

# ANALYTICAL REPORT

## PREPARED FOR

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Novi, Michigan 48377

Generated 3/16/2023 11:19:06 AM

## JOB DESCRIPTION

Ford LTP - On Site

## JOB NUMBER

240-181398-1

# Eurofins Canton

## Job Notes

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## Authorization



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# Table of Contents

|                                  |    |
|----------------------------------|----|
| Cover Page . . . . .             | 1  |
| Table of Contents . . . . .      | 3  |
| Definitions/Glossary . . . . .   | 4  |
| Case Narrative . . . . .         | 5  |
| Method Summary . . . . .         | 6  |
| Sample Summary . . . . .         | 7  |
| Detection Summary . . . . .      | 8  |
| Client Sample Results . . . . .  | 9  |
| Surrogate Summary . . . . .      | 14 |
| QC Sample Results . . . . .      | 15 |
| QC Association Summary . . . . . | 19 |
| Lab Chronicle . . . . .          | 20 |
| Certification Summary . . . . .  | 21 |
| Chain of Custody . . . . .       | 22 |

# Definitions/Glossary

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

Job ID: 240-181398-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description                                    |
|-----------|--|
| 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.                                 |
|----------------|---|
| α              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CFL            | Contains Free Liquid  |
| CFU            | Colony Forming Unit   |
| 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)   |
| MCL            | EPA recommended "Maximum Contaminant Level"   |
| MDA            | Minimum Detectable Activity (Radiochemistry)  |
| MDC            | Minimum Detectable Concentration (Radiochemistry)   |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| MPN            | Most Probable Number  |
| MQL            | Method Quantitation Limit   |
| NC             | Not Calculated  |
| ND             | Not Detected at the reporting limit (or MDL or EDL if shown)  |
| NEG            | Negative / Absent   |
| POS            | Positive / Present  |
| PQL            | Practical Quantitation Limit  |
| PRES           | Presumptive   |
| 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)   |
| TNTC           | Too Numerous To Count   |

# Case Narrative

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

Job ID: 240-181398-1

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**Job ID: 240-181398-1**

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**Laboratory: Eurofins Canton**

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**Narrative**

**Job Narrative**  
**240-181398-1**

**Receipt**

The samples were received on 3/4/2023 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.3°C

**GC/MS VOA**

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

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# Method Summary

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

Job ID: 240-181398-1

| Method    | Method Description                  | Protocol | Laboratory |
|-----------|-------------------------------------|----------|------------|
| 8260D     | Volatile Organic Compounds by GC/MS | SW846    | EET CAN    |
| 8260D SIM | Volatile Organic Compounds (GC/MS)  | SW846    | EET CAN    |
| 5030C     | Purge and Trap                      | SW846    | EET CAN    |

**Protocol References:**

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

**Laboratory References:**

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

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- 13
- 14

# Sample Summary

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

Job ID: 240-181398-1

| Lab Sample ID | Client Sample ID | Matrix | Collected      | Received       |
|---------------|------------------|--------|----------------|----------------|
| 240-181398-1  | TRIP BLANK_61    | Water  | 03/02/23 00:00 | 03/04/23 08:00 |
| 240-181398-2  | MW-200_030223    | Water  | 03/02/23 11:07 | 03/04/23 08:00 |
| 240-181398-3  | MW-200S_030223   | Water  | 03/02/23 11:55 | 03/04/23 08:00 |
| 240-181398-4  | MW-201S_030223   | Water  | 03/02/23 13:18 | 03/04/23 08:00 |
| 240-181398-5  | MW-201_030223    | Water  | 03/02/23 14:45 | 03/04/23 08:00 |

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- 2
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- 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: 240-181398-1

**Client Sample ID: TRIP BLANK\_61**

**Lab Sample ID: 240-181398-1**

No Detections.

**Client Sample ID: MW-200\_030223**

**Lab Sample ID: 240-181398-2**

No Detections.

**Client Sample ID: MW-200S\_030223**

**Lab Sample ID: 240-181398-3**

No Detections.

**Client Sample ID: MW-201S\_030223**

**Lab Sample ID: 240-181398-4**

No Detections.

**Client Sample ID: MW-201\_030223**

**Lab Sample ID: 240-181398-5**

No Detections.

- 1
- 2
- 3
- 4
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- 13
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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: 240-181398-1

**Client Sample ID: TRIP BLANK\_61**

**Lab Sample ID: 240-181398-1**

Date Collected: 03/02/23 00:00

Matrix: Water

Date Received: 03/04/23 08:00

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

| Analyte                  | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|--------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1-Dichloroethene       | 1.0    | U         | 1.0 | 0.49 | ug/L |   |          | 03/11/23 18:04 | 1       |
| cis-1,2-Dichloroethene   | 1.0    | U         | 1.0 | 0.46 | ug/L |   |          | 03/11/23 18:04 | 1       |
| Tetrachloroethene        | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 03/11/23 18:04 | 1       |
| trans-1,2-Dichloroethene | 1.0    | U         | 1.0 | 0.51 | ug/L |   |          | 03/11/23 18:04 | 1       |
| Trichloroethene          | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 03/11/23 18:04 | 1       |
| Vinyl chloride           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 03/11/23 18:04 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 97        |           | 62 - 137 |          | 03/11/23 18:04 | 1       |
| 4-Bromofluorobenzene (Surr)  | 106       |           | 56 - 136 |          | 03/11/23 18:04 | 1       |
| Toluene-d8 (Surr)            | 105       |           | 78 - 122 |          | 03/11/23 18:04 | 1       |
| Dibromofluoromethane (Surr)  | 104       |           | 73 - 120 |          | 03/11/23 18:04 | 1       |

