



4/20/2014

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

Jefferson City MO 65109

Project Name: Bridgeton

Project #:

Workorder #: 1404216

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 4/14/2014 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 #: 1404216**

Work Order Summary

<b>CLIENT:</b>	Mr. Dennis Schroeder Missouri Dept. of Natural Resources 2710 West Main Jefferson City, MO 65109	<b>BILL TO:</b>	Accounts Payable Missouri Dept. of Natural Resources P.O Box 176 Jefferson City, MO 65102
<b>PHONE:</b>	573-526-4428	<b>P.O. #</b>	3ESP140799
<b>FAX:</b>	573-526-3350	<b>PROJECT #</b>	Bridgeton
<b>DATE RECEIVED:</b>	04/14/2014	<b>CONTACT:</b>	Brian Whittaker
<b>DATE COMPLETED:</b>	04/20/2014		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (149615)	Modified TO-15	5.9 "Hg	4.9 psi
02A	U1 (149616)	Modified TO-15	6.1 "Hg	5.4 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: 04/20/14

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# 1404216**

Two 6 Liter Summa Canister (100% Certified) samples were received on April 14, 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	</=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 instrument calibration limitations, the reporting limit for alpha-Chlorotoluene was 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 (149615)**

**Lab ID#: 1404216-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	0.17	0.42	0.82	2.1
Freon 11	0.17	0.19	0.93	1.0
Ethanol	0.83	0.95	1.6	1.8
Acetone	0.83	2.2	2.0	5.2

**Client Sample ID: U1 (149616)**

**Lab ID#: 1404216-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	0.17	0.46	0.85	2.3
Freon 11	0.17	0.21	0.97	1.2
Ethanol	0.86	12	1.6	23
Acetone	0.86	4.1	2.0	9.7
2-Propanol	0.86	17	2.1	42
Methylene Chloride	0.34	0.77	1.2	2.7
Hexane	0.17	0.21	0.61	0.76
Toluene	0.17	1.2	0.65	4.5
m,p-Xylene	0.17	0.23	0.75	1.0



Air Toxics

Client Sample ID: D1 (149615)

Lab ID#: 1404216-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c041708	Date of Collection:	4/8/14 5:24:00 PM
Dil. Factor:	1.66	Date of Analysis:	4/17/14 01:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.42	0.82	2.1
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.83	Not Detected	1.7	Not Detected
Vinyl Chloride	0.17	Not Detected	0.42	Not Detected
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected
Bromomethane	0.83	Not Detected	3.2	Not Detected
Chloroethane	0.83	Not Detected	2.2	Not Detected
Freon 11	0.17	0.19	0.93	1.0
Ethanol	0.83	0.95	1.6	1.8
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Acetone	0.83	2.2	2.0	5.2
2-Propanol	0.83	Not Detected	2.0	Not Detected
Carbon Disulfide	0.83	Not Detected	2.6	Not Detected
3-Chloropropene	0.83	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	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	0.66	Not Detected
Hexane	0.17	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.67	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.83	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Tetrahydrofuran	0.83	Not Detected	2.4	Not Detected
Chloroform	0.17	Not Detected	0.81	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.90	Not Detected
Cyclohexane	0.17	Not Detected	0.57	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.83	Not Detected	3.9	Not Detected
Benzene	0.17	Not Detected	0.53	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.67	Not Detected
Heptane	0.17	Not Detected	0.68	Not Detected
Trichloroethene	0.17	Not Detected	0.89	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.77	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	0.75	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.68	Not Detected
Toluene	0.17	Not Detected	0.62	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.75	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.90	Not Detected
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
2-Hexanone	0.83	Not Detected	3.4	Not Detected



Client Sample ID: D1 (149615)

Lab ID#: 1404216-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c041708	Date of Collection:	4/8/14 5:24:00 PM
Dil. Factor:	1.66	Date of Analysis:	4/17/14 01:25 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	0.76	Not Detected
Ethyl Benzene	0.17	Not Detected	0.72	Not Detected
m,p-Xylene	0.17	Not Detected	0.72	Not Detected
o-Xylene	0.17	Not Detected	0.72	Not Detected
Styrene	0.17	Not Detected	0.71	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	1.1	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	0.83	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.83	Not Detected UJ	6.2	Not Detected UJ
Hexachlorobutadiene	0.83	Not Detected UJ	8.8	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130





Air Toxics

Client Sample ID: U1 (149616)

