AECOM
1001 Highlands Plaza Drive West
Suite 300
St. Louis, MO 63110-1337
www.aecom.com

314 429 0100 tel.
314 429 0462 fax

May 9, 2016,

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 Michael Currier at michael.currier@aecom.com (314-346-9071).

Sincerely,
AECOM, on behalf of Shell Oil Products US

Michael Currier
Environmental Scientist

Robert E. Mooshegian, CHMM
Senior Program Manager

Attachments

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

eurofins | Air Toxics

2/18/2016
Ms. Elizabeth Kunkel
URS Corporation
1001 Highlands Plaza Dr. West
Suite 300
St. Louis MO 63110

Project Name: Roxana Quarterly Soil Vapor
Project #: 60477387-1.04.001
Workorder #: 1602108C

Dear Ms. Elizabeth Kunkel

The following report includes the data for the above referenced project for sample(s) received on 2/5/2016 at Air Toxics Ltd.

The data and associated QC analyzed by 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

eurofins | Air Toxics

# WORK ORDER #: 1602108C

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Ms. Elizabeth Kunkel<br>AECOM<br>1001 Highlands Plaza Dr. West<br>Suite 300<br>St. Louis, MO 63110 | **BILL TO:** | Accounts Payable Austin<br>AECOM<br>P.O. BOX 203970<br>Austin, TX 78720-1088 |
| **PHONE:** | 314-743-4179 | **P.O. #** | 60477387-1.04.001 |
| **FAX:** | | **PROJECT #** | 60477387-1.04.001 Roxana Quarterly Soil Vapor |
| **DATE RECEIVED:** | 02/05/2016 | **CONTACT:** | Kelly Buettner |
| **DATE COMPLETED:** | 02/18/2016 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. | FINAL PRESSURE |
|---|---|---|---|---|
| 05A | VMP-55-5-020416 | TO-15 | 7.0 "Hg | 15 psi |
| 06A | Lab Blank | TO-15 | NA | NA |
| 07A | CCV | TO-15 | NA | NA |
| 08A | LCS | TO-15 | NA | NA |
| 08AA | LCSD | TO-15 | NA | NA |

CERTIFIED BY: Heidi Mayo DATE: 02/18/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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 - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**
**EPA Method TO-15**
**URS Corporation**
**Workorder# 1602108C**

One 1 Liter Summa Canister sample was received on February 05, 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.

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.

Dilution was performed on sample VMP-55-5-020416 due to matrix interference.

## 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

eurofins | Air Toxics

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

**Client Sample ID: VMP-55-5-020416**

**Lab ID#: 1602108C-05A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Tetrahydrofuran | 13 | 4.7 J | 39 | 14 J |
| 2,2,4-Trimethylpentane | 13 | 15 | 62 | 71 |

eurofins | Air Toxics

**Client Sample ID: VMP-55-5-020416**

**Lab ID#: 1602108C-05A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021507** | **Date of Collection:** | **2/4/16 9:50:00 AM** |
| **Dil. Factor:** | **2.64** | **Date of Analysis:** | **2/15/16 01:18 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 13 | Not Detected | 65 | Not Detected |
| Freon 114 | 13 | Not Detected | 92 | Not Detected |
| Chloromethane | 53 | Not Detected | 110 | Not Detected |
| Vinyl Chloride | 13 | Not Detected UJ | 34 | Not Detected UJ |
| 1,3-Butadiene | 13 | Not Detected | 29 | Not Detected |
| Bromomethane | 13 | Not Detected | 51 | Not Detected |
| Chloroethane | 53 | Not Detected | 140 | Not Detected |
| Freon 11 | 13 | Not Detected | 74 | Not Detected |
| Ethanol | 53 | Not Detected | 99 | Not Detected |
| Freon 113 | 13 | Not Detected | 100 | Not Detected |
| 1,1-Dichloroethene | 13 | Not Detected | 52 | Not Detected |
| Acetone | 53 | Not Detected | 120 | Not Detected |
| 2-Propanol | 53 | Not Detected | 130 | Not Detected |
| Carbon Disulfide | 13 | Not Detected | 41 | Not Detected |
| 3-Chloropropene | 53 | Not Detected | 160 | Not Detected |
| Methylene Chloride | 13 | Not Detected | 46 | Not Detected |
| Methyl tert-butyl ether | 13 | Not Detected | 48 | Not Detected |
| trans-1,2-Dichloroethene | 13 | Not Detected | 52 | Not Detected |
| Hexane | 13 | Not Detected | 46 | Not Detected |
| 1,1-Dichloroethane | 13 | Not Detected | 53 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 53 | Not Detected | 160 | Not Detected |
| cis-1,2-Dichloroethene | 13 | Not Detected | 52 | Not Detected |
| Tetrahydrofuran | 13 | 4.7 J | 39 | 14 J |
| Chloroform | 13 | Not Detected | 64 | Not Detected |
| 1,1,1-Trichloroethane | 13 | Not Detected | 72 | Not Detected |
| Cyclohexane | 13 | Not Detected | 45 | Not Detected |
| Carbon Tetrachloride | 13 | Not Detected | 83 | Not Detected |
| 2,2,4-Trimethylpentane | 13 | 15 | 62 | 71 |
| Benzene | 13 | Not Detected | 42 | Not Detected |
| 1,2-Dichloroethane | 13 | Not Detected | 53 | Not Detected |
| Heptane | 13 | Not Detected | 54 | Not Detected |
| Trichloroethene | 13 | Not Detected | 71 | Not Detected |
| 1,2-Dichloropropane | 13 | Not Detected | 61 | Not Detected |
| 1,4-Dioxane | 53 | Not Detected | 190 | Not Detected |
| Bromodichloromethane | 13 | Not Detected | 88 | Not Detected |
| cis-1,3-Dichloropropene | 13 | Not Detected | 60 | Not Detected |
| 4-Methyl-2-pentanone | 13 | Not Detected | 54 | Not Detected |
| Toluene | 13 | Not Detected | 50 | Not Detected |
| trans-1,3-Dichloropropene | 13 | Not Detected | 60 | Not Detected |
| 1,1,2-Trichloroethane | 13 | Not Detected | 72 | Not Detected |
| Tetrachloroethene | 13 | Not Detected | 90 | Not Detected |
| 2-Hexanone | 53 | Not Detected | 220 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: VMP-55-5-020416**

**Lab ID#: 1602108C-05A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021507** | **Date of Collection:** | **2/4/16 9:50:00 AM** |
| **Dil. Factor:** | **2.64** | **Date of Analysis:** | **2/15/16 01:18 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 13 | Not Detected | 110 | Not Detected |
| 1,2-Dibromoethane (EDB) | 13 | Not Detected | 100 | Not Detected |
| Chlorobenzene | 13 | Not Detected | 61 | Not Detected |
| Ethyl Benzene | 13 | Not Detected | 57 | Not Detected |
| m,p-Xylene | 13 | Not Detected | 57 | Not Detected |
| o-Xylene | 13 | Not Detected | 57 | Not Detected |
| Styrene | 13 | Not Detected | 56 | Not Detected |
| Bromoform | 13 | Not Detected | 140 | Not Detected |
| Cumene | 13 | Not Detected | 65 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 13 | Not Detected | 91 | Not Detected |
| Propylbenzene | 13 | Not Detected | 65 | Not Detected |
| 4-Ethyltoluene | 13 | Not Detected | 65 | Not Detected |
| 1,3,5-Trimethylbenzene | 13 | Not Detected | 65 | Not Detected |
| 1,2,4-Trimethylbenzene | 13 | Not Detected | 65 | Not Detected |
| 1,3-Dichlorobenzene | 13 | Not Detected | 79 | Not Detected |
| 1,4-Dichlorobenzene | 13 | Not Detected | 79 | Not Detected |
| alpha-Chlorotoluene | 13 | Not Detected | 68 | Not Detected |
| 1,2-Dichlorobenzene | 13 | Not Detected | 79 | Not Detected |
| 1,2,4-Trichlorobenzene | 53 | Not Detected | 390 | Not Detected |
| Hexachlorobutadiene | 53 | Not Detected | 560 | Not Detected |
| Butane | 53 | Not Detected UJ | 120 | Not Detected UJ |
| Isopentane | 53 | Not Detected | 160 | Not Detected |

UJ = Analyte associated with low bias in the CCV and/or LCS.
J = Estimated value.

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 105 | 70-130 |
| Toluene-d8 | 103 | 70-130 |
| 4-Bromofluorobenzene | 106 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 1602108C-06A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021506a** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 11:19 AM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 5.0 | Not Detected | 25 | Not Detected |
| Freon 114 | 5.0 | Not Detected | 35 | Not Detected |
| Chloromethane | 20 | Not Detected | 41 | Not Detected |
| Vinyl Chloride | 5.0 | Not Detected UJ | 13 | Not Detected UJ |
| 1,3-Butadiene | 5.0 | Not Detected | 11 | Not Detected |
| Bromomethane | 5.0 | Not Detected | 19 | Not Detected |
| Chloroethane | 20 | Not Detected | 53 | Not Detected |
| Freon 11 | 5.0 | Not Detected | 28 | Not Detected |
| Ethanol | 20 | Not Detected | 38 | Not Detected |
| Freon 113 | 5.0 | Not Detected | 38 | Not Detected |
| 1,1-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Acetone | 20 | Not Detected | 48 | Not Detected |
| 2-Propanol | 20 | Not Detected | 49 | Not Detected |
| Carbon Disulfide | 5.0 | Not Detected | 16 | Not Detected |
| 3-Chloropropene | 20 | Not Detected | 63 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |
| trans-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Hexane | 5.0 | Not Detected | 18 | Not Detected |
| 1,1-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 20 | Not Detected | 59 | Not Detected |
| cis-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Tetrahydrofuran | 5.0 | Not Detected | 15 | Not Detected |
| Chloroform | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,1-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Cyclohexane | 5.0 | Not Detected | 17 | Not Detected |
| Carbon Tetrachloride | 5.0 | Not Detected | 31 | Not Detected |
| 2,2,4-Trimethylpentane | 5.0 | Not Detected | 23 | Not Detected |
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| 1,2-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| Heptane | 5.0 | Not Detected | 20 | Not Detected |
| Trichloroethene | 5.0 | Not Detected | 27 | Not Detected |
| 1,2-Dichloropropane | 5.0 | Not Detected | 23 | Not Detected |
| 1,4-Dioxane | 20 | Not Detected | 72 | Not Detected |
| Bromodichloromethane | 5.0 | Not Detected | 34 | Not Detected |
| cis-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |
| 4-Methyl-2-pentanone | 5.0 | Not Detected | 20 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| trans-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |
| 1,1,2-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Tetrachloroethene | 5.0 | Not Detected | 34 | Not Detected |
| 2-Hexanone | 20 | Not Detected | 82 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 1602108C-06A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021506a** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 11:19 AM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 5.0 | Not Detected | 42 | Not Detected |
| 1,2-Dibromoethane (EDB) | 5.0 | Not Detected | 38 | Not Detected |
| Chlorobenzene | 5.0 | Not Detected | 23 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Styrene | 5.0 | Not Detected | 21 | Not Detected |
| Bromoform | 5.0 | Not Detected | 52 | Not Detected |
| Cumene | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 5.0 | Not Detected | 34 | Not Detected |
| Propylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 4-Ethyltoluene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3,5-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,2,4-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,4-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| alpha-Chlorotoluene | 5.0 | Not Detected | 26 | Not Detected |
| 1,2-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,2,4-Trichlorobenzene | 20 | Not Detected | 150 | Not Detected |
| Hexachlorobutadiene | 20 | Not Detected | 210 | Not Detected |
| Butane | 20 | Not Detected UJ | 48 | Not Detected UJ |
| Isopentane | 20 | Not Detected | 59 | Not Detected |

UJ = Analyte associated with low bias in the CCV and/or LCS.

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 106 | 70-130 |
| Toluene-d8 | 98 | 70-130 |
| 4-Bromofluorobenzene | 105 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: CCV**
**Lab ID#: 1602108C-07A**
**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021502** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 09:03 AM** | |

| Compound | %Recovery |
|---|---|
| Freon 12 | 94 |
| Freon 114 | 84 |
| Chloromethane | 79 |
| Vinyl Chloride | 68 Q |
| 1,3-Butadiene | 76 |
| Bromomethane | 74 |
| Chloroethane | 81 |
| Freon 11 | 104 |
| Ethanol | 79 |
| Freon 113 | 97 |
| 1,1-Dichloroethene | 89 |
| Acetone | 81 |
| 2-Propanol | 81 |
| Carbon Disulfide | 79 |
| 3-Chloropropene | 84 |
| Methylene Chloride | 84 |
| Methyl tert-butyl ether | 85 |
| trans-1,2-Dichloroethene | 87 |
| Hexane | 80 |
| 1,1-Dichloroethane | 87 |
| 2-Butanone (Methyl Ethyl Ketone) | 78 |
| cis-1,2-Dichloroethene | 87 |
| Tetrahydrofuran | 85 |
| Chloroform | 94 |
| 1,1,1-Trichloroethane | 100 |
| Cyclohexane | 83 |
| Carbon Tetrachloride | 104 |
| 2,2,4-Trimethylpentane | 82 |
| Benzene | 91 |
| 1,2-Dichloroethane | 104 |
| Heptane | 86 |
| Trichloroethene | 96 |
| 1,2-Dichloropropane | 90 |
| 1,4-Dioxane | 96 |
| Bromodichloromethane | 102 |
| cis-1,3-Dichloropropene | 95 |
| 4-Methyl-2-pentanone | 94 |
| Toluene | 96 |
| trans-1,3-Dichloropropene | 92 |
| 1,1,2-Trichloroethane | 94 |
| Tetrachloroethene | 102 |
| 2-Hexanone | 94 |

eurofins | Air Toxics

**Client Sample ID: CCV**
**Lab ID#: 1602108C-07A**
**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021502** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 09:03 AM** | |

| Compound | %Recovery |
|---|---|
| Dibromochloromethane | 106 |
| 1,2-Dibromoethane (EDB) | 95 |
| Chlorobenzene | 97 |
| Ethyl Benzene | 97 |
| m,p-Xylene | 97 |
| o-Xylene | 97 |
| Styrene | 101 |
| Bromoform | 111 |
| Cumene | 100 |
| 1,1,2,2-Tetrachloroethane | 96 |
| Propylbenzene | 97 |
| 4-Ethyltoluene | 100 |
| 1,3,5-Trimethylbenzene | 107 |
| 1,2,4-Trimethylbenzene | 105 |
| 1,3-Dichlorobenzene | 105 |
| 1,4-Dichlorobenzene | 103 |
| alpha-Chlorotoluene | 112 |
| 1,2-Dichlorobenzene | 107 |
| 1,2,4-Trichlorobenzene | 98 |
| Hexachlorobutadiene | 109 |
| Butane | 67 Q |
| Isopentane | 81 |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 104 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 106 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCS**

