

ANALYTICAL REPORT

PREPARED FOR

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Generated 12/3/2024 7:09:01 AM

JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-215499-1

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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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Table of Contents

| | |
|----------------------------------|----|
| Cover Page | 1 |
| Table of Contents | 3 |
| Definitions/Glossary | 4 |
| Case Narrative | 5 |
| Method Summary | 6 |
| Sample Summary | 7 |
| Detection Summary | 8 |
| Client Sample Results | 9 |
| Surrogate Summary | 11 |
| QC Sample Results | 12 |
| QC Association Summary | 15 |
| Lab Chronicle | 16 |
| Certification Summary | 17 |
| Chain of Custody | 18 |

Definitions/Glossary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-215499-1

Qualifiers

GC/MS VOA

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

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| ☼ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| 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: Ford LTP

Job ID: 240-215499-1

Job ID: 240-215499-1

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Job Narrative 240-215499-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 11/22/2024 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 3.2°C.

GC/MS VOA

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

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Method Summary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-215499-1

| 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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- 2
- 3
- 4
- 5
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- 7
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- 9
- 10
- 11
- 12
- 13
- 14

Sample Summary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-215499-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|------------------|--------|----------------|----------------|
| 240-215499-1 | TRIP BLANK_49 | Water | 11/20/24 00:00 | 11/22/24 08:00 |
| 240-215499-2 | MW-234_112024 | Water | 11/20/24 09:45 | 11/22/24 08:00 |

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Detection Summary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-215499-1

Client Sample ID: TRIP BLANK_49

Lab Sample ID: 240-215499-1

No Detections.

Client Sample ID: MW-234_112024

Lab Sample ID: 240-215499-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|----------------|--------|-----------|-----|------|------|---------|---|--------|-----------|
| Vinyl chloride | 0.48 | J | 1.0 | 0.45 | ug/L | 1 | | 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

Job ID: 240-215499-1

Client Sample ID: TRIP BLANK_49

Lab Sample ID: 240-215499-1

Date Collected: 11/20/24 00:00

Matrix: Water

Date Received: 11/22/24 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 | | | 11/26/24 03:12 | 1 |
| cis-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.46 | ug/L | | | 11/26/24 03:12 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 11/26/24 03:12 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 11/26/24 03:12 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 11/26/24 03:12 | 1 |
| Vinyl chloride | 1.0 | U | 1.0 | 0.45 | ug/L | | | 11/26/24 03:12 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 130 | | 62 - 137 | | 11/26/24 03:12 | 1 |
| 4-Bromofluorobenzene (Surr) | 84 | | 56 - 136 | | 11/26/24 03:12 | 1 |
| Toluene-d8 (Surr) | 98 | | 78 - 122 | | 11/26/24 03:12 | 1 |
| Dibromofluoromethane (Surr) | 118 | | 73 - 120 | | 11/26/24 03:12 | 1 |

Client Sample Results

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-215499-1

Client Sample ID: MW-234_112024

Lab Sample ID: 240-215499-2

Date Collected: 11/20/24 09:45

Matrix: Water

Date Received: 11/22/24 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 | | | 11/28/24 06:52 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 106 | | 68 - 127 | | | | | 11/28/24 06:52 | 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 | | | 11/26/24 03:32 | 1 |
| cis-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.46 | ug/L | | | 11/26/24 03:32 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 11/26/24 03:32 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 11/26/24 03:32 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 11/26/24 03:32 | 1 |
| Vinyl chloride | 0.48 | J | 1.0 | 0.45 | ug/L | | | 11/26/24 03:32 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 123 | | 62 - 137 | | | | | 11/26/24 03:32 | 1 |
| 4-Bromofluorobenzene (Surr) | 78 | | 56 - 136 | | | | | 11/26/24 03:32 | 1 |
| Toluene-d8 (Surr) | 89 | | 78 - 122 | | | | | 11/26/24 03:32 | 1 |
| Dibromofluoromethane (Surr) | 110 | | 73 - 120 | | | | | 11/26/24 03:32 | 1 |

