

5/26/2015

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1505225

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 5/12/2015 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 #: 1505225

Work Order Summary

CLIENT:	Mr. Dennis Schroeder Missouri Dept. of Natural Resources 2710 West Main Jefferson City, MO 65109	BILL TO:	Accounts Payable Missouri Dept. of Natural Resources P.O Box 176 Jefferson City, MO 65102
PHONE:	573-526-4428	P.O. #	3ESP4000007
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	05/12/2015	CONTACT:	Brian Whittaker
DATE COMPLETED:	05/26/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (152209)	Modified TO-15	8 "Hg	5 psi
02A	D2 (152210)	Modified TO-15	8.2 "Hg	4.6 psi
03A	U1 (152211)	Modified TO-15	8 "Hg	5.1 psi
04A	U2 (152212)	Modified TO-15	8.6 "Hg	4.6 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: 05/26/15

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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 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1505225

Four 6 Liter Summa Canister (100% Certified) samples were received on May 12, 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

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.

The Relative Percent Difference (RPD) of the LCS/LCSD exceeded the acceptance limit for 2,2,4-Trimethylpentane.

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 (152209)

Lab ID#: 1505225-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.18	0.23	1.0	1.3
Ethanol	0.91	5.0	1.7	9.4
Acetone	0.91	8.1	2.2	19
2-Butanone (Methyl Ethyl Ketone)	0.91	1.3	2.7	3.9
Toluene	0.18	0.19	0.68	0.72

Client Sample ID: D2 (152210)

Lab ID#: 1505225-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.18	0.23	1.0	1.3
Ethanol	0.90	3.9	1.7	7.4
Acetone	0.90	4.8	2.1	11

Client Sample ID: U1 (152211)

Lab ID#: 1505225-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.22	0.90	1.1
Freon 11	0.18	0.23	1.0	1.3
Ethanol	0.92	4.0	1.7	7.4
Acetone	0.92	5.7	2.2	14
2-Butanone (Methyl Ethyl Ketone)	0.92	1.1	2.7	3.3
Toluene	0.18	0.27	0.69	1.0

Client Sample ID: U2 (152212)

Lab ID#: 1505225-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.18	0.23	1.0	1.3
Ethanol	0.92	4.2	1.7	8.0
Acetone	0.92	6.2	2.2	15

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

Client Sample ID: U2 (152212)

Lab ID#: 1505225-04A

Cyclohexane	0.18	0.38	0.63	1.3
Toluene	0.18	0.26	0.69	0.99



Air Toxics

Client Sample ID: D1 (152209)

Lab ID#: 1505225-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051810	Date of Collection:	5/5/15 2:03:00 PM
Dil. Factor:	1.82	Date of Analysis:	5/18/15 02:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	Not Detected	0.90	Not Detected
Freon 114	0.18	Not Detected	1.3	Not Detected
Chloromethane	0.91	Not Detected	1.9	Not Detected
Vinyl Chloride	0.18	Not Detected	0.46	Not Detected
1,3-Butadiene	0.18	Not Detected	0.40	Not Detected
Bromomethane	0.91	Not Detected	3.5	Not Detected
Chloroethane	0.91	Not Detected	2.4	Not Detected
Freon 11	0.18	0.23	1.0	1.3
Ethanol	0.91	5.0	1.7	9.4
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Acetone	0.91	8.1	2.2	19
2-Propanol	0.91	Not Detected	2.2	Not Detected
Carbon Disulfide	0.91	Not Detected	2.8	Not Detected
3-Chloropropene	0.91	Not Detected	2.8	Not Detected
Methylene Chloride	0.36	Not Detected	1.3	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Hexane	0.18	Not Detected	0.64	Not Detected
1,1-Dichloroethane	0.18	Not Detected	0.74	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.91	1.3	2.7	3.9
cis-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Tetrahydrofuran	0.91	Not Detected	2.7	Not Detected
Chloroform	0.18	Not Detected	0.89	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.99	Not Detected
Cyclohexane	0.18	Not Detected	0.63	Not Detected
Carbon Tetrachloride	0.18	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.91	Not Detected	4.2	Not Detected
Benzene	0.18	Not Detected	0.58	Not Detected
1,2-Dichloroethane	0.18	Not Detected	0.74	Not Detected
Heptane	0.18	Not Detected	0.74	Not Detected
Trichloroethene	0.18	Not Detected	0.98	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.84	Not Detected
1,4-Dioxane	0.18	Not Detected	0.66	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.74	Not Detected
Toluene	0.18	0.19	0.68	0.72
trans-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	0.99	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
2-Hexanone	0.91	Not Detected	3.7	Not Detected