# Client Sample Results

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

Job ID: 240-181398-1

**Client Sample ID: MW-200\_030223**

**Lab Sample ID: 240-181398-2**

Date Collected: 03/02/23 11:07

Matrix: Water

Date Received: 03/04/23 08:00

**Method: SW846 8260D 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 |   |          | 03/13/23 18:31 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 91        |           | 66 - 120 |      |      |   |          | 03/13/23 18:31 | 1       |

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,1-Dichloroethene           | 1.0       | U         | 1.0      | 0.49 | ug/L |   |          | 03/11/23 18:28 | 1       |
| cis-1,2-Dichloroethene       | 1.0       | U         | 1.0      | 0.46 | ug/L |   |          | 03/11/23 18:28 | 1       |
| Tetrachloroethene            | 1.0       | U         | 1.0      | 0.44 | ug/L |   |          | 03/11/23 18:28 | 1       |
| trans-1,2-Dichloroethene     | 1.0       | U         | 1.0      | 0.51 | ug/L |   |          | 03/11/23 18:28 | 1       |
| Trichloroethene              | 1.0       | U         | 1.0      | 0.44 | ug/L |   |          | 03/11/23 18:28 | 1       |
| Vinyl chloride               | 1.0       | U         | 1.0      | 0.45 | ug/L |   |          | 03/11/23 18:28 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 97        |           | 62 - 137 |      |      |   |          | 03/11/23 18:28 | 1       |
| 4-Bromofluorobenzene (Surr)  | 111       |           | 56 - 136 |      |      |   |          | 03/11/23 18:28 | 1       |
| Toluene-d8 (Surr)            | 106       |           | 78 - 122 |      |      |   |          | 03/11/23 18:28 | 1       |
| Dibromofluoromethane (Surr)  | 105       |           | 73 - 120 |      |      |   |          | 03/11/23 18:28 | 1       |

# Client Sample Results

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

Job ID: 240-181398-1

**Client Sample ID: MW-200S\_030223**

**Lab Sample ID: 240-181398-3**

Date Collected: 03/02/23 11:55

Matrix: Water

Date Received: 03/04/23 08:00

**Method: SW846 8260D 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 |   |                 | 03/13/23 18:55  | 1              |
| <b>Surrogate</b>             | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |      |      |   | <b>Prepared</b> | <b>Analyzed</b> | <b>Dil Fac</b> |
| 1,2-Dichloroethane-d4 (Surr) | 88               |                  | 66 - 120      |      |      |   |                 | 03/13/23 18:55  | 1              |

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

| Analyte                      | Result           | Qualifier        | RL            | MDL  | Unit | D | Prepared        | Analyzed        | Dil Fac        |
|------------------------------|------------------|------------------|---------------|------|------|---|-----------------|-----------------|----------------|
| 1,1-Dichloroethene           | 1.0              | U                | 1.0           | 0.49 | ug/L |   |                 | 03/11/23 18:52  | 1              |
| cis-1,2-Dichloroethene       | 1.0              | U                | 1.0           | 0.46 | ug/L |   |                 | 03/11/23 18:52  | 1              |
| Tetrachloroethene            | 1.0              | U                | 1.0           | 0.44 | ug/L |   |                 | 03/11/23 18:52  | 1              |
| trans-1,2-Dichloroethene     | 1.0              | U                | 1.0           | 0.51 | ug/L |   |                 | 03/11/23 18:52  | 1              |
| Trichloroethene              | 1.0              | U                | 1.0           | 0.44 | ug/L |   |                 | 03/11/23 18:52  | 1              |
| Vinyl chloride               | 1.0              | U                | 1.0           | 0.45 | ug/L |   |                 | 03/11/23 18:52  | 1              |
| <b>Surrogate</b>             | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |      |      |   | <b>Prepared</b> | <b>Analyzed</b> | <b>Dil Fac</b> |
| 1,2-Dichloroethane-d4 (Surr) | 97               |                  | 62 - 137      |      |      |   |                 | 03/11/23 18:52  | 1              |
| 4-Bromofluorobenzene (Surr)  | 111              |                  | 56 - 136      |      |      |   |                 | 03/11/23 18:52  | 1              |
| Toluene-d8 (Surr)            | 107              |                  | 78 - 122      |      |      |   |                 | 03/11/23 18:52  | 1              |
| Dibromofluoromethane (Surr)  | 104              |                  | 73 - 120      |      |      |   |                 | 03/11/23 18:52  | 1              |

# Client Sample Results

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

Job ID: 240-181398-1

**Client Sample ID: MW-201S\_030223**

**Lab Sample ID: 240-181398-4**

Date Collected: 03/02/23 13:18

Matrix: Water

Date Received: 03/04/23 08:00

**Method: SW846 8260D 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 |   |          | 03/14/23 13:47 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 83        |           | 66 - 120 |      |      |   |          | 03/14/23 13:47 | 1       |

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,1-Dichloroethene           | 1.0       | U         | 1.0      | 0.49 | ug/L |   |          | 03/11/23 19:16 | 1       |
| cis-1,2-Dichloroethene       | 1.0       | U         | 1.0      | 0.46 | ug/L |   |          | 03/11/23 19:16 | 1       |
| Tetrachloroethene            | 1.0       | U         | 1.0      | 0.44 | ug/L |   |          | 03/11/23 19:16 | 1       |
| trans-1,2-Dichloroethene     | 1.0       | U         | 1.0      | 0.51 | ug/L |   |          | 03/11/23 19:16 | 1       |
| Trichloroethene              | 1.0       | U         | 1.0      | 0.44 | ug/L |   |          | 03/11/23 19:16 | 1       |
| Vinyl chloride               | 1.0       | U         | 1.0      | 0.45 | ug/L |   |          | 03/11/23 19:16 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 96        |           | 62 - 137 |      |      |   |          | 03/11/23 19:16 | 1       |
| 4-Bromofluorobenzene (Surr)  | 110       |           | 56 - 136 |      |      |   |          | 03/11/23 19:16 | 1       |
| Toluene-d8 (Surr)            | 105       |           | 78 - 122 |      |      |   |          | 03/11/23 19:16 | 1       |
| Dibromofluoromethane (Surr)  | 105       |           | 73 - 120 |      |      |   |          | 03/11/23 19:16 | 1       |

