

11/10/2016
Mr. Curt Lueckenhoff
Missouri Dept. of Natural Resources
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill
Project #:
Workorder #: 1610598

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 10/31/2016 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

A Eurofins Lancaster Laboratories Company

WORK ORDER #: 1610598

Work Order Summary

CLIENT:	Mr. Curt Lueckenhoff 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:	573-526-3363	P.O. #	3ESP170267
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	10/31/2016	CONTACT:	Brian Whittaker
DATE COMPLETED:	11/10/2016		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (163910)	Modified TO-15	3.3 "Hg	5 psi
02A(cancelled)	D2 (163911)	Modified TO-15	0 psi	5 psi
03A	U1 (163912)	Modified TO-15	5.9 "Hg	5.1 psi
04A	U2 (163913)	Modified TO-15	5.9 "Hg	4.8 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:



DATE: 11/10/16

Technical Director

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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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1610598**

Four 6 Liter Summa Canister (100% Certified) samples were received on October 31, 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.

Requirement	TO-15	ATL Modifications
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

Despite the use of flow controllers for sample collection, the final canister vacuum for sample D2 (163911) was measured at ambient pressure by the laboratory upon sample receipt.

There was a significant difference (greater than 5.0" Hg) between the measured canister receipt vacuum and that which was reported on the Chain of Custody (COC) for sample D2 (163911). A leak test indicated that the valve was leaking. The client was notified and the analysis was cancelled.

Analytical Notes

There were no analytical discrepancies.

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



Air Toxics

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

Client Sample ID: D1 (163910)**Lab ID#: 1610598-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.52	0.74	2.6
Chloromethane	0.75	0.81	1.5	1.7
Freon 11	0.15	0.25	0.84	1.4
Ethanol	0.75	16	1.4	31
Acetone	0.75	17	1.8	41
2-Propanol	0.75	2.3	1.8	5.6
Carbon Disulfide	0.75	2.8	2.3	8.6
Methylene Chloride	0.30	0.43	1.0	1.5
Hexane	0.15	1.5	0.53	5.3
2-Butanone (Methyl Ethyl Ketone)	0.75	1.8	2.2	5.2
Cyclohexane	0.15	0.64	0.52	2.2
2,2,4-Trimethylpentane	0.75	20	3.5	92
Benzene	0.15	0.54	0.48	1.7
Heptane	0.15	0.67	0.61	2.7
Trichloroethene	0.15	0.16	0.81	0.89
4-Methyl-2-pentanone	0.15	0.51	0.61	2.1
Toluene	0.15	19	0.56	71
Ethyl Benzene	0.15	1.7	0.65	7.3
m,p-Xylene	0.15	7.3	0.65	32
o-Xylene	0.15	2.3	0.65	10
Styrene	0.15	0.28	0.64	1.2
4-Ethyltoluene	0.15	0.46	0.74	2.2
1,3,5-Trimethylbenzene	0.15	0.16	0.74	0.81
1,2,4-Trimethylbenzene	0.15	0.43	0.74	2.1

Client Sample ID: U1 (163912)**Lab ID#: 1610598-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.52	0.83	2.6
Freon 11	0.17	0.24	0.94	1.4
Ethanol	0.84	3.5	1.6	6.7
Acetone	0.84	3.1	2.0	7.3

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

Client Sample ID: U1 (163912)

Lab ID#: 1610598-03A

Hexane	0.17	0.21	0.59	0.76
Benzene	0.17	0.20	0.54	0.64
Toluene	0.17	0.32	0.63	1.2

Client Sample ID: U2 (163913)

Lab ID#: 1610598-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.82	2.5
Freon 11	0.16	0.25	0.93	1.4
Ethanol	0.82	3.3	1.6	6.2
Acetone	0.82	3.1	2.0	7.3
Hexane	0.16	0.28	0.58	1.0
Benzene	0.16	0.21	0.53	0.68
Toluene	0.16	0.37	0.62	1.4



Air Toxics

Client Sample ID: D1 (163910)

