

2/16/2016

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1602134

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 2/5/2016 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 #: 1602134

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. #	3ESP160539
FAX:	573-526-3350	PROJECT #	Bridgeton Landfill
DATE RECEIVED:	02/05/2016	CONTACT:	Brian Whittaker
DATE COMPLETED:	02/16/2016		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (160329)	Modified TO-15	5.5 "Hg	5 psi
02A	D2 (160330)	Modified TO-15	4.7 "Hg	5.1 psi
03A	V1 (160331)	Modified TO-15	3.1 "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: 02/16/16

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

Eurofins Air Toxics Inc. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1602134

Three 6 Liter Summa Canister (100% Certified) samples were received on February 05, 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 QC 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 (160329)

Lab ID#: 1602134-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.81	2.0
Freon 11	0.16	0.19	0.92	1.1
Ethanol	0.82	1.4	1.5	2.6
Acetone	0.82	2.2	1.9	5.3
Benzene	0.16	0.18	0.52	0.57
Toluene	0.16	0.18	0.62	0.69

Client Sample ID: D2 (160330)

Lab ID#: 1602134-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.79	2.0
Freon 11	0.16	0.18	0.90	1.0
Ethanol	0.80	2.4	1.5	4.4
Acetone	0.80	2.5	1.9	5.9
Methylene Chloride	0.32	0.40	1.1	1.4
Hexane	0.16	0.22	0.56	0.76
Benzene	0.16	0.64	0.51	2.0
Heptane	0.16	0.25	0.66	1.0
Toluene	0.16	1.0	0.60	3.8
Ethyl Benzene	0.16	0.31	0.69	1.3
m,p-Xylene	0.16	0.80	0.69	3.5
o-Xylene	0.16	0.34	0.69	1.5
4-Ethyltoluene	0.16	0.31 J0	0.79	1.5 J0
1,2,4-Trimethylbenzene	0.16	0.32	0.79	1.6

Client Sample ID: V1 (160331)

Lab ID#: 1602134-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.40	0.74	2.0
Freon 11	0.15	0.19	0.84	1.1
Ethanol	0.74	24	1.4	46

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

Client Sample ID: V1 (160331)

Lab ID#: 1602134-03A

Acetone	0.74	7.0	1.8	17
2-Propanol	0.74	1.7	1.8	4.3
Methylene Chloride	0.30	0.31	1.0	1.1
Hexane	0.15	0.56	0.52	2.0
2-Butanone (Methyl Ethyl Ketone)	0.74	0.90	2.2	2.7
Cyclohexane	0.15	1.2	0.51	4.0
Benzene	0.15	0.31	0.48	1.0
Heptane	0.15	0.52	0.61	2.1
Toluene	0.15	2.6	0.56	9.8
Ethyl Benzene	0.15	0.33	0.65	1.4
m,p-Xylene	0.15	0.97	0.65	4.2
o-Xylene	0.15	0.63	0.65	2.7
Propylbenzene	0.15	0.50	0.73	2.5
4-Ethyltoluene	0.15	3.1 J0	0.73	15 J0
1,3,5-Trimethylbenzene	0.15	0.85	0.73	4.2
1,2,4-Trimethylbenzene	0.15	4.2	0.73	20



Air Toxics

Client Sample ID: D1 (160329)

Lab ID#: 1602134-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021117	Date of Collection:	2/1/16 1:59:00 PM
Dil. Factor:	1.64	Date of Analysis:	2/11/16 08:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.81	2.0
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	0.19	0.92	1.1
Ethanol	0.82	1.4	1.5	2.6
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	2.2	1.9	5.3
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	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	2.4	Not Detected
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	0.18	0.52	0.57
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	0.18	0.62	0.69
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: D1 (160329)

Lab ID#: 1602134-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021117	Date of Collection:	2/1/16 1:59:00 PM
Dil. Factor:	1.64	Date of Analysis:	2/11/16 08:35 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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: D2 (160330)