# Client Sample Results

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

Job ID: 240-181398-1

**Client Sample ID: MW-201\_030223**

**Lab Sample ID: 240-181398-5**

Date Collected: 03/02/23 14:45

Matrix: Water

Date Received: 03/04/23 08:00

**Method: SW846 8260D 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 |   |          | 03/13/23 19:43 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 77        |           | 66 - 120 |      |      |   |          | 03/13/23 19:43 | 1       |

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,1-Dichloroethene           | 1.0       | U         | 1.0      | 0.49 | ug/L |   |          | 03/11/23 19:40 | 1       |
| cis-1,2-Dichloroethene       | 1.0       | U         | 1.0      | 0.46 | ug/L |   |          | 03/11/23 19:40 | 1       |
| Tetrachloroethene            | 1.0       | U         | 1.0      | 0.44 | ug/L |   |          | 03/11/23 19:40 | 1       |
| trans-1,2-Dichloroethene     | 1.0       | U         | 1.0      | 0.51 | ug/L |   |          | 03/11/23 19:40 | 1       |
| Trichloroethene              | 1.0       | U         | 1.0      | 0.44 | ug/L |   |          | 03/11/23 19:40 | 1       |
| Vinyl chloride               | 1.0       | U         | 1.0      | 0.45 | ug/L |   |          | 03/11/23 19:40 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 95        |           | 62 - 137 |      |      |   |          | 03/11/23 19:40 | 1       |
| 4-Bromofluorobenzene (Surr)  | 109       |           | 56 - 136 |      |      |   |          | 03/11/23 19:40 | 1       |
| Toluene-d8 (Surr)            | 107       |           | 78 - 122 |      |      |   |          | 03/11/23 19:40 | 1       |
| Dibromofluoromethane (Surr)  | 102       |           | 73 - 120 |      |      |   |          | 03/11/23 19:40 | 1       |

# Surrogate Summary

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

Job ID: 240-181398-1

## Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID    | Client Sample ID   | Percent Surrogate Recovery (Acceptance Limits) |                 |                 |                  |
|------------------|--------------------|--|-----------------|-----------------|------------------|
|                  |                    | DCA<br>(62-137)                                | BFB<br>(56-136) | TOL<br>(78-122) | DBFM<br>(73-120) |
| 240-181398-1     | TRIP BLANK_61      | 97   | 106             | 105             | 104              |
| 240-181398-2     | MW-200_030223      | 97   | 111             | 106             | 105              |
| 240-181398-3     | MW-200S_030223     | 97   | 111             | 107             | 104              |
| 240-181398-4     | MW-201S_030223     | 96   | 110             | 105             | 105              |
| 240-181398-5     | MW-201_030223      | 95   | 109             | 107             | 102              |
| 240-181398-5 MS  | MW-201-MS_030223   | 94   | 108             | 103             | 105              |
| 240-181398-5 MSD | MW-201-MSD_0030223 | 96   | 111             | 106             | 105              |
| LCS 240-565039/5 | Lab Control Sample | 95   | 112             | 105             | 104              |
| MB 240-565039/10 | Method Blank       | 95   | 111             | 105             | 105              |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)  
BFB = 4-Bromofluorobenzene (Surr)  
TOL = Toluene-d8 (Surr)  
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID      | Client Sample ID       | Percent Surrogate Recovery (Acceptance Limits) |
|--------------------|------------------------|--|
|                    |                        | DCA<br>(66-120)                                |
| 240-181398-2       | MW-200_030223          | 91   |
| 240-181398-3       | MW-200S_030223         | 88   |
| 240-181398-4       | MW-201S_030223         | 83   |
| 240-181398-5       | MW-201_030223          | 77   |
| 240-181398-5 MS    | MW-201-MS_030223       | 85   |
| 240-181398-5 MSD   | MW-201-MSD_0030223     | 76   |
| 240-181595-E-2 MS  | Matrix Spike           | 87   |
| 240-181595-F-2 MSD | Matrix Spike Duplicate | 83   |
| LCS 240-565107/4   | Lab Control Sample     | 86   |
| LCS 240-565304/4   | Lab Control Sample     | 84   |
| MB 240-565107/6    | Method Blank           | 77   |
| MB 240-565304/6    | Method Blank           | 81   |

**Surrogate Legend**

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

# QC Sample Results

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

Job ID: 240-181398-1

## Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-565039/10

Matrix: Water

Analysis Batch: 565039

Client Sample ID: Method Blank

Prep Type: Total/NA

| Analyte                  | MB     | MB        | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|--------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
|                          | Result | Qualifier |     |      |      |   |          |                |         |
| 1,1-Dichloroethene       | 1.0    | U         | 1.0 | 0.49 | ug/L |   |          | 03/11/23 12:50 | 1       |
| cis-1,2-Dichloroethene   | 1.0    | U         | 1.0 | 0.46 | ug/L |   |          | 03/11/23 12:50 | 1       |
| Tetrachloroethene        | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 03/11/23 12:50 | 1       |
| trans-1,2-Dichloroethene | 1.0    | U         | 1.0 | 0.51 | ug/L |   |          | 03/11/23 12:50 | 1       |
| Trichloroethene          | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 03/11/23 12:50 | 1       |
| Vinyl chloride           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 03/11/23 12:50 | 1       |

| Surrogate                    | MB        | MB        | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
|                              | %Recovery | Qualifier |          |          |                |         |
| 1,2-Dichloroethane-d4 (Surr) | 95        |           | 62 - 137 |          | 03/11/23 12:50 | 1       |
| 4-Bromofluorobenzene (Surr)  | 111       |           | 56 - 136 |          | 03/11/23 12:50 | 1       |
| Toluene-d8 (Surr)            | 105       |           | 78 - 122 |          | 03/11/23 12:50 | 1       |
| Dibromofluoromethane (Surr)  | 105       |           | 73 - 120 |          | 03/11/23 12:50 | 1       |

