

# ANALYTICAL REPORT

## PREPARED FOR

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Generated 8/31/2023 7:07:07 AM

## JOB DESCRIPTION

Ford LTP - On Site

## JOB NUMBER

240-190434-1

# Eurofins Cleveland

## Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

## Authorization



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# Definitions/Glossary

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

## 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.                                 |
|----------------|---|
| 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 US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

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## Job ID: 240-190434-1

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### Laboratory: Eurofins Cleveland

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#### Narrative

#### Job Narrative 240-190434-1

#### Receipt

The samples were received on 8/19/2023 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 0.8°C

#### GC/MS VOA

Method 8260D: The method requirement for no headspace was not met. The following volatile samples were analyzed with headspace in the sample containers: MW-196S\_081723 (240-190434-3), MW-195S\_081723 (240-190434-4) and DUP-05 (240-190434-5).

Method 8260D\_SIM: The method requirement for no headspace was not met. The following volatile samples were analyzed with headspace in the sample containers: MW-196S\_081723 (240-190434-3), MW-195S\_081723 (240-190434-4) and DUP-05 (240-190434-5).

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



# Method Summary

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

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

**Protocol References:**

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

**Laboratory References:**

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

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# Sample Summary

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

| Lab Sample ID | Client Sample ID | Matrix | Collected      | Received       |
|---------------|------------------|--------|----------------|----------------|
| 240-190434-1  | TRIP BLANK_84    | Water  | 08/17/23 00:00 | 08/19/23 08:00 |
| 240-190434-2  | MW-196_081723    | Water  | 08/17/23 09:31 | 08/19/23 08:00 |
| 240-190434-3  | MW-196S_081723   | Water  | 08/17/23 10:36 | 08/19/23 08:00 |
| 240-190434-4  | MW-195S_081723   | Water  | 08/17/23 12:27 | 08/19/23 08:00 |
| 240-190434-5  | DUP-05           | Water  | 08/17/23 00:00 | 08/19/23 08:00 |

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- 13
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# Detection Summary

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

## Client Sample ID: TRIP BLANK\_84

Lab Sample ID: 240-190434-1

No Detections.

## Client Sample ID: MW-196\_081723

Lab Sample ID: 240-190434-2

| Analyte                  | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|--------------------------|--------|-----------|----|-----|------|---------|---|--------|-----------|
| cis-1,2-Dichloroethene   | 310    |           | 10 | 4.6 | ug/L | 10      |   | 8260D  | Total/NA  |
| trans-1,2-Dichloroethene | 120    |           | 10 | 5.1 | ug/L | 10      |   | 8260D  | Total/NA  |
| Trichloroethene          | 610    |           | 10 | 4.4 | ug/L | 10      |   | 8260D  | Total/NA  |

## Client Sample ID: MW-196S\_081723

Lab Sample ID: 240-190434-3

| Analyte                  | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method | Prep Type |
|--------------------------|--------|-----------|-----|------|------|---------|---|--------|-----------|
| cis-1,2-Dichloroethene   | 43     |           | 2.0 | 0.92 | ug/L | 2       |   | 8260D  | Total/NA  |
| trans-1,2-Dichloroethene | 1.4    | J         | 2.0 | 1.0  | ug/L | 2       |   | 8260D  | Total/NA  |
| Trichloroethene          | 220    |           | 5.0 | 2.2  | ug/L | 5       |   | 8260D  | Total/NA  |

## Client Sample ID: MW-195S\_081723

Lab Sample ID: 240-190434-4

| Analyte                  | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|--------------------------|--------|-----------|----|-----|------|---------|---|--------|-----------|
| cis-1,2-Dichloroethene   | 100    |           | 50 | 23  | ug/L | 50      |   | 8260D  | Total/NA  |
| trans-1,2-Dichloroethene | 200    |           | 50 | 26  | ug/L | 50      |   | 8260D  | Total/NA  |
| Trichloroethene          | 3100   |           | 50 | 22  | ug/L | 50      |   | 8260D  | Total/NA  |

## Client Sample ID: DUP-05

Lab Sample ID: 240-190434-5

| Analyte                  | Result | Qualifier | RL  | MDL | Unit | Dil Fac | D | Method | Prep Type |
|--------------------------|--------|-----------|-----|-----|------|---------|---|--------|-----------|
| cis-1,2-Dichloroethene   | 120    |           | 10  | 4.6 | ug/L | 10      |   | 8260D  | Total/NA  |
| trans-1,2-Dichloroethene | 260    |           | 10  | 5.1 | ug/L | 10      |   | 8260D  | Total/NA  |
| Trichloroethene          | 3400   |           | 100 | 44  | ug/L | 100     |   | 8260D  | Total/NA  |
| Vinyl chloride           | 5.5    | J         | 10  | 4.5 | ug/L | 10      |   | 8260D  | Total/NA  |

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

**Client Sample ID: TRIP BLANK\_84**

**Lab Sample ID: 240-190434-1**

Date Collected: 08/17/23 00:00

Matrix: Water

Date Received: 08/19/23 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 |   |          | 08/27/23 15:57 | 1       |
| cis-1,2-Dichloroethene   | 1.0    | U         | 1.0 | 0.46 | ug/L |   |          | 08/27/23 15:57 | 1       |
| Tetrachloroethene        | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 08/27/23 15:57 | 1       |
| trans-1,2-Dichloroethene | 1.0    | U         | 1.0 | 0.51 | ug/L |   |          | 08/27/23 15:57 | 1       |
| Trichloroethene          | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 08/27/23 15:57 | 1       |
| Vinyl chloride           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 08/27/23 15:57 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 99        |           | 62 - 137 |          | 08/27/23 15:57 | 1       |
| 4-Bromofluorobenzene (Surr)  | 91        |           | 56 - 136 |          | 08/27/23 15:57 | 1       |
| Toluene-d8 (Surr)            | 91        |           | 78 - 122 |          | 08/27/23 15:57 | 1       |
| Dibromofluoromethane (Surr)  | 92        |           | 73 - 120 |          | 08/27/23 15:57 | 1       |

# Client Sample Results

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

**Client Sample ID: MW-196\_081723**

**Lab Sample ID: 240-190434-2**

Date Collected: 08/17/23 09:31

Matrix: Water

Date Received: 08/19/23 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 |   |          | 08/28/23 16:33 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 103       |           | 66 - 120 |      |      |   |          | 08/28/23 16:33 | 1       |