Surrogate Summary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-215499-1

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 (62-137) | BFB (56-136) | TOL (78-122) | DBFM (73-120) |
| 240-215498-A-2 MSD | Matrix Spike Duplicate | 105 | 93 | 94 | 96 |
| 240-215498-C-2 MS | Matrix Spike | 111 | 96 | 98 | 99 |
| 240-215499-1 | TRIP BLANK_49 | 130 | 84 | 98 | 118 |
| 240-215499-2 | MW-234_112024 | 123 | 78 | 89 | 110 |
| LCS 240-636697/4 | Lab Control Sample | 113 | 102 | 102 | 103 |
| MB 240-636697/7 | Method Blank | 124 | 87 | 98 | 111 |

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 (68-127) |
| 240-215499-2 | MW-234_112024 | 106 |
| 240-215598-B-2 MS | Matrix Spike | 106 |
| 240-215598-B-2 MSD | Matrix Spike Duplicate | 97 |
| LCS 240-637038/5 | Lab Control Sample | 99 |
| MB 240-637038/7 | Method Blank | 106 |

Surrogate Legend

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

QC Sample Results

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-215499-1

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

Lab Sample ID: MB 240-636697/7

Matrix: Water

Analysis Batch: 636697

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 | | | 11/25/24 21:11 | 1 |
| cis-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.46 | ug/L | | | 11/25/24 21:11 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 11/25/24 21:11 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 11/25/24 21:11 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 11/25/24 21:11 | 1 |
| Vinyl chloride | 1.0 | U | 1.0 | 0.45 | ug/L | | | 11/25/24 21:11 | 1 |

| Surrogate | MB | MB | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| | %Recovery | Qualifier | | | | |
| 1,2-Dichloroethane-d4 (Surr) | 124 | | 62 - 137 | | 11/25/24 21:11 | 1 |
| 4-Bromofluorobenzene (Surr) | 87 | | 56 - 136 | | 11/25/24 21:11 | 1 |
| Toluene-d8 (Surr) | 98 | | 78 - 122 | | 11/25/24 21:11 | 1 |
| Dibromofluoromethane (Surr) | 111 | | 73 - 120 | | 11/25/24 21:11 | 1 |

Lab Sample ID: LCS 240-636697/4

Matrix: Water

Analysis Batch: 636697

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 | 26.5 | | ug/L | | 106 | 63 - 134 |
| cis-1,2-Dichloroethene | 25.0 | 26.2 | | ug/L | | 105 | 77 - 123 |
| Tetrachloroethene | 25.0 | 26.9 | | ug/L | | 108 | 76 - 123 |
| trans-1,2-Dichloroethene | 25.0 | 27.4 | | ug/L | | 110 | 75 - 124 |
| Trichloroethene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 122 |
| Vinyl chloride | 12.5 | 14.3 | | ug/L | | 114 | 60 - 144 |

| Surrogate | LCS | LCS | Limits |
|------------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 1,2-Dichloroethane-d4 (Surr) | 113 | | 62 - 137 |
| 4-Bromofluorobenzene (Surr) | 102 | | 56 - 136 |
| Toluene-d8 (Surr) | 102 | | 78 - 122 |
| Dibromofluoromethane (Surr) | 103 | | 73 - 120 |

Lab Sample ID: 240-215498-A-2 MSD

Matrix: Water

Analysis Batch: 636697

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

| Analyte | Sample | Sample | Spike Added | MSD | MSD | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|--------------------------|--------|-----------|-------------|--------|-----------|------|---|------|-------------|-----|-----------|
| | Result | Qualifier | | Result | Qualifier | | | | | | |
| 1,1-Dichloroethene | 1.0 | U | 25.0 | 25.3 | | ug/L | | 101 | 56 - 135 | 4 | 26 |
| cis-1,2-Dichloroethene | 2.6 | | 25.0 | 28.3 | | ug/L | | 103 | 66 - 128 | 1 | 14 |
| Tetrachloroethene | 1.0 | U | 25.0 | 24.7 | | ug/L | | 99 | 62 - 131 | 9 | 20 |
| trans-1,2-Dichloroethene | 1.0 | U | 25.0 | 27.0 | | ug/L | | 108 | 56 - 136 | 1 | 15 |
| Trichloroethene | 1.0 | U | 25.0 | 24.5 | | ug/L | | 98 | 61 - 124 | 3 | 15 |
| Vinyl chloride | 1.0 | U | 12.5 | 13.7 | | ug/L | | 110 | 43 - 157 | 4 | 24 |

| Surrogate | MSD | MSD | Limits |
|------------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 62 - 137 |
| 4-Bromofluorobenzene (Surr) | 93 | | 56 - 136 |
| Toluene-d8 (Surr) | 94 | | 78 - 122 |