Lab Sample ID: LCS 240-565039/5

Matrix: Water

Analysis Batch: 565039

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

| Analyte                  | Spike Added | LCS    | LCS       | Unit | D | %Rec | %Rec Limits |
|--------------------------|-------------|--------|-----------|------|---|------|-------------|
|                          |             | Result | Qualifier |      |   |      |             |
| 1,1-Dichloroethene       | 20.0        | 18.3   |           | ug/L |   | 91   | 63 - 134    |
| cis-1,2-Dichloroethene   | 20.0        | 18.6   |           | ug/L |   | 93   | 77 - 123    |
| Tetrachloroethene        | 20.0        | 19.5   |           | ug/L |   | 97   | 76 - 123    |
| trans-1,2-Dichloroethene | 20.0        | 18.3   |           | ug/L |   | 91   | 75 - 124    |
| Trichloroethene          | 20.0        | 18.6   |           | ug/L |   | 93   | 70 - 122    |
| Vinyl chloride           | 20.0        | 15.6   |           | ug/L |   | 78   | 60 - 144    |

| Surrogate                    | LCS       | LCS       | Limits   |
|------------------------------|-----------|-----------|----------|
|                              | %Recovery | Qualifier |          |
| 1,2-Dichloroethane-d4 (Surr) | 95        |           | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 112       |           | 56 - 136 |
| Toluene-d8 (Surr)            | 105       |           | 78 - 122 |
| Dibromofluoromethane (Surr)  | 104       |           | 73 - 120 |

Lab Sample ID: 240-181398-5 MS

Matrix: Water

Analysis Batch: 565039

Client Sample ID: MW-201-MS\_030223

Prep Type: Total/NA

| Analyte                  | Sample | Sample    | Spike Added | MS     | MS        | Unit | D | %Rec | %Rec Limits |
|--------------------------|--------|-----------|-------------|--------|-----------|------|---|------|-------------|
|                          | Result | Qualifier |             | Result | Qualifier |      |   |      |             |
| 1,1-Dichloroethene       | 1.0    | U         | 20.0        | 17.8   |           | ug/L |   | 89   | 56 - 135    |
| cis-1,2-Dichloroethene   | 1.0    | U         | 20.0        | 17.6   |           | ug/L |   | 88   | 66 - 128    |
| Tetrachloroethene        | 1.0    | U         | 20.0        | 18.7   |           | ug/L |   | 94   | 62 - 131    |
| trans-1,2-Dichloroethene | 1.0    | U         | 20.0        | 17.5   |           | ug/L |   | 88   | 56 - 136    |
| Trichloroethene          | 1.0    | U         | 20.0        | 17.8   |           | ug/L |   | 89   | 61 - 124    |
| Vinyl chloride           | 1.0    | U         | 20.0        | 15.5   |           | ug/L |   | 78   | 43 - 157    |

| Surrogate                    | MS        | MS        | Limits   |
|------------------------------|-----------|-----------|----------|
|                              | %Recovery | Qualifier |          |
| 1,2-Dichloroethane-d4 (Surr) | 94        |           | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 108       |           | 56 - 136 |
| Toluene-d8 (Surr)            | 103       |           | 78 - 122 |

# QC Sample Results

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

Job ID: 240-181398-1

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

Lab Sample ID: 240-181398-5 MS  
Matrix: Water  
Analysis Batch: 565039

Client Sample ID: MW-201-MS\_030223  
Prep Type: Total/NA

| Surrogate                   | MS<br>%Recovery | MS<br>Qualifier | Limits   |
|-----------------------------|-----------------|-----------------|----------|
| Dibromofluoromethane (Surr) | 105             |                 | 73 - 120 |

Lab Sample ID: 240-181398-5 MSD  
Matrix: Water  
Analysis Batch: 565039

Client Sample ID: MW-201-MSD\_0030223  
Prep Type: Total/NA

| Analyte                  | Sample<br>Result | Sample<br>Qualifier | Spike<br>Added | MSD<br>Result | MSD<br>Qualifier | Unit | D | %Rec | %Rec<br>Limits | RPD | RPD<br>Limit |
|--------------------------|------------------|---------------------|----------------|---------------|------------------|------|---|------|----------------|-----|--------------|
| 1,1-Dichloroethene       | 1.0              | U                   | 20.0           | 18.9          |                  | ug/L |   | 95   | 56 - 135       | 6   | 26           |
| cis-1,2-Dichloroethene   | 1.0              | U                   | 20.0           | 18.9          |                  | ug/L |   | 94   | 66 - 128       | 7   | 14           |
| Tetrachloroethene        | 1.0              | U                   | 20.0           | 19.7          |                  | ug/L |   | 99   | 62 - 131       | 5   | 20           |
| trans-1,2-Dichloroethene | 1.0              | U                   | 20.0           | 18.6          |                  | ug/L |   | 93   | 56 - 136       | 6   | 15           |
| Trichloroethene          | 1.0              | U                   | 20.0           | 19.0          |                  | ug/L |   | 95   | 61 - 124       | 7   | 15           |
| Vinyl chloride           | 1.0              | U                   | 20.0           | 15.8          |                  | ug/L |   | 79   | 43 - 157       | 2   | 24           |

  

| Surrogate                    | MSD<br>%Recovery | MSD<br>Qualifier | Limits   |
|------------------------------|------------------|------------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 96               |                  | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 111              |                  | 56 - 136 |
| Toluene-d8 (Surr)            | 106              |                  | 78 - 122 |
| Dibromofluoromethane (Surr)  | 105              |                  | 73 - 120 |