Lab ID#: 1602134-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021118	Date of Collection:	2/1/16 2:17:00 PM
Dil. Factor:	1.60	Date of Analysis:	2/11/16 09:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.79	2.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	Not Detected	1.6	Not Detected
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.18	0.90	1.0
Ethanol	0.80	2.4	1.5	4.4
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	2.5	1.9	5.9
2-Propanol	0.80	Not Detected	2.0	Not Detected
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	0.40	1.1	1.4
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Hexane	0.16	0.22	0.56	0.76
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.78	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Cyclohexane	0.16	Not Detected	0.55	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.80	Not Detected	3.7	Not Detected
Benzene	0.16	0.64	0.51	2.0
1,2-Dichloroethane	0.16	Not Detected	0.65	Not Detected
Heptane	0.16	0.25	0.66	1.0
Trichloroethene	0.16	Not Detected	0.86	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.74	Not Detected
1,4-Dioxane	0.16	Not Detected	0.58	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.66	Not Detected
Toluene	0.16	1.0	0.60	3.8
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.80	Not Detected	3.3	Not Detected

Client Sample ID: D2 (160330)

Lab ID#: 1602134-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021118	Date of Collection: 2/1/16 2:17:00 PM
Dil. Factor:	1.60	Date of Analysis: 2/11/16 09:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	0.31	0.69	1.3
m,p-Xylene	0.16	0.80	0.69	3.5
o-Xylene	0.16	0.34	0.69	1.5
Styrene	0.16	Not Detected	0.68	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.79	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.79	Not Detected
4-Ethyltoluene	0.16	0.31 J0	0.79	1.5 J0
1,3,5-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,2,4-Trimethylbenzene	0.16	0.32	0.79	1.6
1,3-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.83	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.5	Not Detected

J0 = Estimated value due to bias in the CCV.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: V1 (160331)

Lab ID#: 1602134-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021119	Date of Collection:	2/1/16 1:42:00 PM
Dil. Factor:	1.49	Date of Analysis:	2/11/16 10:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.40	0.74	2.0
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.74	Not Detected	1.5	Not Detected
Vinyl Chloride	0.15	Not Detected	0.38	Not Detected
1,3-Butadiene	0.15	Not Detected	0.33	Not Detected
Bromomethane	0.74	Not Detected	2.9	Not Detected
Chloroethane	0.74	Not Detected	2.0	Not Detected
Freon 11	0.15	0.19	0.84	1.1
Ethanol	0.74	24	1.4	46
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Acetone	0.74	7.0	1.8	17
2-Propanol	0.74	1.7	1.8	4.3
Carbon Disulfide	0.74	Not Detected	2.3	Not Detected
3-Chloropropene	0.74	Not Detected	2.3	Not Detected
Methylene Chloride	0.30	0.31	1.0	1.1
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	0.56	0.52	2.0
1,1-Dichloroethane	0.15	Not Detected	0.60	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.74	0.90	2.2	2.7
cis-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Tetrahydrofuran	0.74	Not Detected	2.2	Not Detected
Chloroform	0.15	Not Detected	0.73	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.81	Not Detected
Cyclohexane	0.15	1.2	0.51	4.0
Carbon Tetrachloride	0.15	Not Detected	0.94	Not Detected
2,2,4-Trimethylpentane	0.74	Not Detected	3.5	Not Detected
Benzene	0.15	0.31	0.48	1.0
1,2-Dichloroethane	0.15	Not Detected	0.60	Not Detected
Heptane	0.15	0.52	0.61	2.1
Trichloroethene	0.15	Not Detected	0.80	Not Detected
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	Not Detected	0.61	Not Detected
Toluene	0.15	2.6	0.56	9.8
trans-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.81	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
2-Hexanone	0.74	Not Detected	3.0	Not Detected



Client Sample ID: V1 (160331)