Lab ID#: 1404216-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c041709	Date of Collection:	4/8/14 4:33:00 PM
Dil. Factor:	1.72	Date of Analysis:	4/17/14 02:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.46	0.85	2.3
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.86	Not Detected	1.8	Not Detected
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.86	Not Detected	3.3	Not Detected
Chloroethane	0.86	Not Detected	2.3	Not Detected
Freon 11	0.17	0.21	0.97	1.2
Ethanol	0.86	12	1.6	23
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	4.1	2.0	9.7
2-Propanol	0.86	17	2.1	42
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	0.77	1.2	2.7
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Hexane	0.17	0.21	0.61	0.76
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	Not Detected	2.5	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.84	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Cyclohexane	0.17	Not Detected	0.59	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.86	Not Detected	4.0	Not Detected
Benzene	0.17	Not Detected	0.55	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.70	Not Detected
Heptane	0.17	Not Detected	0.70	Not Detected
Trichloroethene	0.17	Not Detected	0.92	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.79	Not Detected
1,4-Dioxane	0.17	Not Detected	0.62	Not Detected
Bromodichloromethane	0.17	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.70	Not Detected
Toluene	0.17	1.2	0.65	4.5
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Tetrachloroethene	0.17	Not Detected	1.2	Not Detected
2-Hexanone	0.86	Not Detected	3.5	Not Detected



Client Sample ID: U1 (149616)

Lab ID#: 1404216-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c041709	Date of Collection:	4/8/14 4:33:00 PM
Dil. Factor:	1.72	Date of Analysis:	4/17/14 02:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.79	Not Detected
Ethyl Benzene	0.17	Not Detected	0.75	Not Detected
m,p-Xylene	0.17	0.23	0.75	1.0
o-Xylene	0.17	Not Detected	0.75	Not Detected
Styrene	0.17	Not Detected	0.73	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.84	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.84	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.84	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.84	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.84	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	0.86	Not Detected	4.4	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected UJ	6.4	Not Detected UJ
Hexachlorobutadiene	0.86	Not Detected UJ	9.2	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1404216-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c041706	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/17/14 11:45 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#: 1404216-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c041706	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/17/14 11:45 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 UJ	3.7	Not Detected UJ
Hexachlorobutadiene	0.50	Not Detected UJ	5.3	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	91	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1404216-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c041702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/17/14 08:38 AM

Compound	%Recovery
Freon 12	102
Freon 114	107
Chloromethane	96
Vinyl Chloride	102
1,3-Butadiene	101
Bromomethane	110
Chloroethane	100
Freon 11	101
Ethanol	115
Freon 113	103
1,1-Dichloroethene	110
Acetone	97
2-Propanol	105
Carbon Disulfide	104
3-Chloropropene	107
Methylene Chloride	97
Methyl tert-butyl ether	108
trans-1,2-Dichloroethene	102
Hexane	110
1,1-Dichloroethane	103
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	102
Tetrahydrofuran	108
Chloroform	99
1,1,1-Trichloroethane	108
Cyclohexane	106
Carbon Tetrachloride	101
2,2,4-Trimethylpentane	106
Benzene	108
1,2-Dichloroethane	113
Heptane	116
Trichloroethene	110
1,2-Dichloropropane	108
1,4-Dioxane	119
Bromodichloromethane	114
cis-1,3-Dichloropropene	115
4-Methyl-2-pentanone	126
Toluene	112
trans-1,3-Dichloropropene	109
1,1,2-Trichloroethane	102
Tetrachloroethene	104
2-Hexanone	108



Air Toxics

Client Sample ID: CCV

Lab ID#: 1404216-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c041702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/17/14 08:38 AM

Compound	%Recovery
Dibromochloromethane	116
1,2-Dibromoethane (EDB)	108
Chlorobenzene	104
Ethyl Benzene	111
m,p-Xylene	109
o-Xylene	106
Styrene	107
Bromoform	108
Cumene	102
1,1,2,2-Tetrachloroethane	105
Propylbenzene	98
4-Ethyltoluene	95
1,3,5-Trimethylbenzene	96
1,2,4-Trimethylbenzene	90
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	91
alpha-Chlorotoluene	101
1,2-Dichlorobenzene	91
1,2,4-Trichlorobenzene	68 Q
Hexachlorobutadiene	64 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1404216-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c041703	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/17/14 09:27 AM

