

February 14, 2017

Illinois Department of Transportation
Kirk H. Brown, PE
Project Support Engineer
Division of Highways/Region 5/District 8
1102 Eastport Plaza Drive
Collinsville, Illinois 62234-6198

Subject: Analytical Data for Soil Vapor Sampling According to Illinois Department of Transportation (IDOT) Permits No. 8-28548 and No. 8-28875

Dear Mr. Brown,

AECOM, on behalf of Shell Oil Products US (SOPUS), is submitting the attached analytical results for soil vapor samples collected from the following vapor monitoring points in accordance with IDOT Permits No. 8-28548 and No. 8-28875:

- VMP-15
- VMP-55

If you have any questions or require further information, please contact Robert Mooshegian at robert.mooshegian@aecom.com (314/743-4106) or Samuel Fisher at samuel.fisher@aecom.com (314/296-1969).

Sincerely,
AECOM, on behalf of Shell Oil Products US



Samuel Fisher
Environmental Scientist

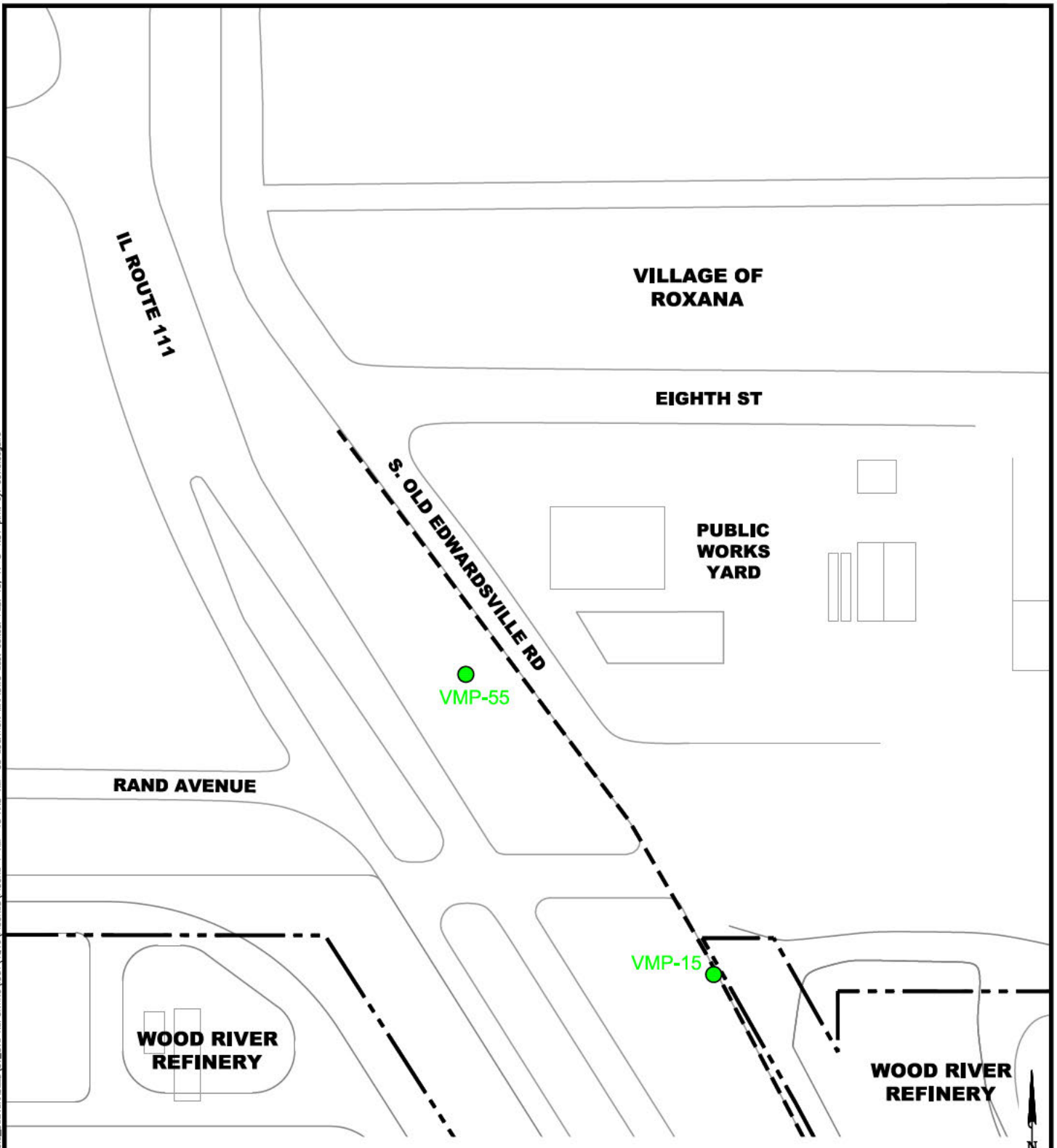


Robert E. Mooshegian, CHMM
Senior Program Manager




Attachments

cc: Kevin Dyer, SOPUS
Repositories – Roxana Village Hall, Roxana Public Library, website
Project File

File: P:\PROJECTS\ENVIRONMENTAL\SHLL\60477367_ROXANA2016\6.0_DELIVERABLES\SV_SVE_REPORTING\DOT\4016\FIGURES\FIGURE 1 VMP-15 AND VMP-55 LOCATION MAP.DWG Last edited: FEB. 15, 17 @ 1:51 p.m. by: david.dequire



LEGEND

-  VAPOR MONITORING POINT (VMP) LOCATION
-  APPROXIMATE BOUNDARY OF WOOD RIVER REFINERY
-  APPROXIMATE EAST BOUNDARY OF IL ROUTE 111 RIGHT-OF-WAY

| | |
|--|-------------------------|
| SHELL OIL PRODUCTS US SOIL VAPOR MONITORING PROGRAM ROXANA, ILLINOIS | PROJECT NO. 60527968 |
|--|-------------------------|



| | | |
|--|-----------------------------------|---------------|
| DRN. BY:djd Feb 2017 DSGN. BY:djd CHKD. BY:smf | VMP-15 and VMP-55 Location Map | FIG. NO. 1 |
|--|-----------------------------------|---------------|

11/15/2016
Ms. Elizabeth Kunkel
URS Corporation
1001 Highlands Plaza Dr. West
Suite 300
St. Louis MO 63110

Project Name: Roxana Quarterly Soil Vapor
Project #: 60477387 - 1.04.004
Workorder #: 1611046A

Dear Ms. Elizabeth Kunkel

The following report includes the data for the above referenced project for sample(s) received on 11/2/2016 at Air Toxics Ltd.

The data and associated QC analyzed by 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: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

WORK ORDER #: 1611046A

Work Order Summary

| | | | |
|------------------------|--|------------------|---|
| CLIENT: | Ms. Elizabeth Kunkel AECOM 1001 Highlands Plaza Dr. West Suite 300 St. Louis, MO 63110 | BILL TO: | Accounts Payable Austin AECOM PO Box 203970 Austin, TX 78720 |
| PHONE: | 314-743-4179 | P.O. # | 60477387 - 1.04.004 |
| FAX: | | PROJECT # | 60477387 - 1.04.004 Roxana Quarterly |
| DATE RECEIVED: | 11/02/2016 | CONTACT: | Soil Vapor Kelly Buettner |
| DATE COMPLETED: | 11/15/2016 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT VAC./PRES.</u> | <u>FINAL PRESSURE</u> |
|-------------------|------------------------|-------------|-------------------------------|---------------------------|
| 01A | VMP-15-5-110116 | TO-15 | 7.3 "Hg | 15.2 psi |
| 02A | VMP-15-21.5-110116 | TO-15 | 4.9 "Hg | 14.8 psi |
| 02B | VMP-15-21.5-110116 | TO-15 | 4.9 "Hg | 14.8 psi |
| 03A | VMP-15-25.5-110116 | TO-15 | 7.8 "Hg | 14.9 psi |
| 03B | VMP-15-25.5-110116 | TO-15 | 7.8 "Hg | 14.9 psi |
| 04A | VMP-15-25.5-110116-Dup | TO-15 | 8.4 "Hg | 15.1 psi |
| 04B | VMP-15-25.5-110116-Dup | TO-15 | 8.4 "Hg | 15.1 psi |
| 05A | VMP-55-20-110116 | TO-15 | 7.8 "Hg | 15.3 psi |
| 05B | VMP-55-20-110116 | TO-15 | 7.8 "Hg | 15.3 psi |
| 06A | Lab Blank | TO-15 | NA | NA |
| 06B | Lab Blank | TO-15 | NA | NA |
| 06C | Lab Blank | TO-15 | NA | NA |
| 07A | CCV | TO-15 | NA | NA |
| 07B | CCV | TO-15 | NA | NA |
| 07C | CCV | TO-15 | NA | NA |
| 08A | LCS | TO-15 | NA | NA |
| 08AA | LCSD | TO-15 | NA | NA |
| 08B | LCS | TO-15 | NA | NA |
| 08BB | LCSD | TO-15 | NA | NA |
| 08C | LCS | TO-15 | NA | NA |
| 08CC | LCSD | TO-15 | NA | NA |

CERTIFIED BY: 

Technical Director

DATE: 11/15/16

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

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

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

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

LABORATORY NARRATIVE
EPA Method TO-15
URS Corporation
Workorder# 1611046A

Five 1 Liter Summa Canister samples were received on November 02, 2016. The laboratory performed analysis via 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.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified (0.2 ppbv for compounds reported at 0.5 ppbv and 0.8 ppbv for compounds reported at 2.0 ppbv) may be false positives.

Due to high-level target compounds, samples VMP-15-21.5-110116, VMP-15-25.5-110116, VMP-15-25.5-110116-Dup, and VMP-55-20-110116 were analyzed twice. In the "A" fraction, the sample was diluted to bring the highest-level compounds within the calibration range. The "B" fraction is also reported by client request and may be reported with "E" flags indicating the compound exceeds the calibration range. Both runs and associated QC are reported.

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 EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VMP-15-5-110116

Lab ID#: 1611046A-01A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|------------|-------------------|---------------|--------------------|----------------|
| Acetone | 13 | 4.4 J | 32 | 10 J |
| 2-Propanol | 5.4 | 2.3 J | 13 | 5.6 J |
| Chloroform | 1.3 | 0.36 J | 6.6 | 1.8 J |
| m,p-Xylene | 1.3 | 0.75 J | 5.8 | 3.2 J |

Client Sample ID: VMP-15-21.5-110116

Lab ID#: 1611046A-02A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|------------------------|-------------------|---------------|--------------------|----------------|
| Acetone | 40 | 9.0 J | 95 | 21 J |
| 2-Propanol | 16 | 2.6 J | 39 | 6.5 J |
| 2,2,4-Trimethylpentane | 4.0 | 920 | 19 | 4300 |
| Benzene | 4.0 | 2.2 J | 13 | 7.1 J |
| Toluene | 4.0 | 0.87 J | 15 | 3.3 J |
| Ethyl Benzene | 4.0 | 1.2 J | 17 | 5.1 J |
| m,p-Xylene | 4.0 | 4.2 | 17 | 18 |
| o-Xylene | 4.0 | 1.1 J | 17 | 4.8 J |
| Cumene | 4.0 | 0.69 J | 20 | 3.4 J |
| Propylbenzene | 4.0 | 2.4 J | 20 | 12 J |
| 4-Ethyltoluene | 4.0 | 1.2 J | 20 | 5.7 J |
| 1,2,4-Trimethylbenzene | 4.0 | 5.9 | 20 | 29 |
| Isopentane | 16 | 8.6 J | 47 | 25 J |

Client Sample ID: VMP-15-21.5-110116

Lab ID#: 1611046A-02B

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|------------------------|-------------------|---------------|--------------------|----------------|
| Acetone | 20 | 7.5 J | 48 | 18 J |
| 2-Propanol | 8.0 | 3.4 J | 20 | 8.4 J |
| 2,2,4-Trimethylpentane | 2.0 | 930 E | 9.3 | 4400 E |
| Benzene | 2.0 | 2.1 | 6.4 | 6.6 |
| Toluene | 2.0 | 0.85 J | 7.5 | 3.2 J |
| Ethyl Benzene | 2.0 | 1.4 J | 8.7 | 6.2 J |

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

Client Sample ID: VMP-15-21.5-110116

Lab ID#: 1611046A-02B

| | | | | |
|------------------------|-----|--------|-----|-------|
| m,p-Xylene | 2.0 | 4.3 | 8.7 | 19 |
| o-Xylene | 2.0 | 1.1 J | 8.7 | 4.7 J |
| Cumene | 2.0 | 0.64 J | 9.8 | 3.2 J |
| Propylbenzene | 2.0 | 1.8 J | 9.8 | 9.1 J |
| 4-Ethyltoluene | 2.0 | 0.97 J | 9.8 | 4.8 J |
| 1,3,5-Trimethylbenzene | 2.0 | 0.50 J | 9.8 | 2.5 J |
| 1,2,4-Trimethylbenzene | 2.0 | 4.6 | 9.8 | 23 |
| Isopentane | 8.0 | 6.6 J | 24 | 19 J |

Client Sample ID: VMP-15-25.5-110116

Lab ID#: 1611046A-03A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|------------------------|-------------------|---------------|--------------------|----------------|
| Cyclohexane | 18 | 290 | 62 | 1000 |
| 2,2,4-Trimethylpentane | 18 | 4600 | 85 | 22000 |
| Benzene | 18 | 36 | 58 | 110 |
| Toluene | 18 | 4.2 J | 68 | 16 J |
| m,p-Xylene | 18 | 6.1 J | 79 | 26 J |
| Propylbenzene | 18 | 2.2 J | 89 | 11 J |
| 1,2,4-Trimethylbenzene | 18 | 2.6 J | 89 | 13 J |
| Butane | 73 | 400 | 170 | 950 |
| Isopentane | 73 | 1300 | 210 | 3800 |

Client Sample ID: VMP-15-25.5-110116

Lab ID#: 1611046A-03B

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|------------------------|-------------------|---------------|--------------------|----------------|
| Acetone | 90 | 9.8 J | 210 | 23 J |
| Hexane | 9.0 | 5.2 J | 32 | 18 J |
| Cyclohexane | 9.0 | 280 | 31 | 950 |
| 2,2,4-Trimethylpentane | 9.0 | 4600 E | 42 | 21000 E |
| Benzene | 9.0 | 36 | 29 | 110 |
| Toluene | 9.0 | 4.2 J | 34 | 16 J |
| Ethyl Benzene | 9.0 | 2.4 J | 39 | 10 J |

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

Client Sample ID: VMP-15-25.5-110116

Lab ID#: 1611046A-03B

| | | | | |
|------------------------|-----|-------|-----|-------|
| m,p-Xylene | 9.0 | 6.6 J | 39 | 28 J |
| o-Xylene | 9.0 | 3.4 J | 39 | 15 J |
| Cumene | 9.0 | 1.8 J | 44 | 8.9 J |
| Propylbenzene | 9.0 | 2.1 J | 44 | 10 J |
| 1,2,4-Trimethylbenzene | 9.0 | 2.2 J | 44 | 11 J |
| Butane | 36 | 410 | 86 | 970 |
| Isopentane | 36 | 1300 | 110 | 3800 |

Client Sample ID: VMP-15-25.5-110116-Dup

Lab ID#: 1611046A-04A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|------------------------|-------------------|---------------|--------------------|----------------|
| Cyclohexane | 19 | 300 | 64 | 1000 |
| 2,2,4-Trimethylpentane | 19 | 4900 | 88 | 23000 |
| Benzene | 19 | 41 | 60 | 130 |
| Toluene | 19 | 3.6 J | 71 | 14 J |
| m,p-Xylene | 19 | 6.4 J | 81 | 28 J |
| o-Xylene | 19 | 3.8 J | 81 | 16 J |
| Butane | 75 | 410 | 180 | 980 |
| Isopentane | 75 | 1300 | 220 | 3900 |

