

3/2/2018  
Mr. Curt Lueckenhoff  
Missouri Dept. of Natural Resources  
2710 West Main

Jefferson City MO 65109

Project Name: Bridgeton Landfill  
Project #:  
Workorder #: 1802412

Dear Mr. Curt Lueckenhoff

The following report includes the data for the above referenced project for sample(s) received on 2/20/2018 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 to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker  
Project Manager

**WORK ORDER #: 1802412**

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>	3ESP180589
<b>FAX:</b>	573-526-3350	<b>PROJECT #</b>	Bridgeton Landfill
<b>DATE RECEIVED:</b>	02/20/2018	<b>CONTACT:</b>	Brian Whittaker
<b>DATE COMPLETED:</b>	03/02/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	D1 (180985)	Modified TO-15	4.7 "Hg	5.1 psi
02A	U1 (180986)	Modified TO-15	5.1 "Hg	5 psi
03A	Lab Blank	Modified TO-15	NA	NA
04A	CCV	Modified TO-15	NA	NA
05A	LCS	Modified TO-15	NA	NA
05AA	LCSD	Modified TO-15	NA	NA

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

DATE: 03/02/18

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935  
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.  
 Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

**LABORATORY NARRATIVE**  
**Modified TO-15**  
**Missouri Dept. of Natural Resources**  
**Workorder# 1802412**

Two 6 Liter Summa Canister (100% Certified) samples were received on February 20, 2018. 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.

**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 (180985)**

**Lab ID#: 1802412-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.49	0.79	2.4
Freon 11	0.16	0.21	0.90	1.2
Ethanol	0.80	3.0	1.5	5.7
Acetone	0.80	3.1	1.9	7.4
2-Propanol	0.80	1.2	2.0	3.0
Hexane	0.16	0.54	0.56	1.9
Benzene	0.16	0.28	0.51	0.90
Heptane	0.16	0.45	0.66	1.8
Toluene	0.16	0.29	0.60	1.1

**Client Sample ID: U1 (180986)**

**Lab ID#: 1802412-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.53	0.80	2.6
Freon 11	0.16	0.23	0.90	1.3
Ethanol	0.80	3.5	1.5	6.7
Acetone	0.80	5.5	1.9	13
2-Propanol	0.80	2.0	2.0	4.8
Hexane	0.16	0.23	0.57	0.82
2-Butanone (Methyl Ethyl Ketone)	0.80	0.95	2.4	2.8
Benzene	0.16	0.22	0.51	0.70
Heptane	0.16	0.22	0.66	0.92
1,4-Dioxane	0.16	0.50	0.58	1.8
Toluene	0.16	0.31	0.61	1.2



Air Toxics

Client Sample ID: D1 (180985)

Lab ID#: 1802412-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022419	Date of Collection:	2/14/18 12:55:00 PM
Dil. Factor:	1.60	Date of Analysis:	2/24/18 09:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.49	0.79	2.4
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	0.21	0.90	1.2
Ethanol	0.80	3.0	1.5	5.7
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	3.1	1.9	7.4
2-Propanol	0.80	1.2	2.0	3.0
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
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	0.54	0.56	1.9
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 UJ	0.78	Not Detected UJ
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	0.28	0.51	0.90
1,2-Dichloroethane	0.16	Not Detected	0.65	Not Detected
Heptane	0.16	0.45	0.66	1.8
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	0.29	0.60	1.1
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: D1 (180985)

Lab ID#: 1802412-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022419	Date of Collection:	2/14/18 12:55:00 PM
Dil. Factor:	1.60	Date of Analysis:	2/24/18 09:02 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	Not Detected	0.69	Not Detected
m,p-Xylene	0.16	Not Detected	0.69	Not Detected
o-Xylene	0.16	Not Detected	0.69	Not Detected
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	Not Detected	0.79	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
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

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	84	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: U1 (180986)

