

ANALYTICAL REPORT

PREPARED FOR

Attn: Kristoffer Hinskey
ARCADIS US Inc
28550 Cabot Drive
Suite 500
Novi, Michigan 48377

Generated 6/4/2023 10:41:32 PM

JOB DESCRIPTION

Ford LTP - On Site

JOB NUMBER

240-185816-1

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: 240-185816-1

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 US Inc
Project/Site: Ford LTP - On Site

Job ID: 240-185816-1

Job ID: 240-185816-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-185816-1

Receipt

The samples were received on 5/23/2023 10:00 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 0.6°C

GC/MS VOA

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: 240-185816-1

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

Protocol References:

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

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

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

Job ID: 240-185816-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|------------------|--------|----------------|----------------|
| 240-185816-1 | TRIP BLANK_185 | Water | 05/19/23 00:00 | 05/23/23 10:00 |
| 240-185816-2 | MW-15-59D_051923 | Water | 05/19/23 11:55 | 05/23/23 10:00 |
| 240-185816-3 | MW-15-60D_051923 | Water | 05/19/23 15:05 | 05/23/23 10:00 |

Detection Summary

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

Job ID: 240-185816-1

Client Sample ID: TRIP BLANK_185

Lab Sample ID: 240-185816-1

No Detections.

Client Sample ID: MW-15-59D_051923

Lab Sample ID: 240-185816-2

No Detections.

Client Sample ID: MW-15-60D_051923

Lab Sample ID: 240-185816-3

No Detections.

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: 240-185816-1

Client Sample ID: TRIP BLANK_185

Lab Sample ID: 240-185816-1

Date Collected: 05/19/23 00:00

Matrix: Water

Date Received: 05/23/23 10:00

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 | | | 05/27/23 15:45 | 1 |
| cis-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.46 | ug/L | | | 05/27/23 15:45 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 05/27/23 15:45 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 05/27/23 15:45 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 05/27/23 15:45 | 1 |
| Vinyl chloride | 1.0 | U | 1.0 | 0.45 | ug/L | | | 05/27/23 15:45 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 98 | | 70 - 128 | | 05/27/23 15:45 | 1 |
| Dibromofluoromethane (Surr) | 94 | | 77 - 124 | | 05/27/23 15:45 | 1 |
| Toluene-d8 (Surr) | 98 | | 80 - 120 | | 05/27/23 15:45 | 1 |
| 4-Bromofluorobenzene | 97 | | 76 - 120 | | 05/27/23 15:45 | 1 |

Client Sample Results

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

Job ID: 240-185816-1

Client Sample ID: MW-15-59D_051923

Lab Sample ID: 240-185816-2

Date Collected: 05/19/23 11:55

Matrix: Water

Date Received: 05/23/23 10:00

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 | | | 05/31/23 13:46 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 4-Bromofluorobenzene | 94 | | 75 - 133 | | | | | 05/31/23 13:46 | 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 | | | 05/27/23 16:35 | 1 |
| cis-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.46 | ug/L | | | 05/27/23 16:35 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 05/27/23 16:35 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 05/27/23 16:35 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 05/27/23 16:35 | 1 |
| Vinyl chloride | 1.0 | U | 1.0 | 0.45 | ug/L | | | 05/27/23 16:35 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 96 | | 70 - 128 | | | | | 05/27/23 16:35 | 1 |
| Dibromofluoromethane (Surr) | 91 | | 77 - 124 | | | | | 05/27/23 16:35 | 1 |
| Toluene-d8 (Surr) | 97 | | 80 - 120 | | | | | 05/27/23 16:35 | 1 |
| 4-Bromofluorobenzene | 91 | | 76 - 120 | | | | | 05/27/23 16:35 | 1 |

