

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

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North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-95404-1

Client Project/Site: Ford LTP Livonia MI - E203728

Revision: 1

For:

ARCADIS U.S., Inc.

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Attn: Kristoffer Hinskey



Authorized for release by:

6/8/2018 2:42:22 PM

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

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

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# Definitions/Glossary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description  |
|-----------|--|
| F2        | MS/MSD RPD exceeds control limits  |
| U         | Indicates the analyte was analyzed for but not detected.   |
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| *         | LCS or LCSD is outside acceptance limits.  |
| X         | Surrogate is outside control limits  |
| B         | Compound was found in the blank and sample.  |
| F1        | MS and/or MSD Recovery is outside acceptance limits.   |

## 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  |
| CNF            | Contains No Free Liquid   |
| DER            | Duplicate Error Ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL             | Detection Limit (DoD/DOE)   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision Level Concentration (Radiochemistry)   |
| EDL            | Estimated Detection Limit (Dioxin)  |
| LOD            | Limit of Detection (DoD/DOE)  |
| LOQ            | Limit of Quantitation (DoD/DOE)   |
| MDA            | Minimum Detectable Activity (Radiochemistry)  |
| MDC            | Minimum Detectable Concentration (Radiochemistry)   |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| NC             | Not Calculated  |
| ND             | Not Detected at the reporting limit (or MDL or EDL if shown)  |
| PQL            | Practical Quantitation Limit  |
| QC             | Quality Control   |
| RER            | Relative Error Ratio (Radiochemistry)   |
| RL             | Reporting Limit or Requested Limit (Radiochemistry)   |
| RPD            | Relative Percent Difference, a measure of the relative difference between two points                        |
| TEF            | Toxicity Equivalent Factor (Dioxin)   |
| TEQ            | Toxicity Equivalent Quotient (Dioxin)   |

# Case Narrative

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Job ID: 240-95404-1**

**Laboratory: TestAmerica Canton**

**Narrative**

## CASE NARRATIVE

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

**Project: Ford LTP Livonia MI - E203631**

**Report Number: 240-95404-1**

### Revision

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

This report was revised 6/8/2018 to report 1,4-Dioxane by 8260B SIM only.

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

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

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

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

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

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

### RECEIPT

The samples were received on 5/10/2018 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.3° C, 1.7° C and 2.3° C.

### VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-23\_050718 (240-95404-1), MW-38\_050818 (240-95404-2), MW-33\_050818 (240-95404-3), MW-39\_050818 (240-95404-4), MW-32\_050818 (240-95404-5), MW-40\_050818 (240-95404-6), MW-31\_050818 (240-95404-7), MW-30\_050818 (240-95404-8), MW-41\_050818 (240-95404-9), MW-34\_050818 (240-95404-10), MW-42\_050918 (240-95404-11), MW-35\_050918 (240-95404-12), MW-71\_050818 (240-95404-13), MW-45\_050818 (240-95404-14), MW-18\_050818 (240-95404-15), MW-43\_050918 (240-95404-16), MW-52\_050918 (240-95404-17), DUP-01\_050818 (240-95404-18) and TRIP BLANK (240-95404-19) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/14/2018 and 05/15/2018.

Acetone was detected in method blank MB 240-326782/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or

# Case Narrative

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

## Job ID: 240-95404-1 (Continued)

### Laboratory: TestAmerica Canton (Continued)

RL, the result has been flagged. Refer to the QC report for details.

Dibromofluoromethane (Surr) failed the surrogate recovery criteria high for MW-38\_050818 (240-95404-2) and MW-43\_050918 (240-95404-16).

Toluene-d8 (Surr) and Dibromofluoromethane (Surr) failed the surrogate recovery criteria high for MW-40\_050818 (240-95404-6). Refer to the QC report for details.

Chloroethane failed the recovery criteria high for LCS 240-326629/4. Refer to the QC report for details.

Acetone exceeded the RPD limit for the MSD of sample 240-95062-1 in batch 240-326782.

cis-1,3-Dichloropropene failed the recovery criteria low for the MSD of sample MW-40\_050818MSD (240-95404-6) in batch 240-326849. 1,1,2-Trichloro-1,2,2-trifluoroethane, Acetone and Methyl acetate exceeded the RPD limit. Refer to the QC report for details.

Samples MW-23\_050718 (240-95404-1)[100X] and MW-45\_050818 (240-95404-14)[66.67X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: The laboratory control sample (LCS) for 326629 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported: MW-33\_050818 (240-95404-3), MW-39\_050818 (240-95404-4), MW-32\_050818 (240-95404-5), MW-31\_050818 (240-95404-7), MW-30\_050818 (240-95404-8), MW-41\_050818 (240-95404-9), MW-34\_050818 (240-95404-10), MW-35\_050918 (240-95404-12), MW-71\_050818 (240-95404-13) and (LCS 240-326629/4).

Method(s) 8260B: Surrogate recovery for the following sample was outside the upper control limit: MW-38\_050818 (240-95404-2). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: Surrogate recovery for the following sample was outside of acceptance limits: MW-43\_050918 (240-95404-16). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Method(s) 8260B: Surrogate recovery for the following sample was outside control limits: MW-40\_050818 (240-95404-6). Re-extraction and/or re-analysis was performed with concurring results. The best analysis has been reported.