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

| Analyte                         | Result     | Qualifier | RL       | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------|------------|-----------|----------|-----|------|---|----------|----------------|---------|
| 1,1-Dichloroethene              | 10         | U         | 10       | 4.9 | ug/L |   |          | 08/27/23 17:09 | 10      |
| <b>cis-1,2-Dichloroethene</b>   | <b>310</b> |           | 10       | 4.6 | ug/L |   |          | 08/27/23 17:09 | 10      |
| Tetrachloroethene               | 10         | U         | 10       | 4.4 | ug/L |   |          | 08/27/23 17:09 | 10      |
| <b>trans-1,2-Dichloroethene</b> | <b>120</b> |           | 10       | 5.1 | ug/L |   |          | 08/27/23 17:09 | 10      |
| <b>Trichloroethene</b>          | <b>610</b> |           | 10       | 4.4 | ug/L |   |          | 08/27/23 17:09 | 10      |
| Vinyl chloride                  | 10         | U         | 10       | 4.5 | ug/L |   |          | 08/27/23 17:09 | 10      |
| Surrogate                       | %Recovery  | Qualifier | Limits   |     |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr)    | 103        |           | 62 - 137 |     |      |   |          | 08/27/23 17:09 | 10      |
| 4-Bromofluorobenzene (Surr)     | 95         |           | 56 - 136 |     |      |   |          | 08/27/23 17:09 | 10      |
| Toluene-d8 (Surr)               | 96         |           | 78 - 122 |     |      |   |          | 08/27/23 17:09 | 10      |
| Dibromofluoromethane (Surr)     | 97         |           | 73 - 120 |     |      |   |          | 08/27/23 17:09 | 10      |

# Client Sample Results

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

**Client Sample ID: MW-196S\_081723**

**Lab Sample ID: 240-190434-3**

Date Collected: 08/17/23 10:36

Matrix: Water

Date Received: 08/19/23 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 |   |          | 08/28/23 16:57 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 92        |           | 66 - 120 |      |      |   |          | 08/28/23 16:57 | 1       |

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

| Analyte                         | Result     | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------|------------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,1-Dichloroethene              | 2.0        | U         | 2.0      | 0.98 | ug/L |   |          | 08/27/23 17:33 | 2       |
| <b>cis-1,2-Dichloroethene</b>   | <b>43</b>  |           | 2.0      | 0.92 | ug/L |   |          | 08/27/23 17:33 | 2       |
| Tetrachloroethene               | 2.0        | U         | 2.0      | 0.88 | ug/L |   |          | 08/27/23 17:33 | 2       |
| <b>trans-1,2-Dichloroethene</b> | <b>1.4</b> | <b>J</b>  | 2.0      | 1.0  | ug/L |   |          | 08/27/23 17:33 | 2       |
| <b>Trichloroethene</b>          | <b>220</b> |           | 5.0      | 2.2  | ug/L |   |          | 08/28/23 15:38 | 5       |
| Vinyl chloride                  | 2.0        | U         | 2.0      | 0.90 | ug/L |   |          | 08/27/23 17:33 | 2       |
| Surrogate                       | %Recovery  | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr)    | 104        |           | 62 - 137 |      |      |   |          | 08/27/23 17:33 | 2       |
| 1,2-Dichloroethane-d4 (Surr)    | 98         |           | 62 - 137 |      |      |   |          | 08/28/23 15:38 | 5       |
| 4-Bromofluorobenzene (Surr)     | 97         |           | 56 - 136 |      |      |   |          | 08/27/23 17:33 | 2       |
| 4-Bromofluorobenzene (Surr)     | 93         |           | 56 - 136 |      |      |   |          | 08/28/23 15:38 | 5       |
| Toluene-d8 (Surr)               | 98         |           | 78 - 122 |      |      |   |          | 08/27/23 17:33 | 2       |
| Toluene-d8 (Surr)               | 96         |           | 78 - 122 |      |      |   |          | 08/28/23 15:38 | 5       |
| Dibromofluoromethane (Surr)     | 98         |           | 73 - 120 |      |      |   |          | 08/27/23 17:33 | 2       |
| Dibromofluoromethane (Surr)     | 94         |           | 73 - 120 |      |      |   |          | 08/28/23 15:38 | 5       |

# Client Sample Results

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

**Client Sample ID: MW-195S\_081723**

**Lab Sample ID: 240-190434-4**

Date Collected: 08/17/23 12:27

Matrix: Water

Date Received: 08/19/23 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 |   |          | 08/28/23 17:20 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 96        |           | 66 - 120 |      |      |   |          | 08/28/23 17:20 | 1       |

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

| Analyte                         | Result      | Qualifier | RL       | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------|-------------|-----------|----------|-----|------|---|----------|----------------|---------|
| 1,1-Dichloroethene              | 50          | U         | 50       | 25  | ug/L |   |          | 08/28/23 16:02 | 50      |
| <b>cis-1,2-Dichloroethene</b>   | <b>100</b>  |           | 50       | 23  | ug/L |   |          | 08/28/23 16:02 | 50      |
| Tetrachloroethene               | 50          | U         | 50       | 22  | ug/L |   |          | 08/28/23 16:02 | 50      |
| <b>trans-1,2-Dichloroethene</b> | <b>200</b>  |           | 50       | 26  | ug/L |   |          | 08/28/23 16:02 | 50      |
| <b>Trichloroethene</b>          | <b>3100</b> |           | 50       | 22  | ug/L |   |          | 08/28/23 16:02 | 50      |
| Vinyl chloride                  | 50          | U         | 50       | 23  | ug/L |   |          | 08/28/23 16:02 | 50      |
| Surrogate                       | %Recovery   | Qualifier | Limits   |     |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr)    | 99          |           | 62 - 137 |     |      |   |          | 08/28/23 16:02 | 50      |
| 4-Bromofluorobenzene (Surr)     | 90          |           | 56 - 136 |     |      |   |          | 08/28/23 16:02 | 50      |
| Toluene-d8 (Surr)               | 92          |           | 78 - 122 |     |      |   |          | 08/28/23 16:02 | 50      |
| Dibromofluoromethane (Surr)     | 91          |           | 73 - 120 |     |      |   |          | 08/28/23 16:02 | 50      |

# Client Sample Results

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

**Client Sample ID: DUP-05**

**Lab Sample ID: 240-190434-5**

Date Collected: 08/17/23 00:00

Matrix: Water

Date Received: 08/19/23 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 |   |          | 08/28/23 17:44 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 90        |           | 66 - 120 |      |      |   |          | 08/28/23 17:44 | 1       |

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

| Analyte                         | Result       | Qualifier | RL       | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------|--------------|-----------|----------|-----|------|---|----------|----------------|---------|
| 1,1-Dichloroethene              | 10           | U         | 10       | 4.9 | ug/L |   |          | 08/28/23 16:26 | 10      |
| <b>cis-1,2-Dichloroethene</b>   | <b>120</b>   |           | 10       | 4.6 | ug/L |   |          | 08/28/23 16:26 | 10      |
| Tetrachloroethene               | 10           | U         | 10       | 4.4 | ug/L |   |          | 08/28/23 16:26 | 10      |
| <b>trans-1,2-Dichloroethene</b> | <b>260</b>   |           | 10       | 5.1 | ug/L |   |          | 08/28/23 16:26 | 10      |
| <b>Trichloroethene</b>          | <b>3400</b>  |           | 100      | 44  | ug/L |   |          | 08/29/23 19:34 | 100     |
| <b>Vinyl chloride</b>           | <b>5.5 J</b> |           | 10       | 4.5 | ug/L |   |          | 08/28/23 16:26 | 10      |
| Surrogate                       | %Recovery    | Qualifier | Limits   |     |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr)    | 101          |           | 62 - 137 |     |      |   |          | 08/28/23 16:26 | 10      |
| 1,2-Dichloroethane-d4 (Surr)    | 102          |           | 62 - 137 |     |      |   |          | 08/29/23 19:34 | 100     |
| 4-Bromofluorobenzene (Surr)     | 94           |           | 56 - 136 |     |      |   |          | 08/28/23 16:26 | 10      |
| 4-Bromofluorobenzene (Surr)     | 94           |           | 56 - 136 |     |      |   |          | 08/29/23 19:34 | 100     |
| Toluene-d8 (Surr)               | 94           |           | 78 - 122 |     |      |   |          | 08/28/23 16:26 | 10      |
| Toluene-d8 (Surr)               | 93           |           | 78 - 122 |     |      |   |          | 08/29/23 19:34 | 100     |
| Dibromofluoromethane (Surr)     | 93           |           | 73 - 120 |     |      |   |          | 08/28/23 16:26 | 10      |
| Dibromofluoromethane (Surr)     | 93           |           | 73 - 120 |     |      |   |          | 08/29/23 19:34 | 100     |