Client Sample Results

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

Job ID: 240-185816-1

Client Sample ID: MW-15-60D_051923

Lab Sample ID: 240-185816-3

Date Collected: 05/19/23 15:05

Matrix: Water

Date Received: 05/23/23 10:00

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 | | | 05/31/23 14:07 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 4-Bromofluorobenzene | 93 | | 75 - 133 | | | | | 05/31/23 14:07 | 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 | | | 05/27/23 17:00 | 1 |
| cis-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.46 | ug/L | | | 05/27/23 17:00 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 05/27/23 17:00 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 05/27/23 17:00 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 05/27/23 17:00 | 1 |
| Vinyl chloride | 1.0 | U | 1.0 | 0.45 | ug/L | | | 05/27/23 17:00 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | 70 - 128 | | | | | 05/27/23 17:00 | 1 |
| Dibromofluoromethane (Surr) | 109 | | 77 - 124 | | | | | 05/27/23 17:00 | 1 |
| Toluene-d8 (Surr) | 95 | | 80 - 120 | | | | | 05/27/23 17:00 | 1 |
| 4-Bromofluorobenzene | 93 | | 76 - 120 | | | | | 05/27/23 17:00 | 1 |

Surrogate Summary

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

Job ID: 240-185816-1

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

Matrix: Water

Prep Type: Total/NA

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|------------------------------------|------------------------|--|----------|----------|----------|
| Lab Sample ID | Client Sample ID | DCA | DBFM | TOL | BFB |
| | | (70-128) | (77-124) | (80-120) | (76-120) |
| 240-185816-1 | TRIP BLANK_185 | 98 | 94 | 98 | 97 |
| 240-185816-2 | MW-15-59D_051923 | 96 | 91 | 97 | 91 |
| 240-185816-3 | MW-15-60D_051923 | 101 | 109 | 95 | 93 |
| LCS 460-911871/4 | Lab Control Sample | 98 | 107 | 97 | 103 |
| LCSD 460-911871/5 | Lab Control Sample Dup | 97 | 98 | 99 | 103 |
| MB 460-911871/11 | Method Blank | 106 | 115 | 102 | 100 |
| Surrogate Legend | | | | | |
| DCA = 1,2-Dichloroethane-d4 (Surr) | | | | | |
| DBFM = Dibromofluoromethane (Surr) | | | | | |
| TOL = Toluene-d8 (Surr) | | | | | |
| BFB = 4-Bromofluorobenzene | | | | | |

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

Matrix: Water

Prep Type: Total/NA

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|----------------------------|------------------------|--|--|--|--|
| Lab Sample ID | Client Sample ID | BFB | | | |
| | | (75-133) | | | |
| 240-185816-2 | MW-15-59D_051923 | 94 | | | |
| 240-185816-3 | MW-15-60D_051923 | 93 | | | |
| LCS 460-912330/9 | Lab Control Sample | 94 | | | |
| LCSD 460-912330/13 | Lab Control Sample Dup | 95 | | | |
| MB 460-912330/7 | Method Blank | 90 | | | |
| Surrogate Legend | | | | | |
| BFB = 4-Bromofluorobenzene | | | | | |

QC Sample Results

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

Job ID: 240-185816-1

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

Lab Sample ID: MB 460-911871/11

Matrix: Water

Analysis Batch: 911871

Client Sample ID: Method Blank

Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------------|-----------|--------------|-----|------|------|---|----------|----------------|---------|
| 1,1-Dichloroethene | 1.0 | U | 1.0 | 0.49 | ug/L | | | 05/27/23 11:59 | 1 |
| cis-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.46 | ug/L | | | 05/27/23 11:59 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 05/27/23 11:59 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 05/27/23 11:59 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 05/27/23 11:59 | 1 |
| Vinyl chloride | 1.0 | U | 1.0 | 0.45 | ug/L | | | 05/27/23 11:59 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|--------------|--------------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 106 | | 70 - 128 | | 05/27/23 11:59 | 1 |
| Dibromofluoromethane (Surr) | 115 | | 77 - 124 | | 05/27/23 11:59 | 1 |
| Toluene-d8 (Surr) | 102 | | 80 - 120 | | 05/27/23 11:59 | 1 |
| 4-Bromofluorobenzene | 100 | | 76 - 120 | | 05/27/23 11:59 | 1 |