**Lab ID#: 1602108C-08A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021503** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 09:27 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Freon 12 | 92 | 70-130 |
| Freon 114 | 86 | 70-130 |
| Chloromethane | 78 | 70-130 |
| Vinyl Chloride | 73 | 70-130 |
| 1,3-Butadiene | 75 | 70-130 |
| Bromomethane | 70 | 70-130 |
| Chloroethane | 80 | 70-130 |
| Freon 11 | 102 | 70-130 |
| Ethanol | 84 | 70-130 |
| Freon 113 | 94 | 70-130 |
| 1,1-Dichloroethene | 80 | 70-130 |
| Acetone | 83 | 70-130 |
| 2-Propanol | 80 | 70-130 |
| Carbon Disulfide | 68 Q | 70-130 |
| 3-Chloropropene | 71 | 70-130 |
| Methylene Chloride | 78 | 70-130 |
| Methyl tert-butyl ether | 78 | 70-130 |
| trans-1,2-Dichloroethene | 71 | 70-130 |
| Hexane | 70 | 70-130 |
| 1,1-Dichloroethane | 84 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 72 | 70-130 |
| cis-1,2-Dichloroethene | 86 | 70-130 |
| Tetrahydrofuran | 79 | 70-130 |
| Chloroform | 92 | 70-130 |
| 1,1,1-Trichloroethane | 100 | 70-130 |
| Cyclohexane | 78 | 70-130 |
| Carbon Tetrachloride | 98 | 70-130 |
| 2,2,4-Trimethylpentane | 78 | 70-130 |
| Benzene | 88 | 70-130 |
| 1,2-Dichloroethane | 103 | 70-130 |
| Heptane | 79 | 70-130 |
| Trichloroethene | 96 | 70-130 |
| 1,2-Dichloropropane | 91 | 70-130 |
| 1,4-Dioxane | 85 | 70-130 |
| Bromodichloromethane | 106 | 70-130 |
| cis-1,3-Dichloropropene | 89 | 70-130 |
| 4-Methyl-2-pentanone | 91 | 70-130 |
| Toluene | 94 | 70-130 |
| trans-1,3-Dichloropropene | 90 | 70-130 |
| 1,1,2-Trichloroethane | 96 | 70-130 |
| Tetrachloroethene | 107 | 70-130 |
| 2-Hexanone | 85 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCS**
**Lab ID#: 1602108C-08A**
**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021503** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 09:27 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Dibromochloromethane | 107 | 70-130 |
| 1,2-Dibromoethane (EDB) | 98 | 70-130 |
| Chlorobenzene | 99 | 70-130 |
| Ethyl Benzene | 92 | 70-130 |
| m,p-Xylene | 90 | 70-130 |
| o-Xylene | 96 | 70-130 |
| Styrene | 96 | 70-130 |
| Bromoform | 111 | 70-130 |
| Cumene | 94 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 99 | 70-130 |
| Propylbenzene | 97 | 70-130 |
| 4-Ethyltoluene | 96 | 70-130 |
| 1,3,5-Trimethylbenzene | 103 | 70-130 |
| 1,2,4-Trimethylbenzene | 98 | 70-130 |
| 1,3-Dichlorobenzene | 107 | 70-130 |
| 1,4-Dichlorobenzene | 106 | 70-130 |
| alpha-Chlorotoluene | 103 | 70-130 |
| 1,2-Dichlorobenzene | 105 | 70-130 |
| 1,2,4-Trichlorobenzene | 95 | 70-130 |
| Hexachlorobutadiene | 109 | 70-130 |
| Butane | 75 | 60-140 |
| Isopentane | 79 | 60-140 |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

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

eurofins | Air Toxics

**Client Sample ID: LCSD**
**Lab ID#: 1602108C-08AA**
**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021504** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 09:52 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Freon 12 | 89 | 70-130 |
| Freon 114 | 84 | 70-130 |
| Chloromethane | 82 | 70-130 |
| Vinyl Chloride | 75 | 70-130 |
| 1,3-Butadiene | 79 | 70-130 |
| Bromomethane | 69 Q | 70-130 |
| Chloroethane | 81 | 70-130 |
| Freon 11 | 106 | 70-130 |
| Ethanol | 81 | 70-130 |
| Freon 113 | 96 | 70-130 |
| 1,1-Dichloroethene | 82 | 70-130 |
| Acetone | 76 | 70-130 |
| 2-Propanol | 76 | 70-130 |
| Carbon Disulfide | 65 Q | 70-130 |
| 3-Chloropropene | 70 | 70-130 |
| Methylene Chloride | 81 | 70-130 |
| Methyl tert-butyl ether | 77 | 70-130 |
| trans-1,2-Dichloroethene | 69 Q | 70-130 |
| Hexane | 73 | 70-130 |
| 1,1-Dichloroethane | 83 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 78 | 70-130 |
| cis-1,2-Dichloroethene | 83 | 70-130 |
| Tetrahydrofuran | 80 | 70-130 |
| Chloroform | 90 | 70-130 |
| 1,1,1-Trichloroethane | 98 | 70-130 |
| Cyclohexane | 76 | 70-130 |
| Carbon Tetrachloride | 98 | 70-130 |
| 2,2,4-Trimethylpentane | 77 | 70-130 |
| Benzene | 90 | 70-130 |
| 1,2-Dichloroethane | 101 | 70-130 |
| Heptane | 78 | 70-130 |
| Trichloroethene | 92 | 70-130 |
| 1,2-Dichloropropane | 88 | 70-130 |
| 1,4-Dioxane | 87 | 70-130 |
| Bromodichloromethane | 100 | 70-130 |
| cis-1,3-Dichloropropene | 86 | 70-130 |
| 4-Methyl-2-pentanone | 85 | 70-130 |
| Toluene | 92 | 70-130 |
| trans-1,3-Dichloropropene | 86 | 70-130 |
| 1,1,2-Trichloroethane | 92 | 70-130 |
| Tetrachloroethene | 102 | 70-130 |
| 2-Hexanone | 87 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCSD**
**Lab ID#: 1602108C-08AA**
**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021504** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 09:52 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Dibromochloromethane | 101 | 70-130 |
| 1,2-Dibromoethane (EDB) | 93 | 70-130 |
| Chlorobenzene | 94 | 70-130 |
| Ethyl Benzene | 89 | 70-130 |
| m,p-Xylene | 93 | 70-130 |
| o-Xylene | 94 | 70-130 |
| Styrene | 92 | 70-130 |
| Bromoform | 110 | 70-130 |
| Cumene | 94 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 97 | 70-130 |
| Propylbenzene | 97 | 70-130 |
| 4-Ethyltoluene | 94 | 70-130 |
| 1,3,5-Trimethylbenzene | 107 | 70-130 |
| 1,2,4-Trimethylbenzene | 98 | 70-130 |
| 1,3-Dichlorobenzene | 104 | 70-130 |
| 1,4-Dichlorobenzene | 103 | 70-130 |
| alpha-Chlorotoluene | 101 | 70-130 |
| 1,2-Dichlorobenzene | 106 | 70-130 |
| 1,2,4-Trichlorobenzene | 109 | 70-130 |
| Hexachlorobutadiene | 123 | 70-130 |
| Butane | 78 | 60-140 |
| Isopentane | 80 | 60-140 |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 106 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 106 | 70-130 |

eurofins | Air Toxics

2/18/2016
Ms. Elizabeth Kunkel
URS Corporation
1001 Highlands Plaza Dr. West
Suite 300
St. Louis MO 63110

Project Name: Roxana Quarterly Soil Vapor
Project #: 60477387-1.04.001
Workorder #: 1602108D

Dear Ms. Elizabeth Kunkel

The following report includes the data for the above referenced project for sample(s) received on 2/5/2016 at Air Toxics Ltd.

The data and associated QC analyzed by Modified 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

eurofins | Air Toxics

# WORK ORDER #: 1602108D

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Ms. Elizabeth Kunkel<br>AECOM<br>1001 Highlands Plaza Dr. West<br>Suite 300<br>St. Louis, MO 63110 | **BILL TO:** | Accounts Payable Austin<br>AECOM<br>P.O. BOX 203970<br>Austin, TX 78720-1088 |
| **PHONE:** | 314-743-4179 | **P.O. #** | 60477387-1.04.001 |
| **FAX:** | | **PROJECT #** | 60477387-1.04.001 Roxana Quarterly Soil Vapor |
| **DATE RECEIVED:** | 02/05/2016 | **CONTACT:** | Kelly Buettner |
| **DATE COMPLETED:** | 02/18/2016 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. | FINAL PRESSURE |
|---|---|---|---|---|
| 05A | VMP-55-5-020416 | Modified ASTM D-1946 | 7.0 "Hg | 15 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: Heidi Mayo DATE: 02/18/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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 - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**
**Modified ASTM D-1946**
**URS Corporation**
**Workorder# 1602108D**

One 1 Liter Summa Canister sample was received on February 05, 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.

| ***Requirement*** | ***ASTM D-1946*** | ***ATL Modifications*** |
|---|---|---|
| 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 >/= 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

eurofins | Air Toxics

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

**Client Sample ID: VMP-55-5-020416**

**Lab ID#: 1602108D-05A**

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.26 | 3.0 |
| Nitrogen | 0.26 | 83 |
| Methane | 0.00026 | 0.00029 |
| Carbon Dioxide | 0.026 | 14 |

eurofins | Air Toxics

**Client Sample ID: VMP-55-5-020416**

**Lab ID#: 1602108D-05A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9021621** | **Date of Collection: 2/4/16 9:50:00 AM** | |
| **Dil. Factor:** | **2.64** | **Date of Analysis: 2/16/16 07:06 PM** | |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.26 | 3.0 |
| Nitrogen | 0.26 | 83 |
| Carbon Monoxide | 0.026 | Not Detected |
| Methane | 0.00026 | 0.00029 |
| Carbon Dioxide | 0.026 | 14 |
| Ethane | 0.0026 | Not Detected |
| Ethene | 0.0026 | Not Detected |
| Helium | 0.13 | Not Detected |

**Container Type: 1 Liter Summa Canister**

eurofins | Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 1602108D-06A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9021604a** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 09:48 AM** | |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.10 | Not Detected |
| Nitrogen | 0.10 | 0.030 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**

eurofins | Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 1602108D-06B**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9021603b** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 09:24 AM** | |

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

**Container Type: NA - Not Applicable**

eurofins | Air Toxics

**Client Sample ID: LCS**

**Lab ID#: 1602108D-07A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9021602** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 08:42 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Oxygen | 95 | 85-115 |
| Nitrogen | 90 | 85-115 |
| Carbon Monoxide | 102 | 85-115 |
| Methane | 94 | 85-115 |
| Carbon Dioxide | 101 | 85-115 |
| Ethane | 93 | 85-115 |
| Ethene | 94 | 85-115 |
| Helium | 102 | 85-115 |

**Container Type: NA - Not Applicable**

eurofins | Air Toxics

**Client Sample ID: LCSD**

**Lab ID#: 1602108D-07AA**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9021625** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 09:19 PM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Oxygen | 93 | 85-115 |
| Nitrogen | 88 | 85-115 |
| Carbon Monoxide | 100 | 85-115 |
| Methane | 93 | 85-115 |
| Carbon Dioxide | 99 | 85-115 |
| Ethane | 92 | 85-115 |
| Ethene | 93 | 85-115 |
| Helium | 100 | 85-115 |

**Container Type: NA - Not Applicable**

eurofins | Air Toxics

2/22/2016
Ms. Elizabeth Kunkel
URS Corporation
1001 Highlands Plaza Dr. West
Suite 300
St. Louis MO 63110

Project Name: Roxana Quarterly Soil Vapor
Project #: 60477387-1.04.001
Workorder #: 1602139C

Dear Ms. Elizabeth Kunkel

The following report includes the data for the above referenced project for sample(s) received on 2/6/2016 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

eurofins | Air Toxics

# WORK ORDER #: 1602139C

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Ms. Elizabeth Kunkel<br>AECOM<br>1001 Highlands Plaza Dr. West<br>Suite 300<br>St. Louis, MO 63110 | **BILL TO:** | Accounts Payable Austin<br>AECOM<br>P.O. BOX 203970<br>Austin, TX 78720-1088 |
| **PHONE:** | 314-743-4179 | **P.O. #** | 60477387-1.04.001 |
| **FAX:** | | **PROJECT #** | 60477387-1.04.001 Roxana Quarterly Soil Vapor |
| **DATE RECEIVED:** | 02/06/2016 | **CONTACT:** | Kelly Buettner |
| **DATE COMPLETED:** | 02/22/2016 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. | FINAL PRESSURE |
|---|---|---|---|---|
| 03A | VMP-15-5-020316 | TO-15 | 6.7 "Hg | 15 psi |
| 04A | VMP-15-21.5-020316 | TO-15 | 7.3 "Hg | 14.6 psi |
| 05A | VMP-15-25.5-020316 | TO-15 | 8.2 "Hg | 15.2 psi |
| 06A | VMP-15-29-020316 | TO-15 | 7.3 "Hg | 14.9 psi |
| 11A | VMP-55-20-020416 | TO-15 | 7.1 "Hg | 15 psi |
| 11B | VMP-55-20-020416 | TO-15 | 7.1 "Hg | 15 psi |
| 12A | VMP-55-20-020416-DUP | TO-15 | 4.5 "Hg | 15.2 psi |
| 12B | VMP-55-20-020416-DUP | TO-15 | 4.5 "Hg | 15.2 psi |
| 13A | Lab Blank | TO-15 | NA | NA |
| 13B | Lab Blank | TO-15 | NA | NA |
| 14A | CCV | TO-15 | NA | NA |
| 14B | CCV | TO-15 | NA | NA |
| 15A | LCS | TO-15 | NA | NA |
| 15AA | LCSD | TO-15 | NA | NA |
| 15B | LCS | TO-15 | NA | NA |
| 15BB | LCSD | TO-15 | NA | NA |

CERTIFIED BY: Heidi Mayo DATE: 02/22/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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# 1602139C**

Six 1 Liter Summa Canister samples were received on February 06, 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 may be false positives.