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

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

Samples MW-23\_050718 (240-95404-1), MW-38\_050818 (240-95404-2), MW-33\_050818 (240-95404-3), MW-39\_050818 (240-95404-4), MW-32\_050818 (240-95404-5), MW-40\_050818 (240-95404-6), MW-31\_050818 (240-95404-7), MW-30\_050818 (240-95404-8), MW-41\_050818 (240-95404-9), MW-34\_050818 (240-95404-10), MW-42\_050918 (240-95404-11), MW-35\_050918 (240-95404-12), MW-71\_050818 (240-95404-13), MW-45\_050818 (240-95404-14), MW-18\_050818 (240-95404-15), MW-43\_050918 (240-95404-16), MW-52\_050918 (240-95404-17) and DUP-01\_050818 (240-95404-18) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 05/15/2018.

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

# Method Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Protocol References:**

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

**Laboratory References:**

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



# Sample Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

| Lab Sample ID | Client Sample ID | Matrix | Collected      | Received       |
|---------------|------------------|--------|----------------|----------------|
| 240-95404-1   | MW-23_050718     | Water  | 05/07/18 15:27 | 05/10/18 09:50 |
| 240-95404-2   | MW-38_050818     | Water  | 05/08/18 08:40 | 05/10/18 09:50 |
| 240-95404-3   | MW-33_050818     | Water  | 05/08/18 10:02 | 05/10/18 09:50 |
| 240-95404-4   | MW-39_050818     | Water  | 05/08/18 10:53 | 05/10/18 09:50 |
| 240-95404-5   | MW-32_050818     | Water  | 05/08/18 12:26 | 05/10/18 09:50 |
| 240-95404-6   | MW-40_050818     | Water  | 05/08/18 13:23 | 05/10/18 09:50 |
| 240-95404-7   | MW-31_050818     | Water  | 05/08/18 14:19 | 05/10/18 09:50 |
| 240-95404-8   | MW-30_050818     | Water  | 05/08/18 15:39 | 05/10/18 09:50 |
| 240-95404-9   | MW-41_050818     | Water  | 05/08/18 16:26 | 05/10/18 09:50 |
| 240-95404-10  | MW-34_050818     | Water  | 05/08/18 17:32 | 05/10/18 09:50 |
| 240-95404-11  | MW-42_050918     | Water  | 05/09/18 07:31 | 05/10/18 09:50 |
| 240-95404-12  | MW-35_050918     | Water  | 05/09/18 08:48 | 05/10/18 09:50 |
| 240-95404-13  | MW-71_050818     | Water  | 05/08/18 13:50 | 05/10/18 09:50 |
| 240-95404-14  | MW-45_050818     | Water  | 05/08/18 14:50 | 05/10/18 09:50 |
| 240-95404-15  | MW-18_050818     | Water  | 05/08/18 16:40 | 05/10/18 09:50 |
| 240-95404-16  | MW-43_050918     | Water  | 05/09/18 09:43 | 05/10/18 09:50 |
| 240-95404-17  | MW-52_050918     | Water  | 05/09/18 11:00 | 05/10/18 09:50 |
| 240-95404-18  | DUP-01_050818    | Water  | 05/08/18 00:00 | 05/10/18 09:50 |
| 240-95404-19  | TRIP BLANK       | Water  | 05/07/18 00:00 | 05/10/18 09:50 |

# Detection Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

## Client Sample ID: MW-23\_050718

## Lab Sample ID: 240-95404-1

| Analyte                  | Result | Qualifier | RL  | MDL | Unit | Dil Fac | D | Method | Prep Type |
|--------------------------|--------|-----------|-----|-----|------|---------|---|--------|-----------|
| cis-1,2-Dichloroethene   | 2400   |           | 100 | 30  | ug/L | 100     |   | 8260B  | Total/NA  |
| trans-1,2-Dichloroethene | 180    |           | 100 | 29  | ug/L | 100     |   | 8260B  | Total/NA  |
| Trichloroethene          | 1000   |           | 100 | 33  | ug/L | 100     |   | 8260B  | Total/NA  |
| Vinyl chloride           | 77     | J         | 100 | 45  | ug/L | 100     |   | 8260B  | Total/NA  |

## Client Sample ID: MW-38\_050818

## Lab Sample ID: 240-95404-2

No Detections.

## Client Sample ID: MW-33\_050818

## Lab Sample ID: 240-95404-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---------|--------|-----------|----|-----|------|---------|---|--------|-----------|
| Acetone | 2.7    | J         | 10 | 1.8 | ug/L | 1       |   | 8260B  | Total/NA  |

## Client Sample ID: MW-39\_050818

## Lab Sample ID: 240-95404-4

No Detections.