Client Sample ID: VMP-15-25.5-110116-Dup

Lab ID#: 1611046A-04B

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|------------------------|-------------------|---------------|--------------------|----------------|
| Cyclohexane | 9.4 | 280 | 32 | 970 |
| 2,2,4-Trimethylpentane | 9.4 | 4700 E | 44 | 22000 E |
| Benzene | 9.4 | 39 | 30 | 120 |
| Toluene | 9.4 | 4.1 J | 35 | 15 J |
| Ethyl Benzene | 9.4 | 2.6 J | 41 | 11 J |
| m,p-Xylene | 9.4 | 6.0 J | 41 | 26 J |
| o-Xylene | 9.4 | 2.6 J | 41 | 11 J |
| Propylbenzene | 9.4 | 2.9 J | 46 | 14 J |
| 1,2,4-Trimethylbenzene | 9.4 | 2.5 J | 46 | 12 J |

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

Client Sample ID: VMP-15-25.5-110116-Dup

Lab ID#: 1611046A-04B

| | | | | |
|------------|----|------|-----|------|
| Butane | 38 | 430 | 89 | 1000 |
| Isopentane | 38 | 1300 | 110 | 3800 |

Client Sample ID: VMP-55-20-110116

Lab ID#: 1611046A-05A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|------------------------|----------------------|------------------|-----------------------|-------------------|
| Ethanol | 1400 | 660 J | 2600 | 1200 J |
| Acetone | 3400 | 760 J | 8200 | 1800 J |
| Carbon Disulfide | 1400 | 440 J | 4300 | 1400 J |
| Hexane | 340 | 7700 | 1200 | 27000 |
| Cyclohexane | 340 | 17000 | 1200 | 59000 |
| 2,2,4-Trimethylpentane | 340 | 30000 | 1600 | 140000 |
| Benzene | 340 | 100 J | 1100 | 320 J |
| Heptane | 340 | 3600 | 1400 | 15000 |
| Toluene | 340 | 140 J | 1300 | 520 J |
| Butane | 1400 | 14000 | 3300 | 33000 |
| Isopentane | 1400 | 86000 | 4100 | 250000 |

Client Sample ID: VMP-55-20-110116

Lab ID#: 1611046A-05B

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|------------------------|----------------------|------------------|-----------------------|-------------------|
| Ethanol | 550 | 520 J | 1000 | 970 J |
| Acetone | 1400 | 570 J | 3300 | 1400 J |
| 2-Propanol | 550 | 130 J | 1400 | 310 J |
| Carbon Disulfide | 550 | 260 J | 1700 | 820 J |
| Hexane | 140 | 8000 | 490 | 28000 |
| Cyclohexane | 140 | 18000 | 480 | 60000 |
| 2,2,4-Trimethylpentane | 140 | 31000 | 640 | 140000 |
| Benzene | 140 | 86 J | 440 | 280 J |
| Heptane | 140 | 3800 | 560 | 15000 |
| Toluene | 140 | 120 J | 520 | 470 J |
| m,p-Xylene | 140 | 56 J | 600 | 240 J |

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

Client Sample ID: VMP-55-20-110116

Lab ID#: 1611046A-05B

| | | | | |
|------------|-----|---------|------|----------|
| Styrene | 140 | 26 J | 590 | 110 J |
| Butane | 550 | 15000 | 1300 | 36000 |
| Isopentane | 550 | 90000 E | 1600 | 260000 E |



Air Toxics

Client Sample ID: VMP-15-5-110116

Lab ID#: 1611046A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|--------------------|
| File Name: | 3110912 | Date of Collection: | 11/1/16 9:26:00 AM |
| Dil. Factor: | 2.69 | Date of Analysis: | 11/9/16 07:12 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 1.3 | Not Detected | 6.6 | Not Detected |
| Freon 114 | 1.3 | Not Detected | 9.4 | Not Detected |
| Chloromethane | 13 | Not Detected | 28 | Not Detected |
| Vinyl Chloride | 1.3 | Not Detected | 3.4 | Not Detected |
| 1,3-Butadiene | 1.3 | Not Detected | 3.0 | Not Detected |
| Bromomethane | 13 | Not Detected | 52 | Not Detected |
| Chloroethane | 5.4 | Not Detected | 14 | Not Detected |
| Freon 11 | 1.3 | Not Detected | 7.6 | Not Detected |
| Ethanol | 5.4 | Not Detected | 10 | Not Detected |
| Freon 113 | 1.3 | Not Detected | 10 | Not Detected |
| 1,1-Dichloroethene | 1.3 | Not Detected | 5.3 | Not Detected |
| Acetone | 13 | 4.4 J | 32 | 10 J |
| 2-Propanol | 5.4 | 2.3 J | 13 | 5.6 J |
| Carbon Disulfide | 5.4 | Not Detected | 17 | Not Detected |
| 3-Chloropropene | 5.4 | Not Detected | 17 | Not Detected |
| Methylene Chloride | 13 | Not Detected | 47 | Not Detected |
| Methyl tert-butyl ether | 5.4 | Not Detected | 19 | Not Detected |
| trans-1,2-Dichloroethene | 1.3 | Not Detected | 5.3 | Not Detected |
| Hexane | 1.3 | Not Detected | 4.7 | Not Detected |
| 1,1-Dichloroethane | 1.3 | Not Detected | 5.4 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 5.4 | Not Detected | 16 | Not Detected |
| cis-1,2-Dichloroethene | 1.3 | Not Detected | 5.3 | Not Detected |
| Tetrahydrofuran | 1.3 | Not Detected | 4.0 | Not Detected |
| Chloroform | 1.3 | 0.36 J | 6.6 | 1.8 J |
| 1,1,1-Trichloroethane | 1.3 | Not Detected | 7.3 | Not Detected |
| Cyclohexane | 1.3 | Not Detected | 4.6 | Not Detected |
| Carbon Tetrachloride | 1.3 | Not Detected | 8.5 | Not Detected |
| 2,2,4-Trimethylpentane | 1.3 | Not Detected | 6.3 | Not Detected |
| Benzene | 1.3 | Not Detected | 4.3 | Not Detected |
| 1,2-Dichloroethane | 1.3 | Not Detected | 5.4 | Not Detected |
| Heptane | 1.3 | Not Detected | 5.5 | Not Detected |
| Trichloroethene | 1.3 | Not Detected | 7.2 | Not Detected |
| 1,2-Dichloropropane | 1.3 | Not Detected | 6.2 | Not Detected |
| 1,4-Dioxane | 5.4 | Not Detected | 19 | Not Detected |
| Bromodichloromethane | 1.3 | Not Detected | 9.0 | Not Detected |
| cis-1,3-Dichloropropene | 1.3 | Not Detected | 6.1 | Not Detected |
| 4-Methyl-2-pentanone | 1.3 | Not Detected | 5.5 | Not Detected |
| Toluene | 1.3 | Not Detected | 5.1 | Not Detected |
| trans-1,3-Dichloropropene | 1.3 | Not Detected | 6.1 | Not Detected |
| 1,1,2-Trichloroethane | 1.3 | Not Detected | 7.3 | Not Detected |
| Tetrachloroethene | 1.3 | Not Detected | 9.1 | Not Detected |
| 2-Hexanone | 5.4 | Not Detected | 22 | Not Detected |



Client Sample ID: VMP-15-5-110116

Lab ID#: 1611046A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|--------------------|
| File Name: | 3110912 | Date of Collection: | 11/1/16 9:26:00 AM |
| Dil. Factor: | 2.69 | Date of Analysis: | 11/9/16 07:12 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 1.3 | Not Detected | 11 | Not Detected |
| 1,2-Dibromoethane (EDB) | 1.3 | Not Detected | 10 | Not Detected |
| Chlorobenzene | 1.3 | Not Detected | 6.2 | Not Detected |
| Ethyl Benzene | 1.3 | Not Detected | 5.8 | Not Detected |
| m,p-Xylene | 1.3 | 0.75 J | 5.8 | 3.2 J |
| o-Xylene | 1.3 | Not Detected | 5.8 | Not Detected |
| Styrene | 1.3 | Not Detected | 5.7 | Not Detected |
| Bromoform | 1.3 | Not Detected | 14 | Not Detected |
| Cumene | 1.3 | Not Detected | 6.6 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 1.3 | Not Detected | 9.2 | Not Detected |
| Propylbenzene | 1.3 | Not Detected | 6.6 | Not Detected |
| 4-Ethyltoluene | 1.3 | Not Detected | 6.6 | Not Detected |
| 1,3,5-Trimethylbenzene | 1.3 | Not Detected | 6.6 | Not Detected |
| 1,2,4-Trimethylbenzene | 1.3 | Not Detected | 6.6 | Not Detected |
| 1,3-Dichlorobenzene | 1.3 | Not Detected | 8.1 | Not Detected |
| 1,4-Dichlorobenzene | 1.3 | Not Detected | 8.1 | Not Detected |
| alpha-Chlorotoluene | 1.3 | Not Detected | 7.0 | Not Detected |
| 1,2-Dichlorobenzene | 1.3 | Not Detected | 8.1 | Not Detected |
| 1,2,4-Trichlorobenzene | 5.4 | Not Detected | 40 | Not Detected |
| Hexachlorobutadiene | 5.4 | Not Detected | 57 | Not Detected |
| Butane | 5.4 | Not Detected | 13 | Not Detected |
| Isopentane | 5.4 | Not Detected | 16 | Not Detected |

J = Estimated value.

Container Type: 1 Liter Summa Canister

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 106 | 70-130 |
| 1,2-Dichloroethane-d4 | 93 | 70-130 |
| 4-Bromofluorobenzene | 92 | 70-130 |

Client Sample ID: VMP-15-21.5-110116

Lab ID#: 1611046A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|--------------------|
| File Name: | 3111419 | Date of Collection: | 11/1/16 9:54:00 AM |
| Dil. Factor: | 8.00 | Date of Analysis: | 11/14/16 08:51 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 4.0 | Not Detected | 20 | Not Detected |
| Freon 114 | 4.0 | Not Detected | 28 | Not Detected |
| Chloromethane | 40 | Not Detected | 83 | Not Detected |
| Vinyl Chloride | 4.0 | Not Detected | 10 | Not Detected |
| 1,3-Butadiene | 4.0 | Not Detected | 8.8 | Not Detected |
| Bromomethane | 40 | Not Detected | 160 | Not Detected |
| Chloroethane | 16 | Not Detected | 42 | Not Detected |
| Freon 11 | 4.0 | Not Detected | 22 | Not Detected |
| Ethanol | 16 | Not Detected | 30 | Not Detected |
| Freon 113 | 4.0 | Not Detected | 31 | Not Detected |
| 1,1-Dichloroethene | 4.0 | Not Detected | 16 | Not Detected |
| Acetone | 40 | 9.0 J | 95 | 21 J |
| 2-Propanol | 16 | 2.6 J | 39 | 6.5 J |
| Carbon Disulfide | 16 | Not Detected | 50 | Not Detected |
| 3-Chloropropene | 16 | Not Detected | 50 | Not Detected |
| Methylene Chloride | 40 | Not Detected | 140 | Not Detected |
| Methyl tert-butyl ether | 16 | Not Detected | 58 | Not Detected |
| trans-1,2-Dichloroethene | 4.0 | Not Detected | 16 | Not Detected |
| Hexane | 4.0 | Not Detected | 14 | Not Detected |
| 1,1-Dichloroethane | 4.0 | Not Detected | 16 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 16 | Not Detected | 47 | Not Detected |
| cis-1,2-Dichloroethene | 4.0 | Not Detected | 16 | Not Detected |
| Tetrahydrofuran | 4.0 | Not Detected | 12 | Not Detected |
| Chloroform | 4.0 | Not Detected | 20 | Not Detected |
| 1,1,1-Trichloroethane | 4.0 | Not Detected | 22 | Not Detected |
| Cyclohexane | 4.0 | Not Detected | 14 | Not Detected |
| Carbon Tetrachloride | 4.0 | Not Detected | 25 | Not Detected |
| 2,2,4-Trimethylpentane | 4.0 | 920 | 19 | 4300 |
| Benzene | 4.0 | 2.2 J | 13 | 7.1 J |
| 1,2-Dichloroethane | 4.0 | Not Detected | 16 | Not Detected |
| Heptane | 4.0 | Not Detected | 16 | Not Detected |
| Trichloroethene | 4.0 | Not Detected | 21 | Not Detected |
| 1,2-Dichloropropane | 4.0 | Not Detected | 18 | Not Detected |
| 1,4-Dioxane | 16 | Not Detected | 58 | Not Detected |
| Bromodichloromethane | 4.0 | Not Detected | 27 | Not Detected |
| cis-1,3-Dichloropropene | 4.0 | Not Detected | 18 | Not Detected |
| 4-Methyl-2-pentanone | 4.0 | Not Detected | 16 | Not Detected |
| Toluene | 4.0 | 0.87 J | 15 | 3.3 J |
| trans-1,3-Dichloropropene | 4.0 | Not Detected | 18 | Not Detected |
| 1,1,2-Trichloroethane | 4.0 | Not Detected | 22 | Not Detected |
| Tetrachloroethene | 4.0 | Not Detected | 27 | Not Detected |
| 2-Hexanone | 16 | Not Detected | 66 | Not Detected |



Client Sample ID: VMP-15-21.5-110116

Lab ID#: 1611046A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|--------------------|
| File Name: | 3111419 | Date of Collection: | 11/1/16 9:54:00 AM |
| Dil. Factor: | 8.00 | Date of Analysis: | 11/14/16 08:51 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 4.0 | Not Detected | 34 | Not Detected |
| 1,2-Dibromoethane (EDB) | 4.0 | Not Detected | 31 | Not Detected |
| Chlorobenzene | 4.0 | Not Detected | 18 | Not Detected |
| Ethyl Benzene | 4.0 | 1.2 J | 17 | 5.1 J |
| m,p-Xylene | 4.0 | 4.2 | 17 | 18 |
| o-Xylene | 4.0 | 1.1 J | 17 | 4.8 J |
| Styrene | 4.0 | Not Detected | 17 | Not Detected |
| Bromoform | 4.0 | Not Detected | 41 | Not Detected |
| Cumene | 4.0 | 0.69 J | 20 | 3.4 J |
| 1,1,2,2-Tetrachloroethane | 4.0 | Not Detected | 27 | Not Detected |
| Propylbenzene | 4.0 | 2.4 J | 20 | 12 J |
| 4-Ethyltoluene | 4.0 | 1.2 J | 20 | 5.7 J |
| 1,3,5-Trimethylbenzene | 4.0 | Not Detected | 20 | Not Detected |
| 1,2,4-Trimethylbenzene | 4.0 | 5.9 | 20 | 29 |
| 1,3-Dichlorobenzene | 4.0 | Not Detected | 24 | Not Detected |
| 1,4-Dichlorobenzene | 4.0 | Not Detected | 24 | Not Detected |
| alpha-Chlorotoluene | 4.0 | Not Detected | 21 | Not Detected |
| 1,2-Dichlorobenzene | 4.0 | Not Detected | 24 | Not Detected |
| 1,2,4-Trichlorobenzene | 16 | Not Detected | 120 | Not Detected |
| Hexachlorobutadiene | 16 | Not Detected | 170 | Not Detected |
| Butane | 16 | Not Detected | 38 | Not Detected |
| Isopentane | 16 | 8.6 J | 47 | 25 J |

J = Estimated value.