Client Sample ID: D1 (152209)

Lab ID#: 1505225-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051810	Date of Collection:	5/5/15 2:03:00 PM
Dil. Factor:	1.82	Date of Analysis:	5/18/15 02:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.18	Not Detected	1.6	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.84	Not Detected
Ethyl Benzene	0.18	Not Detected	0.79	Not Detected
m,p-Xylene	0.18	Not Detected	0.79	Not Detected
o-Xylene	0.18	Not Detected	0.79	Not Detected
Styrene	0.18	Not Detected	0.78	Not Detected
Bromoform	0.18	Not Detected	1.9	Not Detected
Cumene	0.18	Not Detected	0.89	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
Propylbenzene	0.18	Not Detected	0.89	Not Detected
4-Ethyltoluene	0.18	Not Detected	0.89	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.89	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.89	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.18	Not Detected	0.94	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.91	Not Detected UJ	6.8	Not Detected UJ
Hexachlorobutadiene	0.91	Not Detected	9.7	Not Detected

UJ = Analyte 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	106	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: D2 (152210)

Lab ID#: 1505225-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051811	Date of Collection:	5/5/15 2:34:00 PM
Dil. Factor:	1.80	Date of Analysis:	5/18/15 03:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	Not Detected	0.89	Not Detected
Freon 114	0.18	Not Detected	1.2	Not Detected
Chloromethane	0.90	Not Detected	1.8	Not Detected
Vinyl Chloride	0.18	Not Detected	0.46	Not Detected
1,3-Butadiene	0.18	Not Detected	0.40	Not Detected
Bromomethane	0.90	Not Detected	3.5	Not Detected
Chloroethane	0.90	Not Detected	2.4	Not Detected
Freon 11	0.18	0.23	1.0	1.3
Ethanol	0.90	3.9	1.7	7.4
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Acetone	0.90	4.8	2.1	11
2-Propanol	0.90	Not Detected	2.2	Not Detected
Carbon Disulfide	0.90	Not Detected	2.8	Not Detected
3-Chloropropene	0.90	Not Detected	2.8	Not Detected
Methylene Chloride	0.36	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.65	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Hexane	0.18	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.18	Not Detected	0.73	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.90	Not Detected	2.6	Not Detected
cis-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Tetrahydrofuran	0.90	Not Detected	2.6	Not Detected
Chloroform	0.18	Not Detected	0.88	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.98	Not Detected
Cyclohexane	0.18	Not Detected	0.62	Not Detected
Carbon Tetrachloride	0.18	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.90	Not Detected	4.2	Not Detected
Benzene	0.18	Not Detected	0.58	Not Detected
1,2-Dichloroethane	0.18	Not Detected	0.73	Not Detected
Heptane	0.18	Not Detected	0.74	Not Detected
Trichloroethene	0.18	Not Detected	0.97	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.83	Not Detected
1,4-Dioxane	0.18	Not Detected	0.65	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.82	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.74	Not Detected
Toluene	0.18	Not Detected	0.68	Not Detected
trans-1,3-Dichloropropene	0.18	Not Detected	0.82	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	0.98	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
2-Hexanone	0.90	Not Detected	3.7	Not Detected



Client Sample ID: D2 (152210)

Lab ID#: 1505225-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051811	Date of Collection:	5/5/15 2:34:00 PM
Dil. Factor:	1.80	Date of Analysis:	5/18/15 03:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.18	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.83	Not Detected
Ethyl Benzene	0.18	Not Detected	0.78	Not Detected
m,p-Xylene	0.18	Not Detected	0.78	Not Detected
o-Xylene	0.18	Not Detected	0.78	Not Detected
Styrene	0.18	Not Detected	0.77	Not Detected
Bromoform	0.18	Not Detected	1.9	Not Detected
Cumene	0.18	Not Detected	0.88	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
Propylbenzene	0.18	Not Detected	0.88	Not Detected
4-Ethyltoluene	0.18	Not Detected	0.88	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.88	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.88	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.18	Not Detected	0.93	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.90	Not Detected UJ	6.7	Not Detected UJ
Hexachlorobutadiene	0.90	Not Detected	9.6	Not Detected

UJ = Analyte 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	108	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: U1 (152211)