Lab Sample ID: LCS 460-911871/4

Matrix: Water

Analysis Batch: 911871

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|--------------------------|-------------|------------|---------------|------|---|------|-------------|
| 1,1-Dichloroethene | 20.0 | 23.0 | | ug/L | | 115 | 68 - 133 |
| cis-1,2-Dichloroethene | 20.0 | 22.6 | | ug/L | | 113 | 78 - 121 |
| Tetrachloroethene | 20.0 | 20.5 | | ug/L | | 102 | 70 - 127 |
| trans-1,2-Dichloroethene | 20.0 | 21.7 | | ug/L | | 108 | 74 - 126 |
| Trichloroethene | 20.0 | 20.6 | | ug/L | | 103 | 71 - 121 |
| Vinyl chloride | 20.0 | 20.2 | | ug/L | | 101 | 55 - 144 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|------------------------------|---------------|---------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 98 | | 70 - 128 |
| Dibromofluoromethane (Surr) | 107 | | 77 - 124 |
| Toluene-d8 (Surr) | 97 | | 80 - 120 |
| 4-Bromofluorobenzene | 103 | | 76 - 120 |

Lab Sample ID: LCSD 460-911871/5

Matrix: Water

Analysis Batch: 911871

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|--------------------------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| 1,1-Dichloroethene | 20.0 | 22.0 | | ug/L | | 110 | 68 - 133 | 4 | 30 |
| cis-1,2-Dichloroethene | 20.0 | 22.3 | | ug/L | | 111 | 78 - 121 | 2 | 30 |
| Tetrachloroethene | 20.0 | 19.8 | | ug/L | | 99 | 70 - 127 | 3 | 30 |
| trans-1,2-Dichloroethene | 20.0 | 21.4 | | ug/L | | 107 | 74 - 126 | 1 | 30 |
| Trichloroethene | 20.0 | 20.4 | | ug/L | | 102 | 71 - 121 | 1 | 30 |
| Vinyl chloride | 20.0 | 19.5 | | ug/L | | 98 | 55 - 144 | 3 | 30 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|------------------------------|----------------|----------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 97 | | 70 - 128 |
| Dibromofluoromethane (Surr) | 98 | | 77 - 124 |
| Toluene-d8 (Surr) | 99 | | 80 - 120 |

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QC Sample Results

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

Job ID: 240-185816-1

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

Lab Sample ID: LCSD 460-911871/5

Matrix: Water

Analysis Batch: 911871

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

| | LCSD | LCSD | |
|----------------------|-----------|-----------|----------|
| Surrogate | %Recovery | Qualifier | Limits |
| 4-Bromofluorobenzene | 103 | | 76 - 120 |

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

Lab Sample ID: MB 460-912330/7

Matrix: Water

Analysis Batch: 912330

Client Sample ID: Method Blank

Prep Type: Total/NA

| Analyte | MB | MB | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|-----|----|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane | 2.0 | U | 2.0 | 0.86 | ug/L | | | 05/31/23 08:59 | 1 |
| Surrogate | MB | MB | Limits | | | | Prepared | Analyzed | Dil Fac |
| 4-Bromofluorobenzene | 90 | | 75 - 133 | | | | | 05/31/23 08:59 | 1 |

Lab Sample ID: LCS 460-912330/9

Matrix: Water

Analysis Batch: 912330

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

| Analyte | Spike | LCS | LCS | Unit | D | %Rec | %Rec |
|----------------------|-------|------|----------|------|---|------|----------|
| 1,4-Dioxane | 5.00 | 5.09 | | ug/L | | 102 | 57 - 124 |
| Surrogate | LCS | LCS | Limits | | | | |
| 4-Bromofluorobenzene | 94 | | 75 - 133 | | | | |