Due to high-level target compounds, samples VMP-55-20-020416 and VMP-55-20-020416-DUP 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. Target compound non-detects in the samples that are associated with high bias in CCV analyses have not been flagged.

Dilution was performed on all samples due to the presence of high level target species.

The recovery of surrogate 1,2-Dichloroethane-d4 in samples VMP-55-20-020416 (11a) and VMP-55-20-020416-DUP (12b) was outside laboratory control limits due to high level hydrocarbon matrix interference. The surrogate recovery is flagged.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

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

**Client Sample ID: VMP-15-5-020316**

**Lab ID#: 1602139C-03A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 2.6 | 0.63 J | 13 | 3.1 J |
| Ethanol | 10 | 69 | 20 | 130 |
| Acetone | 26 | 8.2 J | 62 | 20 J |
| 2-Propanol | 10 | 4.5 J | 26 | 11 J |
| 2,2,4-Trimethylpentane | 2.6 | 750 | 12 | 3500 |
| Propylbenzene | 2.6 | 0.37 J | 13 | 1.8 J |

**Client Sample ID: VMP-15-21.5-020316**

**Lab ID#: 1602139C-04A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 2-Propanol | 70 | 17 J | 170 | 41 J |
| 2,2,4-Trimethylpentane | 18 | 4200 | 82 | 20000 |
| Butane | 70 | 320 | 170 | 760 |
| Isopentane | 70 | 550 | 210 | 1600 |

**Client Sample ID: VMP-15-25.5-020316**

**Lab ID#: 1602139C-05A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Hexane | 70 | 160 | 250 | 570 |
| Cyclohexane | 70 | 1200 | 240 | 4200 |
| 2,2,4-Trimethylpentane | 70 | 3800 | 330 | 18000 |
| Benzene | 70 | 65 J | 220 | 210 J |
| Heptane | 70 | 35 J | 290 | 140 J |
| Butane | 280 | 3900 J0 | 660 | 9400 J0 |
| Isopentane | 280 | 35000 | 830 | 100000 |

**Client Sample ID: VMP-15-29-020316**

**Lab ID#: 1602139C-06A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|

eurofins | Air Toxics

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

**Client Sample ID: VMP-15-29-020316**

**Lab ID#: 1602139C-06A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Hexane | 27 | 73 | 94 | 260 |
| Cyclohexane | 27 | 560 | 92 | 1900 |
| 2,2,4-Trimethylpentane | 27 | 4900 | 120 | 23000 |
| Benzene | 27 | 63 | 85 | 200 |
| Heptane | 27 | 19 J | 110 | 77 J |
| Butane | 110 | 3500 J0 | 250 | 8300 J0 |
| Isopentane | 110 | 19000 | 310 | 56000 |

**Client Sample ID: VMP-55-20-020416**

**Lab ID#: 1602139C-11A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Hexane | 330 | 47000 | 1200 | 170000 |
| Cyclohexane | 330 | 70000 | 1100 | 240000 |
| 2,2,4-Trimethylpentane | 330 | 50000 | 1500 | 230000 |
| Heptane | 330 | 52000 | 1400 | 210000 |
| Propylbenzene | 330 | 36 J | 1600 | 180 J |
| 4-Ethyltoluene | 330 | 140 J | 1600 | 710 J |
| 1,3,5-Trimethylbenzene | 330 | 83 J | 1600 | 410 J |
| 1,2,4-Trimethylbenzene | 330 | 170 J | 1600 | 820 J |
| Butane | 1300 | 24000 J0 | 3100 | 58000 J0 |
| Isopentane | 1300 | 43000 | 3900 | 130000 |

**Client Sample ID: VMP-55-20-020416**

**Lab ID#: 1602139C-11B**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Hexane | 130 | 42000 | 470 | 150000 |
| Cyclohexane | 130 | 62000 | 460 | 210000 |
| 2,2,4-Trimethylpentane | 130 | 44000 E | 620 | 210000 E |
| Heptane | 130 | 46000 | 540 | 190000 |
| Butane | 530 | 21000 J0 | 1200 | 51000 J0 |
| Isopentane | 530 | 39000 | 1600 | 110000 |

eurofins | Air Toxics

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

**Client Sample ID: VMP-55-20-020416**

**Lab ID#: 1602139C-11B**

**Client Sample ID: VMP-55-20-020416-DUP**

**Lab ID#: 1602139C-12A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Hexane | 300 | 47000 | 1000 | 170000 |
| Cyclohexane | 300 | 69000 | 1000 | 240000 |
| 2,2,4-Trimethylpentane | 300 | 50000 | 1400 | 230000 |
| Heptane | 300 | 52000 | 1200 | 210000 |
| 4-Ethyltoluene | 300 | 54 J | 1500 | 260 J |
| 1,3,5-Trimethylbenzene | 300 | 38 J | 1500 | 190 J |
| Butane | 1200 | 24000 J0 | 2800 | 58000 J0 |
| Isopentane | 1200 | 43000 | 3500 | 130000 |

**Client Sample ID: VMP-55-20-020416-DUP**

**Lab ID#: 1602139C-12B**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Hexane | 120 | 44000 | 420 | 150000 |
| Cyclohexane | 120 | 59000 | 410 | 200000 |
| 2,2,4-Trimethylpentane | 120 | 46000 E | 560 | 220000 E |
| Heptane | 120 | 47000 | 490 | 190000 |
| Butane | 480 | 23000 J0 | 1100 | 55000 J0 |
| Isopentane | 480 | 40000 | 1400 | 120000 |

eurofins | Air Toxics

**Client Sample ID: VMP-15-5-020316**

**Lab ID#: 1602139C-03A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021508** | **Date of Collection:** | **2/3/16 1:36:00 PM** |
| **Dil. Factor:** | **5.20** | **Date of Analysis:** | **2/15/16 02:35 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 2.6 | 0.63 J | 13 | 3.1 J |
| Freon 114 | 2.6 | Not Detected | 18 | Not Detected |
| Chloromethane | 26 | Not Detected | 54 | Not Detected |
| Vinyl Chloride | 2.6 | Not Detected | 6.6 | Not Detected |
| 1,3-Butadiene | 2.6 | Not Detected | 5.8 | Not Detected |
| Bromomethane | 26 | Not Detected | 100 | Not Detected |
| Chloroethane | 10 | Not Detected | 27 | Not Detected |
| Freon 11 | 2.6 | Not Detected | 15 | Not Detected |
| Ethanol | 10 | 69 | 20 | 130 |
| Freon 113 | 2.6 | Not Detected | 20 | Not Detected |
| 1,1-Dichloroethene | 2.6 | Not Detected | 10 | Not Detected |
| Acetone | 26 | 8.2 J | 62 | 20 J |
| 2-Propanol | 10 | 4.5 J | 26 | 11 J |
| Carbon Disulfide | 10 | Not Detected | 32 | Not Detected |
| 3-Chloropropene | 10 | Not Detected | 32 | Not Detected |
| Methylene Chloride | 26 | Not Detected | 90 | Not Detected |
| Methyl tert-butyl ether | 2.6 | Not Detected | 9.4 | Not Detected |
| trans-1,2-Dichloroethene | 2.6 | Not Detected | 10 | Not Detected |
| Hexane | 2.6 | Not Detected | 9.2 | Not Detected |
| 1,1-Dichloroethane | 2.6 | Not Detected | 10 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 10 | Not Detected | 31 | Not Detected |
| cis-1,2-Dichloroethene | 2.6 | Not Detected | 10 | Not Detected |
| Tetrahydrofuran | 2.6 | Not Detected | 7.7 | Not Detected |
| Chloroform | 2.6 | Not Detected | 13 | Not Detected |
| 1,1,1-Trichloroethane | 2.6 | Not Detected | 14 | Not Detected |
| Cyclohexane | 2.6 | Not Detected | 8.9 | Not Detected |
| Carbon Tetrachloride | 2.6 | Not Detected | 16 | Not Detected |
| 2,2,4-Trimethylpentane | 2.6 | 750 | 12 | 3500 |
| Benzene | 2.6 | Not Detected | 8.3 | Not Detected |
| 1,2-Dichloroethane | 2.6 | Not Detected | 10 | Not Detected |
| Heptane | 2.6 | Not Detected | 11 | Not Detected |
| Trichloroethene | 2.6 | Not Detected | 14 | Not Detected |
| 1,2-Dichloropropane | 2.6 | Not Detected | 12 | Not Detected |
| 1,4-Dioxane | 10 | Not Detected | 37 | Not Detected |
| Bromodichloromethane | 2.6 | Not Detected | 17 | Not Detected |
| cis-1,3-Dichloropropene | 2.6 | Not Detected | 12 | Not Detected |
| 4-Methyl-2-pentanone | 2.6 | Not Detected | 11 | Not Detected |
| Toluene | 2.6 | Not Detected | 9.8 | Not Detected |
| trans-1,3-Dichloropropene | 2.6 | Not Detected | 12 | Not Detected |
| 1,1,2-Trichloroethane | 2.6 | Not Detected | 14 | Not Detected |
| Tetrachloroethene | 2.6 | Not Detected | 18 | Not Detected |
| 2-Hexanone | 10 | Not Detected | 43 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: VMP-15-5-020316**

**Lab ID#: 1602139C-03A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021508** | **Date of Collection:** | **2/3/16 1:36:00 PM** |
| **Dil. Factor:** | **5.20** | **Date of Analysis:** | **2/15/16 02:35 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 2.6 | Not Detected | 22 | Not Detected |
| 1,2-Dibromoethane (EDB) | 2.6 | Not Detected | 20 | Not Detected |
| Chlorobenzene | 2.6 | Not Detected | 12 | Not Detected |
| Ethyl Benzene | 2.6 | Not Detected | 11 | Not Detected |
| m,p-Xylene | 2.6 | Not Detected | 11 | Not Detected |
| o-Xylene | 2.6 | Not Detected | 11 | Not Detected |
| Styrene | 2.6 | Not Detected | 11 | Not Detected |
| Bromoform | 2.6 | Not Detected | 27 | Not Detected |
| Cumene | 2.6 | Not Detected | 13 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 2.6 | Not Detected | 18 | Not Detected |
| Propylbenzene | 2.6 | 0.37 J | 13 | 1.8 J |
| 4-Ethyltoluene | 2.6 | Not Detected | 13 | Not Detected |
| 1,3,5-Trimethylbenzene | 2.6 | Not Detected | 13 | Not Detected |
| 1,2,4-Trimethylbenzene | 2.6 | Not Detected | 13 | Not Detected |
| 1,3-Dichlorobenzene | 2.6 | Not Detected | 16 | Not Detected |
| 1,4-Dichlorobenzene | 2.6 | Not Detected | 16 | Not Detected |
| alpha-Chlorotoluene | 2.6 | Not Detected | 13 | Not Detected |
| 1,2-Dichlorobenzene | 2.6 | Not Detected | 16 | Not Detected |
| 1,2,4-Trichlorobenzene | 10 | Not Detected | 77 | Not Detected |
| Hexachlorobutadiene | 10 | Not Detected | 110 | Not Detected |
| Butane | 10 | Not Detected | 25 | Not Detected |
| Isopentane | 10 | Not Detected | 31 | Not Detected |

J = Estimated value.

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 100 | 70-130 |
| 1,2-Dichloroethane-d4 | 104 | 70-130 |
| 4-Bromofluorobenzene | 94 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: VMP-15-21.5-020316**

**Lab ID#: 1602139C-04A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021509** | **Date of Collection:** | **2/3/16 1:54:00 PM** |
| **Dil. Factor:** | **35.1** | **Date of Analysis:** | **2/15/16 02:59 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 18 | Not Detected | 87 | Not Detected |
| Freon 114 | 18 | Not Detected | 120 | Not Detected |
| Chloromethane | 180 | Not Detected | 360 | Not Detected |
| Vinyl Chloride | 18 | Not Detected | 45 | Not Detected |
| 1,3-Butadiene | 18 | Not Detected | 39 | Not Detected |
| Bromomethane | 180 | Not Detected | 680 | Not Detected |
| Chloroethane | 70 | Not Detected | 180 | Not Detected |
| Freon 11 | 18 | Not Detected | 99 | Not Detected |
| Ethanol | 70 | Not Detected | 130 | Not Detected |
| Freon 113 | 18 | Not Detected | 130 | Not Detected |
| 1,1-Dichloroethene | 18 | Not Detected | 70 | Not Detected |
| Acetone | 180 | Not Detected | 420 | Not Detected |
| 2-Propanol | 70 | 17 J | 170 | 41 J |
| Carbon Disulfide | 70 | Not Detected | 220 | Not Detected |
| 3-Chloropropene | 70 | Not Detected | 220 | Not Detected |
| Methylene Chloride | 180 | Not Detected | 610 | Not Detected |
| Methyl tert-butyl ether | 18 | Not Detected | 63 | Not Detected |
| trans-1,2-Dichloroethene | 18 | Not Detected | 70 | Not Detected |
| Hexane | 18 | Not Detected | 62 | Not Detected |
| 1,1-Dichloroethane | 18 | Not Detected | 71 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 70 | Not Detected | 210 | Not Detected |
| cis-1,2-Dichloroethene | 18 | Not Detected | 70 | Not Detected |
| Tetrahydrofuran | 18 | Not Detected | 52 | Not Detected |
| Chloroform | 18 | Not Detected | 86 | Not Detected |
| 1,1,1-Trichloroethane | 18 | Not Detected | 96 | Not Detected |
| Cyclohexane | 18 | Not Detected | 60 | Not Detected |
| Carbon Tetrachloride | 18 | Not Detected | 110 | Not Detected |
| 2,2,4-Trimethylpentane | 18 | 4200 | 82 | 20000 |
| Benzene | 18 | Not Detected | 56 | Not Detected |
| 1,2-Dichloroethane | 18 | Not Detected | 71 | Not Detected |
| Heptane | 18 | Not Detected | 72 | Not Detected |
| Trichloroethene | 18 | Not Detected | 94 | Not Detected |
| 1,2-Dichloropropane | 18 | Not Detected | 81 | Not Detected |
| 1,4-Dioxane | 70 | Not Detected | 250 | Not Detected |
| Bromodichloromethane | 18 | Not Detected | 120 | Not Detected |
| cis-1,3-Dichloropropene | 18 | Not Detected | 80 | Not Detected |
| 4-Methyl-2-pentanone | 18 | Not Detected | 72 | Not Detected |
| Toluene | 18 | Not Detected | 66 | Not Detected |
| trans-1,3-Dichloropropene | 18 | Not Detected | 80 | Not Detected |
| 1,1,2-Trichloroethane | 18 | Not Detected | 96 | Not Detected |
| Tetrachloroethene | 18 | Not Detected | 120 | Not Detected |
| 2-Hexanone | 70 | Not Detected | 290 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: VMP-15-21.5-020316**