# Surrogate Summary

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

## 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) |
| 240-190399-A-1 MS  | Matrix Spike           | 96   | 92              | 93              | 90               |
| 240-190399-A-1 MSD | Matrix Spike Duplicate | 99   | 93              | 94              | 93               |
| 240-190434-1       | TRIP BLANK_84          | 99   | 91              | 91              | 92               |
| 240-190434-2       | MW-196_081723          | 103  | 95              | 96              | 97               |
| 240-190434-3       | MW-196S_081723         | 104  | 97              | 98              | 98               |
| 240-190434-3       | MW-196S_081723         | 98   | 93              | 96              | 94               |
| 240-190434-4       | MW-195S_081723         | 99   | 90              | 92              | 91               |
| 240-190434-5       | DUP-05                 | 101  | 94              | 94              | 93               |
| 240-190434-5       | DUP-05                 | 102  | 94              | 93              | 93               |
| 240-190514-E-1 MS  | Matrix Spike           | 94   | 89              | 90              | 88               |
| 240-190514-F-1 MSD | Matrix Spike Duplicate | 102  | 95              | 93              | 94               |
| 240-190636-F-3 MS  | Matrix Spike           | 101  | 93              | 93              | 93               |
| 240-190636-F-3 MSD | Matrix Spike Duplicate | 102  | 94              | 94              | 93               |
| LCS 240-585262/5   | Lab Control Sample     | 101  | 97              | 96              | 95               |
| LCS 240-585357/5   | Lab Control Sample     | 96   | 92              | 93              | 92               |
| LCS 240-585491/5   | Lab Control Sample     | 103  | 97              | 97              | 98               |
| MB 240-585262/8    | Method Blank           | 100  | 92              | 92              | 94               |
| MB 240-585357/8    | Method Blank           | 103  | 93              | 93              | 94               |
| MB 240-585491/8    | Method Blank           | 105  | 96              | 96              | 97               |

**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)                                |
| 240-190408-C-3 MS  | Matrix Spike           | 106  |
| 240-190408-C-3 MSD | Matrix Spike Duplicate | 99   |
| 240-190434-2       | MW-196_081723          | 103  |
| 240-190434-3       | MW-196S_081723         | 92   |
| 240-190434-4       | MW-195S_081723         | 96   |
| 240-190434-5       | DUP-05                 | 90   |
| LCS 240-585335/5   | Lab Control Sample     | 103  |
| MB 240-585335/7    | Method Blank           | 103  |

**Surrogate Legend**

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

# QC Sample Results

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

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

Lab Sample ID: MB 240-585262/8

Matrix: Water

Analysis Batch: 585262

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 |   |          | 08/27/23 15:09 | 1       |
| cis-1,2-Dichloroethene   | 1.0    | U         | 1.0 | 0.46 | ug/L |   |          | 08/27/23 15:09 | 1       |
| Tetrachloroethene        | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 08/27/23 15:09 | 1       |
| trans-1,2-Dichloroethene | 1.0    | U         | 1.0 | 0.51 | ug/L |   |          | 08/27/23 15:09 | 1       |
| Trichloroethene          | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 08/27/23 15:09 | 1       |
| Vinyl chloride           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 08/27/23 15:09 | 1       |

| Surrogate                    | MB        | MB        | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
|                              | %Recovery | Qualifier |          |          |                |         |
| 1,2-Dichloroethane-d4 (Surr) | 100       |           | 62 - 137 |          | 08/27/23 15:09 | 1       |
| 4-Bromofluorobenzene (Surr)  | 92        |           | 56 - 136 |          | 08/27/23 15:09 | 1       |
| Toluene-d8 (Surr)            | 92        |           | 78 - 122 |          | 08/27/23 15:09 | 1       |
| Dibromofluoromethane (Surr)  | 94        |           | 73 - 120 |          | 08/27/23 15:09 | 1       |

Lab Sample ID: LCS 240-585262/5

Matrix: Water

Analysis Batch: 585262

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       | 25.0        | 27.0   |           | ug/L |   | 108  | 63 - 134    |
| cis-1,2-Dichloroethene   | 25.0        | 25.8   |           | ug/L |   | 103  | 77 - 123    |
| Tetrachloroethene        | 25.0        | 26.4   |           | ug/L |   | 106  | 76 - 123    |
| trans-1,2-Dichloroethene | 25.0        | 26.1   |           | ug/L |   | 104  | 75 - 124    |
| Trichloroethene          | 25.0        | 25.3   |           | ug/L |   | 101  | 70 - 122    |
| Vinyl chloride           | 12.5        | 11.4   |           | ug/L |   | 91   | 60 - 144    |

| Surrogate                    | LCS       | LCS       | Limits   |
|------------------------------|-----------|-----------|----------|
|                              | %Recovery | Qualifier |          |
| 1,2-Dichloroethane-d4 (Surr) | 101       |           | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 97        |           | 56 - 136 |
| Toluene-d8 (Surr)            | 96        |           | 78 - 122 |
| Dibromofluoromethane (Surr)  | 95        |           | 73 - 120 |

Lab Sample ID: 240-190399-A-1 MS

Matrix: Water

Analysis Batch: 585262

Client Sample ID: Matrix Spike

Prep Type: Total/NA

| Analyte                  | Sample | Sample    | Spike Added | MS     | MS        | Unit | D | %Rec | %Rec Limits |
|--------------------------|--------|-----------|-------------|--------|-----------|------|---|------|-------------|
|                          | Result | Qualifier |             | Result | Qualifier |      |   |      |             |
| 1,1-Dichloroethene       | 100    | U         | 2500        | 2550   |           | ug/L |   | 102  | 56 - 135    |
| cis-1,2-Dichloroethene   | 100    | U         | 2500        | 2440   |           | ug/L |   | 98   | 66 - 128    |
| Tetrachloroethene        | 100    | U         | 2500        | 2470   |           | ug/L |   | 99   | 62 - 131    |
| trans-1,2-Dichloroethene | 100    | U         | 2500        | 2380   |           | ug/L |   | 95   | 56 - 136    |
| Trichloroethene          | 100    | U         | 2500        | 2330   |           | ug/L |   | 93   | 61 - 124    |
| Vinyl chloride           | 100    | U         | 1250        | 1110   |           | ug/L |   | 89   | 43 - 157    |

| Surrogate                    | MS        | MS        | Limits   |
|------------------------------|-----------|-----------|----------|
|                              | %Recovery | Qualifier |          |
| 1,2-Dichloroethane-d4 (Surr) | 96        |           | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 92        |           | 56 - 136 |
| Toluene-d8 (Surr)            | 93        |           | 78 - 122 |

