



Air Toxics

Sample Transportation Notice

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager Michael Paris

Collected by: (Print and Sign) Teresa Therny

Company MO DNR

Address P.O. Box 176 City Jefferson City State MO Zip 65102

Phone (573) 526-3918 Fax _____

Project Info:

P.O. # 3E5P400007

Project # _____

Project Name Budgeton Landfill

Turn Around Time:

☒ Normal

☐ Rush

Lab Use Only

Pressurized by _____

Date: _____

Pressurization Gas: _____

N₂ He

Lab I.D. Field Sample I.D. (Location)

Can #

Date

Time

Analyses Requested

Canister Pressure/Vacuum

Initial

Final

Receipt

Final (psi)

Relinquished by: (signature) _____ Date/Time _____

Received by: (signature) _____ Date/Time _____

Date/Time

Date/Time

Notes:

Relinquished by: (signature) _____ Date/Time _____

Received by: (signature) _____ Date/Time _____

Date/Time

Date/Time

Notes:

Relinquished by: (signature) _____ Date/Time _____

Received by: (signature) _____ Date/Time _____

Date/Time

Date/Time

Notes:

Lab Shipper Name

Air Bill #

Temp (°C)

Condition

Custody Seals Intact?

Work Order #

Use Only

UPS

NA

Good

Yes

No

None

1511059

11/14/2015

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

Jefferson City MO 65109

Project Name: Bridgeton Landfill

Project #:

Workorder #: 1511059

Dear Mr. Dennis Schroeder

The following report includes the data for the above referenced project for sample(s) received on 11/4/2015 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 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

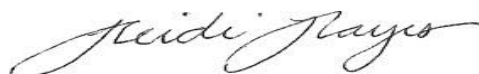
WORK ORDER #: 1511059

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:	11/04/2015	CONTACT:	Brian Whittaker
DATE COMPLETED:	11/14/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (154208)	Modified TO-15	5.5 "Hg	5 psi
02A	D2 (154209)	Modified TO-15	6.0 "Hg	5 psi
03A	U1 (154210)	Modified TO-15	6.5 "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: 11/14/15

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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LABORATORY NARRATIVE
Modified TO-15
Missouri Dept. of Natural Resources
Workorder# 1511059

Three 6 Liter Summa Canister (100% Certified) samples were received on November 04, 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.

Requirement	TO-15	ATL Modifications
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

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

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: D1 (154208)

Lab ID#: 1511059-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.81	2.0
Freon 11	0.16	0.21	0.92	1.2
Ethanol	0.82	1.2	1.5	2.2
Acetone	0.82	2.2	1.9	5.1

Client Sample ID: D2 (154209)

Lab ID#: 1511059-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.42	0.83	2.1
Freon 11	0.17	0.21	0.94	1.2
Ethanol	0.84	5.3	1.6	10
Acetone	0.84	2.4	2.0	5.6
Cyclohexane	0.17	0.23	0.58	0.78
Heptane	0.17	0.29	0.69	1.2
Toluene	0.17	0.87	0.63	3.3

Client Sample ID: U1 (154210)

Lab ID#: 1511059-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.45	0.84	2.2
Freon 11	0.17	0.22	0.96	1.2
Ethanol	0.86	3.1	1.6	5.8
Acetone	0.86	1.6	2.0	3.8
Cyclohexane	0.17	0.23	0.59	0.78
Heptane	0.17	0.18	0.70	0.72
Toluene	0.17	0.59	0.64	2.2



Air Toxics

Client Sample ID: D1 (154208)

Lab ID#: 1511059-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111007	Date of Collection:	10/29/15 1:47:00 PM
Dil. Factor:	1.64	Date of Analysis:	11/10/15 12:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	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	0.21	0.92	1.2
Ethanol	0.82	1.2	1.5	2.2
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	5.1
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	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: D1 (154208)

Lab ID#: 1511059-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111007	Date of Collection:	10/29/15 1:47:00 PM
Dil. Factor:	1.64	Date of Analysis:	11/10/15 12:48 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	112	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: D2 (154209)

Lab ID#: 1511059-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111008	Date of Collection:	10/29/15 1:31:00 PM
Dil. Factor:	1.68	Date of Analysis:	11/10/15 01:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.42	0.83	2.1
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	0.21	0.94	1.2
Ethanol	0.84	5.3	1.6	10
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	2.4	2.0	5.6
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	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	0.23	0.58	0.78
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	0.29	0.69	1.2
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	0.87	0.63	3.3
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 (154209)

Lab ID#: 1511059-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111008	Date of Collection:	10/29/15 1:31:00 PM
Dil. Factor:	1.68	Date of Analysis:	11/10/15 01:31 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	120	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: U1 (154210)

