

## ANALYTICAL REPORT

Eurofins TestAmerica, Canton  
4101 Shuffel Street NW  
North Canton, OH 44720  
Tel: (330)497-9396

Laboratory Job ID: 240-125765-1  
Client Project/Site: Ford LTP On Site

For:  
ARCADIS U.S., Inc.  
28550 Cabot Drive  
Suite 500  
Novi, Michigan 48377

Attn: Kristoffer Hinskey



Authorized for release by:  
2/19/2020 10:16:44 AM

Michael DelMonico, Project Manager I  
(330)497-9396  
[michael.delmonico@testamericainc.com](mailto:michael.delmonico@testamericainc.com)

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



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# Definitions/Glossary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description  |
|-----------|--|
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U         | Indicates the analyte was analyzed for but not detected.   |

## Glossary

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| ▫              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CFL            | Contains Free Liquid  |
| CNF            | Contains No Free Liquid   |
| DER            | Duplicate Error Ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL             | Detection Limit (DoD/DOE)   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision Level Concentration (Radiochemistry)   |
| EDL            | Estimated Detection Limit (Dioxin)  |
| LOD            | Limit of Detection (DoD/DOE)  |
| LOQ            | Limit of Quantitation (DoD/DOE)   |
| MDA            | Minimum Detectable Activity (Radiochemistry)  |
| MDC            | Minimum Detectable Concentration (Radiochemistry)   |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| NC             | Not Calculated  |
| ND             | Not Detected at the reporting limit (or MDL or EDL if shown)  |
| PQL            | Practical Quantitation Limit  |
| QC             | Quality Control   |
| RER            | Relative Error Ratio (Radiochemistry)   |
| RL             | Reporting Limit or Requested Limit (Radiochemistry)   |
| RPD            | Relative Percent Difference, a measure of the relative difference between two points                        |
| TEF            | Toxicity Equivalent Factor (Dioxin)   |
| TEQ            | Toxicity Equivalent Quotient (Dioxin)   |

# Case Narrative

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

**Job ID: 240-125765-1**

**Laboratory: Eurofins TestAmerica, Canton**

**Narrative**

## CASE NARRATIVE

**Client: ARCADIS U.S., Inc.**

**Project: Ford LTP On Site**

**Report Number: 240-125765-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Eurofins TestAmerica, Canton attests to the validity of the laboratory data generated by Eurofins TestAmerica facilities reported herein. All analyses performed by Eurofins TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Eurofins TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client.

### **RECEIPT**

The samples were received on 2/5/2020 8:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.5° C and 3.0° C.

### **VOLATILE ORGANIC COMPOUNDS (GCMS)**

Samples TRIP BLANK (240-125765-1), MW-64\_020320 (240-125765-2) and TW-16-02\_020320 (240-125765-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 02/06/2020 and 02/07/2020.

Sample TW-16-02\_020320 (240-125765-3)[333.33X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **VOLATILE ORGANIC COMPOUNDS (GCMS SIM)**

Samples MW-64\_020320 (240-125765-2) and TW-16-02\_020320 (240-125765-3) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 02/07/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

| Method    | Method Description                 | Protocol | Laboratory |
|-----------|------------------------------------|----------|------------|
| 8260B     | Volatile Organic Compounds (GC/MS) | SW846    | TAL CAN    |
| 8260B SIM | Volatile Organic Compounds (GC/MS) | SW846    | TAL CAN    |
| 5030B     | Purge and Trap                     | SW846    | TAL CAN    |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



# Sample Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

| Lab Sample ID | Client Sample ID | Matrix | Collected      | Received       | Asset ID |
|---------------|------------------|--------|----------------|----------------|----------|
| 240-125765-1  | TRIP BLANK       | Water  | 02/03/20 00:00 | 02/05/20 08:20 |          |
| 240-125765-2  | MW-64_020320     | Water  | 02/03/20 12:16 | 02/05/20 08:20 |          |
| 240-125765-3  | TW-16-02_020320  | Water  | 02/03/20 15:26 | 02/05/20 08:20 |          |

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Detection Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

## Client Sample ID: TRIP BLANK

Lab Sample ID: 240-125765-1

No Detections.