**Lab ID#: 1602139C-04A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021509** | **Date of Collection:** | **2/3/16 1:54:00 PM** |
| **Dil. Factor:** | **35.1** | **Date of Analysis:** | **2/15/16 02:59 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 | 130 | Not Detected |
| Chlorobenzene | 18 | Not Detected | 81 | Not Detected |
| Ethyl Benzene | 18 | Not Detected | 76 | Not Detected |
| m,p-Xylene | 18 | Not Detected | 76 | Not Detected |
| o-Xylene | 18 | Not Detected | 76 | Not Detected |
| Styrene | 18 | Not Detected | 75 | Not Detected |
| Bromoform | 18 | Not Detected | 180 | Not Detected |
| Cumene | 18 | Not Detected | 86 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 18 | Not Detected | 120 | Not Detected |
| Propylbenzene | 18 | Not Detected | 86 | Not Detected |
| 4-Ethyltoluene | 18 | Not Detected | 86 | Not Detected |
| 1,3,5-Trimethylbenzene | 18 | Not Detected | 86 | Not Detected |
| 1,2,4-Trimethylbenzene | 18 | Not Detected | 86 | Not Detected |
| 1,3-Dichlorobenzene | 18 | Not Detected | 100 | Not Detected |
| 1,4-Dichlorobenzene | 18 | Not Detected | 100 | Not Detected |
| alpha-Chlorotoluene | 18 | Not Detected | 91 | Not Detected |
| 1,2-Dichlorobenzene | 18 | Not Detected | 100 | Not Detected |
| 1,2,4-Trichlorobenzene | 70 | Not Detected | 520 | Not Detected |
| Hexachlorobutadiene | 70 | Not Detected | 750 | Not Detected |
| Butane | 70 | 320 | 170 | 760 |
| Isopentane | 70 | 550 | 210 | 1600 |

J = Estimated value.

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 99 | 70-130 |
| 1,2-Dichloroethane-d4 | 103 | 70-130 |
| 4-Bromofluorobenzene | 94 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: VMP-15-25.5-020316**

**Lab ID#: 1602139C-05A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021609** | **Date of Collection:** | **2/3/16 2:12:00 PM** |
| **Dil. Factor:** | **14.0** | **Date of Analysis:** | **2/16/16 01:29 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 70 | Not Detected | 350 | Not Detected |
| Freon 114 | 70 | Not Detected | 490 | Not Detected |
| Chloromethane | 280 | Not Detected | 580 | Not Detected |
| Vinyl Chloride | 70 | Not Detected | 180 | Not Detected |
| 1,3-Butadiene | 70 | Not Detected | 150 | Not Detected |
| Bromomethane | 70 | Not Detected | 270 | Not Detected |
| Chloroethane | 280 | Not Detected | 740 | Not Detected |
| Freon 11 | 70 | Not Detected | 390 | Not Detected |
| Ethanol | 280 | Not Detected | 530 | Not Detected |
| Freon 113 | 70 | Not Detected | 540 | Not Detected |
| 1,1-Dichloroethene | 70 | Not Detected | 280 | Not Detected |
| Acetone | 280 | Not Detected | 660 | Not Detected |
| 2-Propanol | 280 | Not Detected | 690 | Not Detected |
| Carbon Disulfide | 70 | Not Detected | 220 | Not Detected |
| 3-Chloropropene | 280 | Not Detected | 880 | Not Detected |
| Methylene Chloride | 70 | Not Detected | 240 | Not Detected |
| Methyl tert-butyl ether | 70 | Not Detected | 250 | Not Detected |
| trans-1,2-Dichloroethene | 70 | Not Detected | 280 | Not Detected |
| Hexane | 70 | 160 | 250 | 570 |
| 1,1-Dichloroethane | 70 | Not Detected | 280 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 280 | Not Detected | 820 | Not Detected |
| cis-1,2-Dichloroethene | 70 | Not Detected | 280 | Not Detected |
| Tetrahydrofuran | 70 | Not Detected | 210 | Not Detected |
| Chloroform | 70 | Not Detected | 340 | Not Detected |
| 1,1,1-Trichloroethane | 70 | Not Detected | 380 | Not Detected |
| Cyclohexane | 70 | 1200 | 240 | 4200 |
| Carbon Tetrachloride | 70 | Not Detected | 440 | Not Detected |
| 2,2,4-Trimethylpentane | 70 | 3800 | 330 | 18000 |
| Benzene | 70 | 65 J | 220 | 210 J |
| 1,2-Dichloroethane | 70 | Not Detected | 280 | Not Detected |
| Heptane | 70 | 35 J | 290 | 140 J |
| Trichloroethene | 70 | Not Detected | 380 | Not Detected |
| 1,2-Dichloropropane | 70 | Not Detected | 320 | Not Detected |
| 1,4-Dioxane | 280 | Not Detected | 1000 | Not Detected |
| Bromodichloromethane | 70 | Not Detected | 470 | Not Detected |
| cis-1,3-Dichloropropene | 70 | Not Detected | 320 | Not Detected |
| 4-Methyl-2-pentanone | 70 | Not Detected | 290 | Not Detected |
| Toluene | 70 | Not Detected | 260 | Not Detected |
| trans-1,3-Dichloropropene | 70 | Not Detected | 320 | Not Detected |
| 1,1,2-Trichloroethane | 70 | Not Detected | 380 | Not Detected |
| Tetrachloroethene | 70 | Not Detected | 470 | Not Detected |
| 2-Hexanone | 280 | Not Detected | 1100 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: VMP-15-25.5-020316**

**Lab ID#: 1602139C-05A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021609** | **Date of Collection: 2/3/16 2:12:00 PM** | |
| **Dil. Factor:** | **14.0** | **Date of Analysis: 2/16/16 01:29 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 70 | Not Detected | 600 | Not Detected |
| 1,2-Dibromoethane (EDB) | 70 | Not Detected | 540 | Not Detected |
| Chlorobenzene | 70 | Not Detected | 320 | Not Detected |
| Ethyl Benzene | 70 | Not Detected | 300 | Not Detected |
| m,p-Xylene | 70 | Not Detected | 300 | Not Detected |
| o-Xylene | 70 | Not Detected | 300 | Not Detected |
| Styrene | 70 | Not Detected | 300 | Not Detected |
| Bromoform | 70 | Not Detected | 720 | Not Detected |
| Cumene | 70 | Not Detected | 340 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 70 | Not Detected | 480 | Not Detected |
| Propylbenzene | 70 | Not Detected | 340 | Not Detected |
| 4-Ethyltoluene | 70 | Not Detected | 340 | Not Detected |
| 1,3,5-Trimethylbenzene | 70 | Not Detected | 340 | Not Detected |
| 1,2,4-Trimethylbenzene | 70 | Not Detected | 340 | Not Detected |
| 1,3-Dichlorobenzene | 70 | Not Detected | 420 | Not Detected |
| 1,4-Dichlorobenzene | 70 | Not Detected | 420 | Not Detected |
| alpha-Chlorotoluene | 70 | Not Detected | 360 | Not Detected |
| 1,2-Dichlorobenzene | 70 | Not Detected | 420 | Not Detected |
| 1,2,4-Trichlorobenzene | 280 | Not Detected | 2100 | Not Detected |
| Hexachlorobutadiene | 280 | Not Detected | 3000 | Not Detected |
| Butane | 280 | 3900 J0 | 660 | 9400 J0 |
| Isopentane | 280 | 35000 | 830 | 100000 |

J = Estimated value.
J0 = Estimated value due to bias in the CCV.

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | 70-130 |
| Toluene-d8 | 102 | 70-130 |
| 4-Bromofluorobenzene | 102 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: VMP-15-29-020316**

**Lab ID#: 1602139C-06A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021608** | **Date of Collection: 2/3/16 2:28:00 PM** | |
| **Dil. Factor:** | **5.32** | **Date of Analysis: 2/16/16 01:06 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 27 | Not Detected | 130 | Not Detected |
| Freon 114 | 27 | Not Detected | 180 | Not Detected |
| Chloromethane | 110 | Not Detected | 220 | Not Detected |
| Vinyl Chloride | 27 | Not Detected | 68 | Not Detected |
| 1,3-Butadiene | 27 | Not Detected | 59 | Not Detected |
| Bromomethane | 27 | Not Detected | 100 | Not Detected |
| Chloroethane | 110 | Not Detected | 280 | Not Detected |
| Freon 11 | 27 | Not Detected | 150 | Not Detected |
| Ethanol | 110 | Not Detected | 200 | Not Detected |
| Freon 113 | 27 | Not Detected | 200 | Not Detected |
| 1,1-Dichloroethene | 27 | Not Detected | 100 | Not Detected |
| Acetone | 110 | Not Detected | 250 | Not Detected |
| 2-Propanol | 110 | Not Detected | 260 | Not Detected |
| Carbon Disulfide | 27 | Not Detected | 83 | Not Detected |
| 3-Chloropropene | 110 | Not Detected | 330 | Not Detected |
| Methylene Chloride | 27 | Not Detected | 92 | Not Detected |
| Methyl tert-butyl ether | 27 | Not Detected | 96 | Not Detected |
| trans-1,2-Dichloroethene | 27 | Not Detected | 100 | Not Detected |
| Hexane | 27 | 73 | 94 | 260 |
| 1,1-Dichloroethane | 27 | Not Detected | 110 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 110 | Not Detected | 310 | Not Detected |
| cis-1,2-Dichloroethene | 27 | Not Detected | 100 | Not Detected |
| Tetrahydrofuran | 27 | Not Detected | 78 | Not Detected |
| Chloroform | 27 | Not Detected | 130 | Not Detected |
| 1,1,1-Trichloroethane | 27 | Not Detected | 140 | Not Detected |
| Cyclohexane | 27 | 560 | 92 | 1900 |
| Carbon Tetrachloride | 27 | Not Detected | 170 | Not Detected |
| 2,2,4-Trimethylpentane | 27 | 4900 | 120 | 23000 |
| Benzene | 27 | 63 | 85 | 200 |
| 1,2-Dichloroethane | 27 | Not Detected | 110 | Not Detected |
| Heptane | 27 | 19 J | 110 | 77 J |
| Trichloroethene | 27 | Not Detected | 140 | Not Detected |
| 1,2-Dichloropropane | 27 | Not Detected | 120 | Not Detected |
| 1,4-Dioxane | 110 | Not Detected | 380 | Not Detected |
| Bromodichloromethane | 27 | Not Detected | 180 | Not Detected |
| cis-1,3-Dichloropropene | 27 | Not Detected | 120 | Not Detected |
| 4-Methyl-2-pentanone | 27 | Not Detected | 110 | Not Detected |
| Toluene | 27 | Not Detected | 100 | Not Detected |
| trans-1,3-Dichloropropene | 27 | Not Detected | 120 | Not Detected |
| 1,1,2-Trichloroethane | 27 | Not Detected | 140 | Not Detected |
| Tetrachloroethene | 27 | Not Detected | 180 | Not Detected |
| 2-Hexanone | 110 | Not Detected | 440 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: VMP-15-29-020316**

**Lab ID#: 1602139C-06A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021608** | **Date of Collection: 2/3/16 2:28:00 PM** | |
| **Dil. Factor:** | **5.32** | **Date of Analysis: 2/16/16 01:06 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 27 | Not Detected | 230 | Not Detected |
| 1,2-Dibromoethane (EDB) | 27 | Not Detected | 200 | Not Detected |
| Chlorobenzene | 27 | Not Detected | 120 | Not Detected |
| Ethyl Benzene | 27 | Not Detected | 120 | Not Detected |
| m,p-Xylene | 27 | Not Detected | 120 | Not Detected |
| o-Xylene | 27 | Not Detected | 120 | Not Detected |
| Styrene | 27 | Not Detected | 110 | Not Detected |
| Bromoform | 27 | Not Detected | 270 | Not Detected |
| Cumene | 27 | Not Detected | 130 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 27 | Not Detected | 180 | Not Detected |
| Propylbenzene | 27 | Not Detected | 130 | Not Detected |
| 4-Ethyltoluene | 27 | Not Detected | 130 | Not Detected |
| 1,3,5-Trimethylbenzene | 27 | Not Detected | 130 | Not Detected |
| 1,2,4-Trimethylbenzene | 27 | Not Detected | 130 | Not Detected |
| 1,3-Dichlorobenzene | 27 | Not Detected | 160 | Not Detected |
| 1,4-Dichlorobenzene | 27 | Not Detected | 160 | Not Detected |
| alpha-Chlorotoluene | 27 | Not Detected | 140 | Not Detected |
| 1,2-Dichlorobenzene | 27 | Not Detected | 160 | Not Detected |
| 1,2,4-Trichlorobenzene | 110 | Not Detected | 790 | Not Detected |
| Hexachlorobutadiene | 110 | Not Detected | 1100 | Not Detected |
| Butane | 110 | 3500 J0 | 250 | 8300 J0 |
| Isopentane | 110 | 19000 | 310 | 56000 |

J = Estimated value.
J0 = Estimated value due to bias in the CCV.

