



Air Toxics

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager Michael Paris

Collected by: (Print and Sign) Michael Paris

Company MPNR

Address PO Box 176

City Jefferson

State MO

Zip 65102

Phone (573) 526-3918

Fax

Project Info:

P.O. # 353P400007

Project #

Project Name Brigden LF

Turn Around Time:

Normal

Rush

Lab Use Only
Pressurized by:

Date:

Pressurization Gas:

N₂ He

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

Can #

Date of Collection

Time of Collection

Analyses Requested

Canister Pressure/Vacuum

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum
01A	W1 (151775)	4353	3/5/15	1050-1520	To-15	-20 -5.5
02A	W2 (151774)	34410	3/5/15	1100-1530	To-15	-30 -7
03A	D1 (151773)	34322	3/5/15	1110-1540	To-15	-30 -5
04A	D2 (151772)	1026	3/5/15	115-1545	To-15	-20 -7

Relinquished by: (signature)

Date/Time

Received by: (signature)

Date/Time

Notes:

Shipped via UPS
Tracking # 1Z6727EB0343143146

Relinquished by: (signature)

Date/Time

Received by: (signature)

Date/Time

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Shipper Name

Air Bill #

Temp (°C)

Condition

Custody Seals Intact?

Work Order #

Lab Use Only

UR3

NA

Good

Yes No None

1503233

4/2/2015

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1503365

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 3/20/2015 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 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: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker
Project Manager

WORK ORDER #: 1503365

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. #	3ESP4000007
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	03/20/2015	CONTACT:	Brian Whittaker
DATE COMPLETED:	04/02/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	U1 (151771)	Modified TO-15	5.1 "Hg	5.3 psi
02A	U2 (151770)	Modified TO-15	4.5 "Hg	4.9 psi
03A	D1 (151769)	Modified TO-15	5.3 "Hg	5.1 psi
04A	D2 (151768)	Modified TO-15	5.5 "Hg	4.9 psi
05A	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 04/02/15

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 Low Level
Missouri Dept. of Natural Resources
Workorder# 1503365

Four 6 Liter Summa Canister (100% Certified) samples were received on March 20, 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

Due to the linear calibration range of the instrument, the reporting limit for Ethanol was raised from 0.50 ppbv to 1.0 ppbv.

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

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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

Client Sample ID: U1 (151771)

Lab ID#: 1503365-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.44	0.81	2.2
Freon 11	0.16	0.20	0.92	1.1
Ethanol	1.6	2.4	3.1	4.6
Acetone	0.82	4.6	1.9	11
2-Propanol	0.82	1.4	2.0	3.3
Methylene Chloride	0.33	1.1	1.1	3.7
Cyclohexane	0.16	0.19	0.56	0.65
4-Methyl-2-pentanone	0.16	0.19	0.67	0.80
Toluene	0.16	4.1	0.62	15

Client Sample ID: U2 (151770)

Lab ID#: 1503365-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.38	0.78	1.9
Freon 11	0.16	0.19	0.88	1.1
Acetone	0.78	2.3	1.9	5.6

Client Sample ID: D1 (151769)

Lab ID#: 1503365-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.81	2.0
Freon 11	0.16	0.19	0.92	1.0
Ethanol	1.6	1.8	3.1	3.3
Acetone	0.82	2.1	1.9	5.1
Benzene	0.16	0.17	0.52	0.54
Toluene	0.16	0.20	0.62	0.74

Client Sample ID: D2 (151768)

Lab ID#: 1503365-04A

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

Client Sample ID: D2 (151768)

Lab ID#: 1503365-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.43	0.81	2.1
Freon 11	0.16	0.18	0.92	1.0
Ethanol	1.6	4.9	3.1	9.3
Acetone	0.82	2.9	1.9	7.0
2-Propanol	0.82	1.0	2.0	2.5
Benzene	0.16	0.49	0.52	1.6
Toluene	0.16	0.29	0.61	1.1



Air Toxics

Client Sample ID: U1 (151771)