## Client Sample ID: MW-64\_020320

Lab Sample ID: 240-125765-2

| Analyte                | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-----|------|------|---------|---|--------|-----------|
| cis-1,2-Dichloroethene | 0.18   | J         | 1.0 | 0.16 | ug/L | 1       |   | 8260B  | Total/NA  |
| Vinyl chloride         | 0.69   | J         | 1.0 | 0.20 | ug/L | 1       |   | 8260B  | Total/NA  |

## Client Sample ID: TW-16-02\_020320

Lab Sample ID: 240-125765-3

| Analyte                | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method    | Prep Type |
|------------------------|--------|-----------|-----|------|------|---------|---|-----------|-----------|
| 1,4-Dioxane            | 1.8    | J         | 2.0 | 0.86 | ug/L | 1       |   | 8260B SIM | Total/NA  |
| cis-1,2-Dichloroethene | 2200   |           | 330 | 53   | ug/L | 333.33  |   | 8260B     | Total/NA  |
| Vinyl chloride         | 7000   |           | 330 | 67   | ug/L | 333.33  |   | 8260B     | Total/NA  |

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-125765-1**

**Date Collected: 02/03/20 00:00**

**Matrix: Water**

**Date Received: 02/05/20 08:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte                  | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|--------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1-Dichloroethene       | 1.0    | U         | 1.0 | 0.19 | ug/L |   |          | 02/06/20 18:48 | 1       |
| cis-1,2-Dichloroethene   | 1.0    | U         | 1.0 | 0.16 | ug/L |   |          | 02/06/20 18:48 | 1       |
| Tetrachloroethene        | 1.0    | U         | 1.0 | 0.15 | ug/L |   |          | 02/06/20 18:48 | 1       |
| trans-1,2-Dichloroethene | 1.0    | U         | 1.0 | 0.19 | ug/L |   |          | 02/06/20 18:48 | 1       |
| Trichloroethene          | 1.0    | U         | 1.0 | 0.10 | ug/L |   |          | 02/06/20 18:48 | 1       |
| Vinyl chloride           | 1.0    | U         | 1.0 | 0.20 | ug/L |   |          | 02/06/20 18:48 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 91        |           | 75 - 130 |          | 02/06/20 18:48 | 1       |
| 4-Bromofluorobenzene (Surr)  | 70        |           | 47 - 134 |          | 02/06/20 18:48 | 1       |
| Toluene-d8 (Surr)            | 81        |           | 69 - 122 |          | 02/06/20 18:48 | 1       |
| Dibromofluoromethane (Surr)  | 85        |           | 78 - 129 |          | 02/06/20 18:48 | 1       |



# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

**Client Sample ID: MW-64\_020320**

**Lab Sample ID: 240-125765-2**

Date Collected: 02/03/20 12:16

Matrix: Water

Date Received: 02/05/20 08:20

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

| Analyte     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,4-Dioxane | 2.0    | U         | 2.0 | 0.86 | ug/L |   |          | 02/07/20 16:24 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 99        |           | 63 - 125 |          | 02/07/20 16:24 | 1       |

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte                       | Result      | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------------|-------------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1-Dichloroethene            | 1.0         | U         | 1.0 | 0.19 | ug/L |   |          | 02/06/20 19:09 | 1       |
| <b>cis-1,2-Dichloroethene</b> | <b>0.18</b> | <b>J</b>  | 1.0 | 0.16 | ug/L |   |          | 02/06/20 19:09 | 1       |
| Tetrachloroethene             | 1.0         | U         | 1.0 | 0.15 | ug/L |   |          | 02/06/20 19:09 | 1       |
| trans-1,2-Dichloroethene      | 1.0         | U         | 1.0 | 0.19 | ug/L |   |          | 02/06/20 19:09 | 1       |
| Trichloroethene               | 1.0         | U         | 1.0 | 0.10 | ug/L |   |          | 02/06/20 19:09 | 1       |
| <b>Vinyl chloride</b>         | <b>0.69</b> | <b>J</b>  | 1.0 | 0.20 | ug/L |   |          | 02/06/20 19:09 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 87        |           | 75 - 130 |          | 02/06/20 19:09 | 1       |
| 4-Bromofluorobenzene (Surr)  | 67        |           | 47 - 134 |          | 02/06/20 19:09 | 1       |
| Toluene-d8 (Surr)            | 78        |           | 69 - 122 |          | 02/06/20 19:09 | 1       |
| Dibromofluoromethane (Surr)  | 83        |           | 78 - 129 |          | 02/06/20 19:09 | 1       |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

**Client Sample ID: TW-16-02\_020320**

**Lab Sample ID: 240-125765-3**

Date Collected: 02/03/20 15:26

Matrix: Water

Date Received: 02/05/20 08:20

**Method: 8260B SIM - Volatile Organic Compounds (GC/MS)**

| Analyte     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,4-Dioxane | 1.8    | J         | 2.0 | 0.86 | ug/L |   |          | 02/07/20 16:50 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 96        |           | 63 - 125 |          | 02/07/20 16:50 | 1       |