Container Type: 1 Liter Summa Canister

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 104 | 70-130 |
| 1,2-Dichloroethane-d4 | 94 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |



Air Toxics

Client Sample ID: VMP-15-21.5-110116

Lab ID#: 1611046A-02B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|--------------------|
| File Name: | 3111411 | Date of Collection: | 11/1/16 9:54:00 AM |
| Dil. Factor: | 4.00 | Date of Analysis: | 11/14/16 05:23 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 2.0 | Not Detected | 9.9 | Not Detected |
| Freon 114 | 2.0 | Not Detected | 14 | Not Detected |
| Chloromethane | 20 | Not Detected | 41 | Not Detected |
| Vinyl Chloride | 2.0 | Not Detected | 5.1 | Not Detected |
| 1,3-Butadiene | 2.0 | Not Detected | 4.4 | Not Detected |
| Bromomethane | 20 | Not Detected | 78 | Not Detected |
| Chloroethane | 8.0 | Not Detected | 21 | Not Detected |
| Freon 11 | 2.0 | Not Detected | 11 | Not Detected |
| Ethanol | 8.0 | Not Detected | 15 | Not Detected |
| Freon 113 | 2.0 | Not Detected | 15 | Not Detected |
| 1,1-Dichloroethene | 2.0 | Not Detected | 7.9 | Not Detected |
| Acetone | 20 | 7.5 J | 48 | 18 J |
| 2-Propanol | 8.0 | 3.4 J | 20 | 8.4 J |
| Carbon Disulfide | 8.0 | Not Detected | 25 | Not Detected |
| 3-Chloropropene | 8.0 | Not Detected | 25 | Not Detected |
| Methylene Chloride | 20 | Not Detected | 69 | Not Detected |
| Methyl tert-butyl ether | 8.0 | Not Detected | 29 | Not Detected |
| trans-1,2-Dichloroethene | 2.0 | Not Detected | 7.9 | Not Detected |
| Hexane | 2.0 | Not Detected | 7.0 | Not Detected |
| 1,1-Dichloroethane | 2.0 | Not Detected | 8.1 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 8.0 | Not Detected | 24 | Not Detected |
| cis-1,2-Dichloroethene | 2.0 | Not Detected | 7.9 | Not Detected |
| Tetrahydrofuran | 2.0 | Not Detected | 5.9 | Not Detected |
| Chloroform | 2.0 | Not Detected | 9.8 | Not Detected |
| 1,1,1-Trichloroethane | 2.0 | Not Detected | 11 | Not Detected |
| Cyclohexane | 2.0 | Not Detected | 6.9 | Not Detected |
| Carbon Tetrachloride | 2.0 | Not Detected | 12 | Not Detected |
| 2,2,4-Trimethylpentane | 2.0 | 930 E | 9.3 | 4400 E |
| Benzene | 2.0 | 2.1 | 6.4 | 6.6 |
| 1,2-Dichloroethane | 2.0 | Not Detected | 8.1 | Not Detected |
| Heptane | 2.0 | Not Detected | 8.2 | Not Detected |
| Trichloroethene | 2.0 | Not Detected | 11 | Not Detected |
| 1,2-Dichloropropane | 2.0 | Not Detected | 9.2 | Not Detected |
| 1,4-Dioxane | 8.0 | Not Detected | 29 | Not Detected |
| Bromodichloromethane | 2.0 | Not Detected | 13 | Not Detected |
| cis-1,3-Dichloropropene | 2.0 | Not Detected | 9.1 | Not Detected |
| 4-Methyl-2-pentanone | 2.0 | Not Detected | 8.2 | Not Detected |
| Toluene | 2.0 | 0.85 J | 7.5 | 3.2 J |
| trans-1,3-Dichloropropene | 2.0 | Not Detected | 9.1 | Not Detected |
| 1,1,2-Trichloroethane | 2.0 | Not Detected | 11 | Not Detected |
| Tetrachloroethene | 2.0 | Not Detected | 14 | Not Detected |
| 2-Hexanone | 8.0 | Not Detected | 33 | Not Detected |



Client Sample ID: VMP-15-21.5-110116

Lab ID#: 1611046A-02B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|--------------------|
| File Name: | 3111411 | Date of Collection: | 11/1/16 9:54:00 AM |
| Dil. Factor: | 4.00 | Date of Analysis: | 11/14/16 05:23 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 2.0 | Not Detected | 17 | Not Detected |
| 1,2-Dibromoethane (EDB) | 2.0 | Not Detected | 15 | Not Detected |
| Chlorobenzene | 2.0 | Not Detected | 9.2 | Not Detected |
| Ethyl Benzene | 2.0 | 1.4 J | 8.7 | 6.2 J |
| m,p-Xylene | 2.0 | 4.3 | 8.7 | 19 |
| o-Xylene | 2.0 | 1.1 J | 8.7 | 4.7 J |
| Styrene | 2.0 | Not Detected | 8.5 | Not Detected |
| Bromoform | 2.0 | Not Detected | 21 | Not Detected |
| Cumene | 2.0 | 0.64 J | 9.8 | 3.2 J |
| 1,1,2,2-Tetrachloroethane | 2.0 | Not Detected | 14 | Not Detected |
| Propylbenzene | 2.0 | 1.8 J | 9.8 | 9.1 J |
| 4-Ethyltoluene | 2.0 | 0.97 J | 9.8 | 4.8 J |
| 1,3,5-Trimethylbenzene | 2.0 | 0.50 J | 9.8 | 2.5 J |
| 1,2,4-Trimethylbenzene | 2.0 | 4.6 | 9.8 | 23 |
| 1,3-Dichlorobenzene | 2.0 | Not Detected | 12 | Not Detected |
| 1,4-Dichlorobenzene | 2.0 | Not Detected | 12 | Not Detected |
| alpha-Chlorotoluene | 2.0 | Not Detected | 10 | Not Detected |
| 1,2-Dichlorobenzene | 2.0 | Not Detected | 12 | Not Detected |
| 1,2,4-Trichlorobenzene | 8.0 | Not Detected | 59 | Not Detected |
| Hexachlorobutadiene | 8.0 | Not Detected | 85 | Not Detected |
| Butane | 8.0 | Not Detected | 19 | Not Detected |
| Isopentane | 8.0 | 6.6 J | 24 | 19 J |

J = Estimated value.

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 106 | 70-130 |
| 1,2-Dichloroethane-d4 | 96 | 70-130 |
| 4-Bromofluorobenzene | 93 | 70-130 |



Air Toxics

Client Sample ID: VMP-15-25.5-110116

Lab ID#: 1611046A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|---------------------|
| File Name: | 3111412 | Date of Collection: | 11/1/16 10:21:00 AM |
| Dil. Factor: | 36.3 | Date of Analysis: | 11/14/16 05:46 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 18 | Not Detected | 90 | Not Detected |
| Freon 114 | 18 | Not Detected | 130 | Not Detected |
| Chloromethane | 180 | Not Detected | 370 | Not Detected |
| Vinyl Chloride | 18 | Not Detected | 46 | Not Detected |
| 1,3-Butadiene | 18 | Not Detected | 40 | Not Detected |
| Bromomethane | 180 | Not Detected | 700 | Not Detected |
| Chloroethane | 73 | Not Detected | 190 | Not Detected |
| Freon 11 | 18 | Not Detected | 100 | Not Detected |
| Ethanol | 73 | Not Detected | 140 | Not Detected |
| Freon 113 | 18 | Not Detected | 140 | Not Detected |
| 1,1-Dichloroethene | 18 | Not Detected | 72 | Not Detected |
| Acetone | 180 | Not Detected | 430 | Not Detected |
| 2-Propanol | 73 | Not Detected | 180 | Not Detected |
| Carbon Disulfide | 73 | Not Detected | 230 | Not Detected |
| 3-Chloropropene | 73 | Not Detected | 230 | Not Detected |
| Methylene Chloride | 180 | Not Detected | 630 | Not Detected |
| Methyl tert-butyl ether | 73 | Not Detected | 260 | Not Detected |
| trans-1,2-Dichloroethene | 18 | Not Detected | 72 | Not Detected |
| Hexane | 18 | Not Detected | 64 | Not Detected |
| 1,1-Dichloroethane | 18 | Not Detected | 73 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 73 | Not Detected | 210 | Not Detected |
| cis-1,2-Dichloroethene | 18 | Not Detected | 72 | Not Detected |
| Tetrahydrofuran | 18 | Not Detected | 54 | Not Detected |
| Chloroform | 18 | Not Detected | 89 | Not Detected |
| 1,1,1-Trichloroethane | 18 | Not Detected | 99 | Not Detected |
| Cyclohexane | 18 | 290 | 62 | 1000 |
| Carbon Tetrachloride | 18 | Not Detected | 110 | Not Detected |
| 2,2,4-Trimethylpentane | 18 | 4600 | 85 | 22000 |
| Benzene | 18 | 36 | 58 | 110 |
| 1,2-Dichloroethane | 18 | Not Detected | 73 | Not Detected |
| Heptane | 18 | Not Detected | 74 | Not Detected |
| Trichloroethene | 18 | Not Detected | 98 | Not Detected |
| 1,2-Dichloropropane | 18 | Not Detected | 84 | Not Detected |
| 1,4-Dioxane | 73 | Not Detected | 260 | Not Detected |
| Bromodichloromethane | 18 | Not Detected | 120 | Not Detected |
| cis-1,3-Dichloropropene | 18 | Not Detected | 82 | Not Detected |
| 4-Methyl-2-pentanone | 18 | Not Detected | 74 | Not Detected |
| Toluene | 18 | 4.2 J | 68 | 16 J |
| trans-1,3-Dichloropropene | 18 | Not Detected | 82 | Not Detected |
| 1,1,2-Trichloroethane | 18 | Not Detected | 99 | Not Detected |
| Tetrachloroethene | 18 | Not Detected | 120 | Not Detected |
| 2-Hexanone | 73 | Not Detected | 300 | Not Detected |

Client Sample ID: VMP-15-25.5-110116

Lab ID#: 1611046A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|---------------------|
| File Name: | 3111412 | Date of Collection: | 11/1/16 10:21:00 AM |
| Dil. Factor: | 36.3 | Date of Analysis: | 11/14/16 05:46 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 18 | Not Detected | 150 | Not Detected |
| 1,2-Dibromoethane (EDB) | 18 | Not Detected | 140 | Not Detected |
| Chlorobenzene | 18 | Not Detected | 84 | Not Detected |
| Ethyl Benzene | 18 | Not Detected | 79 | Not Detected |
| m,p-Xylene | 18 | 6.1 J | 79 | 26 J |
| o-Xylene | 18 | Not Detected | 79 | Not Detected |
| Styrene | 18 | Not Detected | 77 | Not Detected |
| Bromoform | 18 | Not Detected | 190 | Not Detected |
| Cumene | 18 | Not Detected | 89 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 18 | Not Detected | 120 | Not Detected |
| Propylbenzene | 18 | 2.2 J | 89 | 11 J |
| 4-Ethyltoluene | 18 | Not Detected | 89 | Not Detected |
| 1,3,5-Trimethylbenzene | 18 | Not Detected | 89 | Not Detected |
| 1,2,4-Trimethylbenzene | 18 | 2.6 J | 89 | 13 J |
| 1,3-Dichlorobenzene | 18 | Not Detected | 110 | Not Detected |
| 1,4-Dichlorobenzene | 18 | Not Detected | 110 | Not Detected |
| alpha-Chlorotoluene | 18 | Not Detected | 94 | Not Detected |
| 1,2-Dichlorobenzene | 18 | Not Detected | 110 | Not Detected |
| 1,2,4-Trichlorobenzene | 73 | Not Detected | 540 | Not Detected |
| Hexachlorobutadiene | 73 | Not Detected | 770 | Not Detected |
| Butane | 73 | 400 | 170 | 950 |
| Isopentane | 73 | 1300 | 210 | 3800 |

J = Estimated value.

Container Type: 1 Liter Summa Canister

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 101 | 70-130 |
| 1,2-Dichloroethane-d4 | 90 | 70-130 |
| 4-Bromofluorobenzene | 96 | 70-130 |



Air Toxics

Client Sample ID: VMP-15-25.5-110116

Lab ID#: 1611046A-03B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|---------------------|
| File Name: | 3110914 | Date of Collection: | 11/1/16 10:21:00 AM |
| Dil. Factor: | 18.1 | Date of Analysis: | 11/9/16 08:00 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 9.0 | Not Detected | 45 | Not Detected |
| Freon 114 | 9.0 | Not Detected | 63 | Not Detected |
| Chloromethane | 90 | Not Detected | 190 | Not Detected |
| Vinyl Chloride | 9.0 | Not Detected | 23 | Not Detected |
| 1,3-Butadiene | 9.0 | Not Detected | 20 | Not Detected |
| Bromomethane | 90 | Not Detected | 350 | Not Detected |
| Chloroethane | 36 | Not Detected | 96 | Not Detected |
| Freon 11 | 9.0 | Not Detected | 51 | Not Detected |
| Ethanol | 36 | Not Detected | 68 | Not Detected |
| Freon 113 | 9.0 | Not Detected | 69 | Not Detected |
| 1,1-Dichloroethene | 9.0 | Not Detected | 36 | Not Detected |
| Acetone | 90 | 9.8 J | 210 | 23 J |
| 2-Propanol | 36 | Not Detected | 89 | Not Detected |
| Carbon Disulfide | 36 | Not Detected | 110 | Not Detected |
| 3-Chloropropene | 36 | Not Detected | 110 | Not Detected |
| Methylene Chloride | 90 | Not Detected | 310 | Not Detected |
| Methyl tert-butyl ether | 36 | Not Detected | 130 | Not Detected |
| trans-1,2-Dichloroethene | 9.0 | Not Detected | 36 | Not Detected |
| Hexane | 9.0 | 5.2 J | 32 | 18 J |
| 1,1-Dichloroethane | 9.0 | Not Detected | 37 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 36 | Not Detected | 110 | Not Detected |
| cis-1,2-Dichloroethene | 9.0 | Not Detected | 36 | Not Detected |
| Tetrahydrofuran | 9.0 | Not Detected | 27 | Not Detected |
| Chloroform | 9.0 | Not Detected | 44 | Not Detected |
| 1,1,1-Trichloroethane | 9.0 | Not Detected | 49 | Not Detected |
| Cyclohexane | 9.0 | 280 | 31 | 950 |
| Carbon Tetrachloride | 9.0 | Not Detected | 57 | Not Detected |
| 2,2,4-Trimethylpentane | 9.0 | 4600 E | 42 | 21000 E |
| Benzene | 9.0 | 36 | 29 | 110 |
| 1,2-Dichloroethane | 9.0 | Not Detected | 37 | Not Detected |
| Heptane | 9.0 | Not Detected | 37 | Not Detected |
| Trichloroethene | 9.0 | Not Detected | 49 | Not Detected |
| 1,2-Dichloropropane | 9.0 | Not Detected | 42 | Not Detected |
| 1,4-Dioxane | 36 | Not Detected | 130 | Not Detected |
| Bromodichloromethane | 9.0 | Not Detected | 61 | Not Detected |
| cis-1,3-Dichloropropene | 9.0 | Not Detected | 41 | Not Detected |
| 4-Methyl-2-pentanone | 9.0 | Not Detected | 37 | Not Detected |
| Toluene | 9.0 | 4.2 J | 34 | 16 J |
| trans-1,3-Dichloropropene | 9.0 | Not Detected | 41 | Not Detected |
| 1,1,2-Trichloroethane | 9.0 | Not Detected | 49 | Not Detected |
| Tetrachloroethene | 9.0 | Not Detected | 61 | Not Detected |
| 2-Hexanone | 36 | Not Detected | 150 | Not Detected |



Client Sample ID: VMP-15-25.5-110116

Lab ID#: 1611046A-03B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|---------------------|
| File Name: | 3110914 | Date of Collection: | 11/1/16 10:21:00 AM |
| Dil. Factor: | 18.1 | Date of Analysis: | 11/9/16 08:00 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 9.0 | Not Detected | 77 | Not Detected |
| 1,2-Dibromoethane (EDB) | 9.0 | Not Detected | 70 | Not Detected |
| Chlorobenzene | 9.0 | Not Detected | 42 | Not Detected |
| Ethyl Benzene | 9.0 | 2.4 J | 39 | 10 J |
| m,p-Xylene | 9.0 | 6.6 J | 39 | 28 J |
| o-Xylene | 9.0 | 3.4 J | 39 | 15 J |
| Styrene | 9.0 | Not Detected | 38 | Not Detected |
| Bromoform | 9.0 | Not Detected | 94 | Not Detected |
| Cumene | 9.0 | 1.8 J | 44 | 8.9 J |
| 1,1,2,2-Tetrachloroethane | 9.0 | Not Detected | 62 | Not Detected |
| Propylbenzene | 9.0 | 2.1 J | 44 | 10 J |
| 4-Ethyltoluene | 9.0 | Not Detected | 44 | Not Detected |
| 1,3,5-Trimethylbenzene | 9.0 | Not Detected | 44 | Not Detected |
| 1,2,4-Trimethylbenzene | 9.0 | 2.2 J | 44 | 11 J |
| 1,3-Dichlorobenzene | 9.0 | Not Detected | 54 | Not Detected |
| 1,4-Dichlorobenzene | 9.0 | Not Detected | 54 | Not Detected |
| alpha-Chlorotoluene | 9.0 | Not Detected | 47 | Not Detected |
| 1,2-Dichlorobenzene | 9.0 | Not Detected | 54 | Not Detected |
| 1,2,4-Trichlorobenzene | 36 | Not Detected | 270 | Not Detected |
| Hexachlorobutadiene | 36 | Not Detected | 390 | Not Detected |
| Butane | 36 | 410 | 86 | 970 |
| Isopentane | 36 | 1300 | 110 | 3800 |

J = Estimated value.