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# QC Sample Results

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

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

Lab Sample ID: 240-190399-A-1 MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 585262

| Surrogate                   | MS MS     |           | Limits   |
|-----------------------------|-----------|-----------|----------|
|                             | %Recovery | Qualifier |          |
| Dibromofluoromethane (Surr) | 90        |           | 73 - 120 |

Lab Sample ID: 240-190399-A-1 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 585262

| Analyte                  | Sample | Sample    | Spike | MSD    | MSD       | Unit | D | %Rec | %Rec     | RPD | Limit |
|--------------------------|--------|-----------|-------|--------|-----------|------|---|------|----------|-----|-------|
|                          | Result | Qualifier | Added | Result | Qualifier |      |   |      | Limits   |     |       |
| 1,1-Dichloroethene       | 100    | U         | 2500  | 2500   |           | ug/L |   | 100  | 56 - 135 | 2   | 26    |
| cis-1,2-Dichloroethene   | 100    | U         | 2500  | 2420   |           | ug/L |   | 97   | 66 - 128 | 1   | 14    |
| Tetrachloroethene        | 100    | U         | 2500  | 2380   |           | ug/L |   | 95   | 62 - 131 | 4   | 20    |
| trans-1,2-Dichloroethene | 100    | U         | 2500  | 2380   |           | ug/L |   | 95   | 56 - 136 | 0   | 15    |
| Trichloroethene          | 100    | U         | 2500  | 2300   |           | ug/L |   | 92   | 61 - 124 | 1   | 15    |
| Vinyl chloride           | 100    | U         | 1250  | 1060   |           | ug/L |   | 85   | 43 - 157 | 4   | 24    |

| Surrogate                    | MSD MSD   |           | Limits   |
|------------------------------|-----------|-----------|----------|
|                              | %Recovery | Qualifier |          |
| 1,2-Dichloroethane-d4 (Surr) | 99        |           | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 93        |           | 56 - 136 |
| Toluene-d8 (Surr)            | 94        |           | 78 - 122 |
| Dibromofluoromethane (Surr)  | 93        |           | 73 - 120 |

Lab Sample ID: MB 240-585357/8

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 585357

| 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 |   |          | 08/28/23 14:26 | 1       |
| cis-1,2-Dichloroethene   | 1.0    | U         | 1.0 | 0.46 | ug/L |   |          | 08/28/23 14:26 | 1       |
| Tetrachloroethene        | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 08/28/23 14:26 | 1       |
| trans-1,2-Dichloroethene | 1.0    | U         | 1.0 | 0.51 | ug/L |   |          | 08/28/23 14:26 | 1       |
| Trichloroethene          | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 08/28/23 14:26 | 1       |
| Vinyl chloride           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 08/28/23 14:26 | 1       |

| Surrogate                    | MB MB     |           | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
|                              | %Recovery | Qualifier |          |          |                |         |
| 1,2-Dichloroethane-d4 (Surr) | 103       |           | 62 - 137 |          | 08/28/23 14:26 | 1       |
| 4-Bromofluorobenzene (Surr)  | 93        |           | 56 - 136 |          | 08/28/23 14:26 | 1       |
| Toluene-d8 (Surr)            | 93        |           | 78 - 122 |          | 08/28/23 14:26 | 1       |
| Dibromofluoromethane (Surr)  | 94        |           | 73 - 120 |          | 08/28/23 14:26 | 1       |

Lab Sample ID: LCS 240-585357/5

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 585357

| Analyte                  | Spike Added | LCS LCS |           | Unit | D | %Rec | %Rec     |
|--------------------------|-------------|---------|-----------|------|---|------|----------|
|                          |             | Result  | Qualifier |      |   |      | Limits   |
| 1,1-Dichloroethene       | 25.0        | 27.4    |           | ug/L |   | 110  | 63 - 134 |
| cis-1,2-Dichloroethene   | 25.0        | 25.5    |           | ug/L |   | 102  | 77 - 123 |
| Tetrachloroethene        | 25.0        | 26.7    |           | ug/L |   | 107  | 76 - 123 |
| trans-1,2-Dichloroethene | 25.0        | 26.0    |           | ug/L |   | 104  | 75 - 124 |
| Trichloroethene          | 25.0        | 25.8    |           | ug/L |   | 103  | 70 - 122 |

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# QC Sample Results

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

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

Lab Sample ID: LCS 240-585357/5

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 585357

| Analyte        | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------|-------------|------------|---------------|------|---|------|-------------|
| Vinyl chloride | 12.5        | 11.3       |               | ug/L |   | 91   | 60 - 144    |

| Surrogate                    | LCS %Recovery | LCS Qualifier | Limits   |
|------------------------------|---------------|---------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 96            |               | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 92            |               | 56 - 136 |
| Toluene-d8 (Surr)            | 93            |               | 78 - 122 |
| Dibromofluoromethane (Surr)  | 92            |               | 73 - 120 |

Lab Sample ID: 240-190514-E-1 MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 585357

| Analyte                  | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|--------------------------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| 1,1-Dichloroethene       | 1.0           | U                | 25.0        | 25.6      |              | ug/L |   | 102  | 56 - 135    |
| cis-1,2-Dichloroethene   | 1.0           | U                | 25.0        | 24.6      |              | ug/L |   | 98   | 66 - 128    |
| Tetrachloroethene        | 1.0           | U                | 25.0        | 24.1      |              | ug/L |   | 97   | 62 - 131    |
| trans-1,2-Dichloroethene | 1.0           | U                | 25.0        | 24.3      |              | ug/L |   | 97   | 56 - 136    |
| Trichloroethene          | 1.0           | U                | 25.0        | 23.7      |              | ug/L |   | 95   | 61 - 124    |
| Vinyl chloride           | 0.45          | J                | 12.5        | 11.0      |              | ug/L |   | 88   | 43 - 157    |

| Surrogate                    | MS %Recovery | MS Qualifier | Limits   |
|------------------------------|--------------|--------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 94           |              | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 89           |              | 56 - 136 |
| Toluene-d8 (Surr)            | 90           |              | 78 - 122 |
| Dibromofluoromethane (Surr)  | 88           |              | 73 - 120 |