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte                  | Result | Qualifier | RL  | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|--------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,1-Dichloroethene       | 330    | U         | 330 | 63  | ug/L |   |          | 02/07/20 12:09 | 333.33  |
| cis-1,2-Dichloroethene   | 2200   |           | 330 | 53  | ug/L |   |          | 02/07/20 12:09 | 333.33  |
| Tetrachloroethene        | 330    | U         | 330 | 50  | ug/L |   |          | 02/07/20 12:09 | 333.33  |
| trans-1,2-Dichloroethene | 330    | U         | 330 | 63  | ug/L |   |          | 02/07/20 12:09 | 333.33  |
| Trichloroethene          | 330    | U         | 330 | 33  | ug/L |   |          | 02/07/20 12:09 | 333.33  |
| Vinyl chloride           | 7000   |           | 330 | 67  | ug/L |   |          | 02/07/20 12:09 | 333.33  |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 89        |           | 75 - 130 |          | 02/07/20 12:09 | 333.33  |
| 4-Bromofluorobenzene (Surr)  | 69        |           | 47 - 134 |          | 02/07/20 12:09 | 333.33  |
| Toluene-d8 (Surr)            | 80        |           | 69 - 122 |          | 02/07/20 12:09 | 333.33  |
| Dibromofluoromethane (Surr)  | 85        |           | 78 - 129 |          | 02/07/20 12:09 | 333.33  |

# Surrogate Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID      | Client Sample ID       | Percent Surrogate Recovery (Acceptance Limits) |                 |                 |                  |
|--------------------|------------------------|--|-----------------|-----------------|------------------|
|                    |                        | DCA<br>(75-130)                                | BFB<br>(47-134) | TOL<br>(69-122) | DBFM<br>(78-129) |
| 240-125756-E-2 MSD | Matrix Spike Duplicate | 88   | 74              | 83              | 88               |
| 240-125756-F-2 MS  | Matrix Spike           | 88   | 76              | 83              | 85               |
| 240-125765-1       | TRIP BLANK             | 91   | 70              | 81              | 85               |
| 240-125765-2       | MW-64_020320           | 87   | 67              | 78              | 83               |
| 240-125765-3       | TW-16-02_020320        | 89   | 69              | 80              | 85               |
| 240-125798-B-4 MS  | Matrix Spike           | 87   | 77              | 83              | 88               |
| 240-125798-B-4 MSD | Matrix Spike Duplicate | 84   | 76              | 82              | 86               |
| LCS 240-421752/4   | Lab Control Sample     | 84   | 76              | 81              | 90               |
| LCS 240-421897/4   | Lab Control Sample     | 85   | 76              | 81              | 88               |
| MB 240-421752/7    | Method Blank           | 88   | 74              | 83              | 84               |
| MB 240-421897/7    | Method Blank           | 88   | 71              | 80              | 84               |

#### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

## Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID      | Client Sample ID       | DCA      |
|--------------------|------------------------|----------|
|                    |                        | (63-125) |
| 240-125765-2       | MW-64_020320           | 99       |
| 240-125765-3       | TW-16-02_020320        | 96       |
| 240-125766-G-3 MS  | Matrix Spike           | 100      |
| 240-125766-G-3 MSD | Matrix Spike Duplicate | 106      |
| LCS 240-421906/4   | Lab Control Sample     | 91       |
| MB 240-421906/5    | Method Blank           | 97       |

#### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 240-421752/7**  
**Matrix: Water**  
**Analysis Batch: 421752**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

| Analyte                  | MB Result | MB Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|--------------------------|-----------|--------------|-----|------|------|---|----------|----------------|---------|
| 1,1-Dichloroethene       | 1.0       | U            | 1.0 | 0.19 | ug/L |   |          | 02/06/20 12:15 | 1       |
| cis-1,2-Dichloroethene   | 1.0       | U            | 1.0 | 0.16 | ug/L |   |          | 02/06/20 12:15 | 1       |
| Tetrachloroethene        | 1.0       | U            | 1.0 | 0.15 | ug/L |   |          | 02/06/20 12:15 | 1       |
| trans-1,2-Dichloroethene | 1.0       | U            | 1.0 | 0.19 | ug/L |   |          | 02/06/20 12:15 | 1       |
| Trichloroethene          | 1.0       | U            | 1.0 | 0.10 | ug/L |   |          | 02/06/20 12:15 | 1       |
| Vinyl chloride           | 1.0       | U            | 1.0 | 0.20 | ug/L |   |          | 02/06/20 12:15 | 1       |

| Surrogate                    | MB %Recovery | MB Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|--------------|--------------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 88           |              | 75 - 130 |          | 02/06/20 12:15 | 1       |
| 4-Bromofluorobenzene (Surr)  | 74           |              | 47 - 134 |          | 02/06/20 12:15 | 1       |
| Toluene-d8 (Surr)            | 83           |              | 69 - 122 |          | 02/06/20 12:15 | 1       |
| Dibromofluoromethane (Surr)  | 84           |              | 78 - 129 |          | 02/06/20 12:15 | 1       |