Lab ID#: 1503365-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032318	Date of Collection:	3/13/15 3:31:00 PM
Dil. Factor:	1.64	Date of Analysis:	3/24/15 06:50 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.44	0.81	2.2
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	Not Detected	1.7	Not Detected
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	0.20	0.92	1.1
Ethanol	1.6	2.4	3.1	4.6
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	4.6	1.9	11
2-Propanol	0.82	1.4	2.0	3.3
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	1.1	1.1	3.7
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	0.19	0.56	0.65
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	Not Detected	0.52	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	Not Detected	0.67	Not Detected
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	0.19	0.67	0.80
Toluene	0.16	4.1	0.62	15
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	Not Detected	3.4	Not Detected



Air Toxics

Client Sample ID: U1 (151771)

Lab ID#: 1503365-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032318	Date of Collection: 3/13/15 3:31:00 PM
Dil. Factor:	1.64	Date of Analysis: 3/24/15 06:50 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
Styrene	0.16	Not Detected	0.70	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.81	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.81	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.81	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: U2 (151770)

Lab ID#: 1503365-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032319	Date of Collection:	3/13/15 3:38:00 PM
Dil. Factor:	1.57	Date of Analysis:	3/24/15 07:30 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.38	0.78	1.9
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	0.35	Not Detected
Bromomethane	0.78	Not Detected	3.0	Not Detected
Chloroethane	0.78	Not Detected	2.1	Not Detected
Freon 11	0.16	0.19	0.88	1.1
Ethanol	1.6	Not Detected	3.0	Not Detected
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Acetone	0.78	2.3	1.9	5.6
2-Propanol	0.78	Not Detected	1.9	Not Detected
Carbon Disulfide	0.78	Not Detected	2.4	Not Detected
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	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	0.62	Not Detected
Hexane	0.16	Not Detected	0.55	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.64	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	0.77	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	0.78	Not Detected	3.7	Not Detected
Benzene	0.16	Not Detected	0.50	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.64	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	Not Detected	0.59	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.71	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	0.78	Not Detected	3.2	Not Detected

Client Sample ID: U2 (151770)

Lab ID#: 1503365-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032319	Date of Collection: 3/13/15 3:38:00 PM
Dil. Factor:	1.57	Date of Analysis: 3/24/15 07:30 AM

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	0.67	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	8.4	Not Detected

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

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



Air Toxics

Client Sample ID: D1 (151769)

Lab ID#: 1503365-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032320	Date of Collection:	3/13/15 3:45:00 PM
Dil. Factor:	1.64	Date of Analysis:	3/24/15 08:11 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.81	2.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	Not Detected	1.7	Not Detected
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	0.19	0.92	1.0
Ethanol	1.6	1.8	3.1	3.3
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	2.1	1.9	5.1
2-Propanol	0.82	Not Detected	2.0	Not Detected
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	Not Detected	0.56	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	0.17	0.52	0.54
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	Not Detected	0.67	Not Detected
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.67	Not Detected
Toluene	0.16	0.20	0.62	0.74
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	Not Detected	3.4	Not Detected

Client Sample ID: D1 (151769)

Lab ID#: 1503365-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032320	Date of Collection: 3/13/15 3:45:00 PM
Dil. Factor:	1.64	Date of Analysis: 3/24/15 08:11 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
Styrene	0.16	Not Detected	0.70	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.81	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.81	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.81	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: D2 (151768)

Lab ID#: 1503365-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032321	Date of Collection:	3/13/15 3:52:00 PM
Dil. Factor:	1.63	Date of Analysis:	3/24/15 08:54 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.43	0.81	2.1
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	Not Detected	1.7	Not Detected
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	0.18	0.92	1.0
Ethanol	1.6	4.9	3.1	9.3
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	2.9	1.9	7.0
2-Propanol	0.82	1.0	2.0	2.5
Carbon Disulfide	0.82	Not Detected	2.5	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	Not Detected	0.57	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	Not Detected	0.56	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	0.49	0.52	1.6
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	Not Detected	0.67	Not Detected
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.75	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.67	Not Detected
Toluene	0.16	0.29	0.61	1.1
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	Not Detected	3.3	Not Detected



Client Sample ID: D2 (151768)

