

2/17/2015

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

Jefferson City MO 65109

Project Name: Bridgeton LF

Project #:

Workorder #: 1502043

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 2/4/2015 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 #: 1502043

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:	02/04/2015	CONTACT:	Brian Whittaker
DATE COMPLETED:	02/17/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (1412758)	Modified TO-15	5.1 "Hg	4.9 psi
02A	U1 (1412759)	Modified TO-15	5.3 "Hg	4.9 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: 02/17/15

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# 1502043

Two 6 Liter Summa Canister (100% Certified) samples were received on February 04, 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	$\leq 30\%$ 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

Due to the linear calibration range of the instrument, the reporting limit for alpha-Chlorotoluene was raised from 0.10 ppbv to 0.50 ppbv.

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 (1412758)

Lab ID#: 1502043-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.43	0.80	2.1
Freon 11	0.16	0.20	0.90	1.1
Ethanol	0.80	2.1	1.5	3.9
Acetone	0.80	2.8	1.9	6.6
Benzene	0.16	0.37	0.51	1.2
Toluene	0.16	0.15 J	0.61	0.58 J

Client Sample ID: U1 (1412759)

Lab ID#: 1502043-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.44	0.80	2.2
Freon 11	0.16	0.21	0.91	1.2
Ethanol	0.81	1.9	1.5	3.6
Acetone	0.81	2.2	1.9	5.3



Air Toxics

Client Sample ID: D1 (1412758)

Lab ID#: 1502043-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020526	Date of Collection:	1/24/15 6:11:00 PM
Dil. Factor:	1.61	Date of Analysis:	2/5/15 08:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.43	0.80	2.1
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	0.20	0.90	1.1
Ethanol	0.80	2.1	1.5	3.9
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	2.8	1.9	6.6
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	Not Detected	0.57	Not Detected
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	0.37	0.51	1.2
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	0.15 J	0.61	0.58 J
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: D1 (1412758)

Lab ID#: 1502043-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020526	Date of Collection:	1/24/15 6:11:00 PM
Dil. Factor:	1.61	Date of Analysis:	2/5/15 08:38 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	0.80	Not Detected	4.2	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

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	89	70-130



Air Toxics

Client Sample ID: U1 (1412759)

Lab ID#: 1502043-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020527	Date of Collection:	1/24/15 6:01:00 PM
Dil. Factor:	1.62	Date of Analysis:	2/5/15 09:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.44	0.80	2.2
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	1.9	1.5	3.6
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.81	2.2	1.9	5.3
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	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	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	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: U1 (1412759)

Lab ID#: 1502043-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020527	Date of Collection: 1/24/15 6:01:00 PM
Dil. Factor:	1.62	Date of Analysis: 2/5/15 09:13 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	98	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1502043-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020507	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/5/15 09:04 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#: 1502043-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020507	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/5/15 09:04 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	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	91	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1502043-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/4/15 10:44 PM

Compound	%Recovery
Freon 12	101
Freon 114	103
Chloromethane	106
Vinyl Chloride	105
1,3-Butadiene	106
Bromomethane	108
Chloroethane	104
Freon 11	100
Ethanol	118
Freon 113	104
1,1-Dichloroethene	103
Acetone	94
2-Propanol	109
Carbon Disulfide	104
3-Chloropropene	103
Methylene Chloride	103
Methyl tert-butyl ether	102
trans-1,2-Dichloroethene	105
Hexane	105
1,1-Dichloroethane	106
2-Butanone (Methyl Ethyl Ketone)	104
cis-1,2-Dichloroethene	100
Tetrahydrofuran	108
Chloroform	102
1,1,1-Trichloroethane	99
Cyclohexane	99
Carbon Tetrachloride	96
2,2,4-Trimethylpentane	103
Benzene	100
1,2-Dichloroethane	102
Heptane	108
Trichloroethene	107
1,2-Dichloropropane	107
1,4-Dioxane	89
Bromodichloromethane	104
cis-1,3-Dichloropropene	104
4-Methyl-2-pentanone	105
Toluene	103
trans-1,3-Dichloropropene	101
1,1,2-Trichloroethane	106
Tetrachloroethene	100
2-Hexanone	97



Air Toxics

Client Sample ID: CCV

Lab ID#: 1502043-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/4/15 10:44 PM

Compound	%Recovery
Dibromochloromethane	105
1,2-Dibromoethane (EDB)	103
Chlorobenzene	102
Ethyl Benzene	100
m,p-Xylene	99
o-Xylene	103
Styrene	105
Bromoform	107
Cumene	103
1,1,2,2-Tetrachloroethane	98
Propylbenzene	97
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	101
1,2,4-Trimethylbenzene	102
1,3-Dichlorobenzene	101
1,4-Dichlorobenzene	84
alpha-Chlorotoluene	106
1,2-Dichlorobenzene	92
1,2,4-Trichlorobenzene	89
Hexachlorobutadiene	88

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: LCS

Lab ID#: 1502043-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/5/15 06:13 AM