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 118 | 70-130 |
| Toluene-d8 | 102 | 70-130 |
| 4-Bromofluorobenzene | 103 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: VMP-55-20-020416**

**Lab ID#: 1602139C-11A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021618** | **Date of Collection:** | **2/4/16 10:08:00 AM** |
| **Dil. Factor:** | **66.2** | **Date of Analysis:** | **2/16/16 06:57 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 330 | Not Detected | 1600 | Not Detected |
| Freon 114 | 330 | Not Detected | 2300 | Not Detected |
| Chloromethane | 1300 | Not Detected | 2700 | Not Detected |
| Vinyl Chloride | 330 | Not Detected | 850 | Not Detected |
| 1,3-Butadiene | 330 | Not Detected | 730 | Not Detected |
| Bromomethane | 330 | Not Detected | 1300 | Not Detected |
| Chloroethane | 1300 | Not Detected | 3500 | Not Detected |
| Freon 11 | 330 | Not Detected | 1800 | Not Detected |
| Ethanol | 1300 | Not Detected | 2500 | Not Detected |
| Freon 113 | 330 | Not Detected | 2500 | Not Detected |
| 1,1-Dichloroethene | 330 | Not Detected | 1300 | Not Detected |
| Acetone | 1300 | Not Detected | 3100 | Not Detected |
| 2-Propanol | 1300 | Not Detected | 3200 | Not Detected |
| Carbon Disulfide | 330 | Not Detected | 1000 | Not Detected |
| 3-Chloropropene | 1300 | Not Detected | 4100 | Not Detected |
| Methylene Chloride | 330 | Not Detected | 1100 | Not Detected |
| Methyl tert-butyl ether | 330 | Not Detected | 1200 | Not Detected |
| trans-1,2-Dichloroethene | 330 | Not Detected | 1300 | Not Detected |
| Hexane | 330 | 47000 | 1200 | 170000 |
| 1,1-Dichloroethane | 330 | Not Detected | 1300 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 1300 | Not Detected | 3900 | Not Detected |
| cis-1,2-Dichloroethene | 330 | Not Detected | 1300 | Not Detected |
| Tetrahydrofuran | 330 | Not Detected | 980 | Not Detected |
| Chloroform | 330 | Not Detected | 1600 | Not Detected |
| 1,1,1-Trichloroethane | 330 | Not Detected | 1800 | Not Detected |
| Cyclohexane | 330 | 70000 | 1100 | 240000 |
| Carbon Tetrachloride | 330 | Not Detected | 2100 | Not Detected |
| 2,2,4-Trimethylpentane | 330 | 50000 | 1500 | 230000 |
| Benzene | 330 | Not Detected | 1000 | Not Detected |
| 1,2-Dichloroethane | 330 | Not Detected | 1300 | Not Detected |
| Heptane | 330 | 52000 | 1400 | 210000 |
| Trichloroethene | 330 | Not Detected | 1800 | Not Detected |
| 1,2-Dichloropropane | 330 | Not Detected | 1500 | Not Detected |
| 1,4-Dioxane | 1300 | Not Detected | 4800 | Not Detected |
| Bromodichloromethane | 330 | Not Detected | 2200 | Not Detected |
| cis-1,3-Dichloropropene | 330 | Not Detected | 1500 | Not Detected |
| 4-Methyl-2-pentanone | 330 | Not Detected | 1400 | Not Detected |
| Toluene | 330 | Not Detected | 1200 | Not Detected |
| trans-1,3-Dichloropropene | 330 | Not Detected | 1500 | Not Detected |
| 1,1,2-Trichloroethane | 330 | Not Detected | 1800 | Not Detected |
| Tetrachloroethene | 330 | Not Detected | 2200 | Not Detected |
| 2-Hexanone | 1300 | Not Detected | 5400 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: VMP-55-20-020416**

**Lab ID#: 1602139C-11A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021618** | **Date of Collection: 2/4/16 10:08:00 AM** | |
| **Dil. Factor:** | **66.2** | **Date of Analysis: 2/16/16 06:57 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 330 | Not Detected | 2800 | Not Detected |
| 1,2-Dibromoethane (EDB) | 330 | Not Detected | 2500 | Not Detected |
| Chlorobenzene | 330 | Not Detected | 1500 | Not Detected |
| Ethyl Benzene | 330 | Not Detected | 1400 | Not Detected |
| m,p-Xylene | 330 | Not Detected | 1400 | Not Detected |
| o-Xylene | 330 | Not Detected | 1400 | Not Detected |
| Styrene | 330 | Not Detected | 1400 | Not Detected |
| Bromoform | 330 | Not Detected | 3400 | Not Detected |
| Cumene | 330 | Not Detected | 1600 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 330 | Not Detected | 2300 | Not Detected |
| Propylbenzene | 330 | 36 J | 1600 | 180 J |
| 4-Ethyltoluene | 330 | 140 J | 1600 | 710 J |
| 1,3,5-Trimethylbenzene | 330 | 83 J | 1600 | 410 J |
| 1,2,4-Trimethylbenzene | 330 | 170 J | 1600 | 820 J |
| 1,3-Dichlorobenzene | 330 | Not Detected | 2000 | Not Detected |
| 1,4-Dichlorobenzene | 330 | Not Detected | 2000 | Not Detected |
| alpha-Chlorotoluene | 330 | Not Detected | 1700 | Not Detected |
| 1,2-Dichlorobenzene | 330 | Not Detected | 2000 | Not Detected |
| 1,2,4-Trichlorobenzene | 1300 | Not Detected | 9800 | Not Detected |
| Hexachlorobutadiene | 1300 | Not Detected | 14000 | Not Detected |
| Butane | 1300 | 24000 J0 | 3100 | 58000 J0 |
| Isopentane | 1300 | 43000 | 3900 | 130000 |

J = Estimated value.
J0 = Estimated value due to bias in the CCV.
Q = Exceeds Quality Control limits.

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 133 Q | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 106 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: VMP-55-20-020416**

**Lab ID#: 1602139C-11B**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021610** | **Date of Collection:** | **2/4/16 10:08:00 AM** |
| **Dil. Factor:** | **26.5** | **Date of Analysis:** | **2/16/16 02:16 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 130 | Not Detected | 660 | Not Detected |
| Freon 114 | 130 | Not Detected | 930 | Not Detected |
| Chloromethane | 530 | Not Detected | 1100 | Not Detected |
| Vinyl Chloride | 130 | Not Detected | 340 | Not Detected |
| 1,3-Butadiene | 130 | Not Detected | 290 | Not Detected |
| Bromomethane | 130 | Not Detected | 510 | Not Detected |
| Chloroethane | 530 | Not Detected | 1400 | Not Detected |
| Freon 11 | 130 | Not Detected | 740 | Not Detected |
| Ethanol | 530 | Not Detected | 1000 | Not Detected |
| Freon 113 | 130 | Not Detected | 1000 | Not Detected |
| 1,1-Dichloroethene | 130 | Not Detected | 520 | Not Detected |
| Acetone | 530 | Not Detected | 1200 | Not Detected |
| 2-Propanol | 530 | Not Detected | 1300 | Not Detected |
| Carbon Disulfide | 130 | Not Detected | 410 | Not Detected |
| 3-Chloropropene | 530 | Not Detected | 1600 | Not Detected |
| Methylene Chloride | 130 | Not Detected | 460 | Not Detected |
| Methyl tert-butyl ether | 130 | Not Detected | 480 | Not Detected |
| trans-1,2-Dichloroethene | 130 | Not Detected | 520 | Not Detected |
| Hexane | 130 | 42000 | 470 | 150000 |
| 1,1-Dichloroethane | 130 | Not Detected | 540 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 530 | Not Detected | 1600 | Not Detected |
| cis-1,2-Dichloroethene | 130 | Not Detected | 520 | Not Detected |
| Tetrahydrofuran | 130 | Not Detected | 390 | Not Detected |
| Chloroform | 130 | Not Detected | 650 | Not Detected |
| 1,1,1-Trichloroethane | 130 | Not Detected | 720 | Not Detected |
| Cyclohexane | 130 | 62000 | 460 | 210000 |
| Carbon Tetrachloride | 130 | Not Detected | 830 | Not Detected |
| 2,2,4-Trimethylpentane | 130 | 44000 E | 620 | 210000 E |
| Benzene | 130 | Not Detected | 420 | Not Detected |
| 1,2-Dichloroethane | 130 | Not Detected | 540 | Not Detected |
| Heptane | 130 | 46000 | 540 | 190000 |
| Trichloroethene | 130 | Not Detected | 710 | Not Detected |
| 1,2-Dichloropropane | 130 | Not Detected | 610 | Not Detected |
| 1,4-Dioxane | 530 | Not Detected | 1900 | Not Detected |
| Bromodichloromethane | 130 | Not Detected | 890 | Not Detected |
| cis-1,3-Dichloropropene | 130 | Not Detected | 600 | Not Detected |
| 4-Methyl-2-pentanone | 130 | Not Detected | 540 | Not Detected |
| Toluene | 130 | Not Detected | 500 | Not Detected |
| trans-1,3-Dichloropropene | 130 | Not Detected | 600 | Not Detected |
| 1,1,2-Trichloroethane | 130 | Not Detected | 720 | Not Detected |
| Tetrachloroethene | 130 | Not Detected | 900 | Not Detected |
| 2-Hexanone | 530 | Not Detected | 2200 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: VMP-55-20-020416**

**Lab ID#: 1602139C-11B**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021610** | **Date of Collection: 2/4/16 10:08:00 AM** | |
| **Dil. Factor:** | **26.5** | **Date of Analysis: 2/16/16 02:16 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 130 | Not Detected | 1100 | Not Detected |
| 1,2-Dibromoethane (EDB) | 130 | Not Detected | 1000 | Not Detected |
| Chlorobenzene | 130 | Not Detected | 610 | Not Detected |
| Ethyl Benzene | 130 | Not Detected | 580 | Not Detected |
| m,p-Xylene | 130 | Not Detected | 580 | Not Detected |
| o-Xylene | 130 | Not Detected | 580 | Not Detected |
| Styrene | 130 | Not Detected | 560 | Not Detected |
| Bromoform | 130 | Not Detected | 1400 | Not Detected |
| Cumene | 130 | Not Detected | 650 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 130 | Not Detected | 910 | Not Detected |
| Propylbenzene | 130 | Not Detected | 650 | Not Detected |
| 4-Ethyltoluene | 130 | Not Detected | 650 | Not Detected |
| 1,3,5-Trimethylbenzene | 130 | Not Detected | 650 | Not Detected |
| 1,2,4-Trimethylbenzene | 130 | Not Detected | 650 | Not Detected |
| 1,3-Dichlorobenzene | 130 | Not Detected | 800 | Not Detected |
| 1,4-Dichlorobenzene | 130 | Not Detected | 800 | Not Detected |
| alpha-Chlorotoluene | 130 | Not Detected | 680 | Not Detected |
| 1,2-Dichlorobenzene | 130 | Not Detected | 800 | Not Detected |
| 1,2,4-Trichlorobenzene | 530 | Not Detected | 3900 | Not Detected |
| Hexachlorobutadiene | 530 | Not Detected | 5600 | Not Detected |
| Butane | 530 | 21000 J0 | 1200 | 51000 J0 |
| Isopentane | 530 | 39000 | 1600 | 110000 |

E = Exceeds instrument calibration range.
J0 = Estimated value due to bias in the CCV.
**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 124 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 104 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: VMP-55-20-020416-DUP**

**Lab ID#: 1602139C-12A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021619** | **Date of Collection:** | **2/4/16 10:08:00 AM** |
| **Dil. Factor:** | **59.8** | **Date of Analysis:** | **2/16/16 07:36 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 300 | Not Detected | 1500 | Not Detected |
| Freon 114 | 300 | Not Detected | 2100 | Not Detected |
| Chloromethane | 1200 | Not Detected | 2500 | Not Detected |
| Vinyl Chloride | 300 | Not Detected | 760 | Not Detected |
| 1,3-Butadiene | 300 | Not Detected | 660 | Not Detected |
| Bromomethane | 300 | Not Detected | 1200 | Not Detected |
| Chloroethane | 1200 | Not Detected | 3200 | Not Detected |
| Freon 11 | 300 | Not Detected | 1700 | Not Detected |
| Ethanol | 1200 | Not Detected | 2200 | Not Detected |
| Freon 113 | 300 | Not Detected | 2300 | Not Detected |
| 1,1-Dichloroethene | 300 | Not Detected | 1200 | Not Detected |
| Acetone | 1200 | Not Detected | 2800 | Not Detected |
| 2-Propanol | 1200 | Not Detected | 2900 | Not Detected |
| Carbon Disulfide | 300 | Not Detected | 930 | Not Detected |
| 3-Chloropropene | 1200 | Not Detected | 3700 | Not Detected |
| Methylene Chloride | 300 | Not Detected | 1000 | Not Detected |
| Methyl tert-butyl ether | 300 | Not Detected | 1100 | Not Detected |
| trans-1,2-Dichloroethene | 300 | Not Detected | 1200 | Not Detected |
| Hexane | 300 | 47000 | 1000 | 170000 |
| 1,1-Dichloroethane | 300 | Not Detected | 1200 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 1200 | Not Detected | 3500 | Not Detected |
| cis-1,2-Dichloroethene | 300 | Not Detected | 1200 | Not Detected |
| Tetrahydrofuran | 300 | Not Detected | 880 | Not Detected |
| Chloroform | 300 | Not Detected | 1500 | Not Detected |
| 1,1,1-Trichloroethane | 300 | Not Detected | 1600 | Not Detected |
| Cyclohexane | 300 | 69000 | 1000 | 240000 |
| Carbon Tetrachloride | 300 | Not Detected | 1900 | Not Detected |
| 2,2,4-Trimethylpentane | 300 | 50000 | 1400 | 230000 |
| Benzene | 300 | Not Detected | 960 | Not Detected |
| 1,2-Dichloroethane | 300 | Not Detected | 1200 | Not Detected |
| Heptane | 300 | 52000 | 1200 | 210000 |
| Trichloroethene | 300 | Not Detected | 1600 | Not Detected |
| 1,2-Dichloropropane | 300 | Not Detected | 1400 | Not Detected |
| 1,4-Dioxane | 1200 | Not Detected | 4300 | Not Detected |
| Bromodichloromethane | 300 | Not Detected | 2000 | Not Detected |
| cis-1,3-Dichloropropene | 300 | Not Detected | 1400 | Not Detected |
| 4-Methyl-2-pentanone | 300 | Not Detected | 1200 | Not Detected |
| Toluene | 300 | Not Detected | 1100 | Not Detected |
| trans-1,3-Dichloropropene | 300 | Not Detected | 1400 | Not Detected |
| 1,1,2-Trichloroethane | 300 | Not Detected | 1600 | Not Detected |
| Tetrachloroethene | 300 | Not Detected | 2000 | Not Detected |
| 2-Hexanone | 1200 | Not Detected | 4900 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: VMP-55-20-020416-DUP**