Lab ID#: 1610598-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110417	Date of Collection: 10/25/16 3:05:00 PM		
Dil. Factor:	1.50	Date of Analysis: 11/4/16 07:08 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.52	0.74	2.6
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.75	0.81	1.5	1.7
Vinyl Chloride	0.15	Not Detected	0.38	Not Detected
1,3-Butadiene	0.15	Not Detected	0.33	Not Detected
Bromomethane	0.75	Not Detected	2.9	Not Detected
Chloroethane	0.75	Not Detected	2.0	Not Detected
Freon 11	0.15	0.25	0.84	1.4
Ethanol	0.75	16	1.4	31
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Acetone	0.75	17	1.8	41
2-Propanol	0.75	2.3	1.8	5.6
Carbon Disulfide	0.75	2.8	2.3	8.6
3-Chloropropene	0.75	Not Detected	2.3	Not Detected
Methylene Chloride	0.30	0.43	1.0	1.5
Methyl tert-butyl ether	0.15	Not Detected	0.54	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Hexane	0.15	1.5	0.53	5.3
1,1-Dichloroethane	0.15	Not Detected	0.61	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.75	1.8	2.2	5.2
cis-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Tetrahydrofuran	0.75	Not Detected	2.2	Not Detected
Chloroform	0.15	Not Detected	0.73	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.82	Not Detected
Cyclohexane	0.15	0.64	0.52	2.2
Carbon Tetrachloride	0.15	Not Detected	0.94	Not Detected
2,2,4-Trimethylpentane	0.75	20	3.5	92
Benzene	0.15	0.54	0.48	1.7
1,2-Dichloroethane	0.15	Not Detected	0.61	Not Detected
Heptane	0.15	0.67	0.61	2.7
Trichloroethene	0.15	0.16	0.81	0.89
1,2-Dichloropropane	0.15	Not Detected	0.69	Not Detected
1,4-Dioxane	0.15	Not Detected	0.54	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
4-Methyl-2-pentanone	0.15	0.51	0.61	2.1
Toluene	0.15	19	0.56	71
trans-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.82	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.75	Not Detected	3.1	Not Detected



Air Toxics

Client Sample ID: D1 (163910)

Lab ID#: 1610598-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110417	Date of Collection: 10/25/16 3:05:00 PM		
Dil. Factor:	1.50	Date of Analysis: 11/4/16 07:08 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Chlorobenzene	0.15	Not Detected	0.69	Not Detected
Ethyl Benzene	0.15	1.7	0.65	7.3
m,p-Xylene	0.15	7.3	0.65	32
o-Xylene	0.15	2.3	0.65	10
Styrene	0.15	0.28	0.64	1.2
Bromoform	0.15	Not Detected	1.6	Not Detected
Cumene	0.15	Not Detected	0.74	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	Not Detected	0.74	Not Detected
4-Ethyltoluene	0.15	0.46	0.74	2.2
1,3,5-Trimethylbenzene	0.15	0.16	0.74	0.81
1,2,4-Trimethylbenzene	0.15	0.43	0.74	2.1
1,3-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.78	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected	5.6	Not Detected
Hexachlorobutadiene	0.75	Not Detected	8.0	Not Detected

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	96	70-130



Air Toxics

Client Sample ID: U1 (163912)

Lab ID#: 1610598-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110418	Date of Collection: 10/25/16 1:25:00 PM		
Dil. Factor:	1.68	Date of Analysis: 11/4/16 08:04 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.52	0.83	2.6
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	1.4
Ethanol	0.84	3.5	1.6	6.7
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	3.1	2.0	7.3
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	0.21	0.59	0.76
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	2.5	Not Detected
Chloroform	0.17	Not Detected	0.82	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Cyclohexane	0.17	Not Detected	0.58	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
Benzene	0.17	0.20	0.54	0.64
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	0.32	0.63	1.2
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



Air Toxics

Client Sample ID: U1 (163912)

Lab ID#: 1610598-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110418	Date of Collection: 10/25/16 1:25:00 PM		
Dil. Factor:	1.68	Date of Analysis: 11/4/16 08:04 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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: U2 (163913)