Lab ID#: 1802412-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022420	Date of Collection:	2/14/18 1:05:00 PM
Dil. Factor:	1.61	Date of Analysis:	2/24/18 09:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.53	0.80	2.6
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	Not Detected	1.7	Not Detected
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.23	0.90	1.3
Ethanol	0.80	3.5	1.5	6.7
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	5.5	1.9	13
2-Propanol	0.80	2.0	2.0	4.8
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Hexane	0.16	0.23	0.57	0.82
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	0.95	2.4	2.8
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected UJ	0.79	Not Detected UJ
1,1,1-Trichloroethane	0.16	Not Detected	0.88	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	3.8	Not Detected
Benzene	0.16	0.22	0.51	0.70
1,2-Dichloroethane	0.16	Not Detected	0.65	Not Detected
Heptane	0.16	0.22	0.66	0.92
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	0.50	0.58	1.8
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	0.31	0.61	1.2
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.80	Not Detected	3.3	Not Detected





Air Toxics

Client Sample ID: U1 (180986)

Lab ID#: 1802412-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022420	Date of Collection:	2/14/18 1:05:00 PM
Dil. Factor:	1.61	Date of Analysis:	2/24/18 09:43 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	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	Not Detected	0.70	Not Detected
o-Xylene	0.16	Not Detected	0.70	Not Detected
Styrene	0.16	Not Detected	0.68	Not Detected
Bromoform	0.16	Not Detected	1.7	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	Not Detected	0.79	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.83	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.6	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	88	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1802412-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022406	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/24/18 11:31 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 UJ	0.49	Not Detected UJ
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#: 1802412-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022406	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/24/18 11:31 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

UJ = Analyte associated with low bias in the CCV.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1802412-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/24/18 08:42 AM

Compound	%Recovery
Freon 12	101
Freon 114	109
Chloromethane	90
Vinyl Chloride	99
1,3-Butadiene	90
Bromomethane	117
Chloroethane	102
Freon 11	104
Ethanol	81
Freon 113	103
1,1-Dichloroethene	102
Acetone	94
2-Propanol	79
Carbon Disulfide	100
3-Chloropropene	112
Methylene Chloride	96
Methyl tert-butyl ether	93
trans-1,2-Dichloroethene	101
Hexane	87
1,1-Dichloroethane	93
2-Butanone (Methyl Ethyl Ketone)	95
cis-1,2-Dichloroethene	98
Tetrahydrofuran	81
Chloroform	62 Q
1,1,1-Trichloroethane	98
Cyclohexane	96
Carbon Tetrachloride	100
2,2,4-Trimethylpentane	91
Benzene	105
1,2-Dichloroethane	100
Heptane	94
Trichloroethene	119
1,2-Dichloropropane	102
1,4-Dioxane	102
Bromodichloromethane	101
cis-1,3-Dichloropropene	105
4-Methyl-2-pentanone	86
Toluene	107
trans-1,3-Dichloropropene	95
1,1,2-Trichloroethane	106
Tetrachloroethene	111
2-Hexanone	88



Air Toxics

Client Sample ID: CCV

Lab ID#: 1802412-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/24/18 08:42 AM

Compound	%Recovery
Dibromochloromethane	107
1,2-Dibromoethane (EDB)	106
Chlorobenzene	109
Ethyl Benzene	104
m,p-Xylene	102
o-Xylene	102
Styrene	101
Bromoform	109
Cumene	104
1,1,2,2-Tetrachloroethane	90
Propylbenzene	101
4-Ethyltoluene	106
1,3,5-Trimethylbenzene	99
1,2,4-Trimethylbenzene	99
1,3-Dichlorobenzene	105
1,4-Dichlorobenzene	104
alpha-Chlorotoluene	94
1,2-Dichlorobenzene	102
1,2,4-Trichlorobenzene	113
Hexachlorobutadiene	113

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	82	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	106	70-130

Client Sample ID: LCS

Lab ID#: 1802412-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/24/18 09:24 AM

