

9/17/2016

Mr. Curt Lueckenhoff  
Missouri Dept. of Natural Resources  
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1609227

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 9/8/2016 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 #: 1609227**

Work Order Summary

<b>CLIENT:</b>	Mr. Curt Lueckenhoff 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>	573-526-3363	<b>P.O. #</b>	3ESP170078
<b>FAX:</b>	573-526-3350	<b>PROJECT #</b>	Bridgeton Landfill
<b>DATE RECEIVED:</b>	09/08/2016	<b>CONTACT:</b>	Brian Whittaker
<b>DATE COMPLETED:</b>	09/17/2016		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (163452)	Modified TO-15	6.0 "Hg	5 psi
02A	D2 (163453)	Modified TO-15	6.0 "Hg	5 psi
03A	U1 (163454)	Modified TO-15	5.5 "Hg	5 psi
04A	Lab Blank	Modified TO-15	NA	NA
05A	CCV	Modified TO-15	NA	NA
06A	LCS	Modified TO-15	NA	NA
06AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 09/17/16

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935  
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.

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# 1609227**

Three 6 Liter Summa Canister (100% Certified) samples were received on September 08, 2016. 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**

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. Target compound non-detects in the samples that are associated with high bias in CCV analyses have not been flagged.

**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 (163452)**

**Lab ID#: 1609227-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.41	0.83	2.0
Freon 11	0.17	0.18	0.94	0.99
Ethanol	0.84	4.5	1.6	8.4
Acetone	0.84	2.6	2.0	6.3

**Client Sample ID: D2 (163453)**

**Lab ID#: 1609227-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.44	0.83	2.2
Freon 11	0.17	0.24	0.94	1.3
Ethanol	0.84	11	1.6	21
Acetone	0.84	7.2	2.0	17
Methylene Chloride	0.34	0.44	1.2	1.5
2-Butanone (Methyl Ethyl Ketone)	0.84	1.2	2.5	3.6
Benzene	0.17	0.23	0.54	0.75
Toluene	0.17	0.25	0.63	0.94

**Client Sample ID: U1 (163454)**

**Lab ID#: 1609227-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.81	2.1
Freon 11	0.16	0.20	0.92	1.1
Ethanol	0.82	14	1.5	27
Acetone	0.82	4.0	1.9	9.6
2-Propanol	0.82	1.1	2.0	2.6



Air Toxics

Client Sample ID: D1 (163452)

Lab ID#: 1609227-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091513	Date of Collection:	9/1/16 1:05:00 PM
Dil. Factor:	1.68	Date of Analysis:	9/15/16 07:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.41	0.83	2.0
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	0.18	0.94	0.99
Ethanol	0.84	4.5	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	2.6	2.0	6.3
2-Propanol	0.84	Not Detected	2.1	Not Detected
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
3-Chloropropene	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.60	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	Not Detected	2.5	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Tetrahydrofuran	0.84	Not Detected UJ	2.5	Not Detected UJ
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	0.17	Not Detected	0.69	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: D1 (163452)

Lab ID#: 1609227-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091513	Date of Collection:	9/1/16 1:05:00 PM
Dil. Factor:	1.68	Date of Analysis:	9/15/16 07:38 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	0.17	Not Detected	0.87	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.2	Not Detected
Hexachlorobutadiene	0.84	Not Detected	9.0	Not Detected

UJ = Analyte associated with low bias in the CCV.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: D2 (163453)

Lab ID#: 1609227-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091514	Date of Collection:	9/1/16 1:30:00 PM
Dil. Factor:	1.68	Date of Analysis:	9/15/16 08:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.44	0.83	2.2
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	0.24	0.94	1.3
Ethanol	0.84	11	1.6	21
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	7.2	2.0	17
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	0.44	1.2	1.5
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	1.2	2.5	3.6
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Tetrahydrofuran	0.84	Not Detected UJ	2.5	Not Detected UJ
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	0.23	0.54	0.75
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	0.17	Not Detected	0.69	Not Detected
Toluene	0.17	0.25	0.63	0.94
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 (163453)

Lab ID#: 1609227-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091514	Date of Collection:	9/1/16 1:30:00 PM
Dil. Factor:	1.68	Date of Analysis:	9/15/16 08:36 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	0.17	Not Detected	0.87	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.2	Not Detected
Hexachlorobutadiene	0.84	Not Detected	9.0	Not Detected