Lab ID#: 1610598-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110419	Date of Collection: 10/25/16 1:30:00 PM		
Dil. Factor:	1.65	Date of Analysis: 11/4/16 08:44 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.82	2.5
Freon 114	0.16	Not Detected	1.2	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	0.25	0.93	1.4
Ethanol	0.82	3.3	1.6	6.2
Freon 113	0.16	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	3.1	2.0	7.3
2-Propanol	0.82	Not Detected	2.0	Not Detected
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	0.28	0.58	1.0
1,1-Dichloroethane	0.16	Not Detected	0.67	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.90	Not Detected
Cyclohexane	0.16	Not Detected	0.57	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	0.21	0.53	0.68
1,2-Dichloroethane	0.16	Not Detected	0.67	Not Detected
Heptane	0.16	Not Detected	0.68	Not Detected
Trichloroethene	0.16	Not Detected	0.89	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	0.75	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.68	Not Detected
Toluene	0.16	0.37	0.62	1.4
trans-1,3-Dichloropropene	0.16	Not Detected	0.75	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.90	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	Not Detected	3.4	Not Detected



Air Toxics

Client Sample ID: U2 (163913)

Lab ID#: 1610598-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110419	Date of Collection: 10/25/16 1:30:00 PM		
Dil. Factor:	1.65	Date of Analysis: 11/4/16 08:44 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	0.72	Not Detected
m,p-Xylene	0.16	Not Detected	0.72	Not Detected
o-Xylene	0.16	Not Detected	0.72	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	8.8	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1610598-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110406	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 11/4/16 11:17 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



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1610598-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110406	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 11/4/16 11:17 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	0.10	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

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1610598-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/4/16 08:14 AM

Compound	%Recovery
Freon 12	106
Freon 114	98
Chloromethane	103
Vinyl Chloride	94
1,3-Butadiene	90
Bromomethane	88
Chloroethane	103
Freon 11	97
Ethanol	84
Freon 113	97
1,1-Dichloroethene	93
Acetone	94
2-Propanol	76
Carbon Disulfide	96
3-Chloropropene	96
Methylene Chloride	96
Methyl tert-butyl ether	88
trans-1,2-Dichloroethene	97
Hexane	92
1,1-Dichloroethane	95
2-Butanone (Methyl Ethyl Ketone)	93
cis-1,2-Dichloroethene	97
Tetrahydrofuran	88
Chloroform	101
1,1,1-Trichloroethane	96
Cyclohexane	95
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	89
Benzene	104
1,2-Dichloroethane	100
Heptane	92
Trichloroethene	104
1,2-Dichloropropane	103
1,4-Dioxane	99
Bromodichloromethane	99
cis-1,3-Dichloropropene	98
4-Methyl-2-pentanone	91
Toluene	104
trans-1,3-Dichloropropene	98
1,1,2-Trichloroethane	102
Tetrachloroethene	103
2-Hexanone	87



Air Toxics

Client Sample ID: CCV

Lab ID#: 1610598-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110402	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/4/16 08:14 AM

Compound	%Recovery
Dibromochloromethane	102
1,2-Dibromoethane (EDB)	101
Chlorobenzene	107
Ethyl Benzene	100
m,p-Xylene	100
o-Xylene	103
Styrene	91
Bromoform	110
Cumene	105
1,1,2,2-Tetrachloroethane	109
Propylbenzene	97
4-Ethyltoluene	90
1,3,5-Trimethylbenzene	92
1,2,4-Trimethylbenzene	88
1,3-Dichlorobenzene	103
1,4-Dichlorobenzene	95
alpha-Chlorotoluene	101
1,2-Dichlorobenzene	102
1,2,4-Trichlorobenzene	110
Hexachlorobutadiene	105

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1610598-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110403	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/4/16 08:54 AM
Compound	%Recovery	Method	Limits
Freon 12	109	70-130	
Freon 114	102	70-130	
Chloromethane	101	70-130	
Vinyl Chloride	100	70-130	
1,3-Butadiene	91	70-130	
Bromomethane	89	70-130	
Chloroethane	111	70-130	
Freon 11	98	70-130	
Ethanol	74	70-130	
Freon 113	95	70-130	
1,1-Dichloroethene	93	70-130	
Acetone	93	70-130	
2-Propanol	80	70-130	
Carbon Disulfide	96	70-130	
3-Chloropropene	96	70-130	
Methylene Chloride	94	70-130	
Methyl tert-butyl ether	87	70-130	
trans-1,2-Dichloroethene	98	70-130	
Hexane	95	70-130	
1,1-Dichloroethane	91	70-130	
2-Butanone (Methyl Ethyl Ketone)	94	70-130	
cis-1,2-Dichloroethene	94	70-130	
Tetrahydrofuran	90	70-130	
Chloroform	99	70-130	
1,1,1-Trichloroethane	96	70-130	
Cyclohexane	95	70-130	
Carbon Tetrachloride	102	70-130	
2,2,4-Trimethylpentane	90	70-130	
Benzene	105	70-130	
1,2-Dichloroethane	97	70-130	
Heptane	92	70-130	
Trichloroethene	105	70-130	
1,2-Dichloropropane	102	70-130	
1,4-Dioxane	104	70-130	
Bromodichloromethane	100	70-130	
cis-1,3-Dichloropropene	98	70-130	
4-Methyl-2-pentanone	94	70-130	
Toluene	104	70-130	
trans-1,3-Dichloropropene	97	70-130	
1,1,2-Trichloroethane	105	70-130	
Tetrachloroethene	103	70-130	
2-Hexanone	90	70-130	