Lab Sample ID: 240-190514-F-1 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 585357

| 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                | 25.0        | 24.9       |               | ug/L |   | 100  | 56 - 135    | 3   | 26        |
| cis-1,2-Dichloroethene   | 1.0           | U                | 25.0        | 24.0       |               | ug/L |   | 96   | 66 - 128    | 3   | 14        |
| Tetrachloroethene        | 1.0           | U                | 25.0        | 23.0       |               | ug/L |   | 92   | 62 - 131    | 5   | 20        |
| trans-1,2-Dichloroethene | 1.0           | U                | 25.0        | 23.7       |               | ug/L |   | 95   | 56 - 136    | 3   | 15        |
| Trichloroethene          | 1.0           | U                | 25.0        | 22.7       |               | ug/L |   | 91   | 61 - 124    | 4   | 15        |
| Vinyl chloride           | 0.45          | J                | 12.5        | 11.1       |               | ug/L |   | 89   | 43 - 157    | 1   | 24        |

| Surrogate                    | MSD %Recovery | MSD Qualifier | Limits   |
|------------------------------|---------------|---------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 102           |               | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 95            |               | 56 - 136 |
| Toluene-d8 (Surr)            | 93            |               | 78 - 122 |
| Dibromofluoromethane (Surr)  | 94            |               | 73 - 120 |

# QC Sample Results

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

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

**Lab Sample ID: MB 240-585491/8**  
**Matrix: Water**  
**Analysis Batch: 585491**

**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 |   |          | 08/29/23 14:02 | 1       |
| cis-1,2-Dichloroethene   | 1.0    | U         | 1.0 | 0.46 | ug/L |   |          | 08/29/23 14:02 | 1       |
| Tetrachloroethene        | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 08/29/23 14:02 | 1       |
| trans-1,2-Dichloroethene | 1.0    | U         | 1.0 | 0.51 | ug/L |   |          | 08/29/23 14:02 | 1       |
| Trichloroethene          | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 08/29/23 14:02 | 1       |
| Vinyl chloride           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 08/29/23 14:02 | 1       |

| Surrogate                    | MB        | MB        | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
|                              | %Recovery | Qualifier |          |          |                |         |
| 1,2-Dichloroethane-d4 (Surr) | 105       |           | 62 - 137 |          | 08/29/23 14:02 | 1       |
| 4-Bromofluorobenzene (Surr)  | 96        |           | 56 - 136 |          | 08/29/23 14:02 | 1       |
| Toluene-d8 (Surr)            | 96        |           | 78 - 122 |          | 08/29/23 14:02 | 1       |
| Dibromofluoromethane (Surr)  | 97        |           | 73 - 120 |          | 08/29/23 14:02 | 1       |

**Lab Sample ID: LCS 240-585491/5**  
**Matrix: Water**  
**Analysis Batch: 585491**

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

| Analyte                  | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|--------------------------|-------------|------------|---------------|------|---|------|-------------|
|                          |             |            |               |      |   |      |             |
| cis-1,2-Dichloroethene   | 25.0        | 25.3       |               | ug/L |   | 101  | 77 - 123    |
| Tetrachloroethene        | 25.0        | 25.0       |               | ug/L |   | 100  | 76 - 123    |
| trans-1,2-Dichloroethene | 25.0        | 25.5       |               | ug/L |   | 102  | 75 - 124    |
| Trichloroethene          | 25.0        | 25.3       |               | ug/L |   | 101  | 70 - 122    |
| Vinyl chloride           | 12.5        | 11.0       |               | ug/L |   | 88   | 60 - 144    |

| Surrogate                    | LCS       | LCS       | Limits   |
|------------------------------|-----------|-----------|----------|
|                              | %Recovery | Qualifier |          |
| 1,2-Dichloroethane-d4 (Surr) | 103       |           | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 97        |           | 56 - 136 |
| Toluene-d8 (Surr)            | 97        |           | 78 - 122 |
| Dibromofluoromethane (Surr)  | 98        |           | 73 - 120 |

**Lab Sample ID: 240-190636-F-3 MS**  
**Matrix: Water**  
**Analysis Batch: 585491**

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

| Analyte                  | Sample | Sample    | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|--------------------------|--------|-----------|-------------|-----------|--------------|------|---|------|-------------|
|                          | Result | Qualifier |             |           |              |      |   |      |             |
| 1,1-Dichloroethene       | 100    | U         | 2500        | 2500      |              | ug/L |   | 100  | 56 - 135    |
| cis-1,2-Dichloroethene   | 2300   |           | 2500        | 4670      |              | ug/L |   | 93   | 66 - 128    |
| Tetrachloroethene        | 100    | U         | 2500        | 2400      |              | ug/L |   | 96   | 62 - 131    |
| trans-1,2-Dichloroethene | 99     | J         | 2500        | 2470      |              | ug/L |   | 95   | 56 - 136    |
| Trichloroethene          | 330    |           | 2500        | 2610      |              | ug/L |   | 91   | 61 - 124    |
| Vinyl chloride           | 2900   |           | 1250        | 3810      |              | ug/L |   | 72   | 43 - 157    |

| Surrogate                    | MS        | MS        | Limits   |
|------------------------------|-----------|-----------|----------|
|                              | %Recovery | Qualifier |          |
| 1,2-Dichloroethane-d4 (Surr) | 101       |           | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 93        |           | 56 - 136 |
| Toluene-d8 (Surr)            | 93        |           | 78 - 122 |

# QC Sample Results

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

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

**Lab Sample ID: 240-190636-F-3 MS**  
**Matrix: Water**  
**Analysis Batch: 585491**

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

|                             | MS        | MS        |          |
|-----------------------------|-----------|-----------|----------|
| Surrogate                   | %Recovery | Qualifier | Limits   |
| Dibromofluoromethane (Surr) | 93        |           | 73 - 120 |

**Lab Sample ID: 240-190636-F-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 585491**

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

| Analyte                  | Sample | Sample    | Spike | MSD    | MSD       | Unit | D | %Rec | %Rec     | RPD | RPD   |
|--------------------------|--------|-----------|-------|--------|-----------|------|---|------|----------|-----|-------|
|                          | Result | Qualifier | Added | Result | Qualifier |      |   |      | Limits   |     | Limit |
| 1,1-Dichloroethene       | 100    | U         | 2500  | 2530   |           | ug/L |   | 101  | 56 - 135 | 1   | 26    |
| cis-1,2-Dichloroethene   | 2300   |           | 2500  | 4600   |           | ug/L |   | 90   | 66 - 128 | 1   | 14    |
| Tetrachloroethene        | 100    | U         | 2500  | 2330   |           | ug/L |   | 93   | 62 - 131 | 3   | 20    |
| trans-1,2-Dichloroethene | 99     | J         | 2500  | 2500   |           | ug/L |   | 96   | 56 - 136 | 1   | 15    |
| Trichloroethene          | 330    |           | 2500  | 2610   |           | ug/L |   | 91   | 61 - 124 | 0   | 15    |
| Vinyl chloride           | 2900   |           | 1250  | 3770   |           | ug/L |   | 69   | 43 - 157 | 1   | 24    |

  

|                              | MSD       | MSD       |          |
|------------------------------|-----------|-----------|----------|
| Surrogate                    | %Recovery | Qualifier | Limits   |
| 1,2-Dichloroethane-d4 (Surr) | 102       |           | 62 - 137 |
| 4-Bromofluorobenzene (Surr)  | 94        |           | 56 - 136 |
| Toluene-d8 (Surr)            | 94        |           | 78 - 122 |
| Dibromofluoromethane (Surr)  | 93        |           | 73 - 120 |