Lab ID#: 1503365-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032321	Date of Collection:	3/13/15 3:52:00 PM
Dil. Factor:	1.63	Date of Analysis:	3/24/15 08:54 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.75	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
Styrene	0.16	Not Detected	0.69	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.80	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.80	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.80	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.80	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.80	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.84	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1503365-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032309	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/23/15 04:28 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	1.0	Not Detected	1.9	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#: 1503365-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032309	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/23/15 04:28 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	102	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1503365-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/23/15 10:26 AM

Compound	%Recovery
Freon 12	106
Freon 114	112
Chloromethane	105
Vinyl Chloride	111
1,3-Butadiene	110
Bromomethane	111
Chloroethane	106
Freon 11	110
Ethanol	112
Freon 113	115
1,1-Dichloroethene	108
Acetone	103
2-Propanol	110
Carbon Disulfide	108
3-Chloropropene	108
Methylene Chloride	106
Methyl tert-butyl ether	119
trans-1,2-Dichloroethene	115
Hexane	119
1,1-Dichloroethane	112
2-Butanone (Methyl Ethyl Ketone)	113
cis-1,2-Dichloroethene	115
Tetrahydrofuran	116
Chloroform	102
1,1,1-Trichloroethane	108
Cyclohexane	120
Carbon Tetrachloride	74
2,2,4-Trimethylpentane	111
Benzene	101
1,2-Dichloroethane	97
Heptane	110
Trichloroethene	104
1,2-Dichloropropane	100
1,4-Dioxane	105
Bromodichloromethane	100
cis-1,3-Dichloropropene	107
4-Methyl-2-pentanone	104
Toluene	104
trans-1,3-Dichloropropene	99
1,1,2-Trichloroethane	107
Tetrachloroethene	109
2-Hexanone	109

Client Sample ID: CCV

Lab ID#: 1503365-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/23/15 10:26 AM

Compound	%Recovery
Dibromochloromethane	105
1,2-Dibromoethane (EDB)	110
Chlorobenzene	100
Ethyl Benzene	109
m,p-Xylene	112
o-Xylene	108
Styrene	116
Bromoform	102
Cumene	117
1,1,2,2-Tetrachloroethane	98
Propylbenzene	109
4-Ethyltoluene	114
1,3,5-Trimethylbenzene	113
1,2,4-Trimethylbenzene	117
1,3-Dichlorobenzene	107
1,4-Dichlorobenzene	106
alpha-Chlorotoluene	102
1,2-Dichlorobenzene	107
1,2,4-Trichlorobenzene	96
Hexachlorobutadiene	98

Container Type: NA - Not Applicable

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



Air Toxics

Client Sample ID: LCS

Lab ID#: 1503365-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/23/15 12:07 PM

Compound	%Recovery	Method Limits
Freon 12	122	70-130
Freon 114	128	70-130
Chloromethane	117	70-130
Vinyl Chloride	126	70-130
1,3-Butadiene	122	70-130
Bromomethane	120	70-130
Chloroethane	122	70-130
Freon 11	124	70-130
Ethanol	127	70-130
Freon 113	120	70-130
1,1-Dichloroethene	121	70-130
Acetone	110	70-130
2-Propanol	125	70-130
Carbon Disulfide	101	70-130
3-Chloropropene	123	70-130
Methylene Chloride	115	70-130
Methyl tert-butyl ether	124	70-130
trans-1,2-Dichloroethene	111	70-130
Hexane	133 Q	70-130
1,1-Dichloroethane	119	70-130
2-Butanone (Methyl Ethyl Ketone)	121	70-130
cis-1,2-Dichloroethene	135 Q	70-130
Tetrahydrofuran	120	70-130
Chloroform	112	70-130
1,1,1-Trichloroethane	117	70-130
Cyclohexane	132 Q	70-130
Carbon Tetrachloride	132 Q	70-130
2,2,4-Trimethylpentane	122	70-130
Benzene	115	70-130
1,2-Dichloroethane	110	70-130
Heptane	122	70-130
Trichloroethene	116	70-130
1,2-Dichloropropane	116	70-130
1,4-Dioxane	115	70-130
Bromodichloromethane	118	70-130
cis-1,3-Dichloropropene	112	70-130
4-Methyl-2-pentanone	116	70-130
Toluene	116	70-130
trans-1,3-Dichloropropene	116	70-130
1,1,2-Trichloroethane	118	70-130
Tetrachloroethene	124	70-130
2-Hexanone	119	70-130