Lab ID#: 1511059-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111009	Date of Collection:	10/29/15 2:08:00 PM
Dil. Factor:	1.71	Date of Analysis:	11/10/15 02:18 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.45	0.84	2.2
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.86	Not Detected	1.8	Not Detected
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.86	Not Detected	3.3	Not Detected
Chloroethane	0.86	Not Detected	2.2	Not Detected
Freon 11	0.17	0.22	0.96	1.2
Ethanol	0.86	3.1	1.6	5.8
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	1.6	2.0	3.8
2-Propanol	0.86	Not Detected	2.1	Not Detected
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Hexane	0.17	Not Detected	0.60	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.69	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	Not Detected	2.5	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.83	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.93	Not Detected
Cyclohexane	0.17	0.23	0.59	0.78
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
2,2,4-Trimethylpentane	0.86	Not Detected	4.0	Not Detected
Benzene	0.17	Not Detected	0.55	Not Detected
1,2-Dichloroethane	0.17	Not Detected	0.69	Not Detected
Heptane	0.17	0.18	0.70	0.72
Trichloroethene	0.17	Not Detected	0.92	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.79	Not Detected
1,4-Dioxane	0.17	Not Detected	0.62	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.70	Not Detected
Toluene	0.17	0.59	0.64	2.2
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.93	Not Detected
Tetrachloroethene	0.17	Not Detected	1.2	Not Detected
2-Hexanone	0.86	Not Detected	3.5	Not Detected

Client Sample ID: U1 (154210)

Lab ID#: 1511059-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111009	Date of Collection:	10/29/15 2:08:00 PM
Dil. Factor:	1.71	Date of Analysis:	11/10/15 02:18 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	0.79	Not Detected
Ethyl Benzene	0.17	Not Detected	0.74	Not Detected
m,p-Xylene	0.17	Not Detected	0.74	Not Detected
o-Xylene	0.17	Not Detected	0.74	Not Detected
Styrene	0.17	Not Detected	0.73	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.84	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.84	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.84	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.84	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.84	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.17	Not Detected	0.88	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.3	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.1	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: Lab Blank

Lab ID#: 1511059-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111006	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/10/15 11:45 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 1511059-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111006	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/10/15 11:45 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	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	112	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: CCV

Lab ID#: 1511059-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/10/15 08:26 AM

Compound	%Recovery
Freon 12	105
Freon 114	100
Chloromethane	96
Vinyl Chloride	94
1,3-Butadiene	90
Bromomethane	91
Chloroethane	92
Freon 11	98
Ethanol	83
Freon 113	90
1,1-Dichloroethene	86
Acetone	90
2-Propanol	91
Carbon Disulfide	85
3-Chloropropene	87
Methylene Chloride	90
Methyl tert-butyl ether	98
trans-1,2-Dichloroethene	98
Hexane	97
1,1-Dichloroethane	97
2-Butanone (Methyl Ethyl Ketone)	97
cis-1,2-Dichloroethene	91
Tetrahydrofuran	99
Chloroform	98
1,1,1-Trichloroethane	105
Cyclohexane	95
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	87
Benzene	94
1,2-Dichloroethane	101
Heptane	89
Trichloroethene	94
1,2-Dichloropropane	89
1,4-Dioxane	94
Bromodichloromethane	101
cis-1,3-Dichloropropene	92
4-Methyl-2-pentanone	88
Toluene	94
trans-1,3-Dichloropropene	97
1,1,2-Trichloroethane	98
Tetrachloroethene	106
2-Hexanone	96

Client Sample ID: CCV

Lab ID#: 1511059-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/10/15 08:26 AM

Compound	%Recovery
Dibromochloromethane	104
1,2-Dibromoethane (EDB)	104
Chlorobenzene	95
Ethyl Benzene	96
m,p-Xylene	98
o-Xylene	95
Styrene	100
Bromoform	100
Cumene	98
1,1,2,2-Tetrachloroethane	93
Propylbenzene	98
4-Ethyltoluene	92
1,3,5-Trimethylbenzene	109
1,2,4-Trimethylbenzene	90
1,3-Dichlorobenzene	99
1,4-Dichlorobenzene	97
alpha-Chlorotoluene	101
1,2-Dichlorobenzene	97
1,2,4-Trichlorobenzene	70
Hexachlorobutadiene	74

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: LCS

Lab ID#: 1511059-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/10/15 09:09 AM