## Client Sample ID: MW-32\_050818

## Lab Sample ID: 240-95404-5

| Analyte                | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-----|------|------|---------|---|--------|-----------|
| cis-1,2-Dichloroethene | 0.50   | J         | 1.0 | 0.30 | ug/L | 1       |   | 8260B  | Total/NA  |

## Client Sample ID: MW-40\_050818

## Lab Sample ID: 240-95404-6

| Analyte                  | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method | Prep Type |
|--------------------------|--------|-----------|-----|------|------|---------|---|--------|-----------|
| cis-1,2-Dichloroethene   | 2.3    |           | 1.0 | 0.30 | ug/L | 1       |   | 8260B  | Total/NA  |
| trans-1,2-Dichloroethene | 0.34   | J         | 1.0 | 0.29 | ug/L | 1       |   | 8260B  | Total/NA  |
| Vinyl chloride           | 1.3    |           | 1.0 | 0.45 | ug/L | 1       |   | 8260B  | Total/NA  |

## Client Sample ID: MW-31\_050818

## Lab Sample ID: 240-95404-7

| Analyte                | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-----|------|------|---------|---|--------|-----------|
| 1,2,4-Trichlorobenzene | 1.1    |           | 1.0 | 0.27 | ug/L | 1       |   | 8260B  | Total/NA  |

## Client Sample ID: MW-30\_050818

## Lab Sample ID: 240-95404-8

| Analyte     | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method    | Prep Type |
|-------------|--------|-----------|-----|------|------|---------|---|-----------|-----------|
| 1,4-Dioxane | 14     |           | 2.0 | 0.24 | ug/L | 1       |   | 8260B SIM | Total/NA  |

## Client Sample ID: MW-41\_050818

## Lab Sample ID: 240-95404-9

| Analyte                | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method    | Prep Type |
|------------------------|--------|-----------|-----|------|------|---------|---|-----------|-----------|
| 1,4-Dioxane            | 0.75   | J         | 2.0 | 0.24 | ug/L | 1       |   | 8260B SIM | Total/NA  |
| cis-1,2-Dichloroethene | 2.6    |           | 1.0 | 0.30 | ug/L | 1       |   | 8260B     | Total/NA  |
| Vinyl chloride         | 5.3    |           | 1.0 | 0.45 | ug/L | 1       |   | 8260B     | Total/NA  |

## Client Sample ID: MW-34\_050818

## Lab Sample ID: 240-95404-10

| Analyte     | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method    | Prep Type |
|-------------|--------|-----------|-----|------|------|---------|---|-----------|-----------|
| 1,4-Dioxane | 4.9    |           | 2.0 | 0.24 | ug/L | 1       |   | 8260B SIM | Total/NA  |

This Detection Summary does not include radiochemical test results.

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# Detection Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

## Client Sample ID: MW-34\_050818 (Continued)

## Lab Sample ID: 240-95404-10

| Analyte        | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method | Prep Type |
|----------------|--------|-----------|-----|------|------|---------|---|--------|-----------|
| Vinyl chloride | 0.87   | J         | 1.0 | 0.45 | ug/L | 1       |   | 8260B  | Total/NA  |

## Client Sample ID: MW-42\_050918

## Lab Sample ID: 240-95404-11

| Analyte        | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method    | Prep Type |
|----------------|--------|-----------|-----|------|------|---------|---|-----------|-----------|
| 1,4-Dioxane    | 2.2    |           | 2.0 | 0.24 | ug/L | 1       |   | 8260B SIM | Total/NA  |
| Vinyl chloride | 0.99   | J         | 1.0 | 0.45 | ug/L | 1       |   | 8260B     | Total/NA  |

## Client Sample ID: MW-35\_050918

## Lab Sample ID: 240-95404-12

| Analyte        | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method    | Prep Type |
|----------------|--------|-----------|-----|------|------|---------|---|-----------|-----------|
| 1,4-Dioxane    | 4.7    |           | 2.0 | 0.24 | ug/L | 1       |   | 8260B SIM | Total/NA  |
| Vinyl chloride | 7.2    |           | 1.0 | 0.45 | ug/L | 1       |   | 8260B     | Total/NA  |

## Client Sample ID: MW-71\_050818

## Lab Sample ID: 240-95404-13

| Analyte                | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method    | Prep Type |
|------------------------|--------|-----------|-----|------|------|---------|---|-----------|-----------|
| 1,4-Dioxane            | 0.38   | J         | 2.0 | 0.24 | ug/L | 1       |   | 8260B SIM | Total/NA  |
| cis-1,2-Dichloroethene | 0.40   | J         | 1.0 | 0.30 | ug/L | 1       |   | 8260B     | Total/NA  |
| Vinyl chloride         | 0.59   | J         | 1.0 | 0.45 | ug/L | 1       |   | 8260B     | Total/NA  |

## Client Sample ID: MW-45\_050818

## Lab Sample ID: 240-95404-14

| Analyte                | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method    | Prep Type |
|------------------------|--------|-----------|-----|------|------|---------|---|-----------|-----------|
| 1,4-Dioxane            | 0.40   | J         | 2.0 | 0.24 | ug/L | 1       |   | 8260B SIM | Total/NA  |
| cis-1,2-Dichloroethene | 1200   |           | 67  | 20   | ug/L | 66.67   |   | 8260B     | Total/NA  |
| Vinyl chloride         | 1400   |           | 67  | 30   | ug/L | 66.67   |   | 8260B     | Total/NA  |

## Client Sample ID: MW-18\_050818

## Lab Sample ID: 240-95404-15

No Detections.