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 100 | 70-130 |
| 1,2-Dichloroethane-d4 | 108 | 70-130 |
| 4-Bromofluorobenzene | 96 | 70-130 |



Air Toxics

Client Sample ID: VMP-15-25.5-110116-Dup

Lab ID#: 1611046A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|---------------------|
| File Name: | 3111413 | Date of Collection: | 11/1/16 10:21:00 AM |
| Dil. Factor: | 37.5 | Date of Analysis: | 11/14/16 06:09 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 19 | Not Detected | 93 | Not Detected |
| Freon 114 | 19 | Not Detected | 130 | Not Detected |
| Chloromethane | 190 | Not Detected | 390 | Not Detected |
| Vinyl Chloride | 19 | Not Detected | 48 | Not Detected |
| 1,3-Butadiene | 19 | Not Detected | 41 | Not Detected |
| Bromomethane | 190 | Not Detected | 730 | Not Detected |
| Chloroethane | 75 | Not Detected | 200 | Not Detected |
| Freon 11 | 19 | Not Detected | 100 | Not Detected |
| Ethanol | 75 | Not Detected | 140 | Not Detected |
| Freon 113 | 19 | Not Detected | 140 | Not Detected |
| 1,1-Dichloroethene | 19 | Not Detected | 74 | Not Detected |
| Acetone | 190 | Not Detected | 440 | Not Detected |
| 2-Propanol | 75 | Not Detected | 180 | Not Detected |
| Carbon Disulfide | 75 | Not Detected | 230 | Not Detected |
| 3-Chloropropene | 75 | Not Detected | 230 | Not Detected |
| Methylene Chloride | 190 | Not Detected | 650 | Not Detected |
| Methyl tert-butyl ether | 75 | Not Detected | 270 | Not Detected |
| trans-1,2-Dichloroethene | 19 | Not Detected | 74 | Not Detected |
| Hexane | 19 | Not Detected | 66 | Not Detected |
| 1,1-Dichloroethane | 19 | Not Detected | 76 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 75 | Not Detected | 220 | Not Detected |
| cis-1,2-Dichloroethene | 19 | Not Detected | 74 | Not Detected |
| Tetrahydrofuran | 19 | Not Detected | 55 | Not Detected |
| Chloroform | 19 | Not Detected | 92 | Not Detected |
| 1,1,1-Trichloroethane | 19 | Not Detected | 100 | Not Detected |
| Cyclohexane | 19 | 300 | 64 | 1000 |
| Carbon Tetrachloride | 19 | Not Detected | 120 | Not Detected |
| 2,2,4-Trimethylpentane | 19 | 4900 | 88 | 23000 |
| Benzene | 19 | 41 | 60 | 130 |
| 1,2-Dichloroethane | 19 | Not Detected | 76 | Not Detected |
| Heptane | 19 | Not Detected | 77 | Not Detected |
| Trichloroethene | 19 | Not Detected | 100 | Not Detected |
| 1,2-Dichloropropane | 19 | Not Detected | 87 | Not Detected |
| 1,4-Dioxane | 75 | Not Detected | 270 | Not Detected |
| Bromodichloromethane | 19 | Not Detected | 120 | Not Detected |
| cis-1,3-Dichloropropene | 19 | Not Detected | 85 | Not Detected |
| 4-Methyl-2-pentanone | 19 | Not Detected | 77 | Not Detected |
| Toluene | 19 | 3.6 J | 71 | 14 J |
| trans-1,3-Dichloropropene | 19 | Not Detected | 85 | Not Detected |
| 1,1,2-Trichloroethane | 19 | Not Detected | 100 | Not Detected |
| Tetrachloroethene | 19 | Not Detected | 130 | Not Detected |
| 2-Hexanone | 75 | Not Detected | 310 | Not Detected |

Client Sample ID: VMP-15-25.5-110116-Dup

Lab ID#: 1611046A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|---------------------|
| File Name: | 3111413 | Date of Collection: | 11/1/16 10:21:00 AM |
| Dil. Factor: | 37.5 | Date of Analysis: | 11/14/16 06:09 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 19 | Not Detected | 160 | Not Detected |
| 1,2-Dibromoethane (EDB) | 19 | Not Detected | 140 | Not Detected |
| Chlorobenzene | 19 | Not Detected | 86 | Not Detected |
| Ethyl Benzene | 19 | Not Detected | 81 | Not Detected |
| m,p-Xylene | 19 | 6.4 J | 81 | 28 J |
| o-Xylene | 19 | 3.8 J | 81 | 16 J |
| Styrene | 19 | Not Detected | 80 | Not Detected |
| Bromoform | 19 | Not Detected | 190 | Not Detected |
| Cumene | 19 | Not Detected | 92 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 19 | Not Detected | 130 | Not Detected |
| Propylbenzene | 19 | Not Detected | 92 | Not Detected |
| 4-Ethyltoluene | 19 | Not Detected | 92 | Not Detected |
| 1,3,5-Trimethylbenzene | 19 | Not Detected | 92 | Not Detected |
| 1,2,4-Trimethylbenzene | 19 | Not Detected | 92 | Not Detected |
| 1,3-Dichlorobenzene | 19 | Not Detected | 110 | Not Detected |
| 1,4-Dichlorobenzene | 19 | Not Detected | 110 | Not Detected |
| alpha-Chlorotoluene | 19 | Not Detected | 97 | Not Detected |
| 1,2-Dichlorobenzene | 19 | Not Detected | 110 | Not Detected |
| 1,2,4-Trichlorobenzene | 75 | Not Detected | 560 | Not Detected |
| Hexachlorobutadiene | 75 | Not Detected | 800 | Not Detected |
| Butane | 75 | 410 | 180 | 980 |
| Isopentane | 75 | 1300 | 220 | 3900 |

J = Estimated value.

Container Type: 1 Liter Summa Canister

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 102 | 70-130 |
| 1,2-Dichloroethane-d4 | 91 | 70-130 |
| 4-Bromofluorobenzene | 95 | 70-130 |



Air Toxics

Client Sample ID: VMP-15-25.5-110116-Dup

Lab ID#: 1611046A-04B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|---------------------|
| File Name: | 3110915 | Date of Collection: | 11/1/16 10:21:00 AM |
| Dil. Factor: | 18.8 | Date of Analysis: | 11/9/16 08:24 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 9.4 | Not Detected | 46 | Not Detected |
| Freon 114 | 9.4 | Not Detected | 66 | Not Detected |
| Chloromethane | 94 | Not Detected | 190 | Not Detected |
| Vinyl Chloride | 9.4 | Not Detected | 24 | Not Detected |
| 1,3-Butadiene | 9.4 | Not Detected | 21 | Not Detected |
| Bromomethane | 94 | Not Detected | 360 | Not Detected |
| Chloroethane | 38 | Not Detected | 99 | Not Detected |
| Freon 11 | 9.4 | Not Detected | 53 | Not Detected |
| Ethanol | 38 | Not Detected | 71 | Not Detected |
| Freon 113 | 9.4 | Not Detected | 72 | Not Detected |
| 1,1-Dichloroethene | 9.4 | Not Detected | 37 | Not Detected |
| Acetone | 94 | Not Detected | 220 | Not Detected |
| 2-Propanol | 38 | Not Detected | 92 | Not Detected |
| Carbon Disulfide | 38 | Not Detected | 120 | Not Detected |
| 3-Chloropropene | 38 | Not Detected | 120 | Not Detected |
| Methylene Chloride | 94 | Not Detected | 330 | Not Detected |
| Methyl tert-butyl ether | 38 | Not Detected | 140 | Not Detected |
| trans-1,2-Dichloroethene | 9.4 | Not Detected | 37 | Not Detected |
| Hexane | 9.4 | Not Detected | 33 | Not Detected |
| 1,1-Dichloroethane | 9.4 | Not Detected | 38 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 38 | Not Detected | 110 | Not Detected |
| cis-1,2-Dichloroethene | 9.4 | Not Detected | 37 | Not Detected |
| Tetrahydrofuran | 9.4 | Not Detected | 28 | Not Detected |
| Chloroform | 9.4 | Not Detected | 46 | Not Detected |
| 1,1,1-Trichloroethane | 9.4 | Not Detected | 51 | Not Detected |
| Cyclohexane | 9.4 | 280 | 32 | 970 |
| Carbon Tetrachloride | 9.4 | Not Detected | 59 | Not Detected |
| 2,2,4-Trimethylpentane | 9.4 | 4700 E | 44 | 22000 E |
| Benzene | 9.4 | 39 | 30 | 120 |
| 1,2-Dichloroethane | 9.4 | Not Detected | 38 | Not Detected |
| Heptane | 9.4 | Not Detected | 38 | Not Detected |
| Trichloroethene | 9.4 | Not Detected | 50 | Not Detected |
| 1,2-Dichloropropane | 9.4 | Not Detected | 43 | Not Detected |
| 1,4-Dioxane | 38 | Not Detected | 140 | Not Detected |
| Bromodichloromethane | 9.4 | Not Detected | 63 | Not Detected |
| cis-1,3-Dichloropropene | 9.4 | Not Detected | 43 | Not Detected |
| 4-Methyl-2-pentanone | 9.4 | Not Detected | 38 | Not Detected |
| Toluene | 9.4 | 4.1 J | 35 | 15 J |
| trans-1,3-Dichloropropene | 9.4 | Not Detected | 43 | Not Detected |
| 1,1,2-Trichloroethane | 9.4 | Not Detected | 51 | Not Detected |
| Tetrachloroethene | 9.4 | Not Detected | 64 | Not Detected |
| 2-Hexanone | 38 | Not Detected | 150 | Not Detected |



Client Sample ID: VMP-15-25.5-110116-Dup

Lab ID#: 1611046A-04B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|---------------------|
| File Name: | 3110915 | Date of Collection: | 11/1/16 10:21:00 AM |
| Dil. Factor: | 18.8 | Date of Analysis: | 11/9/16 08:24 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 9.4 | Not Detected | 80 | Not Detected |
| 1,2-Dibromoethane (EDB) | 9.4 | Not Detected | 72 | Not Detected |
| Chlorobenzene | 9.4 | Not Detected | 43 | Not Detected |
| Ethyl Benzene | 9.4 | 2.6 J | 41 | 11 J |
| m,p-Xylene | 9.4 | 6.0 J | 41 | 26 J |
| o-Xylene | 9.4 | 2.6 J | 41 | 11 J |
| Styrene | 9.4 | Not Detected | 40 | Not Detected |
| Bromoform | 9.4 | Not Detected | 97 | Not Detected |
| Cumene | 9.4 | Not Detected | 46 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 9.4 | Not Detected | 64 | Not Detected |
| Propylbenzene | 9.4 | 2.9 J | 46 | 14 J |
| 4-Ethyltoluene | 9.4 | Not Detected | 46 | Not Detected |
| 1,3,5-Trimethylbenzene | 9.4 | Not Detected | 46 | Not Detected |
| 1,2,4-Trimethylbenzene | 9.4 | 2.5 J | 46 | 12 J |
| 1,3-Dichlorobenzene | 9.4 | Not Detected | 56 | Not Detected |
| 1,4-Dichlorobenzene | 9.4 | Not Detected | 56 | Not Detected |
| alpha-Chlorotoluene | 9.4 | Not Detected | 49 | Not Detected |
| 1,2-Dichlorobenzene | 9.4 | Not Detected | 56 | Not Detected |
| 1,2,4-Trichlorobenzene | 38 | Not Detected | 280 | Not Detected |
| Hexachlorobutadiene | 38 | Not Detected | 400 | Not Detected |
| Butane | 38 | 430 | 89 | 1000 |
| Isopentane | 38 | 1300 | 110 | 3800 |

E = Exceeds instrument calibration range.

J = Estimated value.

Container Type: 1 Liter Summa Canister

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 103 | 70-130 |
| 1,2-Dichloroethane-d4 | 89 | 70-130 |
| 4-Bromofluorobenzene | 98 | 70-130 |



Air Toxics

Client Sample ID: VMP-55-20-110116

Lab ID#: 1611046A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|--------------------|
| File Name: | p111507 | Date of Collection: | 11/1/16 8:30:00 AM |
| Dil. Factor: | 690 | Date of Analysis: | 11/15/16 02:02 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 340 | Not Detected | 1700 | Not Detected |
| Freon 114 | 340 | Not Detected | 2400 | Not Detected |
| Chloromethane | 3400 | Not Detected | 7100 | Not Detected |
| Vinyl Chloride | 340 | Not Detected | 880 | Not Detected |
| 1,3-Butadiene | 340 | Not Detected | 760 | Not Detected |
| Bromomethane | 3400 | Not Detected | 13000 | Not Detected |
| Chloroethane | 1400 | Not Detected | 3600 | Not Detected |
| Freon 11 | 340 | Not Detected | 1900 | Not Detected |
| Ethanol | 1400 | 660 J | 2600 | 1200 J |
| Freon 113 | 340 | Not Detected | 2600 | Not Detected |
| 1,1-Dichloroethene | 340 | Not Detected | 1400 | Not Detected |
| Acetone | 3400 | 760 J | 8200 | 1800 J |
| 2-Propanol | 1400 | Not Detected | 3400 | Not Detected |
| Carbon Disulfide | 1400 | 440 J | 4300 | 1400 J |
| 3-Chloropropene | 1400 | Not Detected | 4300 | Not Detected |
| Methylene Chloride | 3400 | Not Detected | 12000 | Not Detected |
| Methyl tert-butyl ether | 1400 | Not Detected | 5000 | Not Detected |
| trans-1,2-Dichloroethene | 340 | Not Detected | 1400 | Not Detected |
| Hexane | 340 | 7700 | 1200 | 27000 |
| 1,1-Dichloroethane | 340 | Not Detected | 1400 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 1400 | Not Detected | 4100 | Not Detected |
| cis-1,2-Dichloroethene | 340 | Not Detected | 1400 | Not Detected |
| Tetrahydrofuran | 340 | Not Detected | 1000 | Not Detected |
| Chloroform | 340 | Not Detected | 1700 | Not Detected |
| 1,1,1-Trichloroethane | 340 | Not Detected | 1900 | Not Detected |
| Cyclohexane | 340 | 17000 | 1200 | 59000 |
| Carbon Tetrachloride | 340 | Not Detected | 2200 | Not Detected |
| 2,2,4-Trimethylpentane | 340 | 30000 | 1600 | 140000 |
| Benzene | 340 | 100 J | 1100 | 320 J |
| 1,2-Dichloroethane | 340 | Not Detected | 1400 | Not Detected |
| Heptane | 340 | 3600 | 1400 | 15000 |
| Trichloroethene | 340 | Not Detected | 1800 | Not Detected |
| 1,2-Dichloropropane | 340 | Not Detected | 1600 | Not Detected |
| 1,4-Dioxane | 1400 | Not Detected | 5000 | Not Detected |
| Bromodichloromethane | 340 | Not Detected | 2300 | Not Detected |
| cis-1,3-Dichloropropene | 340 | Not Detected | 1600 | Not Detected |
| 4-Methyl-2-pentanone | 340 | Not Detected | 1400 | Not Detected |
| Toluene | 340 | 140 J | 1300 | 520 J |
| trans-1,3-Dichloropropene | 340 | Not Detected | 1600 | Not Detected |
| 1,1,2-Trichloroethane | 340 | Not Detected | 1900 | Not Detected |
| Tetrachloroethene | 340 | Not Detected | 2300 | Not Detected |
| 2-Hexanone | 1400 | Not Detected | 5600 | Not Detected |



Client Sample ID: VMP-55-20-110116

Lab ID#: 1611046A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|--------------------|
| File Name: | p111507 | Date of Collection: | 11/1/16 8:30:00 AM |
| Dil. Factor: | 690 | Date of Analysis: | 11/15/16 02:02 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 340 | Not Detected | 2900 | Not Detected |
| 1,2-Dibromoethane (EDB) | 340 | Not Detected | 2600 | Not Detected |
| Chlorobenzene | 340 | Not Detected | 1600 | Not Detected |
| Ethyl Benzene | 340 | Not Detected | 1500 | Not Detected |
| m,p-Xylene | 340 | Not Detected | 1500 | Not Detected |
| o-Xylene | 340 | Not Detected | 1500 | Not Detected |
| Styrene | 340 | Not Detected | 1500 | Not Detected |
| Bromoform | 340 | Not Detected | 3600 | Not Detected |
| Cumene | 340 | Not Detected | 1700 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 340 | Not Detected | 2400 | Not Detected |
| Propylbenzene | 340 | Not Detected | 1700 | Not Detected |
| 4-Ethyltoluene | 340 | Not Detected | 1700 | Not Detected |
| 1,3,5-Trimethylbenzene | 340 | Not Detected | 1700 | Not Detected |
| 1,2,4-Trimethylbenzene | 340 | Not Detected | 1700 | Not Detected |
| 1,3-Dichlorobenzene | 340 | Not Detected | 2100 | Not Detected |
| 1,4-Dichlorobenzene | 340 | Not Detected | 2100 | Not Detected |
| alpha-Chlorotoluene | 340 | Not Detected | 1800 | Not Detected |
| 1,2-Dichlorobenzene | 340 | Not Detected | 2100 | Not Detected |
| 1,2,4-Trichlorobenzene | 1400 | Not Detected | 10000 | Not Detected |
| Hexachlorobutadiene | 1400 | Not Detected | 15000 | Not Detected |
| Butane | 1400 | 14000 | 3300 | 33000 |
| Isopentane | 1400 | 86000 | 4100 | 250000 |

J = Estimated value.

