

8/31/2015

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

Jefferson City MO 65109

Project Name: Bridgeton LF

Project #:

Workorder #: 1508309

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 8/18/2015 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 #: 1508309

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 LF
DATE RECEIVED:	08/18/2015	CONTACT:	Brian Whittaker
DATE COMPLETED:	08/31/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (153325)	Modified TO-15	5.5 "Hg	5 psi
02A	D2 (153326)	Modified TO-15	6.1 "Hg	5 psi
03A	U1 (153327)	Modified TO-15	5.3 "Hg	5 psi
04A	U2 (153328)	Modified TO-15	4.9 "Hg	5.2 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: 08/31/15

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
Missouri Dept. of Natural Resources
Workorder# 1508309

Four 6 Liter Summa Canister (100% Certified) samples were received on August 18, 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 limits for Freon 12, 4-Methyl-2-pentanone, and alpha-Chlorotoluene were raised from 0.10 ppbv to 0.50 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: D1 (153325)

Lab ID#: 1508309-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.16	0.22	0.92	1.2
Ethanol	0.82	4.2	1.5	7.9
Acetone	0.82	5.8	1.9	14
Benzene	0.16	0.20	0.52	0.63
1,2-Dichloroethane	0.16	0.25	0.66	1.0
1,4-Dioxane	0.16	5.9	0.59	21

Client Sample ID: D2 (153326)

Lab ID#: 1508309-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.17	0.23	0.94	1.3
Ethanol	0.84	4.4	1.6	8.4
Acetone	0.84	6.9	2.0	16
2-Butanone (Methyl Ethyl Ketone)	0.84	1.1	2.5	3.3

Client Sample ID: U1 (153327)

Lab ID#: 1508309-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.16	0.24	0.92	1.4
Ethanol	0.82	4.8	1.5	9.1
Acetone	0.82	7.1	1.9	17
Methylene Chloride	0.33	0.38	1.1	1.3
Hexane	0.16	0.19	0.57	0.67
2-Butanone (Methyl Ethyl Ketone)	0.82	0.87	2.4	2.6
1,4-Dioxane	0.16	0.19	0.59	0.69
Toluene	0.16	0.93	0.61	3.5
Tetrachloroethene	0.16	0.47	1.1	3.2
m,p-Xylene	0.16	0.30	0.71	1.3

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

Client Sample ID: U2 (153328)

Lab ID#: 1508309-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.16	0.21	0.91	1.2
Ethanol	0.81	3.3	1.5	6.2
Acetone	0.81	7.4	1.9	18
1,4-Dioxane	0.16	0.54	0.58	2.0



Air Toxics

Client Sample ID: D1 (153325)

Lab ID#: 1508309-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082216	Date of Collection:	8/11/15 2:59:00 PM
Dil. Factor:	1.64	Date of Analysis:	8/22/15 06:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.82	Not Detected	4.0	Not Detected
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	0.22	0.92	1.2
Ethanol	0.82	4.2	1.5	7.9
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	5.8	1.9	14
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	0.20	0.52	0.63
1,2-Dichloroethane	0.16	0.25	0.66	1.0
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	5.9	0.59	21
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	0.82	Not Detected	3.4	Not Detected
Toluene	0.16	Not Detected	0.62	Not Detected
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: D1 (153325)

Lab ID#: 1508309-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082216	Date of Collection:	8/11/15 2:59:00 PM
Dil. Factor:	1.64	Date of Analysis:	8/22/15 06:03 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	1.3	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	0.82	Not Detected	4.2	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	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: D2 (153326)

Lab ID#: 1508309-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082217	Date of Collection:	8/11/15 2:52:00 PM
Dil. Factor:	1.68	Date of Analysis:	8/22/15 06:39 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.84	Not Detected	4.2	Not Detected
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	0.23	0.94	1.3
Ethanol	0.84	4.4	1.6	8.4
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	6.9	2.0	16
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	0.60	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Hexane	0.17	Not Detected	0.59	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	1.1	2.5	3.3
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	1.0	Not Detected
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
Benzene	0.17	Not Detected	0.54	Not Detected
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	0.90	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.78	Not Detected
1,4-Dioxane	0.17	Not Detected	0.60	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
4-Methyl-2-pentanone	0.84	Not Detected	3.4	Not Detected
Toluene	0.17	Not Detected	0.63	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.76	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	3.4	Not Detected



Client Sample ID: D2 (153326)

Lab ID#: 1508309-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082217	Date of Collection:	8/11/15 2:52:00 PM
Dil. Factor:	1.68	Date of Analysis:	8/22/15 06:39 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	0.77	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	0.82	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.82	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.82	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.82	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.82	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	0.84	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.2	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	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: U1 (153327)