## Client Sample ID: MW-43\_050918

## Lab Sample ID: 240-95404-16

| Analyte        | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method    | Prep Type |
|----------------|--------|-----------|-----|------|------|---------|---|-----------|-----------|
| 1,4-Dioxane    | 2.8    |           | 2.0 | 0.24 | ug/L | 1       |   | 8260B SIM | Total/NA  |
| Vinyl chloride | 6.4    |           | 1.0 | 0.45 | ug/L | 1       |   | 8260B     | Total/NA  |

## Client Sample ID: MW-52\_050918

## Lab Sample ID: 240-95404-17

| Analyte        | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method    | Prep Type |
|----------------|--------|-----------|-----|------|------|---------|---|-----------|-----------|
| 1,4-Dioxane    | 0.30   | J         | 2.0 | 0.24 | ug/L | 1       |   | 8260B SIM | Total/NA  |
| Acetone        | 2.7    | J B       | 10  | 1.8  | ug/L | 1       |   | 8260B     | Total/NA  |
| Vinyl chloride | 4.3    |           | 1.0 | 0.45 | ug/L | 1       |   | 8260B     | Total/NA  |

## Client Sample ID: DUP-01\_050818

## Lab Sample ID: 240-95404-18

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---------|--------|-----------|----|-----|------|---------|---|--------|-----------|
| Acetone | 2.9    | J B       | 10 | 1.8 | ug/L | 1       |   | 8260B  | Total/NA  |

This Detection Summary does not include radiochemical test results.

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# Detection Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-95404-19**

| Analyte            | Result | Qualifier | RL  | MDL  | Unit | Dil Fac | D | Method | Prep Type |
|--------------------|--------|-----------|-----|------|------|---------|---|--------|-----------|
| Acetone            | 4.6    | J B       | 10  | 1.8  | ug/L | 1       |   | 8260B  | Total/NA  |
| Methylene Chloride | 0.81   | J         | 5.0 | 0.53 | ug/L | 1       |   | 8260B  | Total/NA  |

This Detection Summary does not include radiochemical test results.

TestAmerica Canton



# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-23\_050718**

**Lab Sample ID: 240-95404-1**

**Date Collected: 05/07/18 15:27**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 13:56 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 90        |           | 63 - 125 |      |      |   |          | 05/15/18 13:56 | 1       |

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

| Analyte                         | Result      | Qualifier | RL   | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------|-------------|-----------|------|-----|------|---|----------|----------------|---------|
| Acetone                         | 1000        | U         | 1000 | 180 | ug/L |   |          | 05/15/18 13:32 | 100     |
| Benzene                         | 100         | U         | 100  | 28  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Bromodichloromethane            | 100         | U         | 100  | 30  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Bromoform                       | 100         | U         | 100  | 43  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Bromomethane                    | 100         | U         | 100  | 42  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 2-Butanone (MEK)                | 1000        | U         | 1000 | 100 | ug/L |   |          | 05/15/18 13:32 | 100     |
| Carbon disulfide                | 500         | U         | 500  | 34  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Carbon tetrachloride            | 100         | U         | 100  | 35  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Chlorobenzene                   | 100         | U         | 100  | 32  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Chloroethane                    | 100         | U         | 100  | 41  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Chloroform                      | 100         | U         | 100  | 31  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Chloromethane                   | 100         | U         | 100  | 43  | ug/L |   |          | 05/15/18 13:32 | 100     |
| <b>cis-1,2-Dichloroethene</b>   | <b>2400</b> |           | 100  | 30  | ug/L |   |          | 05/15/18 13:32 | 100     |
| cis-1,3-Dichloropropene         | 100         | U         | 100  | 26  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Cyclohexane                     | 100         | U         | 100  | 44  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Dibromochloromethane            | 100         | U         | 100  | 25  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,2-Dibromo-3-Chloropropane     | 100         | U         | 100  | 47  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,2-Dibromoethane               | 100         | U         | 100  | 23  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,2-Dichlorobenzene             | 100         | U         | 100  | 26  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,3-Dichlorobenzene             | 100         | U         | 100  | 32  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,4-Dichlorobenzene             | 100         | U         | 100  | 23  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Dichlorodifluoromethane         | 100         | U         | 100  | 50  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,1-Dichloroethane              | 100         | U         | 100  | 25  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,2-Dichloroethane              | 100         | U         | 100  | 30  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,1-Dichloroethene              | 100         | U         | 100  | 27  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,2-Dichloropropane             | 100         | U         | 100  | 30  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Ethylbenzene                    | 100         | U         | 100  | 26  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 2-Hexanone                      | 1000        | U         | 1000 | 120 | ug/L |   |          | 05/15/18 13:32 | 100     |
| Isopropylbenzene                | 100         | U         | 100  | 21  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Methyl acetate                  | 1000        | U         | 1000 | 140 | ug/L |   |          | 05/15/18 13:32 | 100     |
| Methylcyclohexane               | 100         | U         | 100  | 45  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Methylene Chloride              | 500         | U         | 500  | 53  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 4-Methyl-2-pentanone (MIBK)     | 1000        | U         | 1000 | 71  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Methyl tert-butyl ether         | 100         | U         | 100  | 27  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Styrene                         | 100         | U         | 100  | 23  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,1,2,2-Tetrachloroethane       | 100         | U         | 100  | 32  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Tetrachloroethene               | 100         | U         | 100  | 30  | ug/L |   |          | 05/15/18 13:32 | 100     |
| Toluene                         | 100         | U         | 100  | 23  | ug/L |   |          | 05/15/18 13:32 | 100     |
| <b>trans-1,2-Dichloroethene</b> | <b>180</b>  |           | 100  | 29  | ug/L |   |          | 05/15/18 13:32 | 100     |
| trans-1,3-Dichloropropene       | 100         | U         | 100  | 31  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,2,4-Trichlorobenzene          | 100         | U         | 100  | 27  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,1,1-Trichloroethane           | 100         | U         | 100  | 23  | ug/L |   |          | 05/15/18 13:32 | 100     |
| 1,1,2-Trichloroethane           | 100         | U         | 100  | 34  | ug/L |   |          | 05/15/18 13:32 | 100     |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-23\_050718**

