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Air Toxics

Sample Transportation Notice

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

Page 1 of 1

Project Manager Michael Parris

Collected by: (Print and Sign) Ledac Caragon

Company MO DNR

Address PO Box 176

Phone 573 526 3415

Email michael.parris@dms.mo.gov

City Jeherson City

State MO

Zip 65102

Project Info:

P.O. # 95SP140678

Project #

Project Name Bridgeton LF

Turn Around Time:

☒ Normal

☐ Rush

specify

Lab Use Only

Pressurized by:

Date:

Pressurization Gas:

Canister Pressure/Vacuum

Initial Final Receipt Final (psi)

Field Sample I.D. (Location)

Can #

Date of Collection

Time of Collection

Analyses Requested

Canister Pressure/Vacuum

Final (psi)

Lab I.D.

Can #

Date of Collection

Time of Collection

Analyses Requested

Canister Pressure/Vacuum

Final (psi)

Lab I.D.

Can #

Date of Collection

Time of Collection

Analyses Requested

Canister Pressure/Vacuum

Final (psi)

Relinquished by: (signature) 3/3/14 1408

Received by: (signature) 3/3/14 1408

Relinquished by: (signature) 3/4/14 1300

Received by: (signature) 3/4/14 1300

Relinquished by: (signature) 3/4/14 1300

Received by: (signature) 3/4/14 1300

Notes:

Shipped via UPS
Tracking #: 1Z6A2188034529530

Shipper Name

Air Bill #

Temp (°C)

Condition

Custody Seals Intact?

Work Order #

Lab Use Only

Yes No None

3/21/2014

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

Jefferson City MO 65109

Project Name: Bridgeton LF

Project #:

Workorder #: 1403156

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 3/10/2014 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

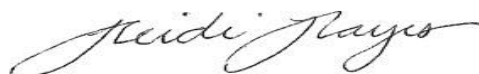
WORK ORDER #: 1403156

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. #	3ESP140678
FAX:	573-526-3350	PROJECT #	Bridgeton LF
DATE RECEIVED:	03/10/2014	CONTACT:	Brian Whittaker
DATE COMPLETED:	03/21/2014		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 149617	Modified TO-15	5.5 "Hg	4.8 psi
02A	U1 149618	Modified TO-15	5.9 "Hg	5.3 psi
03A	Lab Blank	Modified TO-15	NA	NA
04A	CCV	Modified TO-15	NA	NA
05A	LCS	Modified TO-15	NA	NA
05AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:



Technical Director

DATE: 03/21/14

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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LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1403156

Two 6 Liter Summa Canister (100% Certified) samples were received on March 10, 2014. 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	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	$\leq 30\%$ RSD with 4 compounds allowed out to $< 40\%$ RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

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

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 149617

Lab ID#: 1403156-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.53	0.80	2.6
Freon 11	0.16	0.22	0.91	1.2
Ethanol	0.81	3.1	1.5	5.8
Acetone	0.81	3.1	1.9	7.3
Benzene	0.16	0.20	0.52	0.63
Toluene	0.16	0.19	0.61	0.72

Client Sample ID: U1 149618

Lab ID#: 1403156-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.52	0.84	2.6
Freon 11	0.17	0.25	0.95	1.4
Ethanol	0.84	2.6	1.6	4.8
Acetone	0.84	1.8	2.0	4.3
Benzene	0.17	0.22	0.54	0.69



Air Toxics

Client Sample ID: D1 149617

Lab ID#: 1403156-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e031708	Date of Collection: 2/28/14 3:25:00 PM
Dil. Factor:	1.62	Date of Analysis: 3/17/14 01:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.53	0.80	2.6
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.81	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	0.81	Not Detected	3.1	Not Detected
Chloroethane	0.81	Not Detected	2.1	Not Detected
Freon 11	0.16	0.22	0.91	1.2
Ethanol	0.81	3.1	1.5	5.8
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.81	3.1	1.9	7.3
2-Propanol	0.81	Not Detected	2.0	Not Detected
Carbon Disulfide	0.81	Not Detected	2.5	Not Detected
3-Chloropropene	0.81	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	Not Detected	0.57	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.81	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Tetrahydrofuran	0.81	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	0.56	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.81	Not Detected	3.8	Not Detected
Benzene	0.16	0.20	0.52	0.63
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	Not Detected	0.66	Not Detected
Trichloroethene	0.16	Not Detected	0.87	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.75	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	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.66	Not Detected
Toluene	0.16	0.19	0.61	0.72
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	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	0.81	Not Detected	3.3	Not Detected



Air Toxics

Client Sample ID: D1 149617

Lab ID#: 1403156-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e031708	Date of Collection: 2/28/14 3:25:00 PM
Dil. Factor:	1.62	Date of Analysis: 3/17/14 01:19 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	0.69	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	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.84	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.81	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.81	Not Detected	8.6	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	91	70-130