Client Sample ID: LCS

Lab ID#: 1503365-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/23/15 12:07 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	125	70-130
1,2-Dibromoethane (EDB)	126	70-130
Chlorobenzene	112	70-130
Ethyl Benzene	123	70-130
m,p-Xylene	124	70-130
o-Xylene	125	70-130
Styrene	127	70-130
Bromoform	122	70-130
Cumene	125	70-130
1,1,2,2-Tetrachloroethane	106	70-130
Propylbenzene	120	70-130
4-Ethyltoluene	124	70-130
1,3,5-Trimethylbenzene	123	70-130
1,2,4-Trimethylbenzene	127	70-130
1,3-Dichlorobenzene	117	70-130
1,4-Dichlorobenzene	113	70-130
alpha-Chlorotoluene	118	70-130
1,2-Dichlorobenzene	112	70-130
1,2,4-Trichlorobenzene	90	70-130
Hexachlorobutadiene	96	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1503365-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032307	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/23/15 02:58 PM

Compound	%Recovery	Method Limits
Freon 12	122	70-130
Freon 114	130	70-130
Chloromethane	117	70-130
Vinyl Chloride	126	70-130
1,3-Butadiene	121	70-130
Bromomethane	123	70-130
Chloroethane	125	70-130
Freon 11	129	70-130
Ethanol	122	70-130
Freon 113	126	70-130
1,1-Dichloroethene	122	70-130
Acetone	108	70-130
2-Propanol	126	70-130
Carbon Disulfide	101	70-130
3-Chloropropene	123	70-130
Methylene Chloride	119	70-130
Methyl tert-butyl ether	123	70-130
trans-1,2-Dichloroethene	111	70-130
Hexane	133 Q	70-130
1,1-Dichloroethane	120	70-130
2-Butanone (Methyl Ethyl Ketone)	119	70-130
cis-1,2-Dichloroethene	137 Q	70-130
Tetrahydrofuran	123	70-130
Chloroform	114	70-130
1,1,1-Trichloroethane	114	70-130
Cyclohexane	132 Q	70-130
Carbon Tetrachloride	132 Q	70-130
2,2,4-Trimethylpentane	123	70-130
Benzene	115	70-130
1,2-Dichloroethane	111	70-130
Heptane	116	70-130
Trichloroethene	114	70-130
1,2-Dichloropropane	113	70-130
1,4-Dioxane	115	70-130
Bromodichloromethane	117	70-130
cis-1,3-Dichloropropene	114	70-130
4-Methyl-2-pentanone	118	70-130
Toluene	116	70-130
trans-1,3-Dichloropropene	116	70-130
1,1,2-Trichloroethane	119	70-130
Tetrachloroethene	127	70-130
2-Hexanone	120	70-130

Client Sample ID: LCSD

Lab ID#: 1503365-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e032307	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/23/15 02:58 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	128	70-130
1,2-Dibromoethane (EDB)	126	70-130
Chlorobenzene	113	70-130
Ethyl Benzene	122	70-130
m,p-Xylene	121	70-130
o-Xylene	126	70-130
Styrene	126	70-130
Bromoform	125	70-130
Cumene	129	70-130
1,1,2,2-Tetrachloroethane	109	70-130
Propylbenzene	122	70-130
4-Ethyltoluene	126	70-130
1,3,5-Trimethylbenzene	126	70-130
1,2,4-Trimethylbenzene	130	70-130
1,3-Dichlorobenzene	120	70-130
1,4-Dichlorobenzene	116	70-130
alpha-Chlorotoluene	123	70-130
1,2-Dichlorobenzene	117	70-130
1,2,4-Trichlorobenzene	101	70-130
Hexachlorobutadiene	107	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130