Lab ID#: 1602134-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021119	Date of Collection:	2/1/16 1:42:00 PM
Dil. Factor:	1.49	Date of Analysis:	2/11/16 10:11 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	1.1	Not Detected
Chlorobenzene	0.15	Not Detected	0.68	Not Detected
Ethyl Benzene	0.15	0.33	0.65	1.4
m,p-Xylene	0.15	0.97	0.65	4.2
o-Xylene	0.15	0.63	0.65	2.7
Styrene	0.15	Not Detected	0.63	Not Detected
Bromoform	0.15	Not Detected	1.5	Not Detected
Cumene	0.15	Not Detected	0.73	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
Propylbenzene	0.15	0.50	0.73	2.5
4-Ethyltoluene	0.15	3.1 J0	0.73	15 J0
1,3,5-Trimethylbenzene	0.15	0.85	0.73	4.2
1,2,4-Trimethylbenzene	0.15	4.2	0.73	20
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	0.77	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
1,2,4-Trichlorobenzene	0.74	Not Detected	5.5	Not Detected
Hexachlorobutadiene	0.74	Not Detected	7.9	Not Detected

J0 = Estimated value due to bias in the CCV.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1602134-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021106	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/11/16 12:19 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#: 1602134-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021106	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/11/16 12:19 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

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1602134-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/11/16 09:22 AM

Compound	%Recovery
Freon 12	116
Freon 114	120
Chloromethane	117
Vinyl Chloride	118
1,3-Butadiene	107
Bromomethane	119
Chloroethane	122
Freon 11	116
Ethanol	125
Freon 113	113
1,1-Dichloroethene	112
Acetone	115
2-Propanol	113
Carbon Disulfide	110
3-Chloropropene	112
Methylene Chloride	117
Methyl tert-butyl ether	108
trans-1,2-Dichloroethene	118
Hexane	112
1,1-Dichloroethane	114
2-Butanone (Methyl Ethyl Ketone)	114
cis-1,2-Dichloroethene	114
Tetrahydrofuran	114
Chloroform	114
1,1,1-Trichloroethane	112
Cyclohexane	110
Carbon Tetrachloride	120
2,2,4-Trimethylpentane	125
Benzene	116
1,2-Dichloroethane	114
Heptane	119
Trichloroethene	122
1,2-Dichloropropane	120
1,4-Dioxane	121
Bromodichloromethane	115
cis-1,3-Dichloropropene	113
4-Methyl-2-pentanone	116
Toluene	116
trans-1,3-Dichloropropene	114
1,1,2-Trichloroethane	117
Tetrachloroethene	121
2-Hexanone	115

Client Sample ID: CCV

Lab ID#: 1602134-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/11/16 09:22 AM

Compound	%Recovery
Dibromochloromethane	125
1,2-Dibromoethane (EDB)	120
Chlorobenzene	121
Ethyl Benzene	118
m,p-Xylene	118
o-Xylene	117
Styrene	119
Bromoform	127
Cumene	121
1,1,2,2-Tetrachloroethane	121
Propylbenzene	122
4-Ethyltoluene	131 Q
1,3,5-Trimethylbenzene	114
1,2,4-Trimethylbenzene	118
1,3-Dichlorobenzene	127
1,4-Dichlorobenzene	125
alpha-Chlorotoluene	130
1,2-Dichlorobenzene	128
1,2,4-Trichlorobenzene	94
Hexachlorobutadiene	110

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1602134-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021103	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/11/16 10:06 AM

Compound	%Recovery	Method Limits
Freon 12	94	70-130
Freon 114	102	70-130
Chloromethane	92	70-130
Vinyl Chloride	96	70-130
1,3-Butadiene	85	70-130
Bromomethane	96	70-130
Chloroethane	98	70-130
Freon 11	96	70-130
Ethanol	105	70-130
Freon 113	105	70-130
1,1-Dichloroethene	91	70-130
Acetone	88	70-130
2-Propanol	92	70-130
Carbon Disulfide	76	70-130
3-Chloropropene	83	70-130
Methylene Chloride	92	70-130
Methyl tert-butyl ether	85	70-130
trans-1,2-Dichloroethene	96	70-130
Hexane	87	70-130
1,1-Dichloroethane	90	70-130
2-Butanone (Methyl Ethyl Ketone)	91	70-130
cis-1,2-Dichloroethene	88	70-130
Tetrahydrofuran	91	70-130
Chloroform	89	70-130
1,1,1-Trichloroethane	88	70-130
Cyclohexane	88	70-130
Carbon Tetrachloride	90	70-130
2,2,4-Trimethylpentane	95	70-130
Benzene	92	70-130
1,2-Dichloroethane	90	70-130
Heptane	95	70-130
Trichloroethene	98	70-130
1,2-Dichloropropane	93	70-130
1,4-Dioxane	93	70-130
Bromodichloromethane	93	70-130
cis-1,3-Dichloropropene	84	70-130
4-Methyl-2-pentanone	95	70-130
Toluene	94	70-130
trans-1,3-Dichloropropene	91	70-130
1,1,2-Trichloroethane	95	70-130
Tetrachloroethene	98	70-130
2-Hexanone	97	70-130