Air Toxics

Client Sample ID: U1 149618

Lab ID#: 1403156-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e031709	Date of Collection:	2/28/14 3:52:00 PM
Dil. Factor:	1.69	Date of Analysis:	3/17/14 02:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.52	0.84	2.6
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.84	Not Detected	1.7	Not Detected
Vinyl Chloride	0.17	Not Detected	0.43	Not Detected
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected
Bromomethane	0.84	Not Detected	3.3	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Freon 11	0.17	0.25	0.95	1.4
Ethanol	0.84	2.6	1.6	4.8
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	1.8	2.0	4.3
2-Propanol	0.84	Not Detected	2.1	Not Detected
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
3-Chloropropene	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.61	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Hexane	0.17	Not Detected	0.60	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	Not Detected	2.5	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Tetrahydrofuran	0.84	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.82	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Cyclohexane	0.17	Not Detected	0.58	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
Benzene	0.17	0.22	0.54	0.69
1,2-Dichloroethane	0.17	Not Detected	0.68	Not Detected
Heptane	0.17	Not Detected	0.69	Not Detected
Trichloroethene	0.17	Not Detected	0.91	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.78	Not Detected
1,4-Dioxane	0.17	Not Detected	0.61	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.77	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.69	Not Detected
Toluene	0.17	Not Detected	0.64	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.77	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
2-Hexanone	0.84	Not Detected	3.5	Not Detected



Air Toxics

Client Sample ID: U1 149618

Lab ID#: 1403156-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e031709	Date of Collection: 2/28/14 3:52:00 PM
Dil. Factor:	1.69	Date of Analysis: 3/17/14 02:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.78	Not Detected
Ethyl Benzene	0.17	Not Detected	0.73	Not Detected
m,p-Xylene	0.17	Not Detected	0.73	Not Detected
o-Xylene	0.17	Not Detected	0.73	Not Detected
Styrene	0.17	Not Detected	0.72	Not Detected
Bromoform	0.17	Not Detected	1.7	Not Detected
Cumene	0.17	Not Detected	0.83	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.83	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.83	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.83	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.83	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.17	Not Detected	0.87	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.3	Not Detected
Hexachlorobutadiene	0.84	Not Detected	9.0	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1403156-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: e031707

Date of Collection: NA

Dil. Factor: 1.00

Date of Analysis: 3/17/14 12:30 PM

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

Client Sample ID: Lab Blank

Lab ID#: 1403156-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e031707	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/17/14 12:30 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	105	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: CCV

Lab ID#: 1403156-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e031703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/17/14 09:02 AM

Compound	%Recovery
Freon 12	99
Freon 114	86
Chloromethane	121
Vinyl Chloride	104
1,3-Butadiene	108
Bromomethane	98
Chloroethane	106
Freon 11	96
Ethanol	117
Freon 113	83
1,1-Dichloroethene	88
Acetone	95
2-Propanol	115
Carbon Disulfide	96
3-Chloropropene	95
Methylene Chloride	96
Methyl tert-butyl ether	88
trans-1,2-Dichloroethene	88
Hexane	99
1,1-Dichloroethane	96
2-Butanone (Methyl Ethyl Ketone)	90
cis-1,2-Dichloroethene	88
Tetrahydrofuran	125
Chloroform	92
1,1,1-Trichloroethane	91
Cyclohexane	84
Carbon Tetrachloride	103
2,2,4-Trimethylpentane	107
Benzene	99
1,2-Dichloroethane	107
Heptane	107
Trichloroethene	90
1,2-Dichloropropane	106
1,4-Dioxane	95
Bromodichloromethane	98
cis-1,3-Dichloropropene	94
4-Methyl-2-pentanone	122
Toluene	96
trans-1,3-Dichloropropene	96
1,1,2-Trichloroethane	98
Tetrachloroethene	86
2-Hexanone	107



Air Toxics

Client Sample ID: CCV

Lab ID#: 1403156-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e031703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/17/14 09:02 AM

Compound	%Recovery
Dibromochloromethane	94
1,2-Dibromoethane (EDB)	91
Chlorobenzene	91
Ethyl Benzene	93
m,p-Xylene	92
o-Xylene	95
Styrene	90
Bromoform	88
Cumene	94
1,1,2,2-Tetrachloroethane	103
Propylbenzene	101
4-Ethyltoluene	96
1,3,5-Trimethylbenzene	93
1,2,4-Trimethylbenzene	87
1,3-Dichlorobenzene	92
1,4-Dichlorobenzene	93
alpha-Chlorotoluene	104
1,2-Dichlorobenzene	91
1,2,4-Trichlorobenzene	80
Hexachlorobutadiene	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: LCS