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

Lab Sample ID: MB 240-565107/6  
Matrix: Water  
Analysis Batch: 565107

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

| Analyte     | MB<br>Result | MB<br>Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------|--------------|-----------------|-----|------|------|---|----------|----------------|---------|
| 1,4-Dioxane | 2.0          | U               | 2.0 | 0.86 | ug/L |   |          | 03/13/23 11:37 | 1       |

  

| Surrogate                    | MB<br>%Recovery | MB<br>Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------------|-----------------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 77              |                 | 66 - 120 |          | 03/13/23 11:37 | 1       |

Lab Sample ID: LCS 240-565107/4  
Matrix: Water  
Analysis Batch: 565107

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

| Analyte     | Spike<br>Added | LCS<br>Result | LCS<br>Qualifier | Unit | D | %Rec | %Rec<br>Limits |
|-------------|----------------|---------------|------------------|------|---|------|----------------|
| 1,4-Dioxane | 10.0           | 11.2          |                  | ug/L |   | 112  | 80 - 122       |

  

| Surrogate                    | LCS<br>%Recovery | LCS<br>Qualifier | Limits   |
|------------------------------|------------------|------------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 86               |                  | 66 - 120 |

Lab Sample ID: 240-181398-5 MS  
Matrix: Water  
Analysis Batch: 565107

Client Sample ID: MW-201-MS\_030223  
Prep Type: Total/NA

| Analyte     | Sample<br>Result | Sample<br>Qualifier | Spike<br>Added | MS<br>Result | MS<br>Qualifier | Unit | D | %Rec | %Rec<br>Limits |
|-------------|------------------|---------------------|----------------|--------------|-----------------|------|---|------|----------------|
| 1,4-Dioxane | 2.0              | U                   | 10.0           | 10.8         |                 | ug/L |   | 108  | 51 - 153       |

Eurofins Canton



# QC Sample Results

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

Job ID: 240-181398-1

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

| Surrogate                    | <i>MS</i><br>%Recovery | <i>MS</i><br>Qualifier | Limits   |
|------------------------------|------------------------|------------------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 85                     |                        | 66 - 120 |

Lab Sample ID: 240-181398-5 MSD  
Matrix: Water  
Analysis Batch: 565107

Client Sample ID: MW-201-MSD\_0030223  
Prep Type: Total/NA

| Analyte     | Sample<br>Result | Sample<br>Qualifier | Spike<br>Added | MSD<br>Result | MSD<br>Qualifier | Unit | D | %Rec | %Rec<br>Limits | RPD | RPD<br>Limit |
|-------------|------------------|---------------------|----------------|---------------|------------------|------|---|------|----------------|-----|--------------|
| 1,4-Dioxane | 2.0              | U                   | 10.0           | 11.9          |                  | ug/L |   | 119  | 51 - 153       | 10  | 16           |

| Surrogate                    | <i>MSD</i><br>%Recovery | <i>MSD</i><br>Qualifier | Limits   |
|------------------------------|-------------------------|-------------------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 76                      |                         | 66 - 120 |

Lab Sample ID: MB 240-565304/6  
Matrix: Water  
Analysis Batch: 565304

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

| Analyte     | MB<br>Result | MB<br>Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------|--------------|-----------------|-----|------|------|---|----------|----------------|---------|
| 1,4-Dioxane | 2.0          | U               | 2.0 | 0.86 | ug/L |   |          | 03/14/23 12:34 | 1       |

| Surrogate                    | <i>MB</i><br>%Recovery | <i>MB</i><br>Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|------------------------|------------------------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 81                     |                        | 66 - 120 |          | 03/14/23 12:34 | 1       |

Lab Sample ID: LCS 240-565304/4  
Matrix: Water  
Analysis Batch: 565304

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

| Analyte     | Spike<br>Added | LCS<br>Result | LCS<br>Qualifier | Unit | D | %Rec | %Rec<br>Limits |
|-------------|----------------|---------------|------------------|------|---|------|----------------|
| 1,4-Dioxane | 10.0           | 10.5          |                  | ug/L |   | 105  | 80 - 122       |

| Surrogate                    | <i>LCS</i><br>%Recovery | <i>LCS</i><br>Qualifier | Limits   |
|------------------------------|-------------------------|-------------------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 84                      |                         | 66 - 120 |

Lab Sample ID: 240-181595-E-2 MS  
Matrix: Water  
Analysis Batch: 565304

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

| Analyte     | Sample<br>Result | Sample<br>Qualifier | Spike<br>Added | MS<br>Result | MS<br>Qualifier | Unit | D | %Rec | %Rec<br>Limits |
|-------------|------------------|---------------------|----------------|--------------|-----------------|------|---|------|----------------|
| 1,4-Dioxane | 2.0              | U                   | 10.0           | 10.6         |                 | ug/L |   | 106  | 51 - 153       |

| Surrogate                    | <i>MS</i><br>%Recovery | <i>MS</i><br>Qualifier | Limits   |
|------------------------------|------------------------|------------------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 87                     |                        | 66 - 120 |

Lab Sample ID: 240-181595-F-2 MSD  
Matrix: Water  
Analysis Batch: 565304

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

| Analyte     | Sample<br>Result | Sample<br>Qualifier | Spike<br>Added | MSD<br>Result | MSD<br>Qualifier | Unit | D | %Rec | %Rec<br>Limits | RPD | RPD<br>Limit |
|-------------|------------------|---------------------|----------------|---------------|------------------|------|---|------|----------------|-----|--------------|
| 1,4-Dioxane | 2.0              | U                   | 10.0           | 10.8          |                  | ug/L |   | 108  | 51 - 153       | 2   | 16           |