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

**Lab Sample ID: MB 240-585335/7**  
**Matrix: Water**  
**Analysis Batch: 585335**

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

| Analyte     | MB     | MB        | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
|             | Result | Qualifier |     |      |      |   |          |                |         |
| 1,4-Dioxane | 2.0    | U         | 2.0 | 0.86 | ug/L |   |          | 08/28/23 12:11 | 1       |

  

|                              | MB        | MB        |          | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| Surrogate                    | %Recovery | Qualifier | Limits   |          |                |         |
| 1,2-Dichloroethane-d4 (Surr) | 103       |           | 66 - 120 |          | 08/28/23 12:11 | 1       |

**Lab Sample ID: LCS 240-585335/5**  
**Matrix: Water**  
**Analysis Batch: 585335**

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

| Analyte     | Spike Added | LCS    | LCS       | Unit | D | %Rec | %Rec     |
|-------------|-------------|--------|-----------|------|---|------|----------|
|             |             | Result | Qualifier |      |   |      | Limits   |
| 1,4-Dioxane | 10.0        | 9.91   |           | ug/L |   | 99   | 80 - 122 |

  

|                              | LCS       | LCS       |          |
|------------------------------|-----------|-----------|----------|
| Surrogate                    | %Recovery | Qualifier | Limits   |
| 1,2-Dichloroethane-d4 (Surr) | 103       |           | 66 - 120 |

**Lab Sample ID: 240-190408-C-3 MS**  
**Matrix: Water**  
**Analysis Batch: 585335**

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

| Analyte     | Sample | Sample    | Spike | MS     | MS        | Unit | D | %Rec | %Rec     |
|-------------|--------|-----------|-------|--------|-----------|------|---|------|----------|
|             | Result | Qualifier | Added | Result | Qualifier |      |   |      | Limits   |
| 1,4-Dioxane | 2.0    | U         | 10.0  | 10.1   |           | ug/L |   | 101  | 51 - 153 |

Eurofins Cleveland

# QC Sample Results

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

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

| <i>Surrogate</i>             | <i>%Recovery</i> | <i>MS MS<br/>Qualifier</i> | <i>Limits</i> |
|------------------------------|------------------|----------------------------|---------------|
| 1,2-Dichloroethane-d4 (Surr) | 106              |                            | 66 - 120      |

**Lab Sample ID: 240-190408-C-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 585335**

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

| <i>Analyte</i> | <i>Sample<br/>Result</i> | <i>Sample<br/>Qualifier</i> | <i>Spike<br/>Added</i> | <i>MSD<br/>Result</i> | <i>MSD<br/>Qualifier</i> | <i>Unit</i> | <i>D</i> | <i>%Rec</i> | <i>%Rec<br/>Limits</i> | <i>RPD</i> | <i>RPD<br/>Limit</i> |
|----------------|--------------------------|-----------------------------|------------------------|-----------------------|--------------------------|-------------|----------|-------------|------------------------|------------|----------------------|
| 1,4-Dioxane    | 2.0                      | U                           | 10.0                   | 9.97                  |                          | ug/L        |          | 100         | 51 - 153               | 1          | 16                   |

| <i>Surrogate</i>             | <i>%Recovery</i> | <i>MSD MSD<br/>Qualifier</i> | <i>Limits</i> |
|------------------------------|------------------|------------------------------|---------------|
| 1,2-Dichloroethane-d4 (Surr) | 99               |                              | 66 - 120      |

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

# QC Association Summary

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

## GC/MS VOA

### Analysis Batch: 585262

| Lab Sample ID      | Client Sample ID       | Prep Type | Matrix | Method | Prep Batch |
|--------------------|------------------------|-----------|--------|--------|------------|
| 240-190434-1       | TRIP BLANK_84          | Total/NA  | Water  | 8260D  |            |
| 240-190434-2       | MW-196_081723          | Total/NA  | Water  | 8260D  |            |
| 240-190434-3       | MW-196S_081723         | Total/NA  | Water  | 8260D  |            |
| MB 240-585262/8    | Method Blank           | Total/NA  | Water  | 8260D  |            |
| LCS 240-585262/5   | Lab Control Sample     | Total/NA  | Water  | 8260D  |            |
| 240-190399-A-1 MS  | Matrix Spike           | Total/NA  | Water  | 8260D  |            |
| 240-190399-A-1 MSD | Matrix Spike Duplicate | Total/NA  | Water  | 8260D  |            |

### Analysis Batch: 585335

| Lab Sample ID      | Client Sample ID       | Prep Type | Matrix | Method    | Prep Batch |
|--------------------|------------------------|-----------|--------|-----------|------------|
| 240-190434-2       | MW-196_081723          | Total/NA  | Water  | 8260D SIM |            |
| 240-190434-3       | MW-196S_081723         | Total/NA  | Water  | 8260D SIM |            |
| 240-190434-4       | MW-195S_081723         | Total/NA  | Water  | 8260D SIM |            |
| 240-190434-5       | DUP-05                 | Total/NA  | Water  | 8260D SIM |            |
| MB 240-585335/7    | Method Blank           | Total/NA  | Water  | 8260D SIM |            |
| LCS 240-585335/5   | Lab Control Sample     | Total/NA  | Water  | 8260D SIM |            |
| 240-190408-C-3 MS  | Matrix Spike           | Total/NA  | Water  | 8260D SIM |            |
| 240-190408-C-3 MSD | Matrix Spike Duplicate | Total/NA  | Water  | 8260D SIM |            |

### Analysis Batch: 585357

| Lab Sample ID      | Client Sample ID       | Prep Type | Matrix | Method | Prep Batch |
|--------------------|------------------------|-----------|--------|--------|------------|
| 240-190434-3       | MW-196S_081723         | Total/NA  | Water  | 8260D  |            |
| 240-190434-4       | MW-195S_081723         | Total/NA  | Water  | 8260D  |            |
| 240-190434-5       | DUP-05                 | Total/NA  | Water  | 8260D  |            |
| MB 240-585357/8    | Method Blank           | Total/NA  | Water  | 8260D  |            |
| LCS 240-585357/5   | Lab Control Sample     | Total/NA  | Water  | 8260D  |            |
| 240-190514-E-1 MS  | Matrix Spike           | Total/NA  | Water  | 8260D  |            |
| 240-190514-F-1 MSD | Matrix Spike Duplicate | Total/NA  | Water  | 8260D  |            |

### Analysis Batch: 585491

| Lab Sample ID      | Client Sample ID       | Prep Type | Matrix | Method | Prep Batch |
|--------------------|------------------------|-----------|--------|--------|------------|
| 240-190434-5       | DUP-05                 | Total/NA  | Water  | 8260D  |            |
| MB 240-585491/8    | Method Blank           | Total/NA  | Water  | 8260D  |            |
| LCS 240-585491/5   | Lab Control Sample     | Total/NA  | Water  | 8260D  |            |
| 240-190636-F-3 MS  | Matrix Spike           | Total/NA  | Water  | 8260D  |            |
| 240-190636-F-3 MSD | Matrix Spike Duplicate | Total/NA  | Water  | 8260D  |            |