**Lab Sample ID: 240-95404-1**

**Date Collected: 05/07/18 15:27**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result           | Qualifier        | RL            | MDL | Unit | D | Prepared        | Analyzed        | Dil Fac        |
|---------------------------------------|------------------|------------------|---------------|-----|------|---|-----------------|-----------------|----------------|
| <b>Trichloroethene</b>                | <b>1000</b>      |                  | 100           | 33  | ug/L |   |                 | 05/15/18 13:32  | 100            |
| Trichlorofluoromethane                | 100              | U                | 100           | 50  | ug/L |   |                 | 05/15/18 13:32  | 100            |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 100              | U                | 100           | 41  | ug/L |   |                 | 05/15/18 13:32  | 100            |
| 1,2,3-Trimethylbenzene                | 500              | U                | 500           | 22  | ug/L |   |                 | 05/15/18 13:32  | 100            |
| 1,2,4-Trimethylbenzene                | 100              | U                | 100           | 24  | ug/L |   |                 | 05/15/18 13:32  | 100            |
| 1,3,5-Trimethylbenzene                | 100              | U                | 100           | 24  | ug/L |   |                 | 05/15/18 13:32  | 100            |
| <b>Vinyl chloride</b>                 | <b>77</b>        | <b>J</b>         | 100           | 45  | ug/L |   |                 | 05/15/18 13:32  | 100            |
| Xylenes, Total                        | 200              | U                | 200           | 24  | ug/L |   |                 | 05/15/18 13:32  | 100            |
| Diethyl ether                         | 200              | U                | 200           | 35  | ug/L |   |                 | 05/15/18 13:32  | 100            |
| <b>Surrogate</b>                      | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |     |      |   | <b>Prepared</b> | <b>Analyzed</b> | <b>Dil Fac</b> |
| 4-Bromofluorobenzene (Surr)           | 80               |                  | 69 - 120      |     |      |   |                 | 05/15/18 13:32  | 100            |
| Dibromofluoromethane (Surr)           | 103              |                  | 69 - 124      |     |      |   |                 | 05/15/18 13:32  | 100            |
| 1,2-Dichloroethane-d4 (Surr)          | 101              |                  | 61 - 138      |     |      |   |                 | 05/15/18 13:32  | 100            |
| Toluene-d8 (Surr)                     | 95               |                  | 73 - 120      |     |      |   |                 | 05/15/18 13:32  | 100            |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-38\_050818**

**Lab Sample ID: 240-95404-2**

**Date Collected: 05/08/18 08:40**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 14:21 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 101       |           | 63 - 125 |      |      |   |          | 05/15/18 14:21 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 10     | U         | 10  | 1.8  | ug/L |   |          | 05/15/18 13:54 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/15/18 13:54 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Chloroethane                | 1.0    | U         | 1.0 | 0.41 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 13:54 | 1       |
| cis-1,2-Dichloroethene      | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 13:54 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/15/18 13:54 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/15/18 13:54 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,1,2,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 13:54 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/15/18 13:54 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/15/18 13:54 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-38\_050818**

**Lab Sample ID: 240-95404-2**

**Date Collected: 05/08/18 08:40**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| Trichloroethene                       | 1.0       | U         | 1.0      | 0.33 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Trichlorofluoromethane                | 1.0       | U         | 1.0      | 0.50 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0       | U         | 1.0      | 0.41 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0       | U         | 5.0      | 0.22 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0       | U         | 1.0      | 0.24 | ug/L |   |          | 05/15/18 13:54 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0       | U         | 1.0      | 0.24 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Vinyl chloride                        | 1.0       | U         | 1.0      | 0.45 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Xylenes, Total                        | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Diethyl ether                         | 2.0       | U         | 2.0      | 0.35 | ug/L |   |          | 05/15/18 13:54 | 1       |
| Surrogate                             | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 4-Bromofluorobenzene (Surr)           | 83        |           | 69 - 120 |      |      |   |          | 05/15/18 13:54 | 1       |
| Dibromofluoromethane (Surr)           | 126       | X         | 69 - 124 |      |      |   |          | 05/15/18 13:54 | 1       |
| 1,2-Dichloroethane-d4 (Surr)          | 127       |           | 61 - 138 |      |      |   |          | 05/15/18 13:54 | 1       |
| Toluene-d8 (Surr)                     | 97        |           | 73 - 120 |      |      |   |          | 05/15/18 13:54 | 1       |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-33\_050818**