Compound	%Recovery	Method Limits
Freon 12	89	70-130
Freon 114	94	70-130
Chloromethane	93	70-130
Vinyl Chloride	94	70-130
1,3-Butadiene	92	70-130
Bromomethane	93	70-130
Chloroethane	95	70-130
Freon 11	89	70-130
Ethanol	112	70-130
Freon 113	87	70-130
1,1-Dichloroethene	89	70-130
Acetone	85	70-130
2-Propanol	100	70-130
Carbon Disulfide	78	70-130
3-Chloropropene	85	70-130
Methylene Chloride	87	70-130
Methyl tert-butyl ether	89	70-130
trans-1,2-Dichloroethene	79	70-130
Hexane	93	70-130
1,1-Dichloroethane	89	70-130
2-Butanone (Methyl Ethyl Ketone)	85	70-130
cis-1,2-Dichloroethene	95	70-130
Tetrahydrofuran	92	70-130
Chloroform	87	70-130
1,1,1-Trichloroethane	84	70-130
Cyclohexane	87	70-130
Carbon Tetrachloride	83	70-130
2,2,4-Trimethylpentane	90	70-130
Benzene	87	70-130
1,2-Dichloroethane	90	70-130
Heptane	94	70-130
Trichloroethene	90	70-130
1,2-Dichloropropane	94	70-130
1,4-Dioxane	78	70-130
Bromodichloromethane	91	70-130
cis-1,3-Dichloropropene	86	70-130
4-Methyl-2-pentanone	94	70-130
Toluene	89	70-130
trans-1,3-Dichloropropene	86	70-130
1,1,2-Trichloroethane	92	70-130
Tetrachloroethene	85	70-130
2-Hexanone	91	70-130

Client Sample ID: LCS

Lab ID#: 1502043-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/5/15 06:13 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	91	70-130
1,2-Dibromoethane (EDB)	90	70-130
Chlorobenzene	87	70-130
Ethyl Benzene	89	70-130
m,p-Xylene	89	70-130
o-Xylene	95	70-130
Styrene	91	70-130
Bromoform	91	70-130
Cumene	92	70-130
1,1,2,2-Tetrachloroethane	83	70-130
Propylbenzene	89	70-130
4-Ethyltoluene	89	70-130
1,3,5-Trimethylbenzene	86	70-130
1,2,4-Trimethylbenzene	87	70-130
1,3-Dichlorobenzene	90	70-130
1,4-Dichlorobenzene	77	70-130
alpha-Chlorotoluene	96	70-130
1,2-Dichlorobenzene	82	70-130
1,2,4-Trichlorobenzene	81	70-130
Hexachlorobutadiene	83	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	111	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1502043-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020504	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/5/15 07:01 AM

Compound	%Recovery	Method Limits
Freon 12	100	70-130
Freon 114	102	70-130
Chloromethane	101	70-130
Vinyl Chloride	104	70-130
1,3-Butadiene	102	70-130
Bromomethane	103	70-130
Chloroethane	106	70-130
Freon 11	100	70-130
Ethanol	120	70-130
Freon 113	100	70-130
1,1-Dichloroethene	100	70-130
Acetone	94	70-130
2-Propanol	109	70-130
Carbon Disulfide	87	70-130
3-Chloropropene	93	70-130
Methylene Chloride	96	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	88	70-130
Hexane	100	70-130
1,1-Dichloroethane	99	70-130
2-Butanone (Methyl Ethyl Ketone)	95	70-130
cis-1,2-Dichloroethene	106	70-130
Tetrahydrofuran	100	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	94	70-130
Cyclohexane	96	70-130
Carbon Tetrachloride	92	70-130
2,2,4-Trimethylpentane	97	70-130
Benzene	95	70-130
1,2-Dichloroethane	97	70-130
Heptane	104	70-130
Trichloroethene	101	70-130
1,2-Dichloropropane	102	70-130
1,4-Dioxane	86	70-130
Bromodichloromethane	102	70-130
cis-1,3-Dichloropropene	93	70-130
4-Methyl-2-pentanone	102	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	95	70-130
1,1,2-Trichloroethane	99	70-130
Tetrachloroethene	96	70-130
2-Hexanone	98	70-130

Client Sample ID: LCSD

Lab ID#: 1502043-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v020504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/5/15 07:01 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	103	70-130
1,2-Dibromoethane (EDB)	100	70-130
Chlorobenzene	95	70-130
Ethyl Benzene	97	70-130
m,p-Xylene	100	70-130
o-Xylene	100	70-130
Styrene	101	70-130
Bromoform	100	70-130
Cumene	98	70-130
1,1,2,2-Tetrachloroethane	91	70-130
Propylbenzene	95	70-130
4-Ethyltoluene	95	70-130
1,3,5-Trimethylbenzene	98	70-130
1,2,4-Trimethylbenzene	96	70-130
1,3-Dichlorobenzene	96	70-130
1,4-Dichlorobenzene	82	70-130
alpha-Chlorotoluene	105	70-130
1,2-Dichlorobenzene	90	70-130
1,2,4-Trichlorobenzene	89	70-130
Hexachlorobutadiene	90	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	107	70-130