**Lab Sample ID: LCS 240-421752/4**  
**Matrix: Water**  
**Analysis Batch: 421752**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

| Analyte                  | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|--------------------------|-------------|------------|---------------|------|---|------|--------------|
| 1,1-Dichloroethene       | 10.0        | 11.1       |               | ug/L |   | 111  | 73 - 129     |
| cis-1,2-Dichloroethene   | 10.0        | 11.1       |               | ug/L |   | 111  | 75 - 124     |
| Tetrachloroethene        | 10.0        | 10.4       |               | ug/L |   | 104  | 70 - 125     |
| trans-1,2-Dichloroethene | 10.0        | 10.7       |               | ug/L |   | 107  | 74 - 130     |
| Trichloroethene          | 10.0        | 10.8       |               | ug/L |   | 108  | 71 - 121     |
| Vinyl chloride           | 10.0        | 9.53       |               | ug/L |   | 95   | 61 - 134     |

| Surrogate                    | LCS %Recovery | LCS Qualifier | Limits   |
|------------------------------|---------------|---------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 84            |               | 75 - 130 |
| 4-Bromofluorobenzene (Surr)  | 76            |               | 47 - 134 |
| Toluene-d8 (Surr)            | 81            |               | 69 - 122 |
| Dibromofluoromethane (Surr)  | 90            |               | 78 - 129 |

**Lab Sample ID: 240-125756-E-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 421752**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

| Analyte                  | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|--------------------------|---------------|------------------|-------------|------------|---------------|------|---|------|--------------|-----|-----------|
| 1,1-Dichloroethene       | 1.0           | U                | 10.0        | 8.73       |               | ug/L |   | 87   | 64 - 132     | 4   | 35        |
| cis-1,2-Dichloroethene   | 0.22          | J                | 10.0        | 9.36       |               | ug/L |   | 91   | 68 - 121     | 3   | 35        |
| Tetrachloroethene        | 1.0           | U                | 10.0        | 8.15       |               | ug/L |   | 81   | 52 - 129     | 7   | 35        |
| trans-1,2-Dichloroethene | 1.0           | U                | 10.0        | 8.70       |               | ug/L |   | 87   | 69 - 126     | 8   | 35        |
| Trichloroethene          | 1.0           | U                | 10.0        | 8.63       |               | ug/L |   | 86   | 56 - 124     | 4   | 35        |
| Vinyl chloride           | 3.5           |                  | 10.0        | 12.1       |               | ug/L |   | 86   | 49 - 136     | 6   | 35        |

| Surrogate                    | MSD %Recovery | MSD Qualifier | Limits   |
|------------------------------|---------------|---------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 88            |               | 75 - 130 |
| 4-Bromofluorobenzene (Surr)  | 74            |               | 47 - 134 |
| Toluene-d8 (Surr)            | 83            |               | 69 - 122 |

Eurofins TestAmerica, Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 240-125756-E-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 421752**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

| Surrogate                   | MSD %Recovery | MSD Qualifier | Limits   |
|-----------------------------|---------------|---------------|----------|
| Dibromofluoromethane (Surr) | 88            |               | 78 - 129 |

**Lab Sample ID: 240-125756-F-2 MS**  
**Matrix: Water**  
**Analysis Batch: 421752**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

| Analyte                  | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|--------------------------|---------------|------------------|-------------|-----------|--------------|------|---|------|--------------|
| 1,1-Dichloroethene       | 1.0           | U                | 10.0        | 8.34      |              | ug/L |   | 83   | 64 - 132     |
| cis-1,2-Dichloroethene   | 0.22          | J                | 10.0        | 9.11      |              | ug/L |   | 89   | 68 - 121     |
| Tetrachloroethene        | 1.0           | U                | 10.0        | 7.60      |              | ug/L |   | 76   | 52 - 129     |
| trans-1,2-Dichloroethene | 1.0           | U                | 10.0        | 8.04      |              | ug/L |   | 80   | 69 - 126     |
| Trichloroethene          | 1.0           | U                | 10.0        | 8.32      |              | ug/L |   | 83   | 56 - 124     |
| Vinyl chloride           | 3.5           |                  | 10.0        | 11.4      |              | ug/L |   | 79   | 49 - 136     |

| Surrogate                    | MS %Recovery | MS Qualifier | Limits   |
|------------------------------|--------------|--------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 88           |              | 75 - 130 |
| 4-Bromofluorobenzene (Surr)  | 76           |              | 47 - 134 |
| Toluene-d8 (Surr)            | 83           |              | 69 - 122 |
| Dibromofluoromethane (Surr)  | 85           |              | 78 - 129 |