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QC Sample Results

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-215499-1

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

Lab Sample ID: 240-215498-A-2 MSD
Matrix: Water
Analysis Batch: 636697

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

| | MSD | MSD | |
|-----------------------------|-----------|-----------|----------|
| Surrogate | %Recovery | Qualifier | Limits |
| Dibromofluoromethane (Surr) | 96 | | 73 - 120 |

Lab Sample ID: 240-215498-C-2 MS
Matrix: Water
Analysis Batch: 636697

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

| Analyte | Sample | Sample | Spike | MS | MS | Unit | D | %Rec | %Rec |
|--------------------------|--------|-----------|-------|--------|-----------|------|---|------|----------|
| | Result | Qualifier | Added | Result | Qualifier | | | | |
| 1,1-Dichloroethene | 1.0 | U | 25.0 | 26.3 | | ug/L | | 105 | 56 - 135 |
| cis-1,2-Dichloroethene | 2.6 | | 25.0 | 28.0 | | ug/L | | 101 | 66 - 128 |
| Tetrachloroethene | 1.0 | U | 25.0 | 27.0 | | ug/L | | 108 | 62 - 131 |
| trans-1,2-Dichloroethene | 1.0 | U | 25.0 | 27.4 | | ug/L | | 109 | 56 - 136 |
| Trichloroethene | 1.0 | U | 25.0 | 25.2 | | ug/L | | 101 | 61 - 124 |
| Vinyl chloride | 1.0 | U | 12.5 | 13.2 | | ug/L | | 106 | 43 - 157 |

| | MS | MS | |
|------------------------------|-----------|-----------|----------|
| Surrogate | %Recovery | Qualifier | Limits |
| 1,2-Dichloroethane-d4 (Surr) | 111 | | 62 - 137 |
| 4-Bromofluorobenzene (Surr) | 96 | | 56 - 136 |
| Toluene-d8 (Surr) | 98 | | 78 - 122 |
| Dibromofluoromethane (Surr) | 99 | | 73 - 120 |

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

Lab Sample ID: MB 240-637038/7
Matrix: Water
Analysis Batch: 637038

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 | | | 11/27/24 22:16 | 1 |

| | MB | MB | |
|------------------------------|-----------|-----------|----------|
| Surrogate | %Recovery | Qualifier | Limits |
| 1,2-Dichloroethane-d4 (Surr) | 106 | | 68 - 127 |

Lab Sample ID: LCS 240-637038/5
Matrix: Water
Analysis Batch: 637038

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

| Analyte | Spike | LCS | LCS | Unit | D | %Rec | %Rec |
|-------------|-------|--------|-----------|------|---|------|----------|
| | | Result | Qualifier | | | | |
| 1,4-Dioxane | 10.0 | 7.60 | | ug/L | | 76 | 75 - 121 |

| | LCS | LCS | |
|------------------------------|-----------|-----------|----------|
| Surrogate | %Recovery | Qualifier | Limits |
| 1,2-Dichloroethane-d4 (Surr) | 99 | | 68 - 127 |

Lab Sample ID: 240-215598-B-2 MS
Matrix: Water
Analysis Batch: 637038

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

| Analyte | Sample | Sample | Spike | MS | MS | Unit | D | %Rec | %Rec |
|-------------|--------|-----------|-------|--------|-----------|------|---|------|----------|
| | Result | Qualifier | Added | Result | Qualifier | | | | |
| 1,4-Dioxane | 2.0 | U | 10.0 | 8.33 | | ug/L | | 83 | 20 - 180 |

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QC Sample Results

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-215499-1

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

| <i>Surrogate</i> | <i>%Recovery</i> | <i>MS MS Qualifier</i> | <i>Limits</i> |
|------------------------------|------------------|----------------------------|---------------|
| 1,2-Dichloroethane-d4 (Surr) | 106 | | 68 - 127 |