UJ = Analyte associated with low bias in the CCV.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: U1 (163454)

Lab ID#: 1609227-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091515	Date of Collection:	9/1/16 1:50:00 PM
Dil. Factor:	1.64	Date of Analysis:	9/15/16 09:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.81	2.1
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	0.20	0.92	1.1
Ethanol	0.82	14	1.5	27
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	4.0	1.9	9.6
2-Propanol	0.82	1.1	2.0	2.6
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 UJ	2.4	Not Detected UJ
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	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	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	0.67	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



Client Sample ID: U1 (163454)

Lab ID#: 1609227-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091515	Date of Collection:	9/1/16 1:50:00 PM
Dil. Factor:	1.64	Date of Analysis:	9/15/16 09:35 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	0.16	Not Detected	0.85	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

UJ = Analyte associated with low bias in the CCV.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1609227-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091506	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/15/16 01:08 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 UJ	1.5	Not Detected UJ
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#: 1609227-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091506	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/15/16 01:08 PM

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

UJ = Analyte associated with low bias in the CCV.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1609227-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/15/16 10:12 AM

Compound	%Recovery
Freon 12	108
Freon 114	109
Chloromethane	82
Vinyl Chloride	84
1,3-Butadiene	82
Bromomethane	100
Chloroethane	106
Freon 11	116
Ethanol	99
Freon 113	102
1,1-Dichloroethene	99
Acetone	86
2-Propanol	87
Carbon Disulfide	96
3-Chloropropene	122
Methylene Chloride	92
Methyl tert-butyl ether	94
trans-1,2-Dichloroethene	106
Hexane	80
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	89
cis-1,2-Dichloroethene	93
Tetrahydrofuran	69 Q
Chloroform	102
1,1,1-Trichloroethane	106
Cyclohexane	96
Carbon Tetrachloride	112
2,2,4-Trimethylpentane	94
Benzene	99
1,2-Dichloroethane	116
Heptane	93
Trichloroethene	112
1,2-Dichloropropane	91
1,4-Dioxane	94
Bromodichloromethane	112
cis-1,3-Dichloropropene	92
4-Methyl-2-pentanone	91
Toluene	102
trans-1,3-Dichloropropene	100
1,1,2-Trichloroethane	100
Tetrachloroethene	119
2-Hexanone	88



Air Toxics

Client Sample ID: CCV

Lab ID#: 1609227-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/15/16 10:12 AM

Compound	%Recovery
Dibromochloromethane	111
1,2-Dibromoethane (EDB)	108
Chlorobenzene	104
Ethyl Benzene	109
m,p-Xylene	107
o-Xylene	103
Styrene	110
Bromoform	119
Cumene	99
1,1,2,2-Tetrachloroethane	82
Propylbenzene	89
4-Ethyltoluene	91
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	80
1,3-Dichlorobenzene	92
1,4-Dichlorobenzene	93
alpha-Chlorotoluene	88
1,2-Dichlorobenzene	98
1,2,4-Trichlorobenzene	131 Q
Hexachlorobutadiene	138 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1609227-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/15/16 10:57 AM

Compound	%Recovery	Method Limits
Freon 12	109	70-130
Freon 114	106	70-130
Chloromethane	80	70-130
Vinyl Chloride	82	70-130
1,3-Butadiene	76	70-130
Bromomethane	100	70-130
Chloroethane	100	70-130
Freon 11	116	70-130
Ethanol	104	70-130
Freon 113	96	70-130
1,1-Dichloroethene	96	70-130
Acetone	73	70-130
2-Propanol	83	70-130
Carbon Disulfide	79	70-130
3-Chloropropene	112	70-130
Methylene Chloride	88	70-130
Methyl tert-butyl ether	86	70-130
trans-1,2-Dichloroethene	94	70-130
Hexane	83	70-130
1,1-Dichloroethane	93	70-130
2-Butanone (Methyl Ethyl Ketone)	87	70-130
cis-1,2-Dichloroethene	87	70-130
Tetrahydrofuran	60 Q	70-130
Chloroform	98	70-130
1,1,1-Trichloroethane	102	70-130
Cyclohexane	87	70-130
Carbon Tetrachloride	109	70-130
2,2,4-Trimethylpentane	84	70-130
Benzene	96	70-130
1,2-Dichloroethane	113	70-130
Heptane	86	70-130
Trichloroethene	112	70-130
1,2-Dichloropropane	91	70-130
1,4-Dioxane	90	70-130
Bromodichloromethane	114	70-130
cis-1,3-Dichloropropene	86	70-130
4-Methyl-2-pentanone	91	70-130
Toluene	101	70-130
trans-1,3-Dichloropropene	96	70-130
1,1,2-Trichloroethane	103	70-130
Tetrachloroethene	118	70-130
2-Hexanone	89	70-130