**Lab Sample ID: MB 240-421897/7**  
**Matrix: Water**  
**Analysis Batch: 421897**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

| Analyte                  | MB Result | MB Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|--------------------------|-----------|--------------|-----|------|------|---|----------|----------------|---------|
| 1,1-Dichloroethene       | 1.0       | U            | 1.0 | 0.19 | ug/L |   |          | 02/07/20 11:34 | 1       |
| cis-1,2-Dichloroethene   | 1.0       | U            | 1.0 | 0.16 | ug/L |   |          | 02/07/20 11:34 | 1       |
| Tetrachloroethene        | 1.0       | U            | 1.0 | 0.15 | ug/L |   |          | 02/07/20 11:34 | 1       |
| trans-1,2-Dichloroethene | 1.0       | U            | 1.0 | 0.19 | ug/L |   |          | 02/07/20 11:34 | 1       |
| Trichloroethene          | 1.0       | U            | 1.0 | 0.10 | ug/L |   |          | 02/07/20 11:34 | 1       |
| Vinyl chloride           | 1.0       | U            | 1.0 | 0.20 | ug/L |   |          | 02/07/20 11:34 | 1       |

| Surrogate                    | MB %Recovery | MB Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|--------------|--------------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 88           |              | 75 - 130 |          | 02/07/20 11:34 | 1       |
| 4-Bromofluorobenzene (Surr)  | 71           |              | 47 - 134 |          | 02/07/20 11:34 | 1       |
| Toluene-d8 (Surr)            | 80           |              | 69 - 122 |          | 02/07/20 11:34 | 1       |
| Dibromofluoromethane (Surr)  | 84           |              | 78 - 129 |          | 02/07/20 11:34 | 1       |

**Lab Sample ID: LCS 240-421897/4**  
**Matrix: Water**  
**Analysis Batch: 421897**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

| Analyte                  | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|--------------------------|-------------|------------|---------------|------|---|------|--------------|
| 1,1-Dichloroethene       | 10.0        | 10.5       |               | ug/L |   | 105  | 73 - 129     |
| cis-1,2-Dichloroethene   | 10.0        | 10.7       |               | ug/L |   | 107  | 75 - 124     |
| Tetrachloroethene        | 10.0        | 10.1       |               | ug/L |   | 101  | 70 - 125     |
| trans-1,2-Dichloroethene | 10.0        | 10.5       |               | ug/L |   | 105  | 74 - 130     |
| Trichloroethene          | 10.0        | 10.4       |               | ug/L |   | 104  | 71 - 121     |

Eurofins TestAmerica, Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 240-421897/4**  
**Matrix: Water**  
**Analysis Batch: 421897**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

| Analyte                      | Spike Added          | LCS Result           | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|------------------------------|----------------------|----------------------|---------------|------|---|------|--------------|
| Vinyl chloride               | 10.0                 | 9.48                 |               | ug/L |   | 95   | 61 - 134     |
| <b>Surrogate</b>             |                      |                      |               |      |   |      |              |
|                              | <b>LCS %Recovery</b> | <b>LCS Qualifier</b> | <b>Limits</b> |      |   |      |              |
| 1,2-Dichloroethane-d4 (Surr) | 85                   |                      | 75 - 130      |      |   |      |              |
| 4-Bromofluorobenzene (Surr)  | 76                   |                      | 47 - 134      |      |   |      |              |
| Toluene-d8 (Surr)            | 81                   |                      | 69 - 122      |      |   |      |              |
| Dibromofluoromethane (Surr)  | 88                   |                      | 78 - 129      |      |   |      |              |

**Lab Sample ID: 240-125798-B-4 MS**  
**Matrix: Water**  
**Analysis Batch: 421897**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

| Analyte                      | Sample Result       | Sample Qualifier    | Spike Added   | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|------------------------------|---------------------|---------------------|---------------|-----------|--------------|------|---|------|--------------|
| 1,1-Dichloroethene           | 100                 | U                   | 1000          | 813       |              | ug/L |   | 81   | 64 - 132     |
| cis-1,2-Dichloroethene       | 100                 | U                   | 1000          | 938       |              | ug/L |   | 94   | 68 - 121     |
| Tetrachloroethene            | 100                 | U                   | 1000          | 795       |              | ug/L |   | 80   | 52 - 129     |
| trans-1,2-Dichloroethene     | 100                 | U                   | 1000          | 851       |              | ug/L |   | 85   | 69 - 126     |
| Trichloroethene              | 100                 | U                   | 1000          | 881       |              | ug/L |   | 88   | 56 - 124     |
| Vinyl chloride               | 100                 | U                   | 1000          | 801       |              | ug/L |   | 80   | 49 - 136     |
| <b>Surrogate</b>             |                     |                     |               |           |              |      |   |      |              |
|                              | <b>MS %Recovery</b> | <b>MS Qualifier</b> | <b>Limits</b> |           |              |      |   |      |              |
| 1,2-Dichloroethane-d4 (Surr) | 87                  |                     | 75 - 130      |           |              |      |   |      |              |
| 4-Bromofluorobenzene (Surr)  | 77                  |                     | 47 - 134      |           |              |      |   |      |              |
| Toluene-d8 (Surr)            | 83                  |                     | 69 - 122      |           |              |      |   |      |              |
| Dibromofluoromethane (Surr)  | 88                  |                     | 78 - 129      |           |              |      |   |      |              |