Container Type: 1 Liter Summa Canister

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 102 | 70-130 |
| 1,2-Dichloroethane-d4 | 104 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |



Air Toxics

Client Sample ID: VMP-55-20-110116

Lab ID#: 1611046A-05B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|--------------------|
| File Name: | p111506 | Date of Collection: | 11/1/16 8:30:00 AM |
| Dil. Factor: | 276 | Date of Analysis: | 11/15/16 01:07 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 140 | Not Detected | 680 | Not Detected |
| Freon 114 | 140 | Not Detected | 960 | Not Detected |
| Chloromethane | 1400 | Not Detected | 2800 | Not Detected |
| Vinyl Chloride | 140 | Not Detected | 350 | Not Detected |
| 1,3-Butadiene | 140 | Not Detected | 300 | Not Detected |
| Bromomethane | 1400 | Not Detected | 5400 | Not Detected |
| Chloroethane | 550 | Not Detected | 1400 | Not Detected |
| Freon 11 | 140 | Not Detected | 780 | Not Detected |
| Ethanol | 550 | 520 J | 1000 | 970 J |
| Freon 113 | 140 | Not Detected | 1000 | Not Detected |
| 1,1-Dichloroethene | 140 | Not Detected | 550 | Not Detected |
| Acetone | 1400 | 570 J | 3300 | 1400 J |
| 2-Propanol | 550 | 130 J | 1400 | 310 J |
| Carbon Disulfide | 550 | 260 J | 1700 | 820 J |
| 3-Chloropropene | 550 | Not Detected | 1700 | Not Detected |
| Methylene Chloride | 1400 | Not Detected | 4800 | Not Detected |
| Methyl tert-butyl ether | 550 | Not Detected | 2000 | Not Detected |
| trans-1,2-Dichloroethene | 140 | Not Detected | 550 | Not Detected |
| Hexane | 140 | 8000 | 490 | 28000 |
| 1,1-Dichloroethane | 140 | Not Detected | 560 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 550 | Not Detected | 1600 | Not Detected |
| cis-1,2-Dichloroethene | 140 | Not Detected | 550 | Not Detected |
| Tetrahydrofuran | 140 | Not Detected | 410 | Not Detected |
| Chloroform | 140 | Not Detected | 670 | Not Detected |
| 1,1,1-Trichloroethane | 140 | Not Detected | 750 | Not Detected |
| Cyclohexane | 140 | 18000 | 480 | 60000 |
| Carbon Tetrachloride | 140 | Not Detected | 870 | Not Detected |
| 2,2,4-Trimethylpentane | 140 | 31000 | 640 | 140000 |
| Benzene | 140 | 86 J | 440 | 280 J |
| 1,2-Dichloroethane | 140 | Not Detected | 560 | Not Detected |
| Heptane | 140 | 3800 | 560 | 15000 |
| Trichloroethene | 140 | Not Detected | 740 | Not Detected |
| 1,2-Dichloropropane | 140 | Not Detected | 640 | Not Detected |
| 1,4-Dioxane | 550 | Not Detected | 2000 | Not Detected |
| Bromodichloromethane | 140 | Not Detected | 920 | Not Detected |
| cis-1,3-Dichloropropene | 140 | Not Detected | 630 | Not Detected |
| 4-Methyl-2-pentanone | 140 | Not Detected | 560 | Not Detected |
| Toluene | 140 | 120 J | 520 | 470 J |
| trans-1,3-Dichloropropene | 140 | Not Detected | 630 | Not Detected |
| 1,1,2-Trichloroethane | 140 | Not Detected | 750 | Not Detected |
| Tetrachloroethene | 140 | Not Detected | 940 | Not Detected |
| 2-Hexanone | 550 | Not Detected | 2300 | Not Detected |



Client Sample ID: VMP-55-20-110116

Lab ID#: 1611046A-05B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|--------------------|
| File Name: | p111506 | Date of Collection: | 11/1/16 8:30:00 AM |
| Dil. Factor: | 276 | Date of Analysis: | 11/15/16 01:07 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 140 | Not Detected | 1200 | Not Detected |
| 1,2-Dibromoethane (EDB) | 140 | Not Detected | 1100 | Not Detected |
| Chlorobenzene | 140 | Not Detected | 640 | Not Detected |
| Ethyl Benzene | 140 | Not Detected | 600 | Not Detected |
| m,p-Xylene | 140 | 56 J | 600 | 240 J |
| o-Xylene | 140 | Not Detected | 600 | Not Detected |
| Styrene | 140 | 26 J | 590 | 110 J |
| Bromoform | 140 | Not Detected | 1400 | Not Detected |
| Cumene | 140 | Not Detected | 680 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 140 | Not Detected | 950 | Not Detected |
| Propylbenzene | 140 | Not Detected | 680 | Not Detected |
| 4-Ethyltoluene | 140 | Not Detected | 680 | Not Detected |
| 1,3,5-Trimethylbenzene | 140 | Not Detected | 680 | Not Detected |
| 1,2,4-Trimethylbenzene | 140 | Not Detected | 680 | Not Detected |
| 1,3-Dichlorobenzene | 140 | Not Detected | 830 | Not Detected |
| 1,4-Dichlorobenzene | 140 | Not Detected | 830 | Not Detected |
| alpha-Chlorotoluene | 140 | Not Detected | 710 | Not Detected |
| 1,2-Dichlorobenzene | 140 | Not Detected | 830 | Not Detected |
| 1,2,4-Trichlorobenzene | 550 | Not Detected | 4100 | Not Detected |
| Hexachlorobutadiene | 550 | Not Detected | 5900 | Not Detected |
| Butane | 550 | 15000 | 1300 | 36000 |
| Isopentane | 550 | 90000 E | 1600 | 260000 E |

J = Estimated value.

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 100 | 70-130 |
| 1,2-Dichloroethane-d4 | 116 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1611046A-06A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|----------|---------------------|------------------|
| File Name: | 3110906c | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 11/9/16 01:53 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 0.50 | Not Detected | 2.5 | Not Detected |
| Freon 114 | 0.50 | Not Detected | 3.5 | Not Detected |
| Chloromethane | 5.0 | Not Detected | 10 | Not Detected |
| Vinyl Chloride | 0.50 | Not Detected | 1.3 | Not Detected |
| 1,3-Butadiene | 0.50 | Not Detected | 1.1 | Not Detected |
| Bromomethane | 5.0 | Not Detected | 19 | Not Detected |
| Chloroethane | 2.0 | Not Detected | 5.3 | Not Detected |
| Freon 11 | 0.50 | Not Detected | 2.8 | Not Detected |
| Ethanol | 2.0 | Not Detected | 3.8 | Not Detected |
| Freon 113 | 0.50 | Not Detected | 3.8 | Not Detected |
| 1,1-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Acetone | 5.0 | 0.88 J | 12 | 2.1 J |
| 2-Propanol | 2.0 | Not Detected | 4.9 | Not Detected |
| Carbon Disulfide | 2.0 | Not Detected | 6.2 | Not Detected |
| 3-Chloropropene | 2.0 | Not Detected | 6.3 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| Methyl tert-butyl ether | 2.0 | Not Detected | 7.2 | Not Detected |
| trans-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Hexane | 0.50 | Not Detected | 1.8 | Not Detected |
| 1,1-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 2.0 | Not Detected | 5.9 | Not Detected |
| cis-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Tetrahydrofuran | 0.50 | Not Detected | 1.5 | Not Detected |
| Chloroform | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,1-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Cyclohexane | 0.50 | Not Detected | 1.7 | Not Detected |
| Carbon Tetrachloride | 0.50 | Not Detected | 3.1 | Not Detected |
| 2,2,4-Trimethylpentane | 0.50 | Not Detected | 2.3 | Not Detected |
| Benzene | 0.50 | Not Detected | 1.6 | Not Detected |
| 1,2-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| Heptane | 0.50 | Not Detected | 2.0 | Not Detected |
| Trichloroethene | 0.50 | Not Detected | 2.7 | Not Detected |
| 1,2-Dichloropropane | 0.50 | Not Detected | 2.3 | Not Detected |
| 1,4-Dioxane | 2.0 | Not Detected | 7.2 | Not Detected |
| Bromodichloromethane | 0.50 | Not Detected | 3.4 | Not Detected |
| cis-1,3-Dichloropropene | 0.50 | Not Detected | 2.3 | Not Detected |
| 4-Methyl-2-pentanone | 0.50 | Not Detected | 2.0 | Not Detected |
| Toluene | 0.50 | Not Detected | 1.9 | Not Detected |
| trans-1,3-Dichloropropene | 0.50 | Not Detected | 2.3 | Not Detected |
| 1,1,2-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Tetrachloroethene | 0.50 | Not Detected | 3.4 | Not Detected |
| 2-Hexanone | 2.0 | Not Detected | 8.2 | Not Detected |



Client Sample ID: Lab Blank

Lab ID#: 1611046A-06A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|----------|---------------------|------------------|
| File Name: | 3110906c | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 11/9/16 01:53 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 0.50 | Not Detected | 4.2 | Not Detected |
| 1,2-Dibromoethane (EDB) | 0.50 | Not Detected | 3.8 | Not Detected |
| Chlorobenzene | 0.50 | Not Detected | 2.3 | Not Detected |
| Ethyl Benzene | 0.50 | Not Detected | 2.2 | Not Detected |
| m,p-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| o-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| Styrene | 0.50 | Not Detected | 2.1 | Not Detected |
| Bromoform | 0.50 | Not Detected | 5.2 | Not Detected |
| Cumene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 0.50 | Not Detected | 3.4 | Not Detected |
| Propylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 4-Ethyltoluene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,3,5-Trimethylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,2,4-Trimethylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,3-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| 1,4-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| alpha-Chlorotoluene | 0.50 | Not Detected | 2.6 | Not Detected |
| 1,2-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 2.0 | Not Detected | 15 | Not Detected |
| Hexachlorobutadiene | 2.0 | Not Detected | 21 | Not Detected |
| Butane | 2.0 | Not Detected | 4.8 | Not Detected |
| Isopentane | 2.0 | Not Detected | 5.9 | Not Detected |

J = Estimated value.

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 87 | 70-130 |
| 1,2-Dichloroethane-d4 | 97 | 70-130 |
| 4-Bromofluorobenzene | 102 | 70-130 |



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1611046A-06B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|----------|---------------------|-------------------|
| File Name: | 3111407a | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 11/14/16 01:44 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 0.50 | Not Detected | 2.5 | Not Detected |
| Freon 114 | 0.50 | Not Detected | 3.5 | Not Detected |
| Chloromethane | 5.0 | Not Detected | 10 | Not Detected |
| Vinyl Chloride | 0.50 | Not Detected | 1.3 | Not Detected |
| 1,3-Butadiene | 0.50 | Not Detected | 1.1 | Not Detected |
| Bromomethane | 5.0 | Not Detected | 19 | Not Detected |
| Chloroethane | 2.0 | Not Detected | 5.3 | Not Detected |
| Freon 11 | 0.50 | Not Detected | 2.8 | Not Detected |
| Ethanol | 2.0 | Not Detected | 3.8 | Not Detected |
| Freon 113 | 0.50 | Not Detected | 3.8 | Not Detected |
| 1,1-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Acetone | 5.0 | 0.97 J | 12 | 2.3 J |
| 2-Propanol | 2.0 | Not Detected | 4.9 | Not Detected |
| Carbon Disulfide | 2.0 | 0.28 J | 6.2 | 0.86 J |
| 3-Chloropropene | 2.0 | Not Detected | 6.3 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| Methyl tert-butyl ether | 2.0 | Not Detected | 7.2 | Not Detected |
| trans-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Hexane | 0.50 | Not Detected | 1.8 | Not Detected |
| 1,1-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 2.0 | Not Detected | 5.9 | Not Detected |
| cis-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Tetrahydrofuran | 0.50 | Not Detected | 1.5 | Not Detected |
| Chloroform | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,1-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Cyclohexane | 0.50 | Not Detected | 1.7 | Not Detected |
| Carbon Tetrachloride | 0.50 | Not Detected | 3.1 | Not Detected |
| 2,2,4-Trimethylpentane | 0.50 | Not Detected | 2.3 | Not Detected |
| Benzene | 0.50 | Not Detected | 1.6 | Not Detected |
| 1,2-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| Heptane | 0.50 | Not Detected | 2.0 | Not Detected |
| Trichloroethene | 0.50 | Not Detected | 2.7 | Not Detected |
| 1,2-Dichloropropane | 0.50 | Not Detected | 2.3 | Not Detected |
| 1,4-Dioxane | 2.0 | Not Detected | 7.2 | Not Detected |
| Bromodichloromethane | 0.50 | Not Detected | 3.4 | Not Detected |
| cis-1,3-Dichloropropene | 0.50 | Not Detected | 2.3 | Not Detected |
| 4-Methyl-2-pentanone | 0.50 | Not Detected | 2.0 | Not Detected |
| Toluene | 0.50 | Not Detected | 1.9 | Not Detected |
| trans-1,3-Dichloropropene | 0.50 | Not Detected | 2.3 | Not Detected |
| 1,1,2-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Tetrachloroethene | 0.50 | Not Detected | 3.4 | Not Detected |
| 2-Hexanone | 2.0 | Not Detected | 8.2 | Not Detected |

Client Sample ID: Lab Blank

Lab ID#: 1611046A-06B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|----------|---------------------|-------------------|
| File Name: | 3111407a | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 11/14/16 01:44 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 0.50 | Not Detected | 4.2 | Not Detected |
| 1,2-Dibromoethane (EDB) | 0.50 | Not Detected | 3.8 | Not Detected |
| Chlorobenzene | 0.50 | Not Detected | 2.3 | Not Detected |
| Ethyl Benzene | 0.50 | Not Detected | 2.2 | Not Detected |
| m,p-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| o-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| Styrene | 0.50 | Not Detected | 2.1 | Not Detected |
| Bromoform | 0.50 | Not Detected | 5.2 | Not Detected |
| Cumene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 0.50 | Not Detected | 3.4 | Not Detected |
| Propylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 4-Ethyltoluene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,3,5-Trimethylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,2,4-Trimethylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,3-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| 1,4-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| alpha-Chlorotoluene | 0.50 | Not Detected | 2.6 | Not Detected |
| 1,2-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 2.0 | Not Detected | 15 | Not Detected |
| Hexachlorobutadiene | 2.0 | Not Detected | 21 | Not Detected |
| Butane | 2.0 | Not Detected | 4.8 | Not Detected |
| Isopentane | 2.0 | Not Detected | 5.9 | Not Detected |

J = Estimated value.