**Lab ID#: 1602139C-12A**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021619** | **Date of Collection: 2/4/16 10:08:00 AM** | |
| **Dil. Factor:** | **59.8** | **Date of Analysis: 2/16/16 07:36 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 300 | Not Detected | 2500 | Not Detected |
| 1,2-Dibromoethane (EDB) | 300 | Not Detected | 2300 | Not Detected |
| Chlorobenzene | 300 | Not Detected | 1400 | Not Detected |
| Ethyl Benzene | 300 | Not Detected | 1300 | Not Detected |
| m,p-Xylene | 300 | Not Detected | 1300 | Not Detected |
| o-Xylene | 300 | Not Detected | 1300 | Not Detected |
| Styrene | 300 | Not Detected | 1300 | Not Detected |
| Bromoform | 300 | Not Detected | 3100 | Not Detected |
| Cumene | 300 | Not Detected | 1500 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 300 | Not Detected | 2000 | Not Detected |
| Propylbenzene | 300 | Not Detected | 1500 | Not Detected |
| 4-Ethyltoluene | 300 | 54 J | 1500 | 260 J |
| 1,3,5-Trimethylbenzene | 300 | 38 J | 1500 | 190 J |
| 1,2,4-Trimethylbenzene | 300 | Not Detected | 1500 | Not Detected |
| 1,3-Dichlorobenzene | 300 | Not Detected | 1800 | Not Detected |
| 1,4-Dichlorobenzene | 300 | Not Detected | 1800 | Not Detected |
| alpha-Chlorotoluene | 300 | Not Detected | 1500 | Not Detected |
| 1,2-Dichlorobenzene | 300 | Not Detected | 1800 | Not Detected |
| 1,2,4-Trichlorobenzene | 1200 | Not Detected | 8900 | Not Detected |
| Hexachlorobutadiene | 1200 | Not Detected | 13000 | Not Detected |
| Butane | 1200 | 24000 J0 | 2800 | 58000 J0 |
| Isopentane | 1200 | 43000 | 3500 | 130000 |

J = Estimated value.
J0 = Estimated value due to bias in the CCV.
**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 120 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 102 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: VMP-55-20-020416-DUP**

**Lab ID#: 1602139C-12B**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021611** | **Date of Collection:** | **2/4/16 10:08:00 AM** |
| **Dil. Factor:** | **23.9** | **Date of Analysis:** | **2/16/16 03:03 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 120 | Not Detected | 590 | Not Detected |
| Freon 114 | 120 | Not Detected | 840 | Not Detected |
| Chloromethane | 480 | Not Detected | 990 | Not Detected |
| Vinyl Chloride | 120 | Not Detected | 300 | Not Detected |
| 1,3-Butadiene | 120 | Not Detected | 260 | Not Detected |
| Bromomethane | 120 | Not Detected | 460 | Not Detected |
| Chloroethane | 480 | Not Detected | 1300 | Not Detected |
| Freon 11 | 120 | Not Detected | 670 | Not Detected |
| Ethanol | 480 | Not Detected | 900 | Not Detected |
| Freon 113 | 120 | Not Detected | 920 | Not Detected |
| 1,1-Dichloroethene | 120 | Not Detected | 470 | Not Detected |
| Acetone | 480 | Not Detected | 1100 | Not Detected |
| 2-Propanol | 480 | Not Detected | 1200 | Not Detected |
| Carbon Disulfide | 120 | Not Detected | 370 | Not Detected |
| 3-Chloropropene | 480 | Not Detected | 1500 | Not Detected |
| Methylene Chloride | 120 | Not Detected | 420 | Not Detected |
| Methyl tert-butyl ether | 120 | Not Detected | 430 | Not Detected |
| trans-1,2-Dichloroethene | 120 | Not Detected | 470 | Not Detected |
| Hexane | 120 | 44000 | 420 | 150000 |
| 1,1-Dichloroethane | 120 | Not Detected | 480 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 480 | Not Detected | 1400 | Not Detected |
| cis-1,2-Dichloroethene | 120 | Not Detected | 470 | Not Detected |
| Tetrahydrofuran | 120 | Not Detected | 350 | Not Detected |
| Chloroform | 120 | Not Detected | 580 | Not Detected |
| 1,1,1-Trichloroethane | 120 | Not Detected | 650 | Not Detected |
| Cyclohexane | 120 | 59000 | 410 | 200000 |
| Carbon Tetrachloride | 120 | Not Detected | 750 | Not Detected |
| 2,2,4-Trimethylpentane | 120 | 46000 E | 560 | 220000 E |
| Benzene | 120 | Not Detected | 380 | Not Detected |
| 1,2-Dichloroethane | 120 | Not Detected | 480 | Not Detected |
| Heptane | 120 | 47000 | 490 | 190000 |
| Trichloroethene | 120 | Not Detected | 640 | Not Detected |
| 1,2-Dichloropropane | 120 | Not Detected | 550 | Not Detected |
| 1,4-Dioxane | 480 | Not Detected | 1700 | Not Detected |
| Bromodichloromethane | 120 | Not Detected | 800 | Not Detected |
| cis-1,3-Dichloropropene | 120 | Not Detected | 540 | Not Detected |
| 4-Methyl-2-pentanone | 120 | Not Detected | 490 | Not Detected |
| Toluene | 120 | Not Detected | 450 | Not Detected |
| trans-1,3-Dichloropropene | 120 | Not Detected | 540 | Not Detected |
| 1,1,2-Trichloroethane | 120 | Not Detected | 650 | Not Detected |
| Tetrachloroethene | 120 | Not Detected | 810 | Not Detected |
| 2-Hexanone | 480 | Not Detected | 2000 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: VMP-55-20-020416-DUP**

**Lab ID#: 1602139C-12B**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021611** | **Date of Collection:** | **2/4/16 10:08:00 AM** |
| **Dil. Factor:** | **23.9** | **Date of Analysis:** | **2/16/16 03:03 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 120 | Not Detected | 1000 | Not Detected |
| 1,2-Dibromoethane (EDB) | 120 | Not Detected | 920 | Not Detected |
| Chlorobenzene | 120 | Not Detected | 550 | Not Detected |
| Ethyl Benzene | 120 | Not Detected | 520 | Not Detected |
| m,p-Xylene | 120 | Not Detected | 520 | Not Detected |
| o-Xylene | 120 | Not Detected | 520 | Not Detected |
| Styrene | 120 | Not Detected | 510 | Not Detected |
| Bromoform | 120 | Not Detected | 1200 | Not Detected |
| Cumene | 120 | Not Detected | 590 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 120 | Not Detected | 820 | Not Detected |
| Propylbenzene | 120 | Not Detected | 590 | Not Detected |
| 4-Ethyltoluene | 120 | Not Detected | 590 | Not Detected |
| 1,3,5-Trimethylbenzene | 120 | Not Detected | 590 | Not Detected |
| 1,2,4-Trimethylbenzene | 120 | Not Detected | 590 | Not Detected |
| 1,3-Dichlorobenzene | 120 | Not Detected | 720 | Not Detected |
| 1,4-Dichlorobenzene | 120 | Not Detected | 720 | Not Detected |
| alpha-Chlorotoluene | 120 | Not Detected | 620 | Not Detected |
| 1,2-Dichlorobenzene | 120 | Not Detected | 720 | Not Detected |
| 1,2,4-Trichlorobenzene | 480 | Not Detected | 3500 | Not Detected |
| Hexachlorobutadiene | 480 | Not Detected | 5100 | Not Detected |
| Butane | 480 | 23000 J0 | 1100 | 55000 J0 |
| Isopentane | 480 | 40000 | 1400 | 120000 |

E = Exceeds instrument calibration range.
J0 = Estimated value due to bias in the CCV.
Q = Exceeds Quality Control limits.

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 134 Q | 70-130 |
| Toluene-d8 | 101 | 70-130 |
| 4-Bromofluorobenzene | 108 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 1602139C-13A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021506a** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 12:13 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 | 1.2 J | 12 | 2.8 J |
| 2-Propanol | 2.0 | 0.78 J | 4.9 | 1.9 J |
| 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 | 0.50 | Not Detected | 1.8 | 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 | 0.30 J | 2.0 | 1.2 J |
| 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 |

eurofins | Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 1602139C-13A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021506a** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 12:13 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 | 99 | 70-130 |
| 1,2-Dichloroethane-d4 | 94 | 70-130 |
| 4-Bromofluorobenzene | 95 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 1602139C-13B**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021606a** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 10:46 AM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 5.0 | Not Detected | 25 | Not Detected |
| Freon 114 | 5.0 | Not Detected | 35 | Not Detected |
| Chloromethane | 20 | Not Detected | 41 | Not Detected |
| Vinyl Chloride | 5.0 | Not Detected | 13 | Not Detected |
| 1,3-Butadiene | 5.0 | Not Detected | 11 | Not Detected |
| Bromomethane | 5.0 | Not Detected | 19 | Not Detected |
| Chloroethane | 20 | Not Detected | 53 | Not Detected |
| Freon 11 | 5.0 | Not Detected | 28 | Not Detected |
| Ethanol | 20 | Not Detected | 38 | Not Detected |
| Freon 113 | 5.0 | Not Detected | 38 | Not Detected |
| 1,1-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Acetone | 20 | Not Detected | 48 | Not Detected |
| 2-Propanol | 20 | Not Detected | 49 | Not Detected |
| Carbon Disulfide | 5.0 | Not Detected | 16 | Not Detected |
| 3-Chloropropene | 20 | Not Detected | 63 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |
| trans-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Hexane | 5.0 | Not Detected | 18 | Not Detected |
| 1,1-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 20 | Not Detected | 59 | Not Detected |
| cis-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Tetrahydrofuran | 5.0 | 1.3 J | 15 | 3.9 J |
| Chloroform | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,1-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Cyclohexane | 5.0 | Not Detected | 17 | Not Detected |
| Carbon Tetrachloride | 5.0 | Not Detected | 31 | Not Detected |
| 2,2,4-Trimethylpentane | 5.0 | Not Detected | 23 | Not Detected |
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| 1,2-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| Heptane | 5.0 | Not Detected | 20 | Not Detected |
| Trichloroethene | 5.0 | Not Detected | 27 | Not Detected |
| 1,2-Dichloropropane | 5.0 | Not Detected | 23 | Not Detected |
| 1,4-Dioxane | 20 | Not Detected | 72 | Not Detected |
| Bromodichloromethane | 5.0 | Not Detected | 34 | Not Detected |
| cis-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |
| 4-Methyl-2-pentanone | 5.0 | Not Detected | 20 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| trans-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |
| 1,1,2-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Tetrachloroethene | 5.0 | Not Detected | 34 | Not Detected |
| 2-Hexanone | 20 | Not Detected | 82 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 1602139C-13B**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021606a** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 10:46 AM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 5.0 | Not Detected | 42 | Not Detected |
| 1,2-Dibromoethane (EDB) | 5.0 | Not Detected | 38 | Not Detected |
| Chlorobenzene | 5.0 | Not Detected | 23 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Styrene | 5.0 | Not Detected | 21 | Not Detected |
| Bromoform | 5.0 | Not Detected | 52 | Not Detected |
| Cumene | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 5.0 | Not Detected | 34 | Not Detected |
| Propylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 4-Ethyltoluene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3,5-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,2,4-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,4-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| alpha-Chlorotoluene | 5.0 | Not Detected | 26 | Not Detected |
| 1,2-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,2,4-Trichlorobenzene | 20 | Not Detected | 150 | Not Detected |
| Hexachlorobutadiene | 20 | Not Detected | 210 | Not Detected |
| Butane | 20 | Not Detected UJ | 48 | Not Detected UJ |
| Isopentane | 20 | Not Detected | 59 | Not Detected |

J = Estimated value.
UJ = Analyte associated with low bias in the CCV and/or LCS.
**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 107 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 103 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: CCV**

**Lab ID#: 1602139C-14A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021502** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 10:32 AM** | |

| Compound | %Recovery |
|---|---|
| Freon 12 | 96 |
| Freon 114 | 98 |
| Chloromethane | 134 Q |
| Vinyl Chloride | 114 |
| 1,3-Butadiene | 95 |
| Bromomethane | 109 |
| Chloroethane | 95 |
| Freon 11 | 97 |
| Ethanol | 105 |
| Freon 113 | 95 |
| 1,1-Dichloroethene | 94 |
| Acetone | 89 |
| 2-Propanol | 87 |
| Carbon Disulfide | 94 |
| 3-Chloropropene | 94 |
| Methylene Chloride | 101 |
| Methyl tert-butyl ether | 92 |
| trans-1,2-Dichloroethene | 99 |
| Hexane | 94 |
| 1,1-Dichloroethane | 99 |
| 2-Butanone (Methyl Ethyl Ketone) | 93 |
| cis-1,2-Dichloroethene | 96 |
| Tetrahydrofuran | 100 |
| Chloroform | 97 |
| 1,1,1-Trichloroethane | 96 |
| Cyclohexane | 89 |
| Carbon Tetrachloride | 100 |
| 2,2,4-Trimethylpentane | 98 |
| Benzene | 97 |
| 1,2-Dichloroethane | 102 |
| Heptane | 85 |
| Trichloroethene | 98 |
| 1,2-Dichloropropane | 97 |
| 1,4-Dioxane | 99 |
| Bromodichloromethane | 99 |
| cis-1,3-Dichloropropene | 99 |
| 4-Methyl-2-pentanone | 100 |
| Toluene | 95 |
| trans-1,3-Dichloropropene | 101 |
| 1,1,2-Trichloroethane | 98 |
| Tetrachloroethene | 100 |
| 2-Hexanone | 106 |

eurofins | Air Toxics

**Client Sample ID: CCV**

**Lab ID#: 1602139C-14A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021502** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 10:32 AM** | |

| Compound | %Recovery |
|---|---|
| Dibromochloromethane | 101 |
| 1,2-Dibromoethane (EDB) | 101 |
| Chlorobenzene | 102 |
| Ethyl Benzene | 96 |
| m,p-Xylene | 98 |
| o-Xylene | 99 |
| Styrene | 109 |
| Bromoform | 100 |
| Cumene | 97 |
| 1,1,2,2-Tetrachloroethane | 96 |
| Propylbenzene | 98 |
| 4-Ethyltoluene | 96 |
| 1,3,5-Trimethylbenzene | 104 |
| 1,2,4-Trimethylbenzene | 101 |
| 1,3-Dichlorobenzene | 100 |
| 1,4-Dichlorobenzene | 99 |
| alpha-Chlorotoluene | 100 |
| 1,2-Dichlorobenzene | 101 |
| 1,2,4-Trichlorobenzene | 117 |
| Hexachlorobutadiene | 118 |
| Butane | 79 |
| Isopentane | 92 |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