**Lab Sample ID: 240-125798-B-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 421897**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

| Analyte                      | Sample Result        | Sample Qualifier     | Spike Added   | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|------------------------------|----------------------|----------------------|---------------|------------|---------------|------|---|------|--------------|-----|-----------|
| 1,1-Dichloroethene           | 100                  | U                    | 1000          | 879        |               | ug/L |   | 88   | 64 - 132     | 8   | 35        |
| cis-1,2-Dichloroethene       | 100                  | U                    | 1000          | 932        |               | ug/L |   | 93   | 68 - 121     | 1   | 35        |
| Tetrachloroethene            | 100                  | U                    | 1000          | 882        |               | ug/L |   | 88   | 52 - 129     | 10  | 35        |
| trans-1,2-Dichloroethene     | 100                  | U                    | 1000          | 887        |               | ug/L |   | 89   | 69 - 126     | 4   | 35        |
| Trichloroethene              | 100                  | U                    | 1000          | 909        |               | ug/L |   | 91   | 56 - 124     | 3   | 35        |
| Vinyl chloride               | 100                  | U                    | 1000          | 838        |               | ug/L |   | 84   | 49 - 136     | 5   | 35        |
| <b>Surrogate</b>             |                      |                      |               |            |               |      |   |      |              |     |           |
|                              | <b>MSD %Recovery</b> | <b>MSD Qualifier</b> | <b>Limits</b> |            |               |      |   |      |              |     |           |
| 1,2-Dichloroethane-d4 (Surr) | 84                   |                      | 75 - 130      |            |               |      |   |      |              |     |           |
| 4-Bromofluorobenzene (Surr)  | 76                   |                      | 47 - 134      |            |               |      |   |      |              |     |           |
| Toluene-d8 (Surr)            | 82                   |                      | 69 - 122      |            |               |      |   |      |              |     |           |
| Dibromofluoromethane (Surr)  | 86                   |                      | 78 - 129      |            |               |      |   |      |              |     |           |

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

## Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 240-421906/5**  
**Matrix: Water**  
**Analysis Batch: 421906**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

| Analyte                      | MB Result    | MB Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|--------------|--------------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.0          | U            | 2.0      | 0.86 | ug/L |   |          | 02/07/20 11:39 | 1       |
| Surrogate                    | MB %Recovery | MB Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 97           |              | 63 - 125 |      |      |   |          | 02/07/20 11:39 | 1       |

**Lab Sample ID: LCS 240-421906/4**  
**Matrix: Water**  
**Analysis Batch: 421906**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

| Analyte                      | Spike Added   | LCS Result    | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|------------------------------|---------------|---------------|---------------|------|---|------|--------------|
| 1,4-Dioxane                  | 10.0          | 10.2          |               | ug/L |   | 102  | 59 - 131     |
| Surrogate                    | LCS %Recovery | LCS Qualifier | Limits        |      |   |      |              |
| 1,2-Dichloroethane-d4 (Surr) | 91            |               | 63 - 125      |      |   |      |              |

**Lab Sample ID: 240-125766-G-3 MS**  
**Matrix: Water**  
**Analysis Batch: 421906**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

| Analyte                      | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|------------------------------|---------------|------------------|-------------|-----------|--------------|------|---|------|--------------|
| 1,4-Dioxane                  | 2.0           | U                | 10.0        | 9.58      |              | ug/L |   | 96   | 52 - 129     |
| Surrogate                    | MS %Recovery  | MS Qualifier     | Limits      |           |              |      |   |      |              |
| 1,2-Dichloroethane-d4 (Surr) | 100           |                  | 63 - 125    |           |              |      |   |      |              |

**Lab Sample ID: 240-125766-G-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 421906**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

| Analyte                      | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|------------------------------|---------------|------------------|-------------|------------|---------------|------|---|------|--------------|-----|-----------|
| 1,4-Dioxane                  | 2.0           | U                | 10.0        | 9.36       |               | ug/L |   | 94   | 52 - 129     | 2   | 13        |
| Surrogate                    | MSD %Recovery | MSD Qualifier    | Limits      |            |               |      |   |      |              |     |           |
| 1,2-Dichloroethane-d4 (Surr) | 106           |                  | 63 - 125    |            |               |      |   |      |              |     |           |

# QC Association Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

## GC/MS VOA

### Analysis Batch: 421752

| Lab Sample ID      | Client Sample ID       | Prep Type | Matrix | Method | Prep Batch |
|--------------------|------------------------|-----------|--------|--------|------------|
| 240-125765-1       | TRIP BLANK             | Total/NA  | Water  | 8260B  |            |
| 240-125765-2       | MW-64_020320           | Total/NA  | Water  | 8260B  |            |
| MB 240-421752/7    | Method Blank           | Total/NA  | Water  | 8260B  |            |
| LCS 240-421752/4   | Lab Control Sample     | Total/NA  | Water  | 8260B  |            |
| 240-125756-E-2 MSD | Matrix Spike Duplicate | Total/NA  | Water  | 8260B  |            |
| 240-125756-F-2 MS  | Matrix Spike           | Total/NA  | Water  | 8260B  |            |