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 103 | 70-130 |
| 1,2-Dichloroethane-d4 | 91 | 70-130 |
| 4-Bromofluorobenzene | 90 | 70-130 |



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1611046A-06C

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|----------|---------------------|-------------------|
| File Name: | p111505a | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 11/15/16 12:14 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12 | 0.50 | Not Detected | 2.5 | Not Detected |
| Freon 114 | 0.50 | Not Detected | 3.5 | Not Detected |
| Chloromethane | 5.0 | Not Detected | 10 | Not Detected |
| Vinyl Chloride | 0.50 | Not Detected | 1.3 | Not Detected |
| 1,3-Butadiene | 0.50 | Not Detected | 1.1 | Not Detected |
| Bromomethane | 5.0 | Not Detected | 19 | Not Detected |
| Chloroethane | 2.0 | Not Detected | 5.3 | Not Detected |
| Freon 11 | 0.50 | Not Detected | 2.8 | Not Detected |
| Ethanol | 2.0 | Not Detected | 3.8 | Not Detected |
| Freon 113 | 0.50 | Not Detected | 3.8 | Not Detected |
| 1,1-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Acetone | 5.0 | Not Detected | 12 | Not Detected |
| 2-Propanol | 2.0 | Not Detected | 4.9 | Not Detected |
| Carbon Disulfide | 2.0 | Not Detected | 6.2 | Not Detected |
| 3-Chloropropene | 2.0 | Not Detected | 6.3 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| Methyl tert-butyl ether | 2.0 | Not Detected | 7.2 | Not Detected |
| trans-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Hexane | 0.50 | Not Detected | 1.8 | Not Detected |
| 1,1-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 2.0 | Not Detected | 5.9 | Not Detected |
| cis-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Tetrahydrofuran | 0.50 | Not Detected | 1.5 | Not Detected |
| Chloroform | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,1-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Cyclohexane | 0.50 | Not Detected | 1.7 | Not Detected |
| Carbon Tetrachloride | 0.50 | Not Detected | 3.1 | Not Detected |
| 2,2,4-Trimethylpentane | 0.50 | 0.069 J | 2.3 | 0.32 J |
| Benzene | 0.50 | Not Detected | 1.6 | Not Detected |
| 1,2-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| Heptane | 0.50 | Not Detected | 2.0 | Not Detected |
| Trichloroethene | 0.50 | Not Detected | 2.7 | Not Detected |
| 1,2-Dichloropropane | 0.50 | Not Detected | 2.3 | Not Detected |
| 1,4-Dioxane | 2.0 | Not Detected | 7.2 | Not Detected |
| Bromodichloromethane | 0.50 | Not Detected | 3.4 | Not Detected |
| cis-1,3-Dichloropropene | 0.50 | Not Detected | 2.3 | Not Detected |
| 4-Methyl-2-pentanone | 0.50 | Not Detected | 2.0 | Not Detected |
| Toluene | 0.50 | 0.066 J | 1.9 | 0.25 J |
| trans-1,3-Dichloropropene | 0.50 | Not Detected | 2.3 | Not Detected |
| 1,1,2-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Tetrachloroethene | 0.50 | Not Detected | 3.4 | Not Detected |
| 2-Hexanone | 2.0 | Not Detected | 8.2 | Not Detected |

Client Sample ID: Lab Blank

Lab ID#: 1611046A-06C

EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|----------|---------------------|-------------------|
| File Name: | p111505a | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 11/15/16 12:14 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| Dibromochloromethane | 0.50 | Not Detected | 4.2 | Not Detected |
| 1,2-Dibromoethane (EDB) | 0.50 | Not Detected | 3.8 | Not Detected |
| Chlorobenzene | 0.50 | 0.062 J | 2.3 | 0.29 J |
| Ethyl Benzene | 0.50 | Not Detected | 2.2 | Not Detected |
| m,p-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| o-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| Styrene | 0.50 | Not Detected | 2.1 | Not Detected |
| Bromoform | 0.50 | Not Detected | 5.2 | Not Detected |
| Cumene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 0.50 | Not Detected | 3.4 | Not Detected |
| Propylbenzene | 0.50 | 0.10 J | 2.4 | 0.52 J |
| 4-Ethyltoluene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,3,5-Trimethylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,2,4-Trimethylbenzene | 0.50 | 0.23 J | 2.4 | 1.1 J |
| 1,3-Dichlorobenzene | 0.50 | 0.099 J | 3.0 | 0.59 J |
| 1,4-Dichlorobenzene | 0.50 | 0.11 J | 3.0 | 0.68 J |
| alpha-Chlorotoluene | 0.50 | Not Detected | 2.6 | Not Detected |
| 1,2-Dichlorobenzene | 0.50 | 0.11 J | 3.0 | 0.66 J |
| 1,2,4-Trichlorobenzene | 2.0 | Not Detected | 15 | Not Detected |
| Hexachlorobutadiene | 2.0 | Not Detected | 21 | Not Detected |
| Butane | 2.0 | Not Detected | 4.8 | Not Detected |
| Isopentane | 2.0 | Not Detected | 5.9 | Not Detected |

J = Estimated value.

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 101 | 70-130 |
| 1,2-Dichloroethane-d4 | 96 | 70-130 |
| 4-Bromofluorobenzene | 96 | 70-130 |

Client Sample ID: CCV

Lab ID#: 1611046A-07A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|------------------------------------|
| File Name: | 3110902 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/9/16 11:44 AM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 96 |
| Freon 114 | 102 |
| Chloromethane | 93 |
| Vinyl Chloride | 92 |
| 1,3-Butadiene | 86 |
| Bromomethane | 98 |
| Chloroethane | 90 |
| Freon 11 | 95 |
| Ethanol | 78 |
| Freon 113 | 96 |
| 1,1-Dichloroethene | 90 |
| Acetone | 86 |
| 2-Propanol | 77 |
| Carbon Disulfide | 87 |
| 3-Chloropropene | 86 |
| Methylene Chloride | 95 |
| Methyl tert-butyl ether | 79 |
| trans-1,2-Dichloroethene | 98 |
| Hexane | 84 |
| 1,1-Dichloroethane | 95 |
| 2-Butanone (Methyl Ethyl Ketone) | 94 |
| cis-1,2-Dichloroethene | 93 |
| Tetrahydrofuran | 87 |
| Chloroform | 94 |
| 1,1,1-Trichloroethane | 92 |
| Cyclohexane | 89 |
| Carbon Tetrachloride | 97 |
| 2,2,4-Trimethylpentane | 93 |
| Benzene | 105 |
| 1,2-Dichloroethane | 98 |
| Heptane | 96 |
| Trichloroethene | 120 |
| 1,2-Dichloropropane | 105 |
| 1,4-Dioxane | 97 |
| Bromodichloromethane | 104 |
| cis-1,3-Dichloropropene | 100 |
| 4-Methyl-2-pentanone | 83 |
| Toluene | 100 |
| trans-1,3-Dichloropropene | 97 |
| 1,1,2-Trichloroethane | 106 |
| Tetrachloroethene | 104 |
| 2-Hexanone | 93 |



Air Toxics

Client Sample ID: CCV

Lab ID#: 1611046A-07A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|------------------------------------|
| File Name: | 3110902 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/9/16 11:44 AM |

| Compound | %Recovery |
|---------------------------|-----------|
| Dibromochloromethane | 105 |
| 1,2-Dibromoethane (EDB) | 102 |
| Chlorobenzene | 102 |
| Ethyl Benzene | 98 |
| m,p-Xylene | 100 |
| o-Xylene | 99 |
| Styrene | 105 |
| Bromoform | 104 |
| Cumene | 100 |
| 1,1,2,2-Tetrachloroethane | 109 |
| Propylbenzene | 101 |
| 4-Ethyltoluene | 102 |
| 1,3,5-Trimethylbenzene | 105 |
| 1,2,4-Trimethylbenzene | 99 |
| 1,3-Dichlorobenzene | 105 |
| 1,4-Dichlorobenzene | 106 |
| alpha-Chlorotoluene | 107 |
| 1,2-Dichlorobenzene | 105 |
| 1,2,4-Trichlorobenzene | 110 |
| Hexachlorobutadiene | 112 |
| Butane | 88 |
| Isopentane | 82 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 106 | 70-130 |
| 1,2-Dichloroethane-d4 | 88 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |

Client Sample ID: CCV

Lab ID#: 1611046A-07B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | 3111402 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/14/16 10:17 AM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 96 |
| Freon 114 | 101 |
| Chloromethane | 90 |
| Vinyl Chloride | 90 |
| 1,3-Butadiene | 85 |
| Bromomethane | 97 |
| Chloroethane | 88 |
| Freon 11 | 95 |
| Ethanol | 74 |
| Freon 113 | 96 |
| 1,1-Dichloroethene | 86 |
| Acetone | 86 |
| 2-Propanol | 74 |
| Carbon Disulfide | 86 |
| 3-Chloropropene | 79 |
| Methylene Chloride | 95 |
| Methyl tert-butyl ether | 77 |
| trans-1,2-Dichloroethene | 96 |
| Hexane | 81 |
| 1,1-Dichloroethane | 96 |
| 2-Butanone (Methyl Ethyl Ketone) | 92 |
| cis-1,2-Dichloroethene | 91 |
| Tetrahydrofuran | 86 |
| Chloroform | 94 |
| 1,1,1-Trichloroethane | 91 |
| Cyclohexane | 86 |
| Carbon Tetrachloride | 96 |
| 2,2,4-Trimethylpentane | 90 |
| Benzene | 111 |
| 1,2-Dichloroethane | 103 |
| Heptane | 98 |
| Trichloroethene | 123 |
| 1,2-Dichloropropane | 108 |
| 1,4-Dioxane | 98 |
| Bromodichloromethane | 108 |
| cis-1,3-Dichloropropene | 101 |
| 4-Methyl-2-pentanone | 83 |
| Toluene | 104 |
| trans-1,3-Dichloropropene | 98 |
| 1,1,2-Trichloroethane | 111 |
| Tetrachloroethene | 106 |
| 2-Hexanone | 91 |

Client Sample ID: CCV

Lab ID#: 1611046A-07B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | 3111402 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/14/16 10:17 AM |

| Compound | %Recovery |
|---------------------------|-----------|
| Dibromochloromethane | 110 |
| 1,2-Dibromoethane (EDB) | 104 |
| Chlorobenzene | 103 |
| Ethyl Benzene | 99 |
| m,p-Xylene | 102 |
| o-Xylene | 100 |
| Styrene | 106 |
| Bromoform | 108 |
| Cumene | 102 |
| 1,1,2,2-Tetrachloroethane | 112 |
| Propylbenzene | 104 |
| 4-Ethyltoluene | 103 |
| 1,3,5-Trimethylbenzene | 107 |
| 1,2,4-Trimethylbenzene | 99 |
| 1,3-Dichlorobenzene | 110 |
| 1,4-Dichlorobenzene | 109 |
| alpha-Chlorotoluene | 110 |
| 1,2-Dichlorobenzene | 110 |
| 1,2,4-Trichlorobenzene | 114 |
| Hexachlorobutadiene | 117 |
| Butane | 86 |
| Isopentane | 81 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 107 | 70-130 |
| 1,2-Dichloroethane-d4 | 89 | 70-130 |
| 4-Bromofluorobenzene | 102 | 70-130 |

Client Sample ID: CCV

Lab ID#: 1611046A-07C

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | p111502 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/15/16 10:44 AM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 100 |
| Freon 114 | 103 |
| Chloromethane | 106 |
| Vinyl Chloride | 129 |
| 1,3-Butadiene | 116 |
| Bromomethane | 109 |
| Chloroethane | 103 |
| Freon 11 | 97 |
| Ethanol | 107 |
| Freon 113 | 97 |
| 1,1-Dichloroethene | 107 |
| Acetone | 108 |
| 2-Propanol | 104 |
| Carbon Disulfide | 102 |
| 3-Chloropropene | 103 |
| Methylene Chloride | 104 |
| Methyl tert-butyl ether | 99 |
| trans-1,2-Dichloroethene | 106 |
| Hexane | 104 |
| 1,1-Dichloroethane | 106 |
| 2-Butanone (Methyl Ethyl Ketone) | 107 |
| cis-1,2-Dichloroethene | 108 |
| Tetrahydrofuran | 110 |
| Chloroform | 104 |
| 1,1,1-Trichloroethane | 102 |
| Cyclohexane | 102 |
| Carbon Tetrachloride | 108 |
| 2,2,4-Trimethylpentane | 105 |
| Benzene | 108 |
| 1,2-Dichloroethane | 106 |
| Heptane | 106 |
| Trichloroethene | 107 |
| 1,2-Dichloropropane | 106 |
| 1,4-Dioxane | 102 |
| Bromodichloromethane | 108 |
| cis-1,3-Dichloropropene | 108 |
| 4-Methyl-2-pentanone | 105 |
| Toluene | 106 |
| trans-1,3-Dichloropropene | 107 |
| 1,1,2-Trichloroethane | 108 |
| Tetrachloroethene | 106 |
| 2-Hexanone | 103 |



Air Toxics

Client Sample ID: CCV

Lab ID#: 1611046A-07C

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | p111502 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/15/16 10:44 AM |

| Compound | %Recovery |
|---------------------------|-----------|
| Dibromochloromethane | 107 |
| 1,2-Dibromoethane (EDB) | 106 |
| Chlorobenzene | 104 |
| Ethyl Benzene | 103 |
| m,p-Xylene | 105 |
| o-Xylene | 107 |
| Styrene | 107 |
| Bromoform | 106 |
| Cumene | 104 |
| 1,1,2,2-Tetrachloroethane | 100 |
| Propylbenzene | 105 |
| 4-Ethyltoluene | 104 |
| 1,3,5-Trimethylbenzene | 101 |
| 1,2,4-Trimethylbenzene | 104 |
| 1,3-Dichlorobenzene | 102 |
| 1,4-Dichlorobenzene | 102 |
| alpha-Chlorotoluene | 104 |
| 1,2-Dichlorobenzene | 101 |
| 1,2,4-Trichlorobenzene | 89 |
| Hexachlorobutadiene | 92 |
| Butane | 100 |
| Isopentane | 100 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 101 | 70-130 |
| 1,2-Dichloroethane-d4 | 96 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |



Air Toxics

Client Sample ID: LCS

Lab ID#: 1611046A-08A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|------------------------------------|
| File Name: | 3110903 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/9/16 12:09 PM |

| Compound | %Recovery | Method Limits |
|----------------------------------|-----------|---------------|
| Freon 12 | 95 | 70-130 |
| Freon 114 | 101 | 70-130 |
| Chloromethane | 92 | 70-130 |
| Vinyl Chloride | 96 | 70-130 |
| 1,3-Butadiene | 88 | 70-130 |
| Bromomethane | 101 | 70-130 |
| Chloroethane | 93 | 70-130 |
| Freon 11 | 98 | 70-130 |
| Ethanol | 70 | 70-130 |
| Freon 113 | 98 | 70-130 |
| 1,1-Dichloroethene | 87 | 70-130 |
| Acetone | 84 | 70-130 |
| 2-Propanol | 82 | 70-130 |
| Carbon Disulfide | 86 | 70-130 |
| 3-Chloropropene | 85 | 70-130 |
| Methylene Chloride | 94 | 70-130 |
| Methyl tert-butyl ether | 82 | 70-130 |
| trans-1,2-Dichloroethene | 98 | 70-130 |
| Hexane | 86 | 70-130 |
| 1,1-Dichloroethane | 94 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 94 | 70-130 |
| cis-1,2-Dichloroethene | 90 | 70-130 |
| Tetrahydrofuran | 88 | 70-130 |
| Chloroform | 95 | 70-130 |
| 1,1,1-Trichloroethane | 95 | 70-130 |
| Cyclohexane | 93 | 70-130 |
| Carbon Tetrachloride | 101 | 70-130 |
| 2,2,4-Trimethylpentane | 97 | 70-130 |
| Benzene | 108 | 70-130 |
| 1,2-Dichloroethane | 100 | 70-130 |
| Heptane | 102 | 70-130 |
| Trichloroethene | 123 | 70-130 |
| 1,2-Dichloropropane | 109 | 70-130 |
| 1,4-Dioxane | 106 | 70-130 |
| Bromodichloromethane | 109 | 70-130 |
| cis-1,3-Dichloropropene | 104 | 70-130 |
| 4-Methyl-2-pentanone | 92 | 70-130 |
| Toluene | 106 | 70-130 |
| trans-1,3-Dichloropropene | 100 | 70-130 |
| 1,1,2-Trichloroethane | 109 | 70-130 |
| Tetrachloroethene | 106 | 70-130 |
| 2-Hexanone | 105 | 70-130 |