Lab Sample ID: 240-215598-B-2 MSD
Matrix: Water
Analysis Batch: 637038

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

| <i>Analyte</i> | <i>Sample Result</i> | <i>Sample Qualifier</i> | <i>Spike Added</i> | <i>MSD Result</i> | <i>MSD Qualifier</i> | <i>Unit</i> | <i>D</i> | <i>%Rec</i> | <i>%Rec Limits</i> | <i>RPD</i> | <i>RPD Limit</i> |
|----------------|--------------------------|-----------------------------|------------------------|-----------------------|--------------------------|-------------|----------|-------------|------------------------|------------|----------------------|
| 1,4-Dioxane | 2.0 | U | 10.0 | 9.06 | | ug/L | | 91 | 20 - 180 | 8 | 20 |

| <i>Surrogate</i> | <i>%Recovery</i> | <i>MSD MSD Qualifier</i> | <i>Limits</i> |
|------------------------------|------------------|------------------------------|---------------|
| 1,2-Dichloroethane-d4 (Surr) | 97 | | 68 - 127 |

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- 2
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- 12
- 13
- 14

QC Association Summary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-215499-1

GC/MS VOA

Analysis Batch: 636697

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|------------------------|-----------|--------|--------|------------|
| 240-215499-1 | TRIP BLANK_49 | Total/NA | Water | 8260D | |
| 240-215499-2 | MW-234_112024 | Total/NA | Water | 8260D | |
| MB 240-636697/7 | Method Blank | Total/NA | Water | 8260D | |
| LCS 240-636697/4 | Lab Control Sample | Total/NA | Water | 8260D | |
| 240-215498-A-2 MSD | Matrix Spike Duplicate | Total/NA | Water | 8260D | |
| 240-215498-C-2 MS | Matrix Spike | Total/NA | Water | 8260D | |

Analysis Batch: 637038

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|------------------------|-----------|--------|-----------|------------|
| 240-215499-2 | MW-234_112024 | Total/NA | Water | 8260D SIM | |
| MB 240-637038/7 | Method Blank | Total/NA | Water | 8260D SIM | |
| LCS 240-637038/5 | Lab Control Sample | Total/NA | Water | 8260D SIM | |
| 240-215598-B-2 MS | Matrix Spike | Total/NA | Water | 8260D SIM | |
| 240-215598-B-2 MSD | Matrix Spike Duplicate | Total/NA | Water | 8260D SIM | |

Lab Chronicle

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-215499-1

Client Sample ID: TRIP BLANK_49

Lab Sample ID: 240-215499-1

Date Collected: 11/20/24 00:00

Matrix: Water

Date Received: 11/22/24 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|---------|----------------------|
| Total/NA | Analysis | 8260D | | 1 | 636697 | LEE | EET CLE | 11/26/24 03:12 |

Client Sample ID: MW-234_112024

Lab Sample ID: 240-215499-2

Date Collected: 11/20/24 09:45

Matrix: Water

Date Received: 11/22/24 08:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|---------|----------------------|
| Total/NA | Analysis | 8260D | | 1 | 636697 | LEE | EET CLE | 11/26/24 03:32 |
| Total/NA | Analysis | 8260D SIM | | 1 | 637038 | R5XG | EET CLE | 11/28/24 06:52 |

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

Job ID: 240-215499-1

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 | 02-28-25 |
| Connecticut | State | PH-0806 | 12-31-26 |
| Georgia | State | 4062 | 02-27-25 |
| Illinois | NELAP | 200004 | 08-31-25 |
| Iowa | State | 421 | 06-01-25 |
| Kentucky (UST) | State | 112225 | 02-27-25 |
| Kentucky (WW) | State | KY98016 | 12-30-24 |
| Minnesota | NELAP | 039-999-348 | 12-31-24 |
| New Hampshire | NELAP | 225024 | 09-30-25 |
| New Jersey | NELAP | OH001 | 07-03-25 |
| New York | NELAP | 10975 | 04-02-25 |
| Ohio VAP | State | ORELAP 4062 | 02-27-25 |
| Oregon | NELAP | 4062 | 02-27-25 |
| Pennsylvania | NELAP | 68-00340 | 08-31-25 |
| Texas | NELAP | T104704517-22-19 | 08-31-25 |
| USDA | US Federal Programs | P330-18-00281 | 01-05-27 |
| Virginia | NELAP | 460175 | 09-14-25 |
| West Virginia DEP | State | 210 | 12-31-24 |