Lab ID#: 1505225-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051812	Date of Collection:	5/5/15 2:47:00 PM
Dil. Factor:	1.83	Date of Analysis:	5/18/15 04:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.22	0.90	1.1
Freon 114	0.18	Not Detected	1.3	Not Detected
Chloromethane	0.92	Not Detected	1.9	Not Detected
Vinyl Chloride	0.18	Not Detected	0.47	Not Detected
1,3-Butadiene	0.18	Not Detected	0.40	Not Detected
Bromomethane	0.92	Not Detected	3.6	Not Detected
Chloroethane	0.92	Not Detected	2.4	Not Detected
Freon 11	0.18	0.23	1.0	1.3
Ethanol	0.92	4.0	1.7	7.4
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Acetone	0.92	5.7	2.2	14
2-Propanol	0.92	Not Detected	2.2	Not Detected
Carbon Disulfide	0.92	Not Detected	2.8	Not Detected
3-Chloropropene	0.92	Not Detected	2.9	Not Detected
Methylene Chloride	0.37	Not Detected	1.3	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Hexane	0.18	Not Detected	0.64	Not Detected
1,1-Dichloroethane	0.18	Not Detected	0.74	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.92	1.1	2.7	3.3
cis-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Tetrahydrofuran	0.92	Not Detected	2.7	Not Detected
Chloroform	0.18	Not Detected	0.89	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Cyclohexane	0.18	Not Detected	0.63	Not Detected
Carbon Tetrachloride	0.18	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	0.92	Not Detected	4.3	Not Detected
Benzene	0.18	Not Detected	0.58	Not Detected
1,2-Dichloroethane	0.18	Not Detected	0.74	Not Detected
Heptane	0.18	Not Detected	0.75	Not Detected
Trichloroethene	0.18	Not Detected	0.98	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.84	Not Detected
1,4-Dioxane	0.18	Not Detected	0.66	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.75	Not Detected
Toluene	0.18	0.27	0.69	1.0
trans-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
2-Hexanone	0.92	Not Detected	3.7	Not Detected



Client Sample ID: U1 (152211)

Lab ID#: 1505225-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051812	Date of Collection:	5/5/15 2:47:00 PM
Dil. Factor:	1.83	Date of Analysis:	5/18/15 04:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.18	Not Detected	1.6	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.84	Not Detected
Ethyl Benzene	0.18	Not Detected	0.79	Not Detected
m,p-Xylene	0.18	Not Detected	0.79	Not Detected
o-Xylene	0.18	Not Detected	0.79	Not Detected
Styrene	0.18	Not Detected	0.78	Not Detected
Bromoform	0.18	Not Detected	1.9	Not Detected
Cumene	0.18	Not Detected	0.90	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
Propylbenzene	0.18	Not Detected	0.90	Not Detected
4-Ethyltoluene	0.18	Not Detected	0.90	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.90	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.90	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.18	Not Detected	0.95	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.92	Not Detected UJ	6.8	Not Detected UJ
Hexachlorobutadiene	0.92	Not Detected	9.8	Not Detected

UJ = Analyte 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	107	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: U2 (152212)

Lab ID#: 1505225-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051813	Date of Collection:	5/5/15 3:04:00 PM
Dil. Factor:	1.84	Date of Analysis:	5/18/15 05:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	Not Detected	0.91	Not Detected
Freon 114	0.18	Not Detected	1.3	Not Detected
Chloromethane	0.92	Not Detected	1.9	Not Detected
Vinyl Chloride	0.18	Not Detected	0.47	Not Detected
1,3-Butadiene	0.18	Not Detected	0.41	Not Detected
Bromomethane	0.92	Not Detected	3.6	Not Detected
Chloroethane	0.92	Not Detected	2.4	Not Detected
Freon 11	0.18	0.23	1.0	1.3
Ethanol	0.92	4.2	1.7	8.0
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.73	Not Detected
Acetone	0.92	6.2	2.2	15
2-Propanol	0.92	Not Detected	2.3	Not Detected
Carbon Disulfide	0.92	Not Detected	2.9	Not Detected
3-Chloropropene	0.92	Not Detected	2.9	Not Detected
Methylene Chloride	0.37	Not Detected	1.3	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.73	Not Detected
Hexane	0.18	Not Detected	0.65	Not Detected
1,1-Dichloroethane	0.18	Not Detected	0.74	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.92	Not Detected	2.7	Not Detected
cis-1,2-Dichloroethene	0.18	Not Detected	0.73	Not Detected
Tetrahydrofuran	0.92	Not Detected	2.7	Not Detected
Chloroform	0.18	Not Detected	0.90	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Cyclohexane	0.18	0.38	0.63	1.3
Carbon Tetrachloride	0.18	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	0.92	Not Detected	4.3	Not Detected
Benzene	0.18	Not Detected	0.59	Not Detected
1,2-Dichloroethane	0.18	Not Detected	0.74	Not Detected
Heptane	0.18	Not Detected	0.75	Not Detected
Trichloroethene	0.18	Not Detected	0.99	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.85	Not Detected
1,4-Dioxane	0.18	Not Detected	0.66	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.84	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.75	Not Detected
Toluene	0.18	0.26	0.69	0.99
trans-1,3-Dichloropropene	0.18	Not Detected	0.84	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
2-Hexanone	0.92	Not Detected	3.8	Not Detected