Compound	%Recovery	Method Limits
Freon 12	102	70-130
Freon 114	114	70-130
Chloromethane	89	70-130
Vinyl Chloride	101	70-130
1,3-Butadiene	86	70-130
Bromomethane	124	70-130
Chloroethane	107	70-130
Freon 11	108	70-130
Ethanol	85	70-130
Freon 113	103	70-130
1,1-Dichloroethene	102	70-130
Acetone	88	70-130
2-Propanol	84	70-130
Carbon Disulfide	88	70-130
3-Chloropropene	108	70-130
Methylene Chloride	95	70-130
Methyl tert-butyl ether	94	70-130
trans-1,2-Dichloroethene	88	70-130
Hexane	88	70-130
1,1-Dichloroethane	93	70-130
2-Butanone (Methyl Ethyl Ketone)	92	70-130
cis-1,2-Dichloroethene	109	70-130
Tetrahydrofuran	82	70-130
Chloroform	73	70-130
1,1,1-Trichloroethane	97	70-130
Cyclohexane	97	70-130
Carbon Tetrachloride	111	70-130
2,2,4-Trimethylpentane	90	70-130
Benzene	109	70-130
1,2-Dichloroethane	105	70-130
Heptane	97	70-130
Trichloroethene	118	70-130
1,2-Dichloropropane	107	70-130
1,4-Dioxane	109	70-130
Bromodichloromethane	108	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	92	70-130
Toluene	111	70-130
trans-1,3-Dichloropropene	100	70-130
1,1,2-Trichloroethane	109	70-130
Tetrachloroethene	116	70-130
2-Hexanone	93	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1802412-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/24/18 09:24 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	116	70-130
1,2-Dibromoethane (EDB)	110	70-130
Chlorobenzene	114	70-130
Ethyl Benzene	108	70-130
m,p-Xylene	106	70-130
o-Xylene	105	70-130
Styrene	104	70-130
Bromoform	120	70-130
Cumene	108	70-130
1,1,2,2-Tetrachloroethane	107	70-130
Propylbenzene	107	70-130
4-Ethyltoluene	107	70-130
1,3,5-Trimethylbenzene	102	70-130
1,2,4-Trimethylbenzene	99	70-130
1,3-Dichlorobenzene	106	70-130
1,4-Dichlorobenzene	104	70-130
alpha-Chlorotoluene	117	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	82	70-130
Hexachlorobutadiene	75	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1802412-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/24/18 10:05 AM

Compound	%Recovery	Method Limits
Freon 12	103	70-130
Freon 114	115	70-130
Chloromethane	90	70-130
Vinyl Chloride	102	70-130
1,3-Butadiene	88	70-130
Bromomethane	128	70-130
Chloroethane	108	70-130
Freon 11	111	70-130
Ethanol	89	70-130
Freon 113	105	70-130
1,1-Dichloroethene	105	70-130
Acetone	88	70-130
2-Propanol	85	70-130
Carbon Disulfide	89	70-130
3-Chloropropene	111	70-130
Methylene Chloride	98	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	90	70-130
Hexane	90	70-130
1,1-Dichloroethane	94	70-130
2-Butanone (Methyl Ethyl Ketone)	94	70-130
cis-1,2-Dichloroethene	109	70-130
Tetrahydrofuran	83	70-130
Chloroform	76	70-130
1,1,1-Trichloroethane	99	70-130
Cyclohexane	99	70-130
Carbon Tetrachloride	111	70-130
2,2,4-Trimethylpentane	96	70-130
Benzene	106	70-130
1,2-Dichloroethane	100	70-130
Heptane	95	70-130
Trichloroethene	113	70-130
1,2-Dichloropropane	103	70-130
1,4-Dioxane	107	70-130
Bromodichloromethane	108	70-130
cis-1,3-Dichloropropene	100	70-130
4-Methyl-2-pentanone	90	70-130
Toluene	109	70-130
trans-1,3-Dichloropropene	100	70-130
1,1,2-Trichloroethane	112	70-130
Tetrachloroethene	116	70-130
2-Hexanone	94	70-130





Air Toxics

Client Sample ID: LCSD

Lab ID#: 1802412-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	20022404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/24/18 10:05 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	111	70-130
Chlorobenzene	111	70-130
Ethyl Benzene	108	70-130
m,p-Xylene	106	70-130
o-Xylene	107	70-130
Styrene	106	70-130
Bromoform	120	70-130
Cumene	108	70-130
1,1,2,2-Tetrachloroethane	105	70-130
Propylbenzene	107	70-130
4-Ethyltoluene	109	70-130
1,3,5-Trimethylbenzene	101	70-130
1,2,4-Trimethylbenzene	100	70-130
1,3-Dichlorobenzene	106	70-130
1,4-Dichlorobenzene	105	70-130
alpha-Chlorotoluene	119	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	82	70-130
Hexachlorobutadiene	77	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	106	70-130