Lab Sample ID: LCSD 460-912330/13

Matrix: Water

Analysis Batch: 912330

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

| Analyte | Spike | LCSD | LCSD | Unit | D | %Rec | %Rec | RPD | RPD |
|----------------------|-------|------|----------|------|---|------|----------|-----|-----|
| 1,4-Dioxane | 5.00 | 5.02 | | ug/L | | 100 | 57 - 124 | 1 | 30 |
| Surrogate | LCSD | LCSD | Limits | | | | | | |
| 4-Bromofluorobenzene | 95 | | 75 - 133 | | | | | | |

QC Association Summary

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

Job ID: 240-185816-1

GC/MS VOA

Analysis Batch: 911871

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|--------|--------|------------|
| 240-185816-1 | TRIP BLANK_185 | Total/NA | Water | 8260D | |
| 240-185816-2 | MW-15-59D_051923 | Total/NA | Water | 8260D | |
| 240-185816-3 | MW-15-60D_051923 | Total/NA | Water | 8260D | |
| MB 460-911871/11 | Method Blank | Total/NA | Water | 8260D | |
| LCS 460-911871/4 | Lab Control Sample | Total/NA | Water | 8260D | |
| LCSD 460-911871/5 | Lab Control Sample Dup | Total/NA | Water | 8260D | |

Analysis Batch: 912330

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|------------------------|-----------|--------|-----------|------------|
| 240-185816-2 | MW-15-59D_051923 | Total/NA | Water | 8260D SIM | |
| 240-185816-3 | MW-15-60D_051923 | Total/NA | Water | 8260D SIM | |
| MB 460-912330/7 | Method Blank | Total/NA | Water | 8260D SIM | |
| LCS 460-912330/9 | Lab Control Sample | Total/NA | Water | 8260D SIM | |
| LCSD 460-912330/13 | Lab Control Sample Dup | Total/NA | Water | 8260D SIM | |

Lab Chronicle

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

Job ID: 240-185816-1

Client Sample ID: TRIP BLANK_185

Lab Sample ID: 240-185816-1

Date Collected: 05/19/23 00:00

Matrix: Water

Date Received: 05/23/23 10:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|---------|----------------------|
| Total/NA | Analysis | 8260D | | 1 | 911871 | MZS | EET EDI | 05/27/23 15:45 |

Client Sample ID: MW-15-59D_051923

Lab Sample ID: 240-185816-2

Date Collected: 05/19/23 11:55

Matrix: Water

Date Received: 05/23/23 10:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|---------|----------------------|
| Total/NA | Analysis | 8260D | | 1 | 911871 | MZS | EET EDI | 05/27/23 16:35 |
| Total/NA | Analysis | 8260D SIM | | 1 | 912330 | SZD | EET EDI | 05/31/23 13:46 |

Client Sample ID: MW-15-60D_051923

Lab Sample ID: 240-185816-3

Date Collected: 05/19/23 15:05

Matrix: Water

Date Received: 05/23/23 10:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|---------|----------------------|
| Total/NA | Analysis | 8260D | | 1 | 911871 | MZS | EET EDI | 05/27/23 17:00 |
| Total/NA | Analysis | 8260D SIM | | 1 | 912330 | SZD | EET EDI | 05/31/23 14:07 |

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Accreditation/Certification Summary

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

Job ID: 240-185816-1

Laboratory: Eurofins Edison

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

| Authority | Program | Identification Number | Expiration Date |
|-----------------------------------|---------------------|-----------------------|-----------------|
| Connecticut | State | PH-0818 | 01-30-24 |
| DE Haz. Subst. Cleanup Act (HSCA) | State | N/A | 01-01-24 |
| Georgia | State | 12028 (NJ) | 06-30-23 |
| Massachusetts | State | M-NJ312 | 06-30-23 |
| New Jersey | NELAP | 12028 | 06-30-23 |
| New York | NELAP | 11452 | 04-01-24 |
| Pennsylvania | NELAP | 68-00522 | 03-01-24 |
| Rhode Island | State | LAO00376 | 12-30-23 |
| USDA | US Federal Programs | P330-20-00244 | 11-03-23 |