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

eurofins | Air Toxics

**Client Sample ID: CCV**

**Lab ID#: 1602139C-14B**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021603** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 09:15 AM** | |

| Compound | %Recovery |
|---|---|
| Freon 12 | 91 |
| Freon 114 | 85 |
| Chloromethane | 79 |
| Vinyl Chloride | 70 |
| 1,3-Butadiene | 76 |
| Bromomethane | 73 |
| Chloroethane | 80 |
| Freon 11 | 101 |
| Ethanol | 85 |
| Freon 113 | 97 |
| 1,1-Dichloroethene | 88 |
| Acetone | 84 |
| 2-Propanol | 81 |
| Carbon Disulfide | 81 |
| 3-Chloropropene | 80 |
| Methylene Chloride | 83 |
| Methyl tert-butyl ether | 86 |
| trans-1,2-Dichloroethene | 87 |
| Hexane | 78 |
| 1,1-Dichloroethane | 86 |
| 2-Butanone (Methyl Ethyl Ketone) | 82 |
| cis-1,2-Dichloroethene | 85 |
| Tetrahydrofuran | 85 |
| Chloroform | 94 |
| 1,1,1-Trichloroethane | 98 |
| Cyclohexane | 82 |
| Carbon Tetrachloride | 104 |
| 2,2,4-Trimethylpentane | 83 |
| Benzene | 90 |
| 1,2-Dichloroethane | 101 |
| Heptane | 86 |
| Trichloroethene | 94 |
| 1,2-Dichloropropane | 89 |
| 1,4-Dioxane | 97 |
| Bromodichloromethane | 102 |
| cis-1,3-Dichloropropene | 96 |
| 4-Methyl-2-pentanone | 96 |
| Toluene | 96 |
| trans-1,3-Dichloropropene | 91 |
| 1,1,2-Trichloroethane | 92 |
| Tetrachloroethene | 102 |
| 2-Hexanone | 97 |

eurofins | Air Toxics

**Client Sample ID: CCV**
**Lab ID#: 1602139C-14B**
**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021603** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 09:15 AM** | |

| Compound | %Recovery |
|---|---|
| Dibromochloromethane | 104 |
| 1,2-Dibromoethane (EDB) | 97 |
| Chlorobenzene | 98 |
| Ethyl Benzene | 94 |
| m,p-Xylene | 98 |
| o-Xylene | 97 |
| Styrene | 100 |
| Bromoform | 109 |
| Cumene | 99 |
| 1,1,2,2-Tetrachloroethane | 96 |
| Propylbenzene | 99 |
| 4-Ethyltoluene | 100 |
| 1,3,5-Trimethylbenzene | 106 |
| 1,2,4-Trimethylbenzene | 103 |
| 1,3-Dichlorobenzene | 104 |
| 1,4-Dichlorobenzene | 104 |
| alpha-Chlorotoluene | 110 |
| 1,2-Dichlorobenzene | 103 |
| 1,2,4-Trichlorobenzene | 103 |
| Hexachlorobutadiene | 112 |
| Butane | 64 Q |
| Isopentane | 80 |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

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

eurofins | Air Toxics

**Client Sample ID: LCS**

**Lab ID#: 1602139C-15A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021503** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 10:56 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Freon 12 | 106 | 70-130 |
| Freon 114 | 113 | 70-130 |
| Chloromethane | 111 | 70-130 |
| Vinyl Chloride | 128 | 70-130 |
| 1,3-Butadiene | 100 | 70-130 |
| Bromomethane | 113 | 70-130 |
| Chloroethane | 102 | 70-130 |
| Freon 11 | 106 | 70-130 |
| Ethanol | 111 | 70-130 |
| Freon 113 | 100 | 70-130 |
| 1,1-Dichloroethene | 103 | 70-130 |
| Acetone | 87 | 70-130 |
| 2-Propanol | 94 | 70-130 |
| Carbon Disulfide | 89 | 70-130 |
| 3-Chloropropene | 94 | 70-130 |
| Methylene Chloride | 109 | 70-130 |
| Methyl tert-butyl ether | 95 | 70-130 |
| trans-1,2-Dichloroethene | 111 | 70-130 |
| Hexane | 102 | 70-130 |
| 1,1-Dichloroethane | 106 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 98 | 70-130 |
| cis-1,2-Dichloroethene | 101 | 70-130 |
| Tetrahydrofuran | 104 | 70-130 |
| Chloroform | 103 | 70-130 |
| 1,1,1-Trichloroethane | 101 | 70-130 |
| Cyclohexane | 94 | 70-130 |
| Carbon Tetrachloride | 104 | 70-130 |
| 2,2,4-Trimethylpentane | 103 | 70-130 |
| Benzene | 105 | 70-130 |
| 1,2-Dichloroethane | 110 | 70-130 |
| Heptane | 91 | 70-130 |
| Trichloroethene | 108 | 70-130 |
| 1,2-Dichloropropane | 105 | 70-130 |
| 1,4-Dioxane | 103 | 70-130 |
| Bromodichloromethane | 110 | 70-130 |
| cis-1,3-Dichloropropene | 100 | 70-130 |
| 4-Methyl-2-pentanone | 104 | 70-130 |
| Toluene | 104 | 70-130 |
| trans-1,3-Dichloropropene | 108 | 70-130 |
| 1,1,2-Trichloroethane | 107 | 70-130 |
| Tetrachloroethene | 108 | 70-130 |
| 2-Hexanone | 114 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCS**

**Lab ID#: 1602139C-15A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021503** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 10:56 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Dibromochloromethane | 110 | 70-130 |
| 1,2-Dibromoethane (EDB) | 108 | 70-130 |
| Chlorobenzene | 108 | 70-130 |
| Ethyl Benzene | 104 | 70-130 |
| m,p-Xylene | 105 | 70-130 |
| o-Xylene | 105 | 70-130 |
| Styrene | 117 | 70-130 |
| Bromoform | 111 | 70-130 |
| Cumene | 103 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 103 | 70-130 |
| Propylbenzene | 105 | 70-130 |
| 4-Ethyltoluene | 102 | 70-130 |
| 1,3,5-Trimethylbenzene | 111 | 70-130 |
| 1,2,4-Trimethylbenzene | 108 | 70-130 |
| 1,3-Dichlorobenzene | 106 | 70-130 |
| 1,4-Dichlorobenzene | 104 | 70-130 |
| alpha-Chlorotoluene | 106 | 70-130 |
| 1,2-Dichlorobenzene | 106 | 70-130 |
| 1,2,4-Trichlorobenzene | 132 Q | 70-130 |
| Hexachlorobutadiene | 132 Q | 70-130 |
| Butane | 117 | 60-140 |
| Isopentane | 99 | 60-140 |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 98 | 70-130 |
| 1,2-Dichloroethane-d4 | 100 | 70-130 |
| 4-Bromofluorobenzene | 97 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCSD**

**Lab ID#: 1602139C-15AA**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021504** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 11:21 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Freon 12 | 106 | 70-130 |
| Freon 114 | 114 | 70-130 |
| Chloromethane | 113 | 70-130 |
| Vinyl Chloride | 126 | 70-130 |
| 1,3-Butadiene | 101 | 70-130 |
| Bromomethane | 113 | 70-130 |
| Chloroethane | 104 | 70-130 |
| Freon 11 | 107 | 70-130 |
| Ethanol | 106 | 70-130 |
| Freon 113 | 100 | 70-130 |
| 1,1-Dichloroethene | 104 | 70-130 |
| Acetone | 88 | 70-130 |
| 2-Propanol | 96 | 70-130 |
| Carbon Disulfide | 89 | 70-130 |
| 3-Chloropropene | 97 | 70-130 |
| Methylene Chloride | 108 | 70-130 |
| Methyl tert-butyl ether | 96 | 70-130 |
| trans-1,2-Dichloroethene | 109 | 70-130 |
| Hexane | 101 | 70-130 |
| 1,1-Dichloroethane | 107 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 98 | 70-130 |
| cis-1,2-Dichloroethene | 102 | 70-130 |
| Tetrahydrofuran | 104 | 70-130 |
| Chloroform | 104 | 70-130 |
| 1,1,1-Trichloroethane | 99 | 70-130 |
| Cyclohexane | 96 | 70-130 |
| Carbon Tetrachloride | 104 | 70-130 |
| 2,2,4-Trimethylpentane | 102 | 70-130 |
| Benzene | 103 | 70-130 |
| 1,2-Dichloroethane | 109 | 70-130 |
| Heptane | 89 | 70-130 |
| Trichloroethene | 107 | 70-130 |
| 1,2-Dichloropropane | 105 | 70-130 |
| 1,4-Dioxane | 105 | 70-130 |
| Bromodichloromethane | 109 | 70-130 |
| cis-1,3-Dichloropropene | 99 | 70-130 |
| 4-Methyl-2-pentanone | 105 | 70-130 |
| Toluene | 102 | 70-130 |
| trans-1,3-Dichloropropene | 107 | 70-130 |
| 1,1,2-Trichloroethane | 104 | 70-130 |
| Tetrachloroethene | 106 | 70-130 |
| 2-Hexanone | 111 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCSD**

**Lab ID#: 1602139C-15AA**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p021504** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/15/16 11:21 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Dibromochloromethane | 108 | 70-130 |
| 1,2-Dibromoethane (EDB) | 106 | 70-130 |
| Chlorobenzene | 106 | 70-130 |
| Ethyl Benzene | 102 | 70-130 |
| m,p-Xylene | 104 | 70-130 |
| o-Xylene | 104 | 70-130 |
| Styrene | 114 | 70-130 |
| Bromoform | 109 | 70-130 |
| Cumene | 101 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 101 | 70-130 |
| Propylbenzene | 104 | 70-130 |
| 4-Ethyltoluene | 100 | 70-130 |
| 1,3,5-Trimethylbenzene | 111 | 70-130 |
| 1,2,4-Trimethylbenzene | 106 | 70-130 |
| 1,3-Dichlorobenzene | 105 | 70-130 |
| 1,4-Dichlorobenzene | 104 | 70-130 |
| alpha-Chlorotoluene | 104 | 70-130 |
| 1,2-Dichlorobenzene | 106 | 70-130 |
| 1,2,4-Trichlorobenzene | 134 Q | 70-130 |
| Hexachlorobutadiene | 136 Q | 70-130 |
| Butane | 114 | 60-140 |
| Isopentane | 100 | 60-140 |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

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

eurofins | Air Toxics

**Client Sample ID: LCS**

**Lab ID#: 1602139C-15B**

**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021604** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 09:40 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Freon 12 | 92 | 70-130 |
| Freon 114 | 92 | 70-130 |
| Chloromethane | 80 | 70-130 |
| Vinyl Chloride | 76 | 70-130 |
| 1,3-Butadiene | 77 | 70-130 |
| Bromomethane | 76 | 70-130 |
| Chloroethane | 84 | 70-130 |
| Freon 11 | 104 | 70-130 |
| Ethanol | 86 | 70-130 |
| Freon 113 | 96 | 70-130 |
| 1,1-Dichloroethene | 86 | 70-130 |
| Acetone | 86 | 70-130 |
| 2-Propanol | 83 | 70-130 |
| Carbon Disulfide | 71 | 70-130 |
| 3-Chloropropene | 73 | 70-130 |
| Methylene Chloride | 79 | 70-130 |
| Methyl tert-butyl ether | 82 | 70-130 |
| trans-1,2-Dichloroethene | 74 | 70-130 |
| Hexane | 78 | 70-130 |
| 1,1-Dichloroethane | 88 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 78 | 70-130 |
| cis-1,2-Dichloroethene | 89 | 70-130 |
| Tetrahydrofuran | 80 | 70-130 |
| Chloroform | 93 | 70-130 |
| 1,1,1-Trichloroethane | 99 | 70-130 |
| Cyclohexane | 78 | 70-130 |
| Carbon Tetrachloride | 98 | 70-130 |
| 2,2,4-Trimethylpentane | 84 | 70-130 |
| Benzene | 88 | 70-130 |
| 1,2-Dichloroethane | 105 | 70-130 |
| Heptane | 81 | 70-130 |
| Trichloroethene | 91 | 70-130 |
| 1,2-Dichloropropane | 92 | 70-130 |
| 1,4-Dioxane | 92 | 70-130 |
| Bromodichloromethane | 102 | 70-130 |
| cis-1,3-Dichloropropene | 89 | 70-130 |
| 4-Methyl-2-pentanone | 88 | 70-130 |
| Toluene | 95 | 70-130 |
| trans-1,3-Dichloropropene | 84 | 70-130 |
| 1,1,2-Trichloroethane | 92 | 70-130 |
| Tetrachloroethene | 101 | 70-130 |
| 2-Hexanone | 81 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCS**
**Lab ID#: 1602139C-15B**
**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021604** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 09:40 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Dibromochloromethane | 103 | 70-130 |
| 1,2-Dibromoethane (EDB) | 96 | 70-130 |
| Chlorobenzene | 96 | 70-130 |
| Ethyl Benzene | 94 | 70-130 |
| m,p-Xylene | 93 | 70-130 |
| o-Xylene | 93 | 70-130 |
| Styrene | 92 | 70-130 |
| Bromoform | 107 | 70-130 |
| Cumene | 94 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 95 | 70-130 |
| Propylbenzene | 96 | 70-130 |
| 4-Ethyltoluene | 93 | 70-130 |
| 1,3,5-Trimethylbenzene | 103 | 70-130 |
| 1,2,4-Trimethylbenzene | 94 | 70-130 |
| 1,3-Dichlorobenzene | 103 | 70-130 |
| 1,4-Dichlorobenzene | 101 | 70-130 |
| alpha-Chlorotoluene | 99 | 70-130 |
| 1,2-Dichlorobenzene | 103 | 70-130 |
| 1,2,4-Trichlorobenzene | 94 | 70-130 |
| Hexachlorobutadiene | 110 | 70-130 |
| Butane | 72 | 60-140 |
| Isopentane | 80 | 60-140 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 110 | 70-130 |
| Toluene-d8 | 101 | 70-130 |
| 4-Bromofluorobenzene | 107 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCSD**
**Lab ID#: 1602139C-15BB**
**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021605** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 10:05 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Freon 12 | 90 | 70-130 |
| Freon 114 | 87 | 70-130 |
| Chloromethane | 79 | 70-130 |
| Vinyl Chloride | 80 | 70-130 |
| 1,3-Butadiene | 76 | 70-130 |
| Bromomethane | 71 | 70-130 |
| Chloroethane | 84 | 70-130 |
| Freon 11 | 104 | 70-130 |
| Ethanol | 79 | 70-130 |
| Freon 113 | 94 | 70-130 |
| 1,1-Dichloroethene | 84 | 70-130 |
| Acetone | 82 | 70-130 |
| 2-Propanol | 82 | 70-130 |
| Carbon Disulfide | 67 Q | 70-130 |
| 3-Chloropropene | 68 Q | 70-130 |
| Methylene Chloride | 82 | 70-130 |
| Methyl tert-butyl ether | 82 | 70-130 |
| trans-1,2-Dichloroethene | 70 | 70-130 |
| Hexane | 78 | 70-130 |
| 1,1-Dichloroethane | 83 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 78 | 70-130 |
| cis-1,2-Dichloroethene | 90 | 70-130 |
| Tetrahydrofuran | 76 | 70-130 |
| Chloroform | 93 | 70-130 |
| 1,1,1-Trichloroethane | 98 | 70-130 |
| Cyclohexane | 78 | 70-130 |
| Carbon Tetrachloride | 96 | 70-130 |
| 2,2,4-Trimethylpentane | 80 | 70-130 |
| Benzene | 90 | 70-130 |
| 1,2-Dichloroethane | 101 | 70-130 |
| Heptane | 82 | 70-130 |
| Trichloroethene | 93 | 70-130 |
| 1,2-Dichloropropane | 90 | 70-130 |
| 1,4-Dioxane | 85 | 70-130 |
| Bromodichloromethane | 100 | 70-130 |
| cis-1,3-Dichloropropene | 88 | 70-130 |
| 4-Methyl-2-pentanone | 82 | 70-130 |
| Toluene | 94 | 70-130 |
| trans-1,3-Dichloropropene | 86 | 70-130 |
| 1,1,2-Trichloroethane | 96 | 70-130 |
| Tetrachloroethene | 102 | 70-130 |
| 2-Hexanone | 86 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCSD**
**Lab ID#: 1602139C-15BB**
**EPA METHOD TO-15 GC/MS**