### Analysis Batch: 421897

| Lab Sample ID      | Client Sample ID       | Prep Type | Matrix | Method | Prep Batch |
|--------------------|------------------------|-----------|--------|--------|------------|
| 240-125765-3       | TW-16-02_020320        | Total/NA  | Water  | 8260B  |            |
| MB 240-421897/7    | Method Blank           | Total/NA  | Water  | 8260B  |            |
| LCS 240-421897/4   | Lab Control Sample     | Total/NA  | Water  | 8260B  |            |
| 240-125798-B-4 MS  | Matrix Spike           | Total/NA  | Water  | 8260B  |            |
| 240-125798-B-4 MSD | Matrix Spike Duplicate | Total/NA  | Water  | 8260B  |            |

### Analysis Batch: 421906

| Lab Sample ID      | Client Sample ID       | Prep Type | Matrix | Method    | Prep Batch |
|--------------------|------------------------|-----------|--------|-----------|------------|
| 240-125765-2       | MW-64_020320           | Total/NA  | Water  | 8260B SIM |            |
| 240-125765-3       | TW-16-02_020320        | Total/NA  | Water  | 8260B SIM |            |
| MB 240-421906/5    | Method Blank           | Total/NA  | Water  | 8260B SIM |            |
| LCS 240-421906/4   | Lab Control Sample     | Total/NA  | Water  | 8260B SIM |            |
| 240-125766-G-3 MS  | Matrix Spike           | Total/NA  | Water  | 8260B SIM |            |
| 240-125766-G-3 MSD | Matrix Spike Duplicate | Total/NA  | Water  | 8260B SIM |            |



# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-125765-1**

**Date Collected: 02/03/20 00:00**

**Matrix: Water**

**Date Received: 02/05/20 08:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 421752       | 02/06/20 18:48       | LEE     | TAL CAN |

**Client Sample ID: MW-64\_020320**

**Lab Sample ID: 240-125765-2**

**Date Collected: 02/03/20 12:16**

**Matrix: Water**

**Date Received: 02/05/20 08:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 421752       | 02/06/20 19:09       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 421906       | 02/07/20 16:24       | SAM     | TAL CAN |

**Client Sample ID: TW-16-02\_020320**

**Lab Sample ID: 240-125765-3**

**Date Collected: 02/03/20 15:26**

**Matrix: Water**

**Date Received: 02/05/20 08:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 333.33          | 421897       | 02/07/20 12:09       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 421906       | 02/07/20 16:50       | SAM     | TAL CAN |

**Laboratory References:**

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



# Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP On Site

Job ID: 240-125765-1

## Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority             | Program             | Identification Number | Expiration Date |
|-----------------------|---------------------|-----------------------|-----------------|
| California            | State               | 2927                  | 02-23-20 *      |
| Connecticut           | State               | PH-0590               | 12-31-19 *      |
| Florida               | NELAP               | E87225                | 06-30-20        |
| Georgia               | State               | 4062                  | 02-23-20 *      |
| Illinois              | NELAP               | 004498                | 07-31-20        |
| Iowa                  | State               | 421                   | 06-01-21        |
| Kansas                | NELAP               | E-10336               | 04-30-20        |
| Kentucky (UST)        | State               | 112225                | 02-23-20 *      |
| Kentucky (WW)         | State               | KY98016               | 12-31-20        |
| Minnesota             | NELAP               | OH00048               | 12-31-20        |
| Minnesota (Petrofund) | State               | 3506                  | 08-01-21        |
| New Jersey            | NELAP               | OH001                 | 06-30-20        |
| New York              | NELAP               | 10975                 | 03-31-20        |
| Ohio VAP              | State               | CL0024                | 06-05-21        |
| Oregon                | NELAP               | 4062                  | 02-23-20 *      |
| Pennsylvania          | NELAP               | 68-00340              | 08-31-20        |
| Texas                 | NELAP               | T104704517-18-10      | 08-31-20        |
| USDA                  | US Federal Programs | P330-16-00404         | 12-28-19 *      |
| Virginia              | NELAP               | 010101                | 09-14-20        |
| Washington            | State               | C971                  | 01-12-21        |
| West Virginia DEP     | State               | 210                   | 12-31-20        |

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Canton

TestAmerica Laboratory location: Brighton --- 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763

Regulatory program:  DW  NPDES  RCRA  Other

Client Contact  
 Company Name: Arcadis  
 Address: 28550 Cabot Drive, Suite 500  
 City/State/Zip: Novi, MI, 48377  
 Phone: 248-994-2240