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

THE LEADER IN ENVIRONMENTAL TESTING

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Eurofins - Canton Sample Receipt Form/Narrative
Barberton Facility

Login # : 185816

Client Arcadis Site Name _____

Cooler unpacked by: Rachelle Haidet

Cooler Received on 5 23 23 Opened on 5 23 23

FedEx: 1st Grd ☒ Exp ☐ UPS ☐ FAS ☐ Clipper ☐ 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 # 13 (CF +2 °C) Observed Cooler Temp. 0.4 °C Corrected Cooler Temp. 0.6 °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 ☐ NA
4. Did custody papers accompany the sample(s)? ☒ Yes ☐ No ☐ NA
5. Were the custody papers relinquished & signed in the appropriate place? ☒ Yes ☐ No ☐ NA
6. Was/were the person(s) who collected the samples clearly identified on the COC? ☒ Yes ☐ No ☐ NA
7. Did all bottles arrive in good condition (Unbroken)? ☒ Yes ☐ No ☐ NA
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? ☒ Yes ☐ No ☐ NA
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 ☐ NA
10. Were correct bottle(s) used for the test(s) indicated? ☒ Yes ☐ No ☐ NA
11. Sufficient quantity received to perform indicated analyses? ☒ Yes ☐ No ☐ NA
12. Are these work share samples and all listed on the COC? ☒ Yes ☐ No ☐ NA
- 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# HC208070
14. Were VOAs on the COC? ☒ Yes ☐ No ☐ NA
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 # _____ ☒ Yes ☐ No ☐ NA
17. Was a LL Hg or Me Hg trip blank present? ☒ Yes ☐ No ☐ NA

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) 6-MW-15-S9D-051923 were received with bubble >6 mm in diameter. (Notify PM)

6-MW-15-60D-051923

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: _____

WI-NC-099

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Job Number: 240-185816-1

Login Number: 185816

List Number: 2

Creator: Rivera, Kenneth

List Source: Eurofins Edison

List Creation: 05/25/23 10:46 AM

| Question | Answer | Comment |
|--|--------|--------------|
| Radioactivity wasn't checked or is \leq background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.2°C, IR #9 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

DATA VERIFICATION REPORT



June 05, 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: 185816-1

Sample date: 2023-05-19

Report received by CADENA: 2023-06-05

Initial Data Verification completed by CADENA: 2023-06-05

Number of Samples:3

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.

There were no significant QC anomalies or exceptions to report.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD 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 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 - Cleveland

Laboratory Submittal: 185816-1

Sample Name: TRIP BLANK_185
Lab Sample ID: 2401858161
Sample Date: 5/19/2023

MW-15-59D_051923
2401858162
5/19/2023

MW-15-60D_051923
2401858163
5/19/2023

| Analyte | Cas No. | Report | | | | Valid Qualifier | Report | | | | Valid Qualifier | Report | | | | Valid Qualifier |
|---------|---------|--------|-------|-------|--|-----------------|--------|-------|-------|--|-----------------|--------|-------|-------|--|-----------------|
| | | Result | Limit | Units | | | Result | Limit | Units | | | Result | Limit | Units | | |

GC/MS VOC

OSW-8260D

| | | | | | | | | | | | | | |
|--------------------------|----------|----|-----|------|-----|----|-----|------|-----|----|-----|------|-----|
| 1,1-Dichloroethene | 75-35-4 | 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 | --- |
| Tetrachloroethene | 127-18-4 | 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 | --- |
| Trichloroethene | 79-01-6 | 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 | --- |

OSW-8260DSIM

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