# Lab Chronicle

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

**Client Sample ID: TRIP BLANK\_84**

**Lab Sample ID: 240-190434-1**

Date Collected: 08/17/23 00:00

Matrix: Water

Date Received: 08/19/23 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Batch Analyst | Lab     | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------------|---------|----------------------|
| Total/NA  | Analysis   | 8260D        |     | 1               | 585262       | CDG           | EET CLE | 08/27/23 15:57       |

**Client Sample ID: MW-196\_081723**

**Lab Sample ID: 240-190434-2**

Date Collected: 08/17/23 09:31

Matrix: Water

Date Received: 08/19/23 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Batch Analyst | Lab     | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------------|---------|----------------------|
| Total/NA  | Analysis   | 8260D        |     | 10              | 585262       | CDG           | EET CLE | 08/27/23 17:09       |
| Total/NA  | Analysis   | 8260D SIM    |     | 1               | 585335       | MRL           | EET CLE | 08/28/23 16:33       |

**Client Sample ID: MW-196S\_081723**

**Lab Sample ID: 240-190434-3**

Date Collected: 08/17/23 10:36

Matrix: Water

Date Received: 08/19/23 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Batch Analyst | Lab     | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------------|---------|----------------------|
| Total/NA  | Analysis   | 8260D        |     | 2               | 585262       | CDG           | EET CLE | 08/27/23 17:33       |
| Total/NA  | Analysis   | 8260D        |     | 5               | 585357       | CDG           | EET CLE | 08/28/23 15:38       |
| Total/NA  | Analysis   | 8260D SIM    |     | 1               | 585335       | MRL           | EET CLE | 08/28/23 16:57       |

**Client Sample ID: MW-195S\_081723**

**Lab Sample ID: 240-190434-4**

Date Collected: 08/17/23 12:27

Matrix: Water

Date Received: 08/19/23 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Batch Analyst | Lab     | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------------|---------|----------------------|
| Total/NA  | Analysis   | 8260D        |     | 50              | 585357       | CDG           | EET CLE | 08/28/23 16:02       |
| Total/NA  | Analysis   | 8260D SIM    |     | 1               | 585335       | MRL           | EET CLE | 08/28/23 17:20       |

**Client Sample ID: DUP-05**

**Lab Sample ID: 240-190434-5**

Date Collected: 08/17/23 00:00

Matrix: Water

Date Received: 08/19/23 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Batch Analyst | Lab     | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------------|---------|----------------------|
| Total/NA  | Analysis   | 8260D        |     | 10              | 585357       | CDG           | EET CLE | 08/28/23 16:26       |
| Total/NA  | Analysis   | 8260D        |     | 100             | 585491       | CDG           | EET CLE | 08/29/23 19:34       |
| Total/NA  | Analysis   | 8260D SIM    |     | 1               | 585335       | MRL           | EET CLE | 08/28/23 17:44       |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-190434-1

## Laboratory: Eurofins Cleveland

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                  | 02-27-24        |
| Georgia               | State   | 4062                  | 02-27-24        |
| Illinois              | NELAP   | 200004                | 07-31-24        |
| Iowa                  | State   | 421                   | 06-01-25        |
| Kentucky (UST)        | State   | 112225                | 02-28-24        |
| Kentucky (WW)         | State   | KY98016               | 12-31-23        |
| Michigan              | State   | 9135                  | 02-27-24        |
| Minnesota             | NELAP   | 039-999-348           | 12-31-23        |
| Minnesota (Petrofund) | State   | 3506                  | 08-01-23 *      |
| New Jersey            | NELAP   | OH001                 | 07-01-24        |
| New York              | NELAP   | 10975                 | 04-02-24        |
| Ohio                  | State   | 8303                  | 02-27-24        |
| Ohio VAP              | State   | ORELAP 4062           | 02-27-24        |
| Oregon                | NELAP   | 4062                  | 02-27-24        |
| Pennsylvania          | NELAP   | 68-00340              | 08-31-24        |
| Texas                 | NELAP   | T104704517-22-19      | 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.



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

Regulatory program:  DW  NPDES  RCRA  Other

Client Project Manager: Kirt Hinakey  
 Telephone: 248-994-2240  
 Email: kristoffer.hinakey@arcadis.com

Lab Contact: Mike DelMestico  
 Telephone: 330-497-9396

Site Contact: Christina Weaver  
 Telephone: 248-994-2240

Company Name: Arcadis  
 Address: 38680 Cabot Drive, Suite 500  
 City/State/Zip: Novi, MI, 48377  
 Phone: 248-994-2240

Project Name: Ford I.T.P. - On-site  
 Project Number: 30167538-00004-501.03  
 PO # 30167538-00004-501.03

Sampler Name: Nolan Schenkel  
 Method of Shipment/Carrier: 56 9/15/23  
 Shipping/Tracking No: 56 9/15/23

| Sample Identification | Sample Date | Sample Time | Matrix |          |       | Container & Preservative |       |      |     |      |      |       | Filtered Sample (Y/N) | Composite C/Grab/G | 1,1-DCE 8260D | GIS-1,2-DCE 8260D | Trans-1,2-DCE 8260D | PCE 8260D | TCE 8260D | Vinyl Chloride 8260D | 1,4-Dioxane 8260D SIM | Special Instructions:                    |
|-----------------------|-------------|-------------|--------|----------|-------|--------------------------|-------|------|-----|------|------|-------|-----------------------|--------------------|---------------|-------------------|---------------------|-----------|-----------|----------------------|-----------------------|--|
|                       |             |             | Air    | Sediment | Solid | Other:                   | H2SO4 | HNO3 | HCl | NaOH | ZnAc | Ureap |                       |                    |               |                   |                     |           |           |                      |                       |  |
| TRIP BLANK_84         | ---         | ---         | 1      |          |       |                          |       |      |     |      |      |       |                       |                    |               |                   |                     |           |           |                      |                       | 1 Trip Blank                             |
| MW-196-081723         | 8/17/23     | 0931        | 6      |          |       |                          |       |      |     |      |      |       |                       |                    |               |                   |                     |           |           |                      |                       | 3 VOAs for 8260D<br>3 VOAs for 8260D SIM |
| MW-196S-081723        | 8/17/23     | 1036        | 6      |          |       |                          |       |      |     |      |      |       |                       |                    |               |                   |                     |           |           |                      |                       |  |
| MW-195S-081723        | 8/17/23     | 1227        | 6      |          |       |                          |       |      |     |      |      |       |                       |                    |               |                   |                     |           |           |                      |                       |  |
| DUP-05                | 8/17/23     | -           | 6      |          |       |                          |       |      |     |      |      |       |                       |                    |               |                   |                     |           |           |                      |                       |  |

Barcode: 240-190434 Chain of Custody

Possible Hazard Identification:  Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown

Sample Disposal:  Return to Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements & Comments:  
 Sample Address: 56 9/15/23  
 Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203631  
 Level IV Reporting requested.