Client Sample ID: U2 (152212)

Lab ID#: 1505225-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051813	Date of Collection:	5/5/15 3:04:00 PM
Dil. Factor:	1.84	Date of Analysis:	5/18/15 05:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.18	Not Detected	1.6	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.85	Not Detected
Ethyl Benzene	0.18	Not Detected	0.80	Not Detected
m,p-Xylene	0.18	Not Detected	0.80	Not Detected
o-Xylene	0.18	Not Detected	0.80	Not Detected
Styrene	0.18	Not Detected	0.78	Not Detected
Bromoform	0.18	Not Detected	1.9	Not Detected
Cumene	0.18	Not Detected	0.90	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.3	Not Detected
Propylbenzene	0.18	Not Detected	0.90	Not Detected
4-Ethyltoluene	0.18	Not Detected	0.90	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.90	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.90	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.18	Not Detected	0.95	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.92	Not Detected UJ	6.8	Not Detected UJ
Hexachlorobutadiene	0.92	Not Detected	9.8	Not Detected

UJ = Analyte 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	107	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1505225-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051807	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/18/15 12:28 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	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#: 1505225-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051807	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/18/15 12:28 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected UJ	3.7	Not Detected UJ
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

UJ = Analyte associated with low bias in the CCV and/or LCS.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1505225-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/18/15 07:35 AM

Compound	%Recovery
Freon 12	106
Freon 114	102
Chloromethane	100
Vinyl Chloride	104
1,3-Butadiene	102
Bromomethane	109
Chloroethane	100
Freon 11	105
Ethanol	103
Freon 113	100
1,1-Dichloroethene	103
Acetone	96
2-Propanol	100
Carbon Disulfide	104
3-Chloropropene	107
Methylene Chloride	98
Methyl tert-butyl ether	108
trans-1,2-Dichloroethene	100
Hexane	105
1,1-Dichloroethane	105
2-Butanone (Methyl Ethyl Ketone)	104
cis-1,2-Dichloroethene	105
Tetrahydrofuran	104
Chloroform	102
1,1,1-Trichloroethane	100
Cyclohexane	103
Carbon Tetrachloride	98
2,2,4-Trimethylpentane	102
Benzene	102
1,2-Dichloroethane	102
Heptane	108
Trichloroethene	102
1,2-Dichloropropane	104
1,4-Dioxane	111
Bromodichloromethane	111
cis-1,3-Dichloropropene	106
4-Methyl-2-pentanone	109
Toluene	105
trans-1,3-Dichloropropene	110
1,1,2-Trichloroethane	107
Tetrachloroethene	105
2-Hexanone	106



Air Toxics

Client Sample ID: CCV

Lab ID#: 1505225-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/18/15 07:35 AM

Compound	%Recovery
Dibromochloromethane	112
1,2-Dibromoethane (EDB)	111
Chlorobenzene	103
Ethyl Benzene	105
m,p-Xylene	107
o-Xylene	108
Styrene	107
Bromoform	110
Cumene	106
1,1,2,2-Tetrachloroethane	104
Propylbenzene	101
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	100
1,2,4-Trimethylbenzene	98
1,3-Dichlorobenzene	92
1,4-Dichlorobenzene	90
alpha-Chlorotoluene	97
1,2-Dichlorobenzene	87
1,2,4-Trichlorobenzene	61 Q
Hexachlorobutadiene	71

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1505225-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051804	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/18/15 09:05 AM