Lab ID#: 1508309-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082218	Date of Collection:	8/11/15 3:10:00 PM
Dil. Factor:	1.63	Date of Analysis:	8/22/15 07:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.82	Not Detected	4.0	Not Detected
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	0.24	0.92	1.4
Ethanol	0.82	4.8	1.5	9.1
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	7.1	1.9	17
2-Propanol	0.82	Not Detected	2.0	Not Detected
Carbon Disulfide	0.82	Not Detected	2.5	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	0.38	1.1	1.3
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	0.19	0.57	0.67
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	0.87	2.4	2.6
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	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	0.75	Not Detected
1,4-Dioxane	0.16	0.19	0.59	0.69
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	0.82	Not Detected	3.3	Not Detected
Toluene	0.16	0.93	0.61	3.5
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	0.47	1.1	3.2
2-Hexanone	0.82	Not Detected	3.3	Not Detected

Client Sample ID: U1 (153327)

Lab ID#: 1508309-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082218	Date of Collection:	8/11/15 3:10:00 PM
Dil. Factor:	1.63	Date of Analysis:	8/22/15 07:15 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	0.75	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	0.30	0.71	1.3
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	0.82	Not Detected	4.2	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	105	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: U2 (153328)

Lab ID#: 1508309-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082219	Date of Collection:	8/11/15 3:18:00 PM
Dil. Factor:	1.62	Date of Analysis:	8/22/15 07:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.81	Not Detected	4.0	Not Detected
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	0.21	0.91	1.2
Ethanol	0.81	3.3	1.5	6.2
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.81	7.4	1.9	18
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	Not Detected	0.52	Not Detected
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	0.54	0.58	2.0
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	0.81	Not Detected	3.3	Not Detected
Toluene	0.16	Not Detected	0.61	Not Detected
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

Client Sample ID: U2 (153328)

Lab ID#: 1508309-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082219	Date of Collection:	8/11/15 3:18:00 PM
Dil. Factor:	1.62	Date of Analysis:	8/22/15 07:50 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	0.81	Not Detected	4.2	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	100	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1508309-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082206a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/22/15 10:46 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	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	0.50	Not Detected	2.0	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#: 1508309-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082206a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/22/15 10:46 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	0.50	Not Detected	2.6	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	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1508309-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082202a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/15 07:56 AM

Compound	%Recovery
Freon 12	116
Freon 114	109
Chloromethane	110
Vinyl Chloride	113
1,3-Butadiene	111
Bromomethane	106
Chloroethane	106
Freon 11	112
Ethanol	124
Freon 113	111
1,1-Dichloroethene	107
Acetone	107
2-Propanol	128
Carbon Disulfide	108
3-Chloropropene	112
Methylene Chloride	107
Methyl tert-butyl ether	106
trans-1,2-Dichloroethene	108
Hexane	102
1,1-Dichloroethane	106
2-Butanone (Methyl Ethyl Ketone)	109
cis-1,2-Dichloroethene	110
Tetrahydrofuran	108
Chloroform	109
1,1,1-Trichloroethane	103
Cyclohexane	111
Carbon Tetrachloride	112
2,2,4-Trimethylpentane	113
Benzene	108
1,2-Dichloroethane	110
Heptane	120
Trichloroethene	108
1,2-Dichloropropane	110
1,4-Dioxane	106
Bromodichloromethane	112
cis-1,3-Dichloropropene	109
4-Methyl-2-pentanone	115
Toluene	108
trans-1,3-Dichloropropene	111
1,1,2-Trichloroethane	108
Tetrachloroethene	107
2-Hexanone	125



Air Toxics

Client Sample ID: CCV

Lab ID#: 1508309-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082202a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/15 07:56 AM

Compound	%Recovery
Dibromochloromethane	109
1,2-Dibromoethane (EDB)	113
Chlorobenzene	113
Ethyl Benzene	108
m,p-Xylene	115
o-Xylene	119
Styrene	115
Bromoform	107
Cumene	117
1,1,2,2-Tetrachloroethane	101
Propylbenzene	114
4-Ethyltoluene	112
1,3,5-Trimethylbenzene	108
1,2,4-Trimethylbenzene	109
1,3-Dichlorobenzene	110
1,4-Dichlorobenzene	113
alpha-Chlorotoluene	110
1,2-Dichlorobenzene	100
1,2,4-Trichlorobenzene	90
Hexachlorobutadiene	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1508309-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082203a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/15 08:39 AM