Compound	%Recovery	Method Limits
Freon 12	106	70-130
Freon 114	107	70-130
Chloromethane	92	70-130
Vinyl Chloride	99	70-130
1,3-Butadiene	90	70-130
Bromomethane	91	70-130
Chloroethane	93	70-130
Freon 11	102	70-130
Ethanol	92	70-130
Freon 113	88	70-130
1,1-Dichloroethene	89	70-130
Acetone	95	70-130
2-Propanol	92	70-130
Carbon Disulfide	75	70-130
3-Chloropropene	83	70-130
Methylene Chloride	89	70-130
Methyl tert-butyl ether	94	70-130
trans-1,2-Dichloroethene	87	70-130
Hexane	96	70-130
1,1-Dichloroethane	95	70-130
2-Butanone (Methyl Ethyl Ketone)	94	70-130
cis-1,2-Dichloroethene	106	70-130
Tetrahydrofuran	102	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	105	70-130
Cyclohexane	96	70-130
Carbon Tetrachloride	103	70-130
2,2,4-Trimethylpentane	87	70-130
Benzene	101	70-130
1,2-Dichloroethane	110	70-130
Heptane	100	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	94	70-130
1,4-Dioxane	101	70-130
Bromodichloromethane	112	70-130
cis-1,3-Dichloropropene	91	70-130
4-Methyl-2-pentanone	98	70-130
Toluene	100	70-130
trans-1,3-Dichloropropene	100	70-130
1,1,2-Trichloroethane	105	70-130
Tetrachloroethene	110	70-130
2-Hexanone	104	70-130

Client Sample ID: LCS

Lab ID#: 1511059-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/10/15 09:09 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	112	70-130
1,2-Dibromoethane (EDB)	110	70-130
Chlorobenzene	99	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	103	70-130
o-Xylene	103	70-130
Styrene	104	70-130
Bromoform	107	70-130
Cumene	100	70-130
1,1,2,2-Tetrachloroethane	97	70-130
Propylbenzene	103	70-130
4-Ethyltoluene	93	70-130
1,3,5-Trimethylbenzene	110	70-130
1,2,4-Trimethylbenzene	95	70-130
1,3-Dichlorobenzene	104	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	107	70-130
1,2-Dichlorobenzene	100	70-130
1,2,4-Trichlorobenzene	90	70-130
Hexachlorobutadiene	88	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCSD

Lab ID#: 1511059-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: e111004

Date of Collection: NA

Dil. Factor: 1.00

Date of Analysis: 11/10/15 09:58 AM

Compound	%Recovery	Method Limits
Freon 12	107	70-130
Freon 114	107	70-130
Chloromethane	95	70-130
Vinyl Chloride	98	70-130
1,3-Butadiene	91	70-130
Bromomethane	94	70-130
Chloroethane	95	70-130
Freon 11	102	70-130
Ethanol	97	70-130
Freon 113	107	70-130
1,1-Dichloroethene	93	70-130
Acetone	96	70-130
2-Propanol	95	70-130
Carbon Disulfide	76	70-130
3-Chloropropene	86	70-130
Methylene Chloride	91	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	88	70-130
Hexane	98	70-130
1,1-Dichloroethane	95	70-130
2-Butanone (Methyl Ethyl Ketone)	95	70-130
cis-1,2-Dichloroethene	108	70-130
Tetrahydrofuran	103	70-130
Chloroform	101	70-130
1,1,1-Trichloroethane	105	70-130
Cyclohexane	97	70-130
Carbon Tetrachloride	104	70-130
2,2,4-Trimethylpentane	85	70-130
Benzene	98	70-130
1,2-Dichloroethane	106	70-130
Heptane	98	70-130
Trichloroethene	97	70-130
1,2-Dichloropropane	91	70-130
1,4-Dioxane	98	70-130
Bromodichloromethane	108	70-130
cis-1,3-Dichloropropene	92	70-130
4-Methyl-2-pentanone	96	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	107	70-130
2-Hexanone	99	70-130

Client Sample ID: LCSD

Lab ID#: 1511059-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e111004	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/10/15 09:58 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	107	70-130
1,2-Dibromoethane (EDB)	107	70-130
Chlorobenzene	96	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	103	70-130
o-Xylene	105	70-130
Styrene	104	70-130
Bromoform	106	70-130
Cumene	101	70-130
1,1,2,2-Tetrachloroethane	98	70-130
Propylbenzene	102	70-130
4-Ethyltoluene	95	70-130
1,3,5-Trimethylbenzene	112	70-130
1,2,4-Trimethylbenzene	99	70-130
1,3-Dichlorobenzene	103	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	106	70-130
1,2-Dichlorobenzene	101	70-130
1,2,4-Trichlorobenzene	91	70-130
Hexachlorobutadiene	91	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130