Trichloroethene	0.16	Not Detected	0.84	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
1,4-Dioxane	0.16	Not Detected	0.56	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.71	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.64	Not Detected
Toluene	0.16	0.42	0.59	1.6
trans-1,3-Dichloropropene	0.16	Not Detected	0.71	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.85	Not Detected
Tetrachloroethene	0.16	Not Detected	1.0	Not Detected
2-Hexanone	0.78	Not Detected	3.2	Not Detected



Client Sample ID: D1 (154701)

Lab ID#: 1512412-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122312	Date of Collection:	12/15/15 2:09:00 PM
Dil. Factor:	1.56	Date of Analysis:	12/23/15 03:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.72	Not Detected
Ethyl Benzene	0.16	Not Detected	0.68	Not Detected
m,p-Xylene	0.16	Not Detected	0.68	Not Detected
o-Xylene	0.16	Not Detected	0.68	Not Detected
Styrene	0.16	Not Detected	0.66	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.77	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.77	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.77	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.77	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.77	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.81	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,2,4-Trichlorobenzene	0.78	Not Detected	5.8	Not Detected
Hexachlorobutadiene	0.78	Not Detected	8.3	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: D2 (154700)

Lab ID#: 1512412-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122313	Date of Collection:	12/15/15 2:17:00 PM
Dil. Factor:	1.61	Date of Analysis:	12/23/15 04:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	Not Detected	0.80	Not Detected
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	Not Detected	1.7	Not Detected
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.24	0.90	1.3
Ethanol	0.80	1.5	1.5	2.9
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	3.0	1.9	7.1
2-Propanol	0.80	Not Detected	2.0	Not Detected
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Hexane	0.16	0.22	0.57	0.77
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.79	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Cyclohexane	0.16	Not Detected	0.55	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.80	Not Detected	3.8	Not Detected
Benzene	0.16	0.17	0.51	0.55
1,2-Dichloroethane	0.16	Not Detected	0.65	Not Detected
Heptane	0.16	Not Detected	0.66	Not Detected
Trichloroethene	0.16	Not Detected	0.86	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.74	Not Detected
1,4-Dioxane	0.16	Not Detected	0.58	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.66	Not Detected
Toluene	0.16	0.25	0.61	0.93
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.80	Not Detected	3.3	Not Detected



Client Sample ID: D2 (154700)

Lab ID#: 1512412-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122313	Date of Collection:	12/15/15 2:17:00 PM
Dil. Factor:	1.61	Date of Analysis:	12/23/15 04:04 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	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	Not Detected	0.70	Not Detected
o-Xylene	0.16	Not Detected	0.70	Not Detected
Styrene	0.16	Not Detected	0.68	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.79	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.79	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.79	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.83	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.6	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: U1 (154699)

Lab ID#: 1512412-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122314	Date of Collection:	12/15/15 2:33:00 PM
Dil. Factor:	1.58	Date of Analysis:	12/23/15 04:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.54	0.78	2.7
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.79	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.79	Not Detected	3.1	Not Detected
Chloroethane	0.79	Not Detected	2.1	Not Detected
Freon 11	0.16	0.26	0.89	1.4
Ethanol	0.79	2.7	1.5	5.1
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.79	2.4	1.9	5.7
2-Propanol	0.79	Not Detected	1.9	Not Detected
Carbon Disulfide	0.79	Not Detected	2.5	Not Detected
3-Chloropropene	0.79	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
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	0.56	0.56	2.0
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.79	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.77	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.99	Not Detected
2,2,4-Trimethylpentane	0.79	Not Detected	3.7	Not Detected
Benzene	0.16	0.19	0.50	0.62
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Heptane	0.16	0.30	0.65	1.2
Trichloroethene	0.16	Not Detected	0.85	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.73	Not Detected
1,4-Dioxane	0.16	Not Detected	0.57	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.65	Not Detected
Toluene	0.16	0.32	0.60	1.2
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.79	Not Detected	3.2	Not Detected