Client Sample ID: LCS

Lab ID#: 1611046A-08A

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|------------------------------------|
| File Name: | 3110903 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/9/16 12:09 PM |

| Compound | %Recovery | Method Limits |
|---------------------------|-----------|---------------|
| Dibromochloromethane | 112 | 70-130 |
| 1,2-Dibromoethane (EDB) | 106 | 70-130 |
| Chlorobenzene | 106 | 70-130 |
| Ethyl Benzene | 106 | 70-130 |
| m,p-Xylene | 106 | 70-130 |
| o-Xylene | 107 | 70-130 |
| Styrene | 114 | 70-130 |
| Bromoform | 113 | 70-130 |
| Cumene | 106 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 113 | 70-130 |
| Propylbenzene | 108 | 70-130 |
| 4-Ethyltoluene | 108 | 70-130 |
| 1,3,5-Trimethylbenzene | 112 | 70-130 |
| 1,2,4-Trimethylbenzene | 106 | 70-130 |
| 1,3-Dichlorobenzene | 110 | 70-130 |
| 1,4-Dichlorobenzene | 113 | 70-130 |
| alpha-Chlorotoluene | 120 | 70-130 |
| 1,2-Dichlorobenzene | 110 | 70-130 |
| 1,2,4-Trichlorobenzene | 114 | 70-130 |
| Hexachlorobutadiene | 117 | 70-130 |
| Butane | 92 | 60-140 |
| Isopentane | 85 | 60-140 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 106 | 70-130 |
| 1,2-Dichloroethane-d4 | 89 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1611046A-08AA

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|------------------------------------|
| File Name: | 3110904 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/9/16 12:33 PM |

| Compound | %Recovery | Method Limits |
|----------------------------------|-----------|---------------|
| Freon 12 | 97 | 70-130 |
| Freon 114 | 103 | 70-130 |
| Chloromethane | 90 | 70-130 |
| Vinyl Chloride | 97 | 70-130 |
| 1,3-Butadiene | 86 | 70-130 |
| Bromomethane | 102 | 70-130 |
| Chloroethane | 93 | 70-130 |
| Freon 11 | 96 | 70-130 |
| Ethanol | 70 | 70-130 |
| Freon 113 | 97 | 70-130 |
| 1,1-Dichloroethene | 89 | 70-130 |
| Acetone | 84 | 70-130 |
| 2-Propanol | 83 | 70-130 |
| Carbon Disulfide | 87 | 70-130 |
| 3-Chloropropene | 87 | 70-130 |
| Methylene Chloride | 95 | 70-130 |
| Methyl tert-butyl ether | 84 | 70-130 |
| trans-1,2-Dichloroethene | 102 | 70-130 |
| Hexane | 87 | 70-130 |
| 1,1-Dichloroethane | 94 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 95 | 70-130 |
| cis-1,2-Dichloroethene | 90 | 70-130 |
| Tetrahydrofuran | 91 | 70-130 |
| Chloroform | 95 | 70-130 |
| 1,1,1-Trichloroethane | 96 | 70-130 |
| Cyclohexane | 96 | 70-130 |
| Carbon Tetrachloride | 101 | 70-130 |
| 2,2,4-Trimethylpentane | 98 | 70-130 |
| Benzene | 108 | 70-130 |
| 1,2-Dichloroethane | 100 | 70-130 |
| Heptane | 101 | 70-130 |
| Trichloroethene | 127 | 70-130 |
| 1,2-Dichloropropane | 108 | 70-130 |
| 1,4-Dioxane | 107 | 70-130 |
| Bromodichloromethane | 108 | 70-130 |
| cis-1,3-Dichloropropene | 104 | 70-130 |
| 4-Methyl-2-pentanone | 93 | 70-130 |
| Toluene | 105 | 70-130 |
| trans-1,3-Dichloropropene | 99 | 70-130 |
| 1,1,2-Trichloroethane | 110 | 70-130 |
| Tetrachloroethene | 107 | 70-130 |
| 2-Hexanone | 108 | 70-130 |

Client Sample ID: LCSD

Lab ID#: 1611046A-08AA

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|------------------------------------|
| File Name: | 3110904 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/9/16 12:33 PM |

| Compound | %Recovery | Method Limits |
|---------------------------|-----------|---------------|
| Dibromochloromethane | 111 | 70-130 |
| 1,2-Dibromoethane (EDB) | 106 | 70-130 |
| Chlorobenzene | 107 | 70-130 |
| Ethyl Benzene | 106 | 70-130 |
| m,p-Xylene | 106 | 70-130 |
| o-Xylene | 109 | 70-130 |
| Styrene | 116 | 70-130 |
| Bromoform | 114 | 70-130 |
| Cumene | 108 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 114 | 70-130 |
| Propylbenzene | 109 | 70-130 |
| 4-Ethyltoluene | 110 | 70-130 |
| 1,3,5-Trimethylbenzene | 114 | 70-130 |
| 1,2,4-Trimethylbenzene | 108 | 70-130 |
| 1,3-Dichlorobenzene | 112 | 70-130 |
| 1,4-Dichlorobenzene | 115 | 70-130 |
| alpha-Chlorotoluene | 121 | 70-130 |
| 1,2-Dichlorobenzene | 113 | 70-130 |
| 1,2,4-Trichlorobenzene | 120 | 70-130 |
| Hexachlorobutadiene | 122 | 70-130 |
| Butane | 92 | 60-140 |
| Isopentane | 86 | 60-140 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 106 | 70-130 |
| 1,2-Dichloroethane-d4 | 88 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |



Air Toxics

Client Sample ID: LCS

Lab ID#: 1611046A-08B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | 3111403 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/14/16 11:05 AM |

| Compound | %Recovery | Method Limits |
|----------------------------------|-----------|---------------|
| Freon 12 | 99 | 70-130 |
| Freon 114 | 104 | 70-130 |
| Chloromethane | 95 | 70-130 |
| Vinyl Chloride | 99 | 70-130 |
| 1,3-Butadiene | 88 | 70-130 |
| Bromomethane | 104 | 70-130 |
| Chloroethane | 93 | 70-130 |
| Freon 11 | 99 | 70-130 |
| Ethanol | 69 Q | 70-130 |
| Freon 113 | 99 | 70-130 |
| 1,1-Dichloroethene | 88 | 70-130 |
| Acetone | 86 | 70-130 |
| 2-Propanol | 83 | 70-130 |
| Carbon Disulfide | 88 | 70-130 |
| 3-Chloropropene | 86 | 70-130 |
| Methylene Chloride | 95 | 70-130 |
| Methyl tert-butyl ether | 81 | 70-130 |
| trans-1,2-Dichloroethene | 101 | 70-130 |
| Hexane | 87 | 70-130 |
| 1,1-Dichloroethane | 94 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 93 | 70-130 |
| cis-1,2-Dichloroethene | 89 | 70-130 |
| Tetrahydrofuran | 90 | 70-130 |
| Chloroform | 96 | 70-130 |
| 1,1,1-Trichloroethane | 97 | 70-130 |
| Cyclohexane | 94 | 70-130 |
| Carbon Tetrachloride | 103 | 70-130 |
| 2,2,4-Trimethylpentane | 98 | 70-130 |
| Benzene | 110 | 70-130 |
| 1,2-Dichloroethane | 104 | 70-130 |
| Heptane | 104 | 70-130 |
| Trichloroethene | 123 | 70-130 |
| 1,2-Dichloropropane | 110 | 70-130 |
| 1,4-Dioxane | 108 | 70-130 |
| Bromodichloromethane | 110 | 70-130 |
| cis-1,3-Dichloropropene | 104 | 70-130 |
| 4-Methyl-2-pentanone | 92 | 70-130 |
| Toluene | 108 | 70-130 |
| trans-1,3-Dichloropropene | 102 | 70-130 |
| 1,1,2-Trichloroethane | 113 | 70-130 |
| Tetrachloroethene | 110 | 70-130 |
| 2-Hexanone | 107 | 70-130 |

Client Sample ID: LCS

Lab ID#: 1611046A-08B

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | 3111403 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/14/16 11:05 AM |

| Compound | %Recovery | Method Limits |
|---------------------------|-----------|---------------|
| Dibromochloromethane | 114 | 70-130 |
| 1,2-Dibromoethane (EDB) | 109 | 70-130 |
| Chlorobenzene | 108 | 70-130 |
| Ethyl Benzene | 107 | 70-130 |
| m,p-Xylene | 107 | 70-130 |
| o-Xylene | 108 | 70-130 |
| Styrene | 117 | 70-130 |
| Bromoform | 114 | 70-130 |
| Cumene | 107 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 117 | 70-130 |
| Propylbenzene | 109 | 70-130 |
| 4-Ethyltoluene | 111 | 70-130 |
| 1,3,5-Trimethylbenzene | 114 | 70-130 |
| 1,2,4-Trimethylbenzene | 108 | 70-130 |
| 1,3-Dichlorobenzene | 113 | 70-130 |
| 1,4-Dichlorobenzene | 115 | 70-130 |
| alpha-Chlorotoluene | 123 | 70-130 |
| 1,2-Dichlorobenzene | 114 | 70-130 |
| 1,2,4-Trichlorobenzene | 120 | 70-130 |
| Hexachlorobutadiene | 122 | 70-130 |
| Butane | 93 | 60-140 |
| Isopentane | 86 | 60-140 |

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 104 | 70-130 |
| 1,2-Dichloroethane-d4 | 91 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |

Client Sample ID: LCS D

Lab ID#: 1611046A-08BB

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | 3111404 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/14/16 11:30 AM |

| Compound | %Recovery | Method Limits |
|----------------------------------|-----------|---------------|
| Freon 12 | 100 | 70-130 |
| Freon 114 | 105 | 70-130 |
| Chloromethane | 95 | 70-130 |
| Vinyl Chloride | 100 | 70-130 |
| 1,3-Butadiene | 91 | 70-130 |
| Bromomethane | 105 | 70-130 |
| Chloroethane | 96 | 70-130 |
| Freon 11 | 100 | 70-130 |
| Ethanol | 73 | 70-130 |
| Freon 113 | 100 | 70-130 |
| 1,1-Dichloroethene | 92 | 70-130 |
| Acetone | 89 | 70-130 |
| 2-Propanol | 86 | 70-130 |
| Carbon Disulfide | 91 | 70-130 |
| 3-Chloropropene | 91 | 70-130 |
| Methylene Chloride | 98 | 70-130 |
| Methyl tert-butyl ether | 85 | 70-130 |
| trans-1,2-Dichloroethene | 103 | 70-130 |
| Hexane | 91 | 70-130 |
| 1,1-Dichloroethane | 97 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 96 | 70-130 |
| cis-1,2-Dichloroethene | 92 | 70-130 |
| Tetrahydrofuran | 94 | 70-130 |
| Chloroform | 99 | 70-130 |
| 1,1,1-Trichloroethane | 100 | 70-130 |
| Cyclohexane | 96 | 70-130 |
| Carbon Tetrachloride | 106 | 70-130 |
| 2,2,4-Trimethylpentane | 100 | 70-130 |
| Benzene | 111 | 70-130 |
| 1,2-Dichloroethane | 101 | 70-130 |
| Heptane | 101 | 70-130 |
| Trichloroethene | 129 | 70-130 |
| 1,2-Dichloropropane | 110 | 70-130 |
| 1,4-Dioxane | 107 | 70-130 |
| Bromodichloromethane | 110 | 70-130 |
| cis-1,3-Dichloropropene | 105 | 70-130 |
| 4-Methyl-2-pentanone | 93 | 70-130 |
| Toluene | 106 | 70-130 |
| trans-1,3-Dichloropropene | 102 | 70-130 |
| 1,1,2-Trichloroethane | 112 | 70-130 |
| Tetrachloroethene | 108 | 70-130 |
| 2-Hexanone | 106 | 70-130 |



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1611046A-08BB

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | 3111404 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/14/16 11:30 AM |

| Compound | %Recovery | Method Limits |
|---------------------------|-----------|---------------|
| Dibromochloromethane | 114 | 70-130 |
| 1,2-Dibromoethane (EDB) | 107 | 70-130 |
| Chlorobenzene | 108 | 70-130 |
| Ethyl Benzene | 106 | 70-130 |
| m,p-Xylene | 106 | 70-130 |
| o-Xylene | 108 | 70-130 |
| Styrene | 116 | 70-130 |
| Bromoform | 113 | 70-130 |
| Cumene | 107 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 115 | 70-130 |
| Propylbenzene | 109 | 70-130 |
| 4-Ethyltoluene | 110 | 70-130 |
| 1,3,5-Trimethylbenzene | 113 | 70-130 |
| 1,2,4-Trimethylbenzene | 108 | 70-130 |
| 1,3-Dichlorobenzene | 112 | 70-130 |
| 1,4-Dichlorobenzene | 114 | 70-130 |
| alpha-Chlorotoluene | 122 | 70-130 |
| 1,2-Dichlorobenzene | 112 | 70-130 |
| 1,2,4-Trichlorobenzene | 122 | 70-130 |
| Hexachlorobutadiene | 125 | 70-130 |
| Butane | 94 | 60-140 |
| Isopentane | 89 | 60-140 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 105 | 70-130 |
| 1,2-Dichloroethane-d4 | 89 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |

Client Sample ID: LCS

Lab ID#: 1611046A-08C

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | p111503 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/15/16 11:22 AM |

| Compound | %Recovery | Method Limits |
|----------------------------------|-----------|---------------|
| Freon 12 | 99 | 70-130 |
| Freon 114 | 100 | 70-130 |
| Chloromethane | 104 | 70-130 |
| Vinyl Chloride | 122 | 70-130 |
| 1,3-Butadiene | 117 | 70-130 |
| Bromomethane | 111 | 70-130 |
| Chloroethane | 102 | 70-130 |
| Freon 11 | 94 | 70-130 |
| Ethanol | 93 | 70-130 |
| Freon 113 | 94 | 70-130 |
| 1,1-Dichloroethene | 101 | 70-130 |
| Acetone | 103 | 70-130 |
| 2-Propanol | 100 | 70-130 |
| Carbon Disulfide | 97 | 70-130 |
| 3-Chloropropene | 98 | 70-130 |
| Methylene Chloride | 98 | 70-130 |
| Methyl tert-butyl ether | 98 | 70-130 |
| trans-1,2-Dichloroethene | 104 | 70-130 |
| Hexane | 105 | 70-130 |
| 1,1-Dichloroethane | 100 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 100 | 70-130 |
| cis-1,2-Dichloroethene | 97 | 70-130 |
| Tetrahydrofuran | 105 | 70-130 |
| Chloroform | 99 | 70-130 |
| 1,1,1-Trichloroethane | 100 | 70-130 |
| Cyclohexane | 102 | 70-130 |
| Carbon Tetrachloride | 106 | 70-130 |
| 2,2,4-Trimethylpentane | 105 | 70-130 |
| Benzene | 104 | 70-130 |
| 1,2-Dichloroethane | 100 | 70-130 |
| Heptane | 106 | 70-130 |
| Trichloroethene | 103 | 70-130 |
| 1,2-Dichloropropane | 102 | 70-130 |
| 1,4-Dioxane | 100 | 70-130 |
| Bromodichloromethane | 104 | 70-130 |
| cis-1,3-Dichloropropene | 104 | 70-130 |
| 4-Methyl-2-pentanone | 106 | 70-130 |
| Toluene | 103 | 70-130 |
| trans-1,3-Dichloropropene | 104 | 70-130 |
| 1,1,2-Trichloroethane | 104 | 70-130 |
| Tetrachloroethene | 104 | 70-130 |
| 2-Hexanone | 105 | 70-130 |