| | | | |
|---|---|---|---|
| **File Name:** | **j021605** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/16/16 10:05 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Dibromochloromethane | 101 | 70-130 |
| 1,2-Dibromoethane (EDB) | 95 | 70-130 |
| Chlorobenzene | 95 | 70-130 |
| Ethyl Benzene | 96 | 70-130 |
| m,p-Xylene | 94 | 70-130 |
| o-Xylene | 95 | 70-130 |
| Styrene | 95 | 70-130 |
| Bromoform | 106 | 70-130 |
| Cumene | 95 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 97 | 70-130 |
| Propylbenzene | 100 | 70-130 |
| 4-Ethyltoluene | 96 | 70-130 |
| 1,3,5-Trimethylbenzene | 107 | 70-130 |
| 1,2,4-Trimethylbenzene | 98 | 70-130 |
| 1,3-Dichlorobenzene | 105 | 70-130 |
| 1,4-Dichlorobenzene | 103 | 70-130 |
| alpha-Chlorotoluene | 103 | 70-130 |
| 1,2-Dichlorobenzene | 106 | 70-130 |
| 1,2,4-Trichlorobenzene | 109 | 70-130 |
| Hexachlorobutadiene | 126 | 70-130 |
| Butane | 74 | 60-140 |
| Isopentane | 78 | 60-140 |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 106 | 70-130 |
| Toluene-d8 | 98 | 70-130 |
| 4-Bromofluorobenzene | 106 | 70-130 |

eurofins | Air Toxics

2/22/2016

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

Project Name: Roxana Quarterly Soil Vapor
Project #: 60477387-1.04.001
Workorder #: 1602139D

Dear Ms. Elizabeth Kunkel

The following report includes the data for the above referenced project for sample(s) received on 2/6/2016 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

eurofins | Air Toxics

# WORK ORDER #: 1602139D

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Ms. Elizabeth Kunkel<br>AECOM<br>1001 Highlands Plaza Dr. West<br>Suite 300<br>St. Louis, MO 63110 | **BILL TO:** | Accounts Payable Austin<br>AECOM<br>P.O. BOX 203970<br>Austin, TX 78720-1088 |
| **PHONE:** | 314-743-4179 | **P.O. #** | 60477387-1.04.001 |
| **FAX:** | | **PROJECT #** | 60477387-1.04.001 Roxana Quarterly Soil Vapor |
| **DATE RECEIVED:** | 02/06/2016 | **CONTACT:** | Kelly Buettner |
| **DATE COMPLETED:** | 02/22/2016 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. | FINAL PRESSURE |
|---|---|---|---|---|
| 03A | VMP-15-5-020316 | Modified ASTM D-1946 | 6.7 "Hg | 15 psi |
| 04A | VMP-15-21.5-020316 | Modified ASTM D-1946 | 7.3 "Hg | 14.6 psi |
| 05A | VMP-15-25.5-020316 | Modified ASTM D-1946 | 8.2 "Hg | 15.2 psi |
| 06A | VMP-15-29-020316 | Modified ASTM D-1946 | 7.3 "Hg | 14.9 psi |
| 11A | VMP-55-20-020416 | Modified ASTM D-1946 | 7.1 "Hg | 15 psi |
| 12A | VMP-55-20-020416-DUP | Modified ASTM D-1946 | 4.5 "Hg | 15.2 psi |
| 13A | Lab Blank | Modified ASTM D-1946 | NA | NA |
| 13B | Lab Blank | Modified ASTM D-1946 | NA | NA |
| 14A | LCS | Modified ASTM D-1946 | NA | NA |
| 14AA | LCSD | Modified ASTM D-1946 | NA | NA |

CERTIFIED BY: Heidi Mayo DATE: 02/22/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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 - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**
**Modified ASTM D-1946**
**URS Corporation**
**Workorder# 1602139D**

Six 1 Liter Summa Canister samples were received on February 06, 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.

| ***Requirement*** | ***ASTM D-1946*** | ***ATL Modifications*** |
|---|---|---|
| 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 >/= 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

eurofins | Air Toxics

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

**Client Sample ID: VMP-15-5-020316**

**Lab ID#: 1602139D-03A**

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.26 | 16 |
| Nitrogen | 0.26 | 80 |
| Methane | 0.00026 | 0.30 |
| Carbon Dioxide | 0.026 | 3.2 |

**Client Sample ID: VMP-15-21.5-020316**

**Lab ID#: 1602139D-04A**

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.26 | 1.8 |
| Nitrogen | 0.26 | 75 |
| Methane | 0.00026 | 9.5 |
| Carbon Dioxide | 0.026 | 14 |
| Ethane | 0.0026 | 0.0033 |

**Client Sample ID: VMP-15-25.5-020316**

**Lab ID#: 1602139D-05A**

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.28 | 2.5 |
| Nitrogen | 0.28 | 73 |
| Methane | 0.00028 | 9.3 |
| Carbon Dioxide | 0.028 | 15 |
| Ethane | 0.0028 | 0.0037 |

**Client Sample ID: VMP-15-29-020316**

**Lab ID#: 1602139D-06A**

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.27 | 2.8 |
| Nitrogen | 0.27 | 73 |
| Methane | 0.00027 | 9.1 |

eurofins | Air Toxics

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

**Client Sample ID: VMP-15-29-020316**

**Lab ID#: 1602139D-06A**

| | | |
|---|---|---|
| Carbon Dioxide | 0.027 | 15 |
| Ethane | 0.0027 | 0.0038 |

**Client Sample ID: VMP-55-20-020416**

**Lab ID#: 1602139D-11A**

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.26 | 1.8 |
| Nitrogen | 0.26 | 80 |
| Methane | 0.00026 | 0.97 |
| Carbon Dioxide | 0.026 | 17 |
| Ethane | 0.0026 | 0.00031 J |
| Helium | 0.13 | 0.020 J |

**Client Sample ID: VMP-55-20-020416-DUP**

**Lab ID#: 1602139D-12A**

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.24 | 1.8 |
| Nitrogen | 0.24 | 80 |
| Methane | 0.00024 | 0.97 |
| Carbon Dioxide | 0.024 | 17 |
| Ethane | 0.0024 | 0.00029 J |
| Helium | 0.12 | 0.024 J |

eurofins | Air Toxics

**Client Sample ID: VMP-15-5-020316**

**Lab ID#: 1602139D-03A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **10021107** | **Date of Collection: 2/3/16 1:36:00 PM** | |
| **Dil. Factor:** | **2.60** | **Date of Analysis: 2/11/16 11:32 AM** | |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.26 | 16 |
| Nitrogen | 0.26 | 80 |
| Carbon Monoxide | 0.026 | Not Detected |
| Methane | 0.00026 | 0.30 |
| Carbon Dioxide | 0.026 | 3.2 |
| Ethane | 0.0026 | Not Detected |
| Ethene | 0.0026 | Not Detected |
| Helium | 0.13 | Not Detected |

**Container Type: 1 Liter Summa Canister**

eurofins | Air Toxics

**Client Sample ID: VMP-15-21.5-020316**

**Lab ID#: 1602139D-04A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **10021108** | **Date of Collection: 2/3/16 1:54:00 PM** | |
| **Dil. Factor:** | **2.64** | **Date of Analysis: 2/11/16 11:58 AM** | |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.26 | 1.8 |
| Nitrogen | 0.26 | 75 |
| Carbon Monoxide | 0.026 | Not Detected |
| Methane | 0.00026 | 9.5 |
| Carbon Dioxide | 0.026 | 14 |
| Ethane | 0.0026 | 0.0033 |
| Ethene | 0.0026 | Not Detected |
| Helium | 0.13 | Not Detected |

**Container Type: 1 Liter Summa Canister**

eurofins | Air Toxics

**Client Sample ID: VMP-15-25.5-020316**

**Lab ID#: 1602139D-05A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **10021109** | **Date of Collection: 2/3/16 2:12:00 PM** | |
| **Dil. Factor:** | **2.79** | **Date of Analysis: 2/11/16 12:24 PM** | |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.28 | 2.5 |
| Nitrogen | 0.28 | 73 |
| Carbon Monoxide | 0.028 | Not Detected |
| Methane | 0.00028 | 9.3 |
| Carbon Dioxide | 0.028 | 15 |
| Ethane | 0.0028 | 0.0037 |
| Ethene | 0.0028 | Not Detected |
| Helium | 0.14 | Not Detected |

**Container Type: 1 Liter Summa Canister**

eurofins | Air Toxics

**Client Sample ID: VMP-15-29-020316**

**Lab ID#: 1602139D-06A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **10021110** | **Date of Collection: 2/3/16 2:28:00 PM** | |
| **Dil. Factor:** | **2.67** | **Date of Analysis: 2/11/16 12:47 PM** | |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.27 | 2.8 |
| Nitrogen | 0.27 | 73 |
| Carbon Monoxide | 0.027 | Not Detected |
| Methane | 0.00027 | 9.1 |
| Carbon Dioxide | 0.027 | 15 |
| Ethane | 0.0027 | 0.0038 |
| Ethene | 0.0027 | Not Detected |
| Helium | 0.13 | Not Detected |

**Container Type: 1 Liter Summa Canister**

eurofins | Air Toxics

**Client Sample ID: VMP-55-20-020416**

**Lab ID#: 1602139D-11A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **10021116** | **Date of Collection: 2/4/16 10:08:00 AM** | |
| **Dil. Factor:** | **2.65** | **Date of Analysis: 2/11/16 04:32 PM** | |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.26 | 1.8 |
| Nitrogen | 0.26 | 80 |
| Carbon Monoxide | 0.026 | Not Detected |
| Methane | 0.00026 | 0.97 |
| Carbon Dioxide | 0.026 | 17 |
| Ethane | 0.0026 | 0.00031 J |
| Ethene | 0.0026 | Not Detected |
| Helium | 0.13 | 0.020 J |

J = Estimated value.

**Container Type: 1 Liter Summa Canister**

eurofins | Air Toxics

**Client Sample ID: VMP-55-20-020416-DUP**

**Lab ID#: 1602139D-12A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **10021117** | **Date of Collection: 2/4/16 10:08:00 AM** | |
| **Dil. Factor:** | **2.39** | **Date of Analysis: 2/11/16 05:23 PM** | |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.24 | 1.8 |
| Nitrogen | 0.24 | 80 |
| Carbon Monoxide | 0.024 | Not Detected |
| Methane | 0.00024 | 0.97 |
| Carbon Dioxide | 0.024 | 17 |
| Ethane | 0.0024 | 0.00029 J |
| Ethene | 0.0024 | Not Detected |
| Helium | 0.12 | 0.024 J |

J = Estimated value.

**Container Type: 1 Liter Summa Canister**

eurofins | Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 1602139D-13A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **10021103a** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/11/16 09:25 AM** | |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.10 | Not Detected |
| Nitrogen | 0.10 | Not Detected |
| 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 |

**Container Type: NA - Not Applicable**

eurofins | Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 1602139D-13B**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **10021104c** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/11/16 09:54 AM** | |

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

**Container Type: NA - Not Applicable**

eurofins | Air Toxics

**Client Sample ID: LCS**

**Lab ID#: 1602139D-14A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **10021102** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/11/16 08:53 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Oxygen | 100 | 85-115 |
| Nitrogen | 93 | 85-115 |
| Carbon Monoxide | 95 | 85-115 |
| Methane | 104 | 85-115 |
| Carbon Dioxide | 99 | 85-115 |
| Ethane | 104 | 85-115 |
| Ethene | 105 | 85-115 |
| Helium | 103 | 85-115 |

**Container Type: NA - Not Applicable**

eurofins | Air Toxics

**Client Sample ID: LCSD**

**Lab ID#: 1602139D-14AA**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **10021126** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 2/11/16 10:02 PM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Oxygen | 100 | 85-115 |
| Nitrogen | 92 | 85-115 |
| Carbon Monoxide | 94 | 85-115 |
| Methane | 104 | 85-115 |
| Carbon Dioxide | 100 | 85-115 |
| Ethane | 104 | 85-115 |
| Ethene | 104 | 85-115 |
| Helium | 103 | 85-115 |

**Container Type: NA - Not Applicable**