Air Toxics

Client Sample ID: LCS

Lab ID#: 1610598-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110403	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/4/16 08:54 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	106	70-130
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	105	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	98	70-130
o-Xylene	100	70-130
Styrene	91	70-130
Bromoform	114	70-130
Cumene	103	70-130
1,1,2,2-Tetrachloroethane	107	70-130
Propylbenzene	96	70-130
4-Ethyltoluene	88	70-130
1,3,5-Trimethylbenzene	88	70-130
1,2,4-Trimethylbenzene	86	70-130
1,3-Dichlorobenzene	99	70-130
1,4-Dichlorobenzene	94	70-130
alpha-Chlorotoluene	99	70-130
1,2-Dichlorobenzene	98	70-130
1,2,4-Trichlorobenzene	92	70-130
Hexachlorobutadiene	90	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1610598-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110404	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/4/16 09:34 AM
Compound	%Recovery	Method	Limits
Freon 12	106	70-130	
Freon 114	100	70-130	
Chloromethane	101	70-130	
Vinyl Chloride	98	70-130	
1,3-Butadiene	90	70-130	
Bromomethane	100	70-130	
Chloroethane	110	70-130	
Freon 11	97	70-130	
Ethanol	74	70-130	
Freon 113	95	70-130	
1,1-Dichloroethene	93	70-130	
Acetone	92	70-130	
2-Propanol	80	70-130	
Carbon Disulfide	96	70-130	
3-Chloropropene	97	70-130	
Methylene Chloride	94	70-130	
Methyl tert-butyl ether	87	70-130	
trans-1,2-Dichloroethene	97	70-130	
Hexane	94	70-130	
1,1-Dichloroethane	91	70-130	
2-Butanone (Methyl Ethyl Ketone)	94	70-130	
cis-1,2-Dichloroethene	93	70-130	
Tetrahydrofuran	90	70-130	
Chloroform	98	70-130	
1,1,1-Trichloroethane	95	70-130	
Cyclohexane	94	70-130	
Carbon Tetrachloride	101	70-130	
2,2,4-Trimethylpentane	89	70-130	
Benzene	105	70-130	
1,2-Dichloroethane	98	70-130	
Heptane	94	70-130	
Trichloroethene	105	70-130	
1,2-Dichloropropane	101	70-130	
1,4-Dioxane	103	70-130	
Bromodichloromethane	101	70-130	
cis-1,3-Dichloropropene	98	70-130	
4-Methyl-2-pentanone	95	70-130	
Toluene	103	70-130	
trans-1,3-Dichloropropene	99	70-130	
1,1,2-Trichloroethane	104	70-130	
Tetrachloroethene	104	70-130	
2-Hexanone	94	70-130	



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1610598-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20110404	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/4/16 09:34 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	107	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	106	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	98	70-130
o-Xylene	102	70-130
Styrene	93	70-130
Bromoform	115	70-130
Cumene	104	70-130
1,1,2,2-Tetrachloroethane	108	70-130
Propylbenzene	96	70-130
4-Ethyltoluene	90	70-130
1,3,5-Trimethylbenzene	90	70-130
1,2,4-Trimethylbenzene	88	70-130
1,3-Dichlorobenzene	101	70-130
1,4-Dichlorobenzene	96	70-130
alpha-Chlorotoluene	103	70-130
1,2-Dichlorobenzene	100	70-130
1,2,4-Trichlorobenzene	100	70-130
Hexachlorobutadiene	97	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130