# QC Sample Results

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

Job ID: 240-181398-1

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

Lab Sample ID: 240-181595-F-2 MSD

Matrix: Water

Analysis Batch: 565304

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

| <i>Surrogate</i>             | <i>MSD</i>       | <i>MSD</i>       | <i>Limits</i> |
|------------------------------|------------------|------------------|---------------|
|                              | <i>%Recovery</i> | <i>Qualifier</i> |               |
| 1,2-Dichloroethane-d4 (Surr) | 83               |                  | 66 - 120      |

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

# QC Association Summary

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

Job ID: 240-181398-1

## GC/MS VOA

### Analysis Batch: 565039

| Lab Sample ID    | Client Sample ID   | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------|-----------|--------|--------|------------|
| 240-181398-1     | TRIP BLANK_61      | Total/NA  | Water  | 8260D  |            |
| 240-181398-2     | MW-200_030223      | Total/NA  | Water  | 8260D  |            |
| 240-181398-3     | MW-200S_030223     | Total/NA  | Water  | 8260D  |            |
| 240-181398-4     | MW-201S_030223     | Total/NA  | Water  | 8260D  |            |
| 240-181398-5     | MW-201_030223      | Total/NA  | Water  | 8260D  |            |
| MB 240-565039/10 | Method Blank       | Total/NA  | Water  | 8260D  |            |
| LCS 240-565039/5 | Lab Control Sample | Total/NA  | Water  | 8260D  |            |
| 240-181398-5 MS  | MW-201-MS_030223   | Total/NA  | Water  | 8260D  |            |
| 240-181398-5 MSD | MW-201-MSD_0030223 | Total/NA  | Water  | 8260D  |            |

### Analysis Batch: 565107

| Lab Sample ID    | Client Sample ID   | Prep Type | Matrix | Method    | Prep Batch |
|------------------|--------------------|-----------|--------|-----------|------------|
| 240-181398-2     | MW-200_030223      | Total/NA  | Water  | 8260D SIM |            |
| 240-181398-3     | MW-200S_030223     | Total/NA  | Water  | 8260D SIM |            |
| 240-181398-5     | MW-201_030223      | Total/NA  | Water  | 8260D SIM |            |
| MB 240-565107/6  | Method Blank       | Total/NA  | Water  | 8260D SIM |            |
| LCS 240-565107/4 | Lab Control Sample | Total/NA  | Water  | 8260D SIM |            |
| 240-181398-5 MS  | MW-201-MS_030223   | Total/NA  | Water  | 8260D SIM |            |
| 240-181398-5 MSD | MW-201-MSD_0030223 | Total/NA  | Water  | 8260D SIM |            |

### Analysis Batch: 565304

| Lab Sample ID      | Client Sample ID       | Prep Type | Matrix | Method    | Prep Batch |
|--------------------|------------------------|-----------|--------|-----------|------------|
| 240-181398-4       | MW-201S_030223         | Total/NA  | Water  | 8260D SIM |            |
| MB 240-565304/6    | Method Blank           | Total/NA  | Water  | 8260D SIM |            |
| LCS 240-565304/4   | Lab Control Sample     | Total/NA  | Water  | 8260D SIM |            |
| 240-181595-E-2 MS  | Matrix Spike           | Total/NA  | Water  | 8260D SIM |            |
| 240-181595-F-2 MSD | Matrix Spike Duplicate | Total/NA  | Water  | 8260D SIM |            |

# Lab Chronicle

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

Job ID: 240-181398-1

**Client Sample ID: TRIP BLANK\_61**

**Lab Sample ID: 240-181398-1**

Date Collected: 03/02/23 00:00

Matrix: Water

Date Received: 03/04/23 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab     | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|---------|----------------------|
| Total/NA  | Analysis   | 8260D        |     | 1               | 565039       | HMB     | EET CAN | 03/11/23 18:04       |

**Client Sample ID: MW-200\_030223**

**Lab Sample ID: 240-181398-2**

Date Collected: 03/02/23 11:07

Matrix: Water

Date Received: 03/04/23 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab     | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|---------|----------------------|
| Total/NA  | Analysis   | 8260D        |     | 1               | 565039       | HMB     | EET CAN | 03/11/23 18:28       |
| Total/NA  | Analysis   | 8260D SIM    |     | 1               | 565107       | BAJ     | EET CAN | 03/13/23 18:31       |

**Client Sample ID: MW-200S\_030223**

**Lab Sample ID: 240-181398-3**

Date Collected: 03/02/23 11:55

Matrix: Water

Date Received: 03/04/23 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab     | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|---------|----------------------|
| Total/NA  | Analysis   | 8260D        |     | 1               | 565039       | HMB     | EET CAN | 03/11/23 18:52       |
| Total/NA  | Analysis   | 8260D SIM    |     | 1               | 565107       | BAJ     | EET CAN | 03/13/23 18:55       |

**Client Sample ID: MW-201S\_030223**

**Lab Sample ID: 240-181398-4**

Date Collected: 03/02/23 13:18

Matrix: Water

Date Received: 03/04/23 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab     | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|---------|----------------------|
| Total/NA  | Analysis   | 8260D        |     | 1               | 565039       | HMB     | EET CAN | 03/11/23 19:16       |
| Total/NA  | Analysis   | 8260D SIM    |     | 1               | 565304       | BAJ     | EET CAN | 03/14/23 13:47       |

**Client Sample ID: MW-201\_030223**

**Lab Sample ID: 240-181398-5**

Date Collected: 03/02/23 14:45

Matrix: Water

Date Received: 03/04/23 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab     | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|---------|----------------------|
| Total/NA  | Analysis   | 8260D        |     | 1               | 565039       | HMB     | EET CAN | 03/11/23 19:40       |
| Total/NA  | Analysis   | 8260D SIM    |     | 1               | 565107       | BAJ     | EET CAN | 03/13/23 19:43       |