Compound	%Recovery	Method Limits
Freon 12	120	70-130
Freon 114	123	70-130
Chloromethane	111	70-130
Vinyl Chloride	119	70-130
1,3-Butadiene	111	70-130
Bromomethane	114	70-130
Chloroethane	113	70-130
Freon 11	120	70-130
Ethanol	130	70-130
Freon 113	111	70-130
1,1-Dichloroethene	113	70-130
Acetone	102	70-130
2-Propanol	126	70-130
Carbon Disulfide	99	70-130
3-Chloropropene	115	70-130
Methylene Chloride	109	70-130
Methyl tert-butyl ether	110	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	106	70-130
1,1-Dichloroethane	114	70-130
2-Butanone (Methyl Ethyl Ketone)	117	70-130
cis-1,2-Dichloroethene	126	70-130
Tetrahydrofuran	116	70-130
Chloroform	115	70-130
1,1,1-Trichloroethane	108	70-130
Cyclohexane	117	70-130
Carbon Tetrachloride	120	70-130
2,2,4-Trimethylpentane	111	70-130
Benzene	113	70-130
1,2-Dichloroethane	118	70-130
Heptane	123	70-130
Trichloroethene	114	70-130
1,2-Dichloropropane	116	70-130
1,4-Dioxane	108	70-130
Bromodichloromethane	122	70-130
cis-1,3-Dichloropropene	108	70-130
4-Methyl-2-pentanone	125	70-130
Toluene	112	70-130
trans-1,3-Dichloropropene	117	70-130
1,1,2-Trichloroethane	115	70-130
Tetrachloroethene	113	70-130
2-Hexanone	131 Q	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1508309-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082203a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/15 08:39 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	116	70-130
1,2-Dibromoethane (EDB)	124	70-130
Chlorobenzene	114	70-130
Ethyl Benzene	111	70-130
m,p-Xylene	115	70-130
o-Xylene	118	70-130
Styrene	119	70-130
Bromoform	116	70-130
Cumene	114	70-130
1,1,2,2-Tetrachloroethane	104	70-130
Propylbenzene	112	70-130
4-Ethyltoluene	106	70-130
1,3,5-Trimethylbenzene	106	70-130
1,2,4-Trimethylbenzene	112	70-130
1,3-Dichlorobenzene	104	70-130
1,4-Dichlorobenzene	101	70-130
alpha-Chlorotoluene	112	70-130
1,2-Dichlorobenzene	94	70-130
1,2,4-Trichlorobenzene	87	70-130
Hexachlorobutadiene	84	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1508309-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082204a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/22/15 09:15 AM

Compound	%Recovery	Method Limits
Freon 12	119	70-130
Freon 114	118	70-130
Chloromethane	113	70-130
Vinyl Chloride	120	70-130
1,3-Butadiene	112	70-130
Bromomethane	116	70-130
Chloroethane	115	70-130
Freon 11	119	70-130
Ethanol	126	70-130
Freon 113	111	70-130
1,1-Dichloroethene	111	70-130
Acetone	103	70-130
2-Propanol	121	70-130
Carbon Disulfide	97	70-130
3-Chloropropene	108	70-130
Methylene Chloride	109	70-130
Methyl tert-butyl ether	111	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	106	70-130
1,1-Dichloroethane	110	70-130
2-Butanone (Methyl Ethyl Ketone)	113	70-130
cis-1,2-Dichloroethene	125	70-130
Tetrahydrofuran	114	70-130
Chloroform	112	70-130
1,1,1-Trichloroethane	108	70-130
Cyclohexane	114	70-130
Carbon Tetrachloride	120	70-130
2,2,4-Trimethylpentane	112	70-130
Benzene	111	70-130
1,2-Dichloroethane	114	70-130
Heptane	122	70-130
Trichloroethene	110	70-130
1,2-Dichloropropane	111	70-130
1,4-Dioxane	111	70-130
Bromodichloromethane	118	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	118	70-130
Toluene	112	70-130
trans-1,3-Dichloropropene	118	70-130
1,1,2-Trichloroethane	114	70-130
Tetrachloroethene	115	70-130
2-Hexanone	134 Q	70-130

Client Sample ID: LCSD

Lab ID#: 1508309-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082204a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/22/15 09:15 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	119	70-130
1,2-Dibromoethane (EDB)	123	70-130
Chlorobenzene	116	70-130
Ethyl Benzene	113	70-130
m,p-Xylene	118	70-130
o-Xylene	122	70-130
Styrene	121	70-130
Bromoform	119	70-130
Cumene	118	70-130
1,1,2,2-Tetrachloroethane	112	70-130
Propylbenzene	115	70-130
4-Ethyltoluene	114	70-130
1,3,5-Trimethylbenzene	112	70-130
1,2,4-Trimethylbenzene	119	70-130
1,3-Dichlorobenzene	111	70-130
1,4-Dichlorobenzene	109	70-130
alpha-Chlorotoluene	118	70-130
1,2-Dichlorobenzene	98	70-130
1,2,4-Trichlorobenzene	88	70-130
Hexachlorobutadiene	86	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130