Client Sample ID: LCS

Lab ID#: 1609227-06A

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

<b>File Name:</b>	<b>e091503</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 9/15/16 10:57 AM

<b>Compound</b>	<b>%Recovery</b>	<b>Method Limits</b>
Dibromochloromethane	116	70-130
1,2-Dibromoethane (EDB)	107	70-130
Chlorobenzene	108	70-130
Ethyl Benzene	105	70-130
m,p-Xylene	107	70-130
o-Xylene	107	70-130
Styrene	113	70-130
Bromoform	128	70-130
Cumene	101	70-130
1,1,2,2-Tetrachloroethane	82	70-130
Propylbenzene	94	70-130
4-Ethyltoluene	90	70-130
1,3,5-Trimethylbenzene	97	70-130
1,2,4-Trimethylbenzene	82	70-130
1,3-Dichlorobenzene	90	70-130
1,4-Dichlorobenzene	96	70-130
alpha-Chlorotoluene	98	70-130
1,2-Dichlorobenzene	98	70-130
1,2,4-Trichlorobenzene	130	70-130
Hexachlorobutadiene	136 Q	70-130

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	107	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1609227-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e091504	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/15/16 11:41 AM

Compound	%Recovery	Method Limits
Freon 12	102	70-130
Freon 114	102	70-130
Chloromethane	84	70-130
Vinyl Chloride	80	70-130
1,3-Butadiene	72	70-130
Bromomethane	98	70-130
Chloroethane	98	70-130
Freon 11	112	70-130
Ethanol	96	70-130
Freon 113	94	70-130
1,1-Dichloroethene	96	70-130
Acetone	70	70-130
2-Propanol	80	70-130
Carbon Disulfide	77	70-130
3-Chloropropene	110	70-130
Methylene Chloride	84	70-130
Methyl tert-butyl ether	83	70-130
trans-1,2-Dichloroethene	103	70-130
Hexane	81	70-130
1,1-Dichloroethane	85	70-130
2-Butanone (Methyl Ethyl Ketone)	79	70-130
cis-1,2-Dichloroethene	81	70-130
Tetrahydrofuran	62 Q	70-130
Chloroform	94	70-130
1,1,1-Trichloroethane	100	70-130
Cyclohexane	89	70-130
Carbon Tetrachloride	108	70-130
2,2,4-Trimethylpentane	84	70-130
Benzene	95	70-130
1,2-Dichloroethane	111	70-130
Heptane	89	70-130
Trichloroethene	107	70-130
1,2-Dichloropropane	87	70-130
1,4-Dioxane	95	70-130
Bromodichloromethane	114	70-130
cis-1,3-Dichloropropene	86	70-130
4-Methyl-2-pentanone	92	70-130
Toluene	100	70-130
trans-1,3-Dichloropropene	94	70-130
1,1,2-Trichloroethane	95	70-130
Tetrachloroethene	113	70-130
2-Hexanone	89	70-130

Client Sample ID: LCSD

Lab ID#: 1609227-06AA

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

File Name:	e091504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/15/16 11:41 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	106	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	105	70-130
o-Xylene	106	70-130
Styrene	108	70-130
Bromoform	125	70-130
Cumene	97	70-130
1,1,2,2-Tetrachloroethane	82	70-130
Propylbenzene	89	70-130
4-Ethyltoluene	88	70-130
1,3,5-Trimethylbenzene	95	70-130
1,2,4-Trimethylbenzene	79	70-130
1,3-Dichlorobenzene	87	70-130
1,4-Dichlorobenzene	92	70-130
alpha-Chlorotoluene	92	70-130
1,2-Dichlorobenzene	95	70-130
1,2,4-Trichlorobenzene	130	70-130
Hexachlorobutadiene	135 Q	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130