Compound	%Recovery	Method Limits
Freon 12	108	70-130
Freon 114	109	70-130
Chloromethane	111	70-130
Vinyl Chloride	108	70-130
1,3-Butadiene	108	70-130
Bromomethane	114	70-130
Chloroethane	105	70-130
Freon 11	103	70-130
Ethanol	118	70-130
Freon 113	118	70-130
1,1-Dichloroethene	127	70-130
Acetone	107	70-130
2-Propanol	110	70-130
Carbon Disulfide	98	70-130
3-Chloropropene	114	70-130
Methylene Chloride	109	70-130
Methyl tert-butyl ether	108	70-130
trans-1,2-Dichloroethene	90	70-130
Hexane	115	70-130
1,1-Dichloroethane	108	70-130
2-Butanone (Methyl Ethyl Ketone)	109	70-130
cis-1,2-Dichloroethene	117	70-130
Tetrahydrofuran	108	70-130
Chloroform	104	70-130
1,1,1-Trichloroethane	108	70-130
Cyclohexane	113	70-130
Carbon Tetrachloride	110	70-130
2,2,4-Trimethylpentane	114	70-130
Benzene	103	70-130
1,2-Dichloroethane	104	70-130
Heptane	111	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	100	70-130
1,4-Dioxane	116	70-130
Bromodichloromethane	110	70-130
cis-1,3-Dichloropropene	112	70-130
4-Methyl-2-pentanone	120	70-130
Toluene	106	70-130
trans-1,3-Dichloropropene	99	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	100	70-130
2-Hexanone	110	70-130

Client Sample ID: LCS

Lab ID#: 1404216-05A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>c041703</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 4/17/14 09:27 AM

<b>Compound</b>	<b>%Recovery</b>	<b>Method Limits</b>
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	104	70-130
Chlorobenzene	97	70-130
Ethyl Benzene	110	70-130
m,p-Xylene	111	70-130
o-Xylene	108	70-130
Styrene	106	70-130
Bromoform	109	70-130
Cumene	108	70-130
1,1,2,2-Tetrachloroethane	102	70-130
Propylbenzene	105	70-130
4-Ethyltoluene	103	70-130
1,3,5-Trimethylbenzene	100	70-130
1,2,4-Trimethylbenzene	92	70-130
1,3-Dichlorobenzene	103	70-130
1,4-Dichlorobenzene	98	70-130
alpha-Chlorotoluene	114	70-130
1,2-Dichlorobenzene	99	70-130
1,2,4-Trichlorobenzene	78	70-130
Hexachlorobutadiene	74	70-130

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	96	70-130





Air Toxics

Client Sample ID: LCS D

Lab ID#: 1404216-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c041704	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/17/14 10:06 AM

Compound	%Recovery	Method Limits
Freon 12	96	70-130
Freon 114	98	70-130
Chloromethane	89	70-130
Vinyl Chloride	98	70-130
1,3-Butadiene	95	70-130
Bromomethane	113	70-130
Chloroethane	98	70-130
Freon 11	95	70-130
Ethanol	119	70-130
Freon 113	112	70-130
1,1-Dichloroethene	117	70-130
Acetone	98	70-130
2-Propanol	98	70-130
Carbon Disulfide	92	70-130
3-Chloropropene	107	70-130
Methylene Chloride	102	70-130
Methyl tert-butyl ether	100	70-130
trans-1,2-Dichloroethene	84	70-130
Hexane	110	70-130
1,1-Dichloroethane	100	70-130
2-Butanone (Methyl Ethyl Ketone)	102	70-130
cis-1,2-Dichloroethene	110	70-130
Tetrahydrofuran	102	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	101	70-130
Cyclohexane	105	70-130
Carbon Tetrachloride	104	70-130
2,2,4-Trimethylpentane	102	70-130
Benzene	101	70-130
1,2-Dichloroethane	98	70-130
Heptane	108	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	100	70-130
1,4-Dioxane	111	70-130
Bromodichloromethane	106	70-130
cis-1,3-Dichloropropene	111	70-130
4-Methyl-2-pentanone	116	70-130
Toluene	104	70-130
trans-1,3-Dichloropropene	101	70-130
1,1,2-Trichloroethane	102	70-130
Tetrachloroethene	102	70-130
2-Hexanone	114	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1404216-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	c041704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/17/14 10:06 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	100	70-130
Ethyl Benzene	109	70-130
m,p-Xylene	118	70-130
o-Xylene	113	70-130
Styrene	113	70-130
Bromoform	110	70-130
Cumene	114	70-130
1,1,2,2-Tetrachloroethane	103	70-130
Propylbenzene	114	70-130
4-Ethyltoluene	110	70-130
1,3,5-Trimethylbenzene	108	70-130
1,2,4-Trimethylbenzene	100	70-130
1,3-Dichlorobenzene	108	70-130
1,4-Dichlorobenzene	107	70-130
alpha-Chlorotoluene	123	70-130
1,2-Dichlorobenzene	108	70-130
1,2,4-Trichlorobenzene	89	70-130
Hexachlorobutadiene	84	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	87	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130