**Lab Sample ID: 240-95404-3**

**Date Collected: 05/08/18 10:02**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 14:46 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 95        |           | 63 - 125 |      |      |   |          | 05/15/18 14:46 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 2.7    | J         | 10  | 1.8  | ug/L |   |          | 05/14/18 13:27 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/14/18 13:27 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Chloroethane                | 1.0    | U*        | 1.0 | 0.41 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 13:27 | 1       |
| cis-1,2-Dichloroethene      | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 13:27 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/14/18 13:27 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/14/18 13:27 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,1,2,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 13:27 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/14/18 13:27 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/14/18 13:27 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-33\_050818**  
**Date Collected: 05/08/18 10:02**  
**Date Received: 05/10/18 09:50**

**Lab Sample ID: 240-95404-3**  
**Matrix: Water**

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

| Analyte                               | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Trichloroethene                       | 1.0    | U         | 1.0 | 0.33 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Trichlorofluoromethane                | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0    | U         | 1.0 | 0.41 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0    | U         | 5.0 | 0.22 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0    | U         | 1.0 | 0.24 | ug/L |   |          | 05/14/18 13:27 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0    | U         | 1.0 | 0.24 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Vinyl chloride                        | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Xylenes, Total                        | 2.0    | U         | 2.0 | 0.24 | ug/L |   |          | 05/14/18 13:27 | 1       |
| Diethyl ether                         | 2.0    | U         | 2.0 | 0.35 | ug/L |   |          | 05/14/18 13:27 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr)  | 69        |           | 69 - 120 |          | 05/14/18 13:27 | 1       |
| Dibromofluoromethane (Surr)  | 91        |           | 69 - 124 |          | 05/14/18 13:27 | 1       |
| 1,2-Dichloroethane-d4 (Surr) | 90        |           | 61 - 138 |          | 05/14/18 13:27 | 1       |
| Toluene-d8 (Surr)            | 94        |           | 73 - 120 |          | 05/14/18 13:27 | 1       |



# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-39\_050818**

**Lab Sample ID: 240-95404-4**

**Date Collected: 05/08/18 10:53**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 15:11 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 100       |           | 63 - 125 |      |      |   |          | 05/15/18 15:11 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 10     | U         | 10  | 1.8  | ug/L |   |          | 05/14/18 13:50 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/14/18 13:50 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Chloroethane                | 1.0    | U*        | 1.0 | 0.41 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 13:50 | 1       |
| cis-1,2-Dichloroethene      | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 13:50 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/14/18 13:50 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/14/18 13:50 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,1,2,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 13:50 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 13:50 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/14/18 13:50 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 13:50 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/14/18 13:50 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-39\_050818**

**Lab Sample ID: 240-95404-4**

**Date Collected: 05/08/18 10:53**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result           | Qualifier        | RL            | MDL  | Unit | D | Prepared        | Analyzed        | Dil Fac        |
|---------------------------------------|------------------|------------------|---------------|------|------|---|-----------------|-----------------|----------------|
| Trichloroethene                       | 1.0              | U                | 1.0           | 0.33 | ug/L |   |                 | 05/14/18 13:50  | 1              |
| Trichlorofluoromethane                | 1.0              | U                | 1.0           | 0.50 | ug/L |   |                 | 05/14/18 13:50  | 1              |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0              | U                | 1.0           | 0.41 | ug/L |   |                 | 05/14/18 13:50  | 1              |
| 1,2,3-Trimethylbenzene                | 5.0              | U                | 5.0           | 0.22 | ug/L |   |                 | 05/14/18 13:50  | 1              |
| 1,2,4-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/14/18 13:50  | 1              |
| 1,3,5-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/14/18 13:50  | 1              |
| Vinyl chloride                        | 1.0              | U                | 1.0           | 0.45 | ug/L |   |                 | 05/14/18 13:50  | 1              |
| Xylenes, Total                        | 2.0              | U                | 2.0           | 0.24 | ug/L |   |                 | 05/14/18 13:50  | 1              |
| Diethyl ether                         | 2.0              | U                | 2.0           | 0.35 | ug/L |   |                 | 05/14/18 13:50  | 1              |
| <b>Surrogate</b>                      | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |      |      |   | <b>Prepared</b> | <b>Analyzed</b> | <b>Dil Fac</b> |
| 4-Bromofluorobenzene (Surr)           | 77               |                  | 69 - 120      |      |      |   |                 | 05/14/18 13:50  | 1              |
| Dibromofluoromethane (Surr)           | 106              |                  | 69 - 124      |      |      |   |                 | 05/14/18 13:50  | 1              |
| 1,2-Dichloroethane-d4 (Surr)          | 107              |                  | 61 - 138      |      |      |   |                 | 05/14/18 13:50  | 1              |
| Toluene-d8 (Surr)                     | 109              |                  | 73 - 120      |      |      |   |                 | 05/14/18 13:50  | 1              |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-32\_050818**

**Lab Sample ID: 240-95404-5**

**Date Collected: 05/08/18 12:26**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 15:36 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 96        |           | 63 - 125 |      |      |   |          | 05/15/18 15:36 | 1       |