Compound	%Recovery	Method Limits
Freon 12	108	70-130
Freon 114	108	70-130
Chloromethane	101	70-130
Vinyl Chloride	106	70-130
1,3-Butadiene	100	70-130
Bromomethane	114	70-130
Chloroethane	104	70-130
Freon 11	107	70-130
Ethanol	106	70-130
Freon 113	99	70-130
1,1-Dichloroethene	105	70-130
Acetone	95	70-130
2-Propanol	105	70-130
Carbon Disulfide	91	70-130
3-Chloropropene	100	70-130
Methylene Chloride	99	70-130
Methyl tert-butyl ether	102	70-130
trans-1,2-Dichloroethene	89	70-130
Hexane	105	70-130
1,1-Dichloroethane	102	70-130
2-Butanone (Methyl Ethyl Ketone)	99	70-130
cis-1,2-Dichloroethene	113	70-130
Tetrahydrofuran	98	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	100	70-130
Cyclohexane	102	70-130
Carbon Tetrachloride	106	70-130
2,2,4-Trimethylpentane	103	70-130
Benzene	102	70-130
1,2-Dichloroethane	101	70-130
Heptane	108	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	104	70-130
1,4-Dioxane	105	70-130
Bromodichloromethane	113	70-130
cis-1,3-Dichloropropene	98	70-130
4-Methyl-2-pentanone	108	70-130
Toluene	103	70-130
trans-1,3-Dichloropropene	106	70-130
1,1,2-Trichloroethane	103	70-130
Tetrachloroethene	102	70-130
2-Hexanone	103	70-130

Client Sample ID: LCS

Lab ID#: 1505225-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/18/15 09:05 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	113	70-130
1,2-Dibromoethane (EDB)	109	70-130
Chlorobenzene	99	70-130
Ethyl Benzene	103	70-130
m,p-Xylene	102	70-130
o-Xylene	103	70-130
Styrene	106	70-130
Bromoform	112	70-130
Cumene	101	70-130
1,1,2,2-Tetrachloroethane	102	70-130
Propylbenzene	96	70-130
4-Ethyltoluene	94	70-130
1,3,5-Trimethylbenzene	94	70-130
1,2,4-Trimethylbenzene	90	70-130
1,3-Dichlorobenzene	89	70-130
1,4-Dichlorobenzene	86	70-130
alpha-Chlorotoluene	99	70-130
1,2-Dichlorobenzene	86	70-130
1,2,4-Trichlorobenzene	70	70-130
Hexachlorobutadiene	78	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1505225-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051805	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/18/15 09:55 AM

Compound	%Recovery	Method Limits
Freon 12	111	70-130
Freon 114	112	70-130
Chloromethane	103	70-130
Vinyl Chloride	109	70-130
1,3-Butadiene	103	70-130
Bromomethane	119	70-130
Chloroethane	107	70-130
Freon 11	110	70-130
Ethanol	113	70-130
Freon 113	101	70-130
1,1-Dichloroethene	108	70-130
Acetone	99	70-130
2-Propanol	109	70-130
Carbon Disulfide	95	70-130
3-Chloropropene	104	70-130
Methylene Chloride	104	70-130
Methyl tert-butyl ether	106	70-130
trans-1,2-Dichloroethene	90	70-130
Hexane	109	70-130
1,1-Dichloroethane	106	70-130
2-Butanone (Methyl Ethyl Ketone)	104	70-130
cis-1,2-Dichloroethene	119	70-130
Tetrahydrofuran	103	70-130
Chloroform	103	70-130
1,1,1-Trichloroethane	102	70-130
Cyclohexane	107	70-130
Carbon Tetrachloride	110	70-130
2,2,4-Trimethylpentane	134 Q	70-130
Benzene	102	70-130
1,2-Dichloroethane	102	70-130
Heptane	107	70-130
Trichloroethene	103	70-130
1,2-Dichloropropane	104	70-130
1,4-Dioxane	107	70-130
Bromodichloromethane	113	70-130
cis-1,3-Dichloropropene	100	70-130
4-Methyl-2-pentanone	110	70-130
Toluene	104	70-130
trans-1,3-Dichloropropene	109	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	104	70-130
2-Hexanone	104	70-130



Client Sample ID: LCSD

Lab ID#: 1505225-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20051805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/18/15 09:55 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	113	70-130
1,2-Dibromoethane (EDB)	108	70-130
Chlorobenzene	101	70-130
Ethyl Benzene	108	70-130
m,p-Xylene	106	70-130
o-Xylene	109	70-130
Styrene	108	70-130
Bromoform	114	70-130
Cumene	104	70-130
1,1,2,2-Tetrachloroethane	105	70-130
Propylbenzene	99	70-130
4-Ethyltoluene	97	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	92	70-130
1,3-Dichlorobenzene	92	70-130
1,4-Dichlorobenzene	88	70-130
alpha-Chlorotoluene	103	70-130
1,2-Dichlorobenzene	89	70-130
1,2,4-Trichlorobenzene	77	70-130
Hexachlorobutadiene	86	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130