Relinquished by: Nolan Schenkel  
 Date/Time: 8/17/23 14:30  
 Company: Arcadis

Relinquished by: Christina Weaver  
 Date/Time: 8/18/23 1255  
 Company: Arcadis

Relinquished by: Mike DelMestico  
 Date/Time: 8/18/23 1255  
 Company: EETH

Relinquished by: Christina Weaver  
 Date/Time: 8-19-23 800  
 Company: EETH





Client Arcadis Site Name \_\_\_\_\_ Cooler unpacked by: Young/lyh  
Cooler Received on 8-19-23 Opened on 8-19-23  
FedEx: 1<sup>st</sup> Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

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

Eurofins Cooler # EC 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 # 22 (CF -0.1 °C) Observed Cooler Temp. 0.9 °C Corrected Cooler Temp. 0.8 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1
  - 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
13. Were all preserved sample(s) at the correct pH upon receipt?  Yes  No  NA pH Strip Lot# HC312502
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 # covered  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



August 31, 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 - Cleveland

Laboratory submittal: 190434-1

Sample date: 2023-08-17

Report received by CADENA: 2023-08-31

Initial Data Verification completed by CADENA: 2023-08-31

Number of Samples:5

Sample Matrices:Water

Test Categories:GCMS VOC

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

The following minor QC exceptions or missing information were noted:

SRN - Sample Receipt Non-conformance (headspace)- Samples -003, -004, -005 results for GCMS VOC/SIM should be considered to be estimated and qualified with J flags if detected and UJ flags if non-detect due to sample receipt non-conformance that affects the integrity of the sample. See laboratory submittal sample receipt forms for details.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, 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.  |

# Qualified Results Summary

CADENA Project ID: E203728

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory Submittal: 190434-1

|                                    |                |            |
|------------------------------------|----------------|------------|
| <b>Sample Name:</b> MW-196S_081723 | MW-195S_081723 | DUP-05     |
| <b>Lab Sample ID:</b> 2401904343   | 2401904344     | 2401904345 |
| <b>Sample Date:</b> 8/17/2023      | 8/17/2023      | 8/17/2023  |

| Analyte | Cas No. | MW-196S_081723 |              |       |                 | MW-195S_081723 |              |       |                 | DUP-05 |              |       |                 |
|---------|---------|----------------|--------------|-------|-----------------|----------------|--------------|-------|-----------------|--------|--------------|-------|-----------------|
|         |         | Result         | Report Limit | Units | Valid Qualifier | Result         | Report Limit | Units | Valid Qualifier | Result | Report Limit | Units | Valid Qualifier |

**GC/MS VOC**

OSW-8260D

|                          |          |     |     |      |    |      |    |      |    |      |     |      |    |
|--------------------------|----------|-----|-----|------|----|------|----|------|----|------|-----|------|----|
| 1,1-Dichloroethene       | 75-35-4  | ND  | 2.0 | ug/l | UJ | ND   | 50 | ug/l | UJ | ND   | 10  | ug/l | UJ |
| cis-1,2-Dichloroethene   | 156-59-2 | 43  | 2.0 | ug/l | J  | 100  | 50 | ug/l | J  | 120  | 10  | ug/l | J  |
| Tetrachloroethene        | 127-18-4 | ND  | 2.0 | ug/l | UJ | ND   | 50 | ug/l | UJ | ND   | 10  | ug/l | UJ |
| trans-1,2-Dichloroethene | 156-60-5 | 1.4 | 2.0 | ug/l | J  | 200  | 50 | ug/l | J  | 260  | 10  | ug/l | J  |
| Trichloroethene          | 79-01-6  | 220 | 5.0 | ug/l | J  | 3100 | 50 | ug/l | J  | 3400 | 100 | ug/l | J  |
| Vinyl chloride           | 75-01-4  | ND  | 2.0 | ug/l | UJ | ND   | 50 | ug/l | UJ | 5.5  | 10  | ug/l | J  |

OSW-8260DSIM

|             |          |    |     |      |    |    |     |      |    |    |     |      |    |
|-------------|----------|----|-----|------|----|----|-----|------|----|----|-----|------|----|
| 1,4-Dioxane | 123-91-1 | ND | 2.0 | ug/l | UJ | ND | 2.0 | ug/l | UJ | ND | 2.0 | ug/l | UJ |
|-------------|----------|----|-----|------|----|----|-----|------|----|----|-----|------|----|

## Analytical Results Summary

CADENA Project ID: E203728

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory Submittal: 190434-1

| Analyte                  | Cas No.  | Sample Name: TRIP BLANK_84 |       |       |       | Sample Name: MW-196_081723 |       |       |       | Sample Name: MW-196S_081723 |       |       |       | Sample Name: MW-195S_081723 |       |       |       | Sample Name: DUP-05 |       |       |       |
|--------------------------|----------|----------------------------|-------|-------|-------|----------------------------|-------|-------|-------|-----------------------------|-------|-------|-------|-----------------------------|-------|-------|-------|---------------------|-------|-------|-------|
|                          |          | 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                         | 10    | ug/l  | ---   | ND                          | 2.0   | ug/l  | UJ    | ND                          | 50    | ug/l  | UJ    | ND                  | 10    | ug/l  | UJ    |
| cis-1,2-Dichloroethene   | 156-59-2 | ND                         | 1.0   | ug/l  | ---   | 310                        | 10    | ug/l  | ---   | 43                          | 2.0   | ug/l  | J     | 100                         | 50    | ug/l  | J     | 120                 | 10    | ug/l  | J     |
| Tetrachloroethene        | 127-18-4 | ND                         | 1.0   | ug/l  | ---   | ND                         | 10    | ug/l  | ---   | ND                          | 2.0   | ug/l  | UJ    | ND                          | 50    | ug/l  | UJ    | ND                  | 10    | ug/l  | UJ    |
| trans-1,2-Dichloroethene | 156-60-5 | ND                         | 1.0   | ug/l  | ---   | 120                        | 10    | ug/l  | ---   | 1.4                         | 2.0   | ug/l  | J     | 200                         | 50    | ug/l  | J     | 260                 | 10    | ug/l  | J     |
| Trichloroethene          | 79-01-6  | ND                         | 1.0   | ug/l  | ---   | 610                        | 10    | ug/l  | ---   | 220                         | 5.0   | ug/l  | J     | 3100                        | 50    | ug/l  | J     | 3400                | 100   | ug/l  | J     |
| Vinyl chloride           | 75-01-4  | ND                         | 1.0   | ug/l  | ---   | ND                         | 10    | ug/l  | ---   | ND                          | 2.0   | ug/l  | UJ    | ND                          | 50    | ug/l  | UJ    | 5.5                 | 10    | ug/l  | J     |
| <u>OSW-8260DSIM</u>      |          |                            |       |       |       |                            |       |       |       |                             |       |       |       |                             |       |       |       |                     |       |       |       |
| 1,4-Dioxane              | 123-91-1 |                            |       |       |       | ND                         | 2.0   | ug/l  | ---   | ND                          | 2.0   | ug/l  | UJ    | ND                          | 2.0   | ug/l  | UJ    | ND                  | 2.0   | ug/l  | UJ    |