Client Sample ID: U1 (154699)

Lab ID#: 1512412-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122314	Date of Collection:	12/15/15 2:33:00 PM
Dil. Factor:	1.58	Date of Analysis:	12/23/15 04:43 PM

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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1512412-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/23/15 11:17 AM

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

Client Sample ID: Lab Blank

Lab ID#: 1512412-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/23/15 11:17 AM

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

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1512412-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/23/15 08:06 AM

Compound	%Recovery
Freon 12	107
Freon 114	109
Chloromethane	101
Vinyl Chloride	106
1,3-Butadiene	107
Bromomethane	133 Q
Chloroethane	108
Freon 11	104
Ethanol	107
Freon 113	101
1,1-Dichloroethene	110
Acetone	102
2-Propanol	97
Carbon Disulfide	106
3-Chloropropene	109
Methylene Chloride	105
Methyl tert-butyl ether	109
trans-1,2-Dichloroethene	105
Hexane	109
1,1-Dichloroethane	103
2-Butanone (Methyl Ethyl Ketone)	107
cis-1,2-Dichloroethene	109
Tetrahydrofuran	107
Chloroform	103
1,1,1-Trichloroethane	102
Cyclohexane	108
Carbon Tetrachloride	114
2,2,4-Trimethylpentane	107
Benzene	104
1,2-Dichloroethane	103
Heptane	109
Trichloroethene	109
1,2-Dichloropropane	106
1,4-Dioxane	113
Bromodichloromethane	113
cis-1,3-Dichloropropene	111
4-Methyl-2-pentanone	114
Toluene	108
trans-1,3-Dichloropropene	114
1,1,2-Trichloroethane	107
Tetrachloroethene	109
2-Hexanone	111



Air Toxics

Client Sample ID: CCV

Lab ID#: 1512412-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/23/15 08:06 AM

Compound	%Recovery
Dibromochloromethane	116
1,2-Dibromoethane (EDB)	112
Chlorobenzene	108
Ethyl Benzene	110
m,p-Xylene	108
o-Xylene	112
Styrene	109
Bromoform	119
Cumene	111
1,1,2,2-Tetrachloroethane	108
Propylbenzene	101
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	108
1,2,4-Trimethylbenzene	109
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	95
alpha-Chlorotoluene	114
1,2-Dichlorobenzene	101
1,2,4-Trichlorobenzene	85
Hexachlorobutadiene	80

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130



Client Sample ID: LCS

Lab ID#: 1512412-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/23/15 08:54 AM

Compound	%Recovery	Method Limits
Freon 12	111	70-130
Freon 114	117	70-130
Chloromethane	103	70-130
Vinyl Chloride	111	70-130
1,3-Butadiene	106	70-130
Bromomethane	141 Q	70-130
Chloroethane	109	70-130
Freon 11	109	70-130
Ethanol	113	70-130
Freon 113	101	70-130
1,1-Dichloroethene	110	70-130
Acetone	102	70-130
2-Propanol	100	70-130
Carbon Disulfide	97	70-130
3-Chloropropene	101	70-130
Methylene Chloride	105	70-130
Methyl tert-butyl ether	108	70-130
trans-1,2-Dichloroethene	109	70-130
Hexane	110	70-130
1,1-Dichloroethane	105	70-130
2-Butanone (Methyl Ethyl Ketone)	108	70-130
cis-1,2-Dichloroethene	106	70-130
Tetrahydrofuran	106	70-130
Chloroform	105	70-130
1,1,1-Trichloroethane	102	70-130
Cyclohexane	112	70-130
Carbon Tetrachloride	94	70-130
2,2,4-Trimethylpentane	107	70-130
Benzene	104	70-130
1,2-Dichloroethane	100	70-130
Heptane	104	70-130
Trichloroethene	107	70-130
1,2-Dichloropropane	106	70-130
1,4-Dioxane	109	70-130
Bromodichloromethane	115	70-130
cis-1,3-Dichloropropene	103	70-130
4-Methyl-2-pentanone	113	70-130
Toluene	106	70-130
trans-1,3-Dichloropropene	115	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	110	70-130
2-Hexanone	112	70-130