**Laboratory References:**

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

# Accreditation/Certification Summary

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

Job ID: 240-181398-1

## Laboratory: Eurofins 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                  | 02-27-23 *      |
| Connecticut           | State   | PH-0590               | 12-31-23        |
| Florida               | NELAP   | E87225                | 06-30-23        |
| Georgia               | State   | 4062                  | 02-27-23 *      |
| Illinois              | NELAP   | 200004                | 07-31-23        |
| Iowa                  | State   | 421                   | 06-01-23        |
| Kentucky (UST)        | State   | 112225                | 02-27-23 *      |
| Kentucky (WW)         | State   | KY98016               | 12-31-23        |
| Michigan              | State   | 9135                  | 02-27-23 *      |
| Minnesota             | NELAP   | 039-999-348           | 12-31-23        |
| Minnesota (Petrofund) | State   | 3506                  | 08-01-23        |
| New Jersey            | NELAP   | OH001                 | 06-30-23        |
| New York              | NELAP   | 10975                 | 04-01-23        |
| Ohio                  | State   | 8303                  | 02-27-23 *      |
| Ohio VAP              | State   | CL0024                | 02-27-23 *      |
| Oregon                | NELAP   | 4062                  | 02-28-24        |
| Pennsylvania          | NELAP   | 68-00340              | 08-31-23        |
| Texas                 | NELAP   | T104704517-22-17      | 08-31-23        |
| Virginia              | NELAP   | 460175                | 09-14-23        |
| West Virginia DEP     | State   | 210                   | 12-31-23        |

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



**Chain of Custody Record**

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

|  |  |  |   |  |   |  |   |   |  |   |  |   |   |   |   |   |
|--|--|--|---|--|---|--|---|---|--|---|--|---|---|---|---|---|
| <b>Client Contact</b><br>Company Name: Arcadis<br>Address: 28550 Cabot Drive, Suite 500<br>City/State/Zip: Novi, MI, 48377<br>Phone: 248-994-2240<br>Project Name: Ford I, TP On-Site<br>Project Number: 30167538.401.03<br>PO # 30167538.401.03 |  | <b>Regulatory program:</b> <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other |   | <b>Client Project Manager:</b> Kris Hinsky<br>Telephone: 248-994-2240<br>Email: kristoffer.hinsky@arcadis.com<br>Sampler Name: <b>Sommer Guy</b><br>Method of Shipment/Carrier:<br>Shipping/Tracking No: |   | <b>Site Contact:</b> Christina Weaver<br>Telephone: 248-994-2240<br>Analysis Turnaround Time:<br>TAT in different from below:<br><input type="checkbox"/> 3 weeks<br><input checked="" type="checkbox"/> 2 weeks<br><input type="checkbox"/> 1 week<br><input type="checkbox"/> 2 days<br><input type="checkbox"/> 1 day<br>Containers & Preservatives:<br>H2SO4<br>HNO3<br>HCl<br>NaOH<br>NaOH<br>Tap<br>Other: |   | <b>Lab Contact:</b> Mike DelMonico<br>Telephone: 310-497-9396<br>Analyses:<br>1,4-Dioxane 8260B<br>Vinyl Chloride 8260B<br>TCE 8260B<br>PCE 8260B<br>Trans-1,2-DCE 8260B<br>Cis-1,2-DCE 8260B<br>1,1-DCE 8260B<br>Composite-C / Grab-G<br>Filtered Sample (Y/N) |  | <b>TestAmerica Laboratories, Inc.</b><br>COC No: _____ of COCs<br>For lab use only:<br>Walk-in client<br>Lab sampling<br>Job/SDG No:<br>Sample Specific Notes / Special Instructions:<br>1 Trip Blank<br>3 VOAs for 8260B<br>3 VOAs for 8260B SIM |  |   |   |   |   |   |
| Sample Identification<br>TRIP BLANK_ 61<br>MW-200-030223<br>MW-2005-030223<br>MW-2015-030223<br>MW-201-030223<br>MW-201-MS-030223<br>MW-201-MSD-030223   | Sample Date<br>---<br>3/2/23<br>3/2/23<br>3/2/23<br>3/2/23<br>3/2/23<br>3/2/23 | Sample Time<br>---<br>1107<br>1155<br>1318<br>1445<br>1445<br>1445   | Matrix<br>Air<br>Aqueous<br>Sediment<br>Solid<br>Other: | Containers & Preservatives<br>H2SO4<br>HNO3<br>HCl<br>NaOH<br>NaOH<br>Tap<br>Other:  | Filtered Sample (Y/N)<br>NG<br>NG<br>NG<br>NG<br>NG<br>NG<br>NG | Composite-C / Grab-G<br>1,1-DCE 8260B<br>Cis-1,2-DCE 8260B<br>Trans-1,2-DCE 8260B<br>PCE 8260B<br>TCE 8260B<br>Vinyl Chloride 8260B<br>1,4-Dioxane 8260B   | Analyses<br>1,4-Dioxane 8260B<br>Vinyl Chloride 8260B<br>TCE 8260B<br>PCE 8260B<br>Trans-1,2-DCE 8260B<br>Cis-1,2-DCE 8260B<br>1,1-DCE 8260B<br>Composite-C / Grab-G<br>Filtered Sample (Y/N) | Sample Disposal (A fee may be assessed if samples are retained in lab)<br><input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive   | Possible Hazard Identification<br><input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Irritable <input type="checkbox"/> Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown | Special Instructions/QC Requirements & Comments:<br>Submit all results through Cadena at jromalia@cadenasco.com. Cadena #E203728<br>Level IV Reporting requested.   | Relinquished by: <b>Sommer Guy</b><br>Relinquished by: <b>[Signature]</b><br>Relinquished by: <b>[Signature]</b> | Date/Time:<br>3/2/23 1545<br>3/3/23 1230<br>3/3/23 1230 | Company:<br>Arcadis<br>Arcadis<br>Arcadis | Received by:<br>Novi Cold Storage<br>[Signature]<br>[Signature] | Date/Time:<br>3/2/23 1545<br>3/3/23 1230<br>3/3/23 8:00 | Company:<br>Arcadis<br>Arcadis<br>Arcadis |