Chain of Custody Record

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

| Client Contact | | Regulatory program: DW NPDES RCRA Other | | TestAmerica Laboratories, Inc. | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|--|--|-------------|---------------------------------------|---------------------------------|----------|-------|-----------------------------|----------------------------|---------------|-------------------|---------------------|-----------|-----------|----------------------|-----------------------|----------------|--|--------|--|-------|--|---|--|
| Company Name: Arcadis | | Client Project Manager: Kris Hinskey | | | Site Contact: Christina Weaver | | | Lab Contact: Mike DelMonico | | | | COC No: | | | | | | | | | | | | |
| Address: 28550 Cabot Drive, Suite 500 | | Telephone: 248-994-2240 | | | Telephone: 248-994-2240 | | | Telephone: 330-497-9396 | | | | 1 of 1 COCs | | | | | | | | | | | | |
| City/State/Zip: Novi, MI, 48377 | | Email: kristoffer.hinskey@arcadis.com | | | Analysis Turnaround Time | | | Analyses | | | | For lab use only | | | | | | | | | | | | |
| Phone: 248-994-2240 | | Sampler Name: <i>Ken Kasper</i> | | | TAT is different from below | | | Filtered Sample (V/N) | Composite=C / Grab=G | 1,1-DCE 8260D | cis-1,2-DCE 8260D | Trans-1,2-DCE 8260D | PCE 8260D | TCE 8260D | Vinyl Chloride 8260D | 1,4-Dioxane 8260D SIM | Walk-in client | | | | | | | |
| Project Name: Ford LTP | | Method of Shipment/Carrier: | | | 10 day | | | | | | | | | | | | 1 week | | 2 days | | 1 day | | Lab sampling | |
| Project Number: 30206169.0401.03 | | Shipping/Tracking No: | | | | | | | | | | | | | | | | | | | | | Job/SDG No. | |
| PO # US3410018772 | | | | | | | | | | | | | | | | | | | | | | | Sample Specific Notes / Special Instructions: | |
| Sample Identification | | Sample Date | Sample Time | Matrix | | | | | Containers & Preservatives | | | | | | | | | | | | | | | |
| | | | | Air | Aqueous | Sediment | Solid | Other: | H2SO4 | HNO3 | HCl | NaOH | ZnAc | NaOH | Unpres | Other: | | | | | | | | |
| ✓ TRIP BLANK_ 49 | | --- | --- | 1 | | | | | | | 1 | | | | | | | 1 Trip Blank | | | | | | |
| ✓ MW-234-112024 | | 11/20/24 | 0945 | 6 | | | | | | | 6 | | | | | | | 3 VOAs for 8260D 3 VOAs for 8260D SIM | | | | | | |



MICHIGAN
190

Possible Hazard Identification
 Non-Hazard flammable Irritant Poison B Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal By Lab Archive For: _____ Months

Special Instructions/OC Requirements & Comments:

Submit all results through Cadena at jtomatia@cadenacc.com Cadena #E203728
 Level IV Reporting requested

| | | | | | |
|-------------------------------------|------------------|---------------------------|---|------------------|--------------------------|
| Relinquished by: <i>[Signature]</i> | Company: Arcadis | Date/Time: 11/20/24 1643 | Received by: <i>[Signature]</i> | Company: Arcadis | Date/Time: 11/20/24 1643 |
| Relinquished by: <i>[Signature]</i> | Company: Arcadis | Date/Time: 11/21/24 1225 | Received by: <i>[Signature]</i> | Company: EETA | Date/Time: 11/21/24 1220 |
| Relinquished by: <i>[Signature]</i> | Company: EETA | Date/Time: 11/21/24 12:30 | Received in Laboratory by: JESSE MOROSKO | Company: EETA | Date/Time: 11/21/24 0800 |

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Client PRCADIS Site Name _____ Cooler unpacked by _____
 Cooler Received on 11/22/24 Opened on 11/22/24
 FedEx 1st Grd Exp UPS FAS W/Print Client Drop Off Eurofins Courier Other JWOROSKO