Client Sample ID: LCS

Lab ID#: 1512412-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/23/15 08:54 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	115	70-130
1,2-Dibromoethane (EDB)	113	70-130
Chlorobenzene	108	70-130
Ethyl Benzene	114	70-130
m,p-Xylene	113	70-130
o-Xylene	120	70-130
Styrene	112	70-130
Bromoform	119	70-130
Cumene	115	70-130
1,1,2,2-Tetrachloroethane	109	70-130
Propylbenzene	107	70-130
4-Ethyltoluene	102	70-130
1,3,5-Trimethylbenzene	107	70-130
1,2,4-Trimethylbenzene	106	70-130
1,3-Dichlorobenzene	103	70-130
1,4-Dichlorobenzene	101	70-130
alpha-Chlorotoluene	126	70-130
1,2-Dichlorobenzene	104	70-130
1,2,4-Trichlorobenzene	106	70-130
Hexachlorobutadiene	100	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1512412-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122304	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/23/15 09:40 AM

Compound	%Recovery	Method Limits
Freon 12	110	70-130
Freon 114	113	70-130
Chloromethane	102	70-130
Vinyl Chloride	110	70-130
1,3-Butadiene	105	70-130
Bromomethane	144 Q	70-130
Chloroethane	113	70-130
Freon 11	111	70-130
Ethanol	117	70-130
Freon 113	103	70-130
1,1-Dichloroethene	111	70-130
Acetone	103	70-130
2-Propanol	100	70-130
Carbon Disulfide	97	70-130
3-Chloropropene	101	70-130
Methylene Chloride	106	70-130
Methyl tert-butyl ether	108	70-130
trans-1,2-Dichloroethene	113	70-130
Hexane	110	70-130
1,1-Dichloroethane	106	70-130
2-Butanone (Methyl Ethyl Ketone)	108	70-130
cis-1,2-Dichloroethene	107	70-130
Tetrahydrofuran	107	70-130
Chloroform	105	70-130
1,1,1-Trichloroethane	103	70-130
Cyclohexane	111	70-130
Carbon Tetrachloride	95	70-130
2,2,4-Trimethylpentane	111	70-130
Benzene	103	70-130
1,2-Dichloroethane	102	70-130
Heptane	104	70-130
Trichloroethene	107	70-130
1,2-Dichloropropane	105	70-130
1,4-Dioxane	105	70-130
Bromodichloromethane	112	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	112	70-130
Toluene	108	70-130
trans-1,3-Dichloropropene	113	70-130
1,1,2-Trichloroethane	105	70-130
Tetrachloroethene	107	70-130
2-Hexanone	109	70-130



Client Sample ID: LCSD

Lab ID#: 1512412-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20122304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/23/15 09:40 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	110	70-130
Chlorobenzene	106	70-130
Ethyl Benzene	112	70-130
m,p-Xylene	110	70-130
o-Xylene	114	70-130
Styrene	111	70-130
Bromoform	115	70-130
Cumene	110	70-130
1,1,2,2-Tetrachloroethane	106	70-130
Propylbenzene	103	70-130
4-Ethyltoluene	97	70-130
1,3,5-Trimethylbenzene	102	70-130
1,2,4-Trimethylbenzene	101	70-130
1,3-Dichlorobenzene	98	70-130
1,4-Dichlorobenzene	95	70-130
alpha-Chlorotoluene	121	70-130
1,2-Dichlorobenzene	100	70-130
1,2,4-Trichlorobenzene	98	70-130
Hexachlorobutadiene	91	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130