Client Sample ID: LCS

Lab ID#: 1611046A-08C

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | p111503 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/15/16 11:22 AM |

| Compound | %Recovery | Method Limits |
|---------------------------|-----------|---------------|
| Dibromochloromethane | 107 | 70-130 |
| 1,2-Dibromoethane (EDB) | 103 | 70-130 |
| Chlorobenzene | 102 | 70-130 |
| Ethyl Benzene | 104 | 70-130 |
| m,p-Xylene | 104 | 70-130 |
| o-Xylene | 107 | 70-130 |
| Styrene | 108 | 70-130 |
| Bromoform | 106 | 70-130 |
| Cumene | 103 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 99 | 70-130 |
| Propylbenzene | 105 | 70-130 |
| 4-Ethyltoluene | 102 | 70-130 |
| 1,3,5-Trimethylbenzene | 103 | 70-130 |
| 1,2,4-Trimethylbenzene | 102 | 70-130 |
| 1,3-Dichlorobenzene | 100 | 70-130 |
| 1,4-Dichlorobenzene | 102 | 70-130 |
| alpha-Chlorotoluene | 107 | 70-130 |
| 1,2-Dichlorobenzene | 99 | 70-130 |
| 1,2,4-Trichlorobenzene | 84 | 70-130 |
| Hexachlorobutadiene | 87 | 70-130 |
| Butane | 98 | 60-140 |
| Isopentane | 99 | 60-140 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 101 | 70-130 |
| 1,2-Dichloroethane-d4 | 99 | 70-130 |
| 4-Bromofluorobenzene | 98 | 70-130 |

Client Sample ID: LCS D

Lab ID#: 1611046A-08CC

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | p111504 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/15/16 11:47 AM |

| Compound | %Recovery | Method Limits |
|----------------------------------|-----------|---------------|
| Freon 12 | 99 | 70-130 |
| Freon 114 | 102 | 70-130 |
| Chloromethane | 103 | 70-130 |
| Vinyl Chloride | 125 | 70-130 |
| 1,3-Butadiene | 116 | 70-130 |
| Bromomethane | 113 | 70-130 |
| Chloroethane | 106 | 70-130 |
| Freon 11 | 94 | 70-130 |
| Ethanol | 93 | 70-130 |
| Freon 113 | 95 | 70-130 |
| 1,1-Dichloroethene | 105 | 70-130 |
| Acetone | 105 | 70-130 |
| 2-Propanol | 101 | 70-130 |
| Carbon Disulfide | 99 | 70-130 |
| 3-Chloropropene | 97 | 70-130 |
| Methylene Chloride | 98 | 70-130 |
| Methyl tert-butyl ether | 99 | 70-130 |
| trans-1,2-Dichloroethene | 106 | 70-130 |
| Hexane | 105 | 70-130 |
| 1,1-Dichloroethane | 101 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 105 | 70-130 |
| cis-1,2-Dichloroethene | 99 | 70-130 |
| Tetrahydrofuran | 108 | 70-130 |
| Chloroform | 100 | 70-130 |
| 1,1,1-Trichloroethane | 100 | 70-130 |
| Cyclohexane | 104 | 70-130 |
| Carbon Tetrachloride | 108 | 70-130 |
| 2,2,4-Trimethylpentane | 107 | 70-130 |
| Benzene | 106 | 70-130 |
| 1,2-Dichloroethane | 101 | 70-130 |
| Heptane | 105 | 70-130 |
| Trichloroethene | 104 | 70-130 |
| 1,2-Dichloropropane | 102 | 70-130 |
| 1,4-Dioxane | 102 | 70-130 |
| Bromodichloromethane | 105 | 70-130 |
| cis-1,3-Dichloropropene | 105 | 70-130 |
| 4-Methyl-2-pentanone | 108 | 70-130 |
| Toluene | 103 | 70-130 |
| trans-1,3-Dichloropropene | 105 | 70-130 |
| 1,1,2-Trichloroethane | 106 | 70-130 |
| Tetrachloroethene | 105 | 70-130 |
| 2-Hexanone | 108 | 70-130 |

Client Sample ID: LCSD

Lab ID#: 1611046A-08CC

EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|-------------------------------------|
| File Name: | p111504 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/15/16 11:47 AM |

| Compound | %Recovery | Method Limits |
|---------------------------|-----------|---------------|
| Dibromochloromethane | 109 | 70-130 |
| 1,2-Dibromoethane (EDB) | 104 | 70-130 |
| Chlorobenzene | 104 | 70-130 |
| Ethyl Benzene | 106 | 70-130 |
| m,p-Xylene | 105 | 70-130 |
| o-Xylene | 109 | 70-130 |
| Styrene | 110 | 70-130 |
| Bromoform | 109 | 70-130 |
| Cumene | 107 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 101 | 70-130 |
| Propylbenzene | 107 | 70-130 |
| 4-Ethyltoluene | 106 | 70-130 |
| 1,3,5-Trimethylbenzene | 107 | 70-130 |
| 1,2,4-Trimethylbenzene | 105 | 70-130 |
| 1,3-Dichlorobenzene | 103 | 70-130 |
| 1,4-Dichlorobenzene | 105 | 70-130 |
| alpha-Chlorotoluene | 110 | 70-130 |
| 1,2-Dichlorobenzene | 102 | 70-130 |
| 1,2,4-Trichlorobenzene | 98 | 70-130 |
| Hexachlorobutadiene | 101 | 70-130 |
| Butane | 97 | 60-140 |
| Isopentane | 99 | 60-140 |

Container Type: NA - Not Applicable

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

11/15/2016
Ms. Elizabeth Kunkel
URS Corporation
1001 Highlands Plaza Dr. West
Suite 300
St. Louis MO 63110

Project Name: Roxana Quarterly Soil Vapor
Project #: 60477387 - 1.04.004
Workorder #: 1611046B

Dear Ms. Elizabeth Kunkel

The following report includes the data for the above referenced project for sample(s) received on 11/2/2016 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 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: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

WORK ORDER #: 1611046B

Work Order Summary

| | | | |
|------------------------|--|------------------|---|
| CLIENT: | Ms. Elizabeth Kunkel AECOM 1001 Highlands Plaza Dr. West Suite 300 St. Louis, MO 63110 | BILL TO: | Accounts Payable Austin AECOM PO Box 203970 Austin, TX 78720 |
| PHONE: | 314-743-4179 | P.O. # | 60477387 - 1.04.004 |
| FAX: | | PROJECT # | 60477387 - 1.04.004 Roxana Quarterly |
| DATE RECEIVED: | 11/02/2016 | CONTACT: | Soil Vapor Kelly Buettner |
| DATE COMPLETED: | 11/15/2016 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT VAC./PRES.</u> | <u>FINAL PRESSURE</u> |
|-------------------|------------------------|----------------------|-------------------------------|---------------------------|
| 01A | VMP-15-5-110116 | Modified ASTM D-1946 | 7.3 "Hg | 15.2 psi |
| 02A | VMP-15-21.5-110116 | Modified ASTM D-1946 | 4.9 "Hg | 14.8 psi |
| 03A | VMP-15-25.5-110116 | Modified ASTM D-1946 | 7.8 "Hg | 14.9 psi |
| 04A | VMP-15-25.5-110116-Dup | Modified ASTM D-1946 | 8.4 "Hg | 15.1 psi |
| 05A | VMP-55-20-110116 | Modified ASTM D-1946 | 7.8 "Hg | 15.3 psi |
| 06A | Lab Blank | Modified ASTM D-1946 | NA | NA |
| 06B | Lab Blank | Modified ASTM D-1946 | NA | NA |
| 07A | LCS | Modified ASTM D-1946 | NA | NA |
| 07AA | LCSD | Modified ASTM D-1946 | NA | NA |

CERTIFIED BY: 

 Technical Director

DATE: 11/15/16

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

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

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

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

LABORATORY NARRATIVE
Modified ASTM D-1946
URS Corporation
Workorder# 1611046B

Five 1 Liter Summa Canister samples were received on November 02, 2016. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

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>ASTM D-1946</i> | <i>ATL Modifications</i> |
|-------------------------|--|--|
| Calibration | A single point calibration is performed using a reference standard closely matching the composition of the unknown. | A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor. |
| Reference Standard | The composition of any reference standard must be known to within 0.01 mol % for any component. | The standards used by ATL are blended to a $\geq 95\%$ accuracy. |
| Sample Injection Volume | Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL. | The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum. |
| Normalization | Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%. | Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix. |
| Precision | Precision requirements established at each concentration level. | Duplicates should agree within 25% RPD for detections $> 5 X$'s the RL. |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

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 detection limit.

M - Reported value may be biased due to apparent matrix interferences.

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
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: VMP-15-5-110116

Lab ID#: 1611046B-01A

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|-----------------------|-------------------|
| Oxygen | 0.27 | 16 |
| Nitrogen | 0.27 | 80 |
| Carbon Dioxide | 0.027 | 3.6 |

Client Sample ID: VMP-15-21.5-110116

Lab ID#: 1611046B-02A

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|-----------------------|-------------------|
| Oxygen | 0.24 | 1.8 |
| Nitrogen | 0.24 | 75 |
| Methane | 0.00024 | 8.4 |
| Carbon Dioxide | 0.024 | 15 |
| Ethane | 0.0024 | 0.00067 J |

Client Sample ID: VMP-15-25.5-110116

Lab ID#: 1611046B-03A

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|-----------------------|-------------------|
| Oxygen | 0.27 | 1.8 |
| Nitrogen | 0.27 | 73 |
| Methane | 0.00027 | 9.5 |
| Carbon Dioxide | 0.027 | 16 |
| Ethane | 0.0027 | 0.0039 |

Client Sample ID: VMP-15-25.5-110116-Dup

Lab ID#: 1611046B-04A

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|-----------------------|-------------------|
| Oxygen | 0.28 | 1.8 |
| Nitrogen | 0.28 | 73 |
| Methane | 0.00028 | 9.5 |
| Carbon Dioxide | 0.028 | 16 |

Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: VMP-15-25.5-110116-Dup

Lab ID#: 1611046B-04A

| | | |
|--------|--------|--------|
| Ethane | 0.0028 | 0.0040 |
|--------|--------|--------|

Client Sample ID: VMP-55-20-110116

Lab ID#: 1611046B-05A

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|-----------------------|-------------------|
| Oxygen | 0.28 | 2.7 |
| Nitrogen | 0.28 | 76 |
| Methane | 0.00028 | 2.7 |
| Carbon Dioxide | 0.028 | 19 |
| Ethane | 0.0028 | 0.00070 J |
| Helium | 0.14 | 0.0074 J |



Air Toxics

Client Sample ID: VMP-15-5-110116

Lab ID#: 1611046B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10111214 | Date of Collection: | 11/1/16 9:26:00 AM |
| Dil. Factor: | 2.69 | Date of Analysis: | 11/12/16 01:17 PM |

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|----------------|--------------|
| Oxygen | 0.27 | 16 |
| Nitrogen | 0.27 | 80 |
| Carbon Monoxide | 0.027 | Not Detected |
| Methane | 0.00027 | Not Detected |
| Carbon Dioxide | 0.027 | 3.6 |
| Ethane | 0.0027 | Not Detected |
| Ethene | 0.0027 | Not Detected |
| Helium | 0.13 | Not Detected |

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: VMP-15-21.5-110116

Lab ID#: 1611046B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10111215 | Date of Collection: | 11/1/16 9:54:00 AM |
| Dil. Factor: | 2.40 | Date of Analysis: | 11/12/16 01:39 PM |

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|----------------|--------------|
| Oxygen | 0.24 | 1.8 |
| Nitrogen | 0.24 | 75 |
| Carbon Monoxide | 0.024 | Not Detected |
| Methane | 0.00024 | 8.4 |
| Carbon Dioxide | 0.024 | 15 |
| Ethane | 0.0024 | 0.00067 J |
| Ethene | 0.0024 | Not Detected |
| Helium | 0.12 | Not Detected |

J = Estimated value.

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: VMP-15-25.5-110116

Lab ID#: 1611046B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|---------------------|
| File Name: | 10111216 | Date of Collection: | 11/1/16 10:21:00 AM |
| Dil. Factor: | 2.72 | Date of Analysis: | 11/12/16 02:01 PM |

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|----------------|--------------|
| Oxygen | 0.27 | 1.8 |
| Nitrogen | 0.27 | 73 |
| Carbon Monoxide | 0.027 | Not Detected |
| Methane | 0.00027 | 9.5 |
| Carbon Dioxide | 0.027 | 16 |
| Ethane | 0.0027 | 0.0039 |
| Ethene | 0.0027 | Not Detected |
| Helium | 0.14 | Not Detected |

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: VMP-15-25.5-110116-Dup

Lab ID#: 1611046B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|---------------------|
| File Name: | 10111217 | Date of Collection: | 11/1/16 10:21:00 AM |
| Dil. Factor: | 2.81 | Date of Analysis: | 11/12/16 02:25 PM |

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|----------------|--------------|
| Oxygen | 0.28 | 1.8 |
| Nitrogen | 0.28 | 73 |
| Carbon Monoxide | 0.028 | Not Detected |
| Methane | 0.00028 | 9.5 |
| Carbon Dioxide | 0.028 | 16 |
| Ethane | 0.0028 | 0.0040 |
| Ethene | 0.0028 | Not Detected |
| Helium | 0.14 | Not Detected |

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: VMP-55-20-110116

Lab ID#: 1611046B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10111218 | Date of Collection: | 11/1/16 8:30:00 AM |
| Dil. Factor: | 2.75 | Date of Analysis: | 11/12/16 02:46 PM |

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|----------------|--------------|
| Oxygen | 0.28 | 2.7 |
| Nitrogen | 0.28 | 76 |
| Carbon Monoxide | 0.028 | Not Detected |
| Methane | 0.00028 | 2.7 |
| Carbon Dioxide | 0.028 | 19 |
| Ethane | 0.0028 | 0.00070 J |
| Ethene | 0.0028 | Not Detected |
| Helium | 0.14 | 0.0074 J |

J = Estimated value.

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1611046B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | |
|--------------|-----------|-------------------------------------|
| File Name: | 10111204a | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/12/16 09:19 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|----------------|--------------|
| Oxygen | 0.10 | 0.020 J |
| Nitrogen | 0.10 | 0.088 J |
| Carbon Monoxide | 0.010 | Not Detected |
| Methane | 0.00010 | Not Detected |
| Carbon Dioxide | 0.010 | Not Detected |
| Ethane | 0.0010 | Not Detected |
| Ethene | 0.0010 | Not Detected |

J = Estimated value.

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1611046B-06B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|-----------|---------------------|-------------------|
| File Name: | 10111203c | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 11/12/16 08:56 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------|----------------|--------------|
| Helium | 0.050 | Not Detected |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 1611046B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | |
|--------------|----------|-------------------------------------|
| File Name: | 10111202 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/12/16 08:32 AM |

| Compound | %Recovery | Method Limits |
|-----------------|-----------|---------------|
| Oxygen | 99 | 85-115 |
| Nitrogen | 95 | 85-115 |
| Carbon Monoxide | 95 | 85-115 |
| Methane | 101 | 85-115 |
| Carbon Dioxide | 102 | 85-115 |
| Ethane | 101 | 85-115 |
| Ethene | 102 | 85-115 |
| Helium | 103 | 85-115 |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1611046B-07AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | |
|--------------|----------|-------------------------------------|
| File Name: | 10111219 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 11/12/16 03:09 PM |

| Compound | %Recovery | Method Limits |
|-----------------|-----------|---------------|
| Oxygen | 98 | 85-115 |
| Nitrogen | 95 | 85-115 |
| Carbon Monoxide | 96 | 85-115 |
| Methane | 100 | 85-115 |
| Carbon Dioxide | 102 | 85-115 |
| Ethane | 100 | 85-115 |
| Ethene | 100 | 85-115 |
| Helium | 101 | 85-115 |

Container Type: NA - Not Applicable