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

| Analyte                       | Result      | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------------|-------------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                       | 10          | U         | 10  | 1.8  | ug/L |   |          | 05/14/18 14:13 | 1       |
| Benzene                       | 1.0         | U         | 1.0 | 0.28 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Bromodichloromethane          | 1.0         | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Bromoform                     | 1.0         | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Bromomethane                  | 1.0         | U         | 1.0 | 0.42 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 2-Butanone (MEK)              | 10          | U         | 10  | 1.0  | ug/L |   |          | 05/14/18 14:13 | 1       |
| Carbon disulfide              | 5.0         | U         | 5.0 | 0.34 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Carbon tetrachloride          | 1.0         | U         | 1.0 | 0.35 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Chlorobenzene                 | 1.0         | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Chloroethane                  | 1.0         | U*        | 1.0 | 0.41 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Chloroform                    | 1.0         | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Chloromethane                 | 1.0         | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 14:13 | 1       |
| <b>cis-1,2-Dichloroethene</b> | <b>0.50</b> | <b>J</b>  | 1.0 | 0.30 | ug/L |   |          | 05/14/18 14:13 | 1       |
| cis-1,3-Dichloropropene       | 1.0         | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Cyclohexane                   | 1.0         | U         | 1.0 | 0.44 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Dibromochloromethane          | 1.0         | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,2-Dibromo-3-Chloropropane   | 1.0         | U         | 1.0 | 0.47 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,2-Dibromoethane             | 1.0         | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,2-Dichlorobenzene           | 1.0         | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,3-Dichlorobenzene           | 1.0         | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,4-Dichlorobenzene           | 1.0         | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Dichlorodifluoromethane       | 1.0         | U         | 1.0 | 0.50 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,1-Dichloroethane            | 1.0         | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,2-Dichloroethane            | 1.0         | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,1-Dichloroethene            | 1.0         | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,2-Dichloropropane           | 1.0         | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Ethylbenzene                  | 1.0         | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 2-Hexanone                    | 10          | U         | 10  | 1.2  | ug/L |   |          | 05/14/18 14:13 | 1       |
| Isopropylbenzene              | 1.0         | U         | 1.0 | 0.21 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Methyl acetate                | 10          | U         | 10  | 1.4  | ug/L |   |          | 05/14/18 14:13 | 1       |
| Methylcyclohexane             | 1.0         | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Methylene Chloride            | 5.0         | U         | 5.0 | 0.53 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 4-Methyl-2-pentanone (MIBK)   | 10          | U         | 10  | 0.71 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Methyl tert-butyl ether       | 1.0         | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Styrene                       | 1.0         | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,1,2,2-Tetrachloroethane     | 1.0         | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Tetrachloroethene             | 1.0         | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 14:13 | 1       |
| Toluene                       | 1.0         | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 14:13 | 1       |
| trans-1,2-Dichloroethene      | 1.0         | U         | 1.0 | 0.29 | ug/L |   |          | 05/14/18 14:13 | 1       |
| trans-1,3-Dichloropropene     | 1.0         | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,2,4-Trichlorobenzene        | 1.0         | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,1,1-Trichloroethane         | 1.0         | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 14:13 | 1       |
| 1,1,2-Trichloroethane         | 1.0         | U         | 1.0 | 0.34 | ug/L |   |          | 05/14/18 14:13 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-32\_050818**

**Lab Sample ID: 240-95404-5**

**Date Collected: 05/08/18 12:26**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result           | Qualifier        | RL            | MDL  | Unit | D | Prepared        | Analyzed        | Dil Fac        |
|---------------------------------------|------------------|------------------|---------------|------|------|---|-----------------|-----------------|----------------|
| Trichloroethene                       | 1.0              | U                | 1.0           | 0.33 | ug/L |   |                 | 05/14/18 14:13  | 1              |
| Trichlorofluoromethane                | 1.0              | U                | 1.0           | 0.50 | ug/L |   |                 | 05/14/18 14:13  | 1              |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0              | U                | 1.0           | 0.41 | ug/L |   |                 | 05/14/18 14:13  | 1              |
| 1,2,3-Trimethylbenzene                | 5.0              | U                | 5.0           | 0.22 | ug/L |   |                 | 05/14/18 14:13  | 1              |
| 1,2,4-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/14/18 14:13  | 1              |
| 1,3,5-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/14/18 14:13  | 1              |
| Vinyl chloride                        | 1.0              | U                | 1.0           | 0.45 | ug/L |   |                 | 05/14/18 14:13  | 1              |
| Xylenes, Total                        | 2.0              | U                | 2.0           | 0.24 | ug/L |   |                 | 05/14/18 14:13  | 1              |
| Diethyl ether                         | 2.0              | U                | 2.0           | 0.35 | ug/L |   |                 | 05/14/18 14:13  | 1              |
| <b>Surrogate</b>                      | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |      |      |   | <b>Prepared</b> | <b>Analyzed</b> | <b>Dil Fac</b> |
| 4-Bromofluorobenzene (Surr)           | 74               |                  | 69 - 120      |      |      |   |                 | 05/14/18 14:13  | 1              |
| Dibromofluoromethane (Surr)           | 99               |                  | 69 - 124      |      |      |   |                 | 05/14/18 14:13  | 1              |
| 1,2-Dichloroethane-d4 (Surr)          | 101              |                  | 61 - 138      |      |      |   |                 | 05/14/18 14:13  | 1              |
| Toluene-d8 (Surr)                     | 102              |                  | 73 - 120      |      |      |   |                 | 05/14/18 14:13  | 1              |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-40\_050818**

**Lab Sample ID: 240-95404-6**

**Date Collected: 05/08/18 13:23**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 16:01 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 100       |           | 63 - 125 |      |      |   |          | 05/15/18 16:01 | 1       |