Lab ID#: 1403156-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: e031704

Date of Collection: NA

Dil. Factor: 1.00

Date of Analysis: 3/17/14 09:44 AM

Compound	%Recovery	Method Limits
Freon 12	106	70-130
Freon 114	95	70-130
Chloromethane	130	70-130
Vinyl Chloride	111	70-130
1,3-Butadiene	119	70-130
Bromomethane	102	70-130
Chloroethane	105	70-130
Freon 11	100	70-130
Ethanol	122	70-130
Freon 113	95	70-130
1,1-Dichloroethene	101	70-130
Acetone	105	70-130
2-Propanol	119	70-130
Carbon Disulfide	90	70-130
3-Chloropropene	83	70-130
Methylene Chloride	108	70-130
Methyl tert-butyl ether	91	70-130
trans-1,2-Dichloroethene	80	70-130
Hexane	104	70-130
1,1-Dichloroethane	104	70-130
2-Butanone (Methyl Ethyl Ketone)	96	70-130
cis-1,2-Dichloroethene	100	70-130
Tetrahydrofuran	131 Q	70-130
Chloroform	97	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	92	70-130
Carbon Tetrachloride	76	70-130
2,2,4-Trimethylpentane	110	70-130
Benzene	101	70-130
1,2-Dichloroethane	112	70-130
Heptane	112	70-130
Trichloroethene	95	70-130
1,2-Dichloropropane	108	70-130
1,4-Dioxane	98	70-130
Bromodichloromethane	103	70-130
cis-1,3-Dichloropropene	98	70-130
4-Methyl-2-pentanone	122	70-130
Toluene	99	70-130
trans-1,3-Dichloropropene	87	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	86	70-130
2-Hexanone	109	70-130

Client Sample ID: LCS

Lab ID#: 1403156-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e031704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/17/14 09:44 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	99	70-130
1,2-Dibromoethane (EDB)	95	70-130
Chlorobenzene	92	70-130
Ethyl Benzene	95	70-130
m,p-Xylene	95	70-130
o-Xylene	93	70-130
Styrene	92	70-130
Bromoform	88	70-130
Cumene	98	70-130
1,1,2,2-Tetrachloroethane	103	70-130
Propylbenzene	104	70-130
4-Ethyltoluene	98	70-130
1,3,5-Trimethylbenzene	92	70-130
1,2,4-Trimethylbenzene	86	70-130
1,3-Dichlorobenzene	92	70-130
1,4-Dichlorobenzene	93	70-130
alpha-Chlorotoluene	108	70-130
1,2-Dichlorobenzene	92	70-130
1,2,4-Trichlorobenzene	76	70-130
Hexachlorobutadiene	85	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	96	70-130

Client Sample ID: LCSD

Lab ID#: 1403156-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: e031705

Date of Collection: NA

Dil. Factor: 1.00

Date of Analysis: 3/17/14 10:25 AM

Compound	%Recovery	Method Limits
Freon 12	106	70-130
Freon 114	95	70-130
Chloromethane	127	70-130
Vinyl Chloride	111	70-130
1,3-Butadiene	118	70-130
Bromomethane	104	70-130
Chloroethane	109	70-130
Freon 11	100	70-130
Ethanol	122	70-130
Freon 113	97	70-130
1,1-Dichloroethene	102	70-130
Acetone	105	70-130
2-Propanol	118	70-130
Carbon Disulfide	90	70-130
3-Chloropropene	84	70-130
Methylene Chloride	109	70-130
Methyl tert-butyl ether	89	70-130
trans-1,2-Dichloroethene	82	70-130
Hexane	105	70-130
1,1-Dichloroethane	104	70-130
2-Butanone (Methyl Ethyl Ketone)	95	70-130
cis-1,2-Dichloroethene	103	70-130
Tetrahydrofuran	133 Q	70-130
Chloroform	98	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	93	70-130
Carbon Tetrachloride	76	70-130
2,2,4-Trimethylpentane	111	70-130
Benzene	103	70-130
1,2-Dichloroethane	113	70-130
Heptane	114	70-130
Trichloroethene	93	70-130
1,2-Dichloropropane	110	70-130
1,4-Dioxane	99	70-130
Bromodichloromethane	104	70-130
cis-1,3-Dichloropropene	100	70-130
4-Methyl-2-pentanone	128	70-130
Toluene	99	70-130
trans-1,3-Dichloropropene	89	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	89	70-130
2-Hexanone	110	70-130

Client Sample ID: LCSD

Lab ID#: 1403156-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e031705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/17/14 10:25 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	97	70-130
1,2-Dibromoethane (EDB)	95	70-130
Chlorobenzene	93	70-130
Ethyl Benzene	96	70-130
m,p-Xylene	96	70-130
o-Xylene	97	70-130
Styrene	96	70-130
Bromoform	91	70-130
Cumene	101	70-130
1,1,2,2-Tetrachloroethane	106	70-130
Propylbenzene	107	70-130
4-Ethyltoluene	103	70-130
1,3,5-Trimethylbenzene	94	70-130
1,2,4-Trimethylbenzene	87	70-130
1,3-Dichlorobenzene	95	70-130
1,4-Dichlorobenzene	95	70-130
alpha-Chlorotoluene	110	70-130
1,2-Dichlorobenzene	93	70-130
1,2,4-Trichlorobenzene	80	70-130
Hexachlorobutadiene	92	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	96	70-130