Receipt After-hours Drop-off Date/Time _____ Storage Location _____
 Eurofins Cooler # ZC Foam Box _____ Client Cooler _____ Box _____ Other _____
 Packing material used. Bubble Wrap Foam Plastic Bag _____ None _____ Other _____

COOLANT Water Blue Ice _____ Dry Ice _____ Water _____ None _____
 1 Cooler temperature upon receipt: See Multiple Cooler Form
 IR GUN # 17 (CR TD.1 °C) Observed Cooler Temp. 31 °C Corrected Cooler Temp 32 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____
 -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

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

- 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)?
 - 10 Were correct bottle(s) used for the test(s) indicated? Yes No
 - 11 Sufficient quantity received to perform indicated analyses? Yes No
 12. Are these work share samples and all listed on the COC? Yes No
- If Yes, Questions 13-17 have been checked at the originating laboratory
- 13 Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC4448976
 - 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 trp blank present in the cooler(s)? Trip Blank Lot # U3271 Yes No
 - 17 Was a LL Hg or Me Hg trp blank present? Yes No

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: _____



11/22/2024

Login Container Summary Report

240-215499

12/3/2024

Temperature readings

| <u>Client Sample ID</u> | <u>Lab ID</u> | <u>Container Type</u> | <u>Container</u> | <u>Preservation</u> | <u>Preservation</u> |
|-------------------------|----------------|-----------------------------------|------------------|---------------------|---------------------|
| | | | <u>pH</u> | <u>Temp</u> | <u>Added</u> |
| | | | | | <u>Lot Number</u> |
| TRIP BLANK_49 | 240-215499-A-1 | Voa Vial 40ml - Hydrochloric Acid | | | |
| MW-234_112024 | 240-215499-A-2 | Voa Vial 40ml - Hydrochloric Acid | | | |
| MW-234_112024 | 240-215499-B-2 | Voa Vial 40ml - Hydrochloric Acid | | | |
| MW-234_112024 | 240-215499-C-2 | Voa Vial 40ml - Hydrochloric Acid | | | |
| MW-234_112024 | 240-215499-D-2 | Voa Vial 40ml - Hydrochloric Acid | | | |
| MW-234_112024 | 240-215499-E-2 | Voa Vial 40ml - Hydrochloric Acid | | | |
| MW-234_112024 | 240-215499-G-2 | Voa Vial 40ml - Hydrochloric Acid | | | |

DATA VERIFICATION REPORT



December 04, 2024

Megan Meckley
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI US 48377

CADENA project ID: E203728
Project: Ford Livonia Transmission Plant - Soil Gas, Ground Water and Soil
Project number: 30206169.0401.04_WA-03
Event Specific Scope of Work References: Sample COC
Laboratory: Eurofins Environment Testing LLC - Cleveland
Laboratory submittal: 215499-1
Sample date: 2024-11-20
Report received by CADENA: 2024-12-03
Initial Data Verification completed by CADENA: 2024-12-04
Number of Samples:2
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, 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.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

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

CADENA Valid Qualifiers

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

Analytical Results Summary

CADENA Project ID: E203728

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory Submittal: 215499-1

| | |
|-----------------------------------|---------------|
| Sample Name: TRIP BLANK_49 | MW-234_112024 |
| Lab Sample ID: 2402154991 | 2402154992 |
| Sample Date: 11/20/2024 | 11/20/2024 |

| Analyte | Cas No. | Report | | Valid | | Report | | Valid | |
|--------------------------|----------|--------|-------|-------|-----------|--------|-------|-------|-----------|
| | | Result | Limit | Units | Qualifier | Result | Limit | Units | Qualifier |
| GC/MS VOC | | | | | | | | | |
| <u>OSW-8260D</u> | | | | | | | | | |
| 1,1-Dichloroethene | 75-35-4 | 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 | --- |
| Tetrachloroethene | 127-18-4 | 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 | --- |
| Trichloroethene | 79-01-6 | ND | 1.0 | ug/l | --- | ND | 1.0 | ug/l | --- |
| Vinyl chloride | 75-01-4 | ND | 1.0 | ug/l | --- | 0.48 | 1.0 | ug/l | J |
| <u>OSW-8260DSIM</u> | | | | | | | | | |
| 1,4-Dioxane | 123-91-1 | | | | | ND | 2.0 | ug/l | --- |