Client Sample ID: LCS

Lab ID#: 1602134-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/11/16 10:06 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	99	70-130
1,2-Dibromoethane (EDB)	95	70-130
Chlorobenzene	95	70-130
Ethyl Benzene	94	70-130
m,p-Xylene	92	70-130
o-Xylene	96	70-130
Styrene	95	70-130
Bromoform	104	70-130
Cumene	95	70-130
1,1,2,2-Tetrachloroethane	97	70-130
Propylbenzene	98	70-130
4-Ethyltoluene	101	70-130
1,3,5-Trimethylbenzene	87	70-130
1,2,4-Trimethylbenzene	90	70-130
1,3-Dichlorobenzene	100	70-130
1,4-Dichlorobenzene	98	70-130
alpha-Chlorotoluene	105	70-130
1,2-Dichlorobenzene	102	70-130
1,2,4-Trichlorobenzene	88	70-130
Hexachlorobutadiene	97	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1602134-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021104	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/11/16 10:50 AM

Compound	%Recovery	Method Limits
Freon 12	94	70-130
Freon 114	102	70-130
Chloromethane	93	70-130
Vinyl Chloride	96	70-130
1,3-Butadiene	84	70-130
Bromomethane	97	70-130
Chloroethane	100	70-130
Freon 11	97	70-130
Ethanol	110	70-130
Freon 113	105	70-130
1,1-Dichloroethene	91	70-130
Acetone	87	70-130
2-Propanol	93	70-130
Carbon Disulfide	77	70-130
3-Chloropropene	83	70-130
Methylene Chloride	94	70-130
Methyl tert-butyl ether	87	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	87	70-130
1,1-Dichloroethane	90	70-130
2-Butanone (Methyl Ethyl Ketone)	89	70-130
cis-1,2-Dichloroethene	89	70-130
Tetrahydrofuran	91	70-130
Chloroform	89	70-130
1,1,1-Trichloroethane	88	70-130
Cyclohexane	89	70-130
Carbon Tetrachloride	89	70-130
2,2,4-Trimethylpentane	94	70-130
Benzene	90	70-130
1,2-Dichloroethane	89	70-130
Heptane	93	70-130
Trichloroethene	96	70-130
1,2-Dichloropropane	92	70-130
1,4-Dioxane	96	70-130
Bromodichloromethane	94	70-130
cis-1,3-Dichloropropene	82	70-130
4-Methyl-2-pentanone	94	70-130
Toluene	92	70-130
trans-1,3-Dichloropropene	92	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	98	70-130
2-Hexanone	98	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1602134-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e021104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/11/16 10:50 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	100	70-130
1,2-Dibromoethane (EDB)	96	70-130
Chlorobenzene	96	70-130
Ethyl Benzene	94	70-130
m,p-Xylene	92	70-130
o-Xylene	96	70-130
Styrene	95	70-130
Bromoform	103	70-130
Cumene	96	70-130
1,1,2,2-Tetrachloroethane	98	70-130
Propylbenzene	98	70-130
4-Ethyltoluene	102	70-130
1,3,5-Trimethylbenzene	88	70-130
1,2,4-Trimethylbenzene	93	70-130
1,3-Dichlorobenzene	101	70-130
1,4-Dichlorobenzene	100	70-130
alpha-Chlorotoluene	105	70-130
1,2-Dichlorobenzene	102	70-130
1,2,4-Trichlorobenzene	104	70-130
Hexachlorobutadiene	110	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130