Client Project Manager: Kris Hinskey  
 Telephone: 248-994-2240  
 Email: kris@hinskey.com  
 Site Contact: Julia McClafferty  
 Telephone: 734-644-5131

Project Name: Ford LTP On-Site  
 Project Number: 30042006.0401.02  
 PO # 30042006.0401.02

Sampler Name: Gary Schreyer  
 Method of Shipment/Carrier:  
 Shipping/Tracking No:

| Sample Identification | Sample Date | Sample Time | Matrix |         |          |       |        |      |      | Other: |     |      |           |         |  |  |  |  |  |  |  |  |
|-----------------------|-------------|-------------|--------|---------|----------|-------|--------|------|------|--------|-----|------|-----------|---------|--|--|--|--|--|--|--|--|
|                       |             |             | Air    | Aqueous | Sediment | Solid | Other: | MSO4 | HNO3 |        | HCl | NaOH | ZnAc/NaOH | Tempers |  |  |  |  |  |  |  |  |
| TRIP BLANK            |             |             |        |         |          |       |        |      |      |        |     |      |           |         |  |  |  |  |  |  |  |  |
| MW-64-020320          | 02/03/20    | 12:16       | X      |         |          |       |        |      |      |        |     |      |           |         |  |  |  |  |  |  |  |  |
| TW-16-02-020320       | 02/03/20    | 15:26       | X      |         |          |       |        |      |      |        |     |      |           |         |  |  |  |  |  |  |  |  |



Possible Hazard Identification  
 Non-Hazard  Flammable  Irritant  Poison B  Unknown

Special Instructions/QC Requirements & Comments:  
 Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203728  
 Level IV Reporting requested.

| Relinquished by:                           | Company: | Date/Time:    | Received by:                | Company: | Date/Time:  |
|--|----------|---------------|-----------------------------|----------|-------------|
| <i>Rachel Bielak</i>                       | Arcadis  | 02/03/20 1630 | <i>Matthew Woodman</i>      | Arcadis  | 2/3/20/1630 |
| <i>Matthew Woodman</i>                     | Arcadis  | 2/3/20 1811   | <i>Arcadis Cold Storage</i> | Arcadis  | 2/3/20 1811 |
| <i>RACHEL BIELAK and Patrick Beningush</i> | Arcadis  | 2/4/20 1136   | <i>Molly Hixon</i>          | ETAL-MI  | 2/4/20 1136 |
| <i>Molly Hixon</i>                         | ETAL-MI  | 2/4/20 1603   | <i>ETAC</i>                 | ETAC     | 2-5-20 820  |

**Eurofins TestAmerica Canton Sample Receipt Form/Narrative**  
**Canton Facility**

Login # : 175765


Client Arcadis Site Name \_\_\_\_\_  
 Cooler Received on 2-5-20 Opened on 2-5-20

Cooler unpacked by: \_\_\_\_\_

FedEx: 1<sup>st</sup>  Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other \_\_\_\_\_

**Receipt After-hours:** Drop-off Date/Time \_\_\_\_\_ Storage Location \_\_\_\_\_

TestAmerica Cooler # 11 Foam Box Client Cooler Box Other \_\_\_\_\_  
 Packing material used: Bubble Wrap Foam Plastic Bag None Other \_\_\_\_\_  
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt  See Multiple Cooler Form  
 IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
 IR GUN #IR-11 (CF +0.9 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No  
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA  
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No  
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No  
 4. Did custody papers accompany the sample(s)? Yes No  
 5. Were the custody papers relinquished & signed in the appropriate place? Yes No  
 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No  
 7. Did all bottles arrive in good condition (Unbroken)? Yes No  
 8. Could all bottle labels be reconciled with the COC? Yes No  
 9. Were correct bottle(s) used for the test(s) indicated? Yes No  
 10. Sufficient quantity received to perform indicated analyses? Yes No  
 11. Are these work share samples? Yes No  
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC995364  
 13. Were VOAs on the COC? Yes No  
 14. Were air bubbles >6 mm in any VOA vials?  Larger than this. Yes No NA  
 15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # NA Yes No  
 16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:  
 VOAs  
 Oil and Grease  
 TOC

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other \_\_\_\_\_

Concerning \_\_\_\_\_

**17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES**

Samples processed by: \_\_\_\_\_

AG

**18. SAMPLE CONDITION**

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.  
 Sample(s) \_\_\_\_\_ were received in a broken container.  
 Sample(s) \_\_\_\_\_ were received with bubble >6 mm in diameter. (Notify PM)

**19. SAMPLE PRESERVATION**

Sample(s) \_\_\_\_\_ were further preserved in the laboratory.  
 Time preserved: \_\_\_\_\_ Preservative(s) added/Lot number(s): \_\_\_\_\_

VOA Sample Preservation - Date/Time VOAs Frozen: \_\_\_\_\_