**Eurofins - Canton Sample Receipt Form/Narrative**  
**Barberton Facility**

Login #: 181398

Client Ascadis Site Name \_\_\_\_\_  
 Cooler Received on 3-4-23 Opened on 3-4-23  
 FedEx: 1<sup>st</sup> Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other \_\_\_\_\_

Cooler unpacked by:  
Charliek

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

Eurofins Cooler # 12C 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-13 (CF -0.2 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
 IR GUN # IR-16 (CF -0.1 °C) Observed Cooler Temp. 2.4 °C Corrected Cooler Temp. 2.3 °C  
 IR GUN # IR-17 (CF -0.3 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity \_\_\_\_\_ 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 NA  
 -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 (ID/Date/Time) be reconciled with the COC?  Yes  No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?  Yes  No
10. Were correct bottle(s) used for the test(s) indicated?  Yes  No
11. Sufficient quantity received to perform indicated analyses?  Yes  No
12. Are these work share samples and all listed on the COC?  Yes  No  
 If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No  NA pH Strip Lot# HC293086
14. Were VOAs on the COC?  Yes  No
15. Were air bubbles >6 mm in any VOA vials?  Yes  No  NA Larger than this.
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Conud  Yes  No
17. 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 \_\_\_\_\_

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES  additional next page Samples processed by: \_\_\_\_\_

19. 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)

20. 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: \_\_\_\_\_

# DATA VERIFICATION REPORT



March 17, 2023

Kris Hinskey  
Arcadis of Michigan  
28550 Cabot Drive  
Suite 500  
Novi, MI US 48377

CADENA project ID: E203728

Project: Ford Livonia Transmission Plant - ON-SITE -Soil Gas, Ground water and Soil

Project number: 30167538.401.03- onsite groundwater

Event Specific Scope of Work References: Sample COC

Laboratory: Eurofins Environment Testing LLC - Barberton

Laboratory submittal: 181398-1

Sample date: 2023-03-02

Report received by CADENA: 2023-03-17

Initial Data Verification completed by CADENA: 2023-03-17

Number of Samples:5

Sample Matrices:Water and trip blank

Test Categories:GCMS VOC

**Please see attached criteria report or sample result/qualified analytical result summary for qualifier flags assigned to sample data.**

There were no significant QC anomalies or exceptions to report.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at <http://clms.cadenaco.com/index.cfm>.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Inc, 1099 Highland Drive, Suite E, Ann Arbor, MI 48108 517-819-0356



## CADENA Valid Qualifiers

| Valid Qualifiers | Description  |
|------------------|--|
| <                | Less than the reported concentration.  |
| >                | Greater than the reported concentration.   |
| B                | The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminants) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration. |
| E                | The analyte / Compound reported exceeds the calibration range and is considered estimated.   |
| EMPC             | Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.  |
| J                | Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.                     |
| J-               | The result is an estimated quantity, but the result may be biased low.   |
| JB               | NON-DETECT AT THE CONCENTRATION REPORTED AND ESTIMATED   |
| JH               | The sample result is considered estimated and is potentially biased high.  |
| JL               | The sample result is considered estimated and is potentially biased low.   |
| JUB              | NON-DETECT AT THE REPORTING LIMIT AND ESTIMATED  |
| NJ               | Tentatively identified compound with approximated concentration.   |
| R                | Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)  |
| TNTC             | Too Numerous to Count - Asbestos and Microbiological Results.  |
| U                | Indicates that the analyte / compound was analyzed for, but not detected.  |
| UB               | The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminants) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.   |
| UJ               | The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.  |

## Analytical Results Summary

CADENA Project ID: E203728

Laboratory: Eurofins Environment Testing LLC - Barberton

Laboratory Submittal: 181398-1

| Analyte                  | Cas No.  | Sample Name: TRIP BLANK_61 |       |       |       | Sample Name: MW-200_030223 |       |       |       | Sample Name: MW-200S_030223 |       |       |       | Sample Name: MW-201S_030223 |       |       |       | Sample Name: MW-201_030223 |       |       |       |
|--------------------------|----------|----------------------------|-------|-------|-------|----------------------------|-------|-------|-------|-----------------------------|-------|-------|-------|-----------------------------|-------|-------|-------|----------------------------|-------|-------|-------|
|                          |          | Result                     | Limit | Units | Valid | Result                     | Limit | Units | Valid | Result                      | Limit | Units | Valid | Result                      | Limit | Units | Valid | Result                     | Limit | Units | Valid |
| GC/MS VOC                |          |                            |       |       |       |                            |       |       |       |                             |       |       |       |                             |       |       |       |                            |       |       |       |
| <u>OSW-8260D</u>         |          |                            |       |       |       |                            |       |       |       |                             |       |       |       |                             |       |       |       |                            |       |       |       |
| 1,1-Dichloroethene       | 75-35-4  | ND                         | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   |
| cis-1,2-Dichloroethene   | 156-59-2 | ND                         | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   |
| Tetrachloroethene        | 127-18-4 | ND                         | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   |
| trans-1,2-Dichloroethene | 156-60-5 | ND                         | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   |
| Trichloroethene          | 79-01-6  | ND                         | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   |
| Vinyl chloride           | 75-01-4  | ND                         | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                          | 1.0   | ug/l  | ---   | ND                         | 1.0   | ug/l  | ---   |
| <u>OSW-8260DSIM</u>      |          |                            |       |       |       |                            |       |       |       |                             |       |       |       |                             |       |       |       |                            |       |       |       |
| 1,4-Dioxane              | 123-91-1 |                            |       |       |       | ND                         | 2.0   | ug/l  | ---   | ND                          | 2.0   | ug/l  | ---   | ND                          | 2.0   | ug/l  | ---   | ND                         | 2.0   | ug/l  | ---   |