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

| Analyte                         | Result      | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------|-------------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                         | 10          | U F2      | 10  | 1.8  | ug/L |   |          | 05/15/18 14:16 | 1       |
| Benzene                         | 1.0         | U         | 1.0 | 0.28 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Bromodichloromethane            | 1.0         | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Bromoform                       | 1.0         | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Bromomethane                    | 1.0         | U         | 1.0 | 0.42 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 2-Butanone (MEK)                | 10          | U         | 10  | 1.0  | ug/L |   |          | 05/15/18 14:16 | 1       |
| Carbon disulfide                | 5.0         | U         | 5.0 | 0.34 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Carbon tetrachloride            | 1.0         | U         | 1.0 | 0.35 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Chlorobenzene                   | 1.0         | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Chloroethane                    | 1.0         | U         | 1.0 | 0.41 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Chloroform                      | 1.0         | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Chloromethane                   | 1.0         | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 14:16 | 1       |
| <b>cis-1,2-Dichloroethene</b>   | <b>2.3</b>  |           | 1.0 | 0.30 | ug/L |   |          | 05/15/18 14:16 | 1       |
| cis-1,3-Dichloropropene         | 1.0         | U F1      | 1.0 | 0.26 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Cyclohexane                     | 1.0         | U         | 1.0 | 0.44 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Dibromochloromethane            | 1.0         | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,2-Dibromo-3-Chloropropane     | 1.0         | U         | 1.0 | 0.47 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,2-Dibromoethane               | 1.0         | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,2-Dichlorobenzene             | 1.0         | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,3-Dichlorobenzene             | 1.0         | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,4-Dichlorobenzene             | 1.0         | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Dichlorodifluoromethane         | 1.0         | U         | 1.0 | 0.50 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,1-Dichloroethane              | 1.0         | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,2-Dichloroethane              | 1.0         | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,1-Dichloroethene              | 1.0         | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,2-Dichloropropane             | 1.0         | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Ethylbenzene                    | 1.0         | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 2-Hexanone                      | 10          | U         | 10  | 1.2  | ug/L |   |          | 05/15/18 14:16 | 1       |
| Isopropylbenzene                | 1.0         | U         | 1.0 | 0.21 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Methyl acetate                  | 10          | U F2      | 10  | 1.4  | ug/L |   |          | 05/15/18 14:16 | 1       |
| Methylcyclohexane               | 1.0         | U         | 1.0 | 0.45 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Methylene Chloride              | 5.0         | U         | 5.0 | 0.53 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 4-Methyl-2-pentanone (MIBK)     | 10          | U         | 10  | 0.71 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Methyl tert-butyl ether         | 1.0         | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Styrene                         | 1.0         | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,1,2,2-Tetrachloroethane       | 1.0         | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Tetrachloroethene               | 1.0         | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Toluene                         | 1.0         | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 14:16 | 1       |
| <b>trans-1,2-Dichloroethene</b> | <b>0.34</b> | <b>J</b>  | 1.0 | 0.29 | ug/L |   |          | 05/15/18 14:16 | 1       |
| trans-1,3-Dichloropropene       | 1.0         | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,2,4-Trichlorobenzene          | 1.0         | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,1,1-Trichloroethane           | 1.0         | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,1,2-Trichloroethane           | 1.0         | U         | 1.0 | 0.34 | ug/L |   |          | 05/15/18 14:16 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-40\_050818**

**Lab Sample ID: 240-95404-6**

**Date Collected: 05/08/18 13:23**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result     | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|------------|-----------|-----|------|------|---|----------|----------------|---------|
| Trichloroethene                       | 1.0        | U         | 1.0 | 0.33 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Trichlorofluoromethane                | 1.0        | U         | 1.0 | 0.50 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0        | U F2      | 1.0 | 0.41 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0        | U         | 5.0 | 0.22 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0        | U         | 1.0 | 0.24 | ug/L |   |          | 05/15/18 14:16 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0        | U         | 1.0 | 0.24 | ug/L |   |          | 05/15/18 14:16 | 1       |
| <b>Vinyl chloride</b>                 | <b>1.3</b> |           | 1.0 | 0.45 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Xylenes, Total                        | 2.0        | U         | 2.0 | 0.24 | ug/L |   |          | 05/15/18 14:16 | 1       |
| Diethyl ether                         | 2.0        | U         | 2.0 | 0.35 | ug/L |   |          | 05/15/18 14:16 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr)  | 89        |           | 69 - 120 |          | 05/14/18 14:36 | 1       |
| 4-Bromofluorobenzene (Surr)  | 81        |           | 69 - 120 |          | 05/15/18 14:16 | 1       |
| Dibromofluoromethane (Surr)  | 117       |           | 69 - 124 |          | 05/14/18 14:36 | 1       |
| Dibromofluoromethane (Surr)  | 128       | X         | 69 - 124 |          | 05/15/18 14:16 | 1       |
| 1,2-Dichloroethane-d4 (Surr) | 123       |           | 61 - 138 |          | 05/14/18 14:36 | 1       |
| 1,2-Dichloroethane-d4 (Surr) | 127       |           | 61 - 138 |          | 05/15/18 14:16 | 1       |
| Toluene-d8 (Surr)            | 124       | X         | 73 - 120 |          | 05/14/18 14:36 | 1       |
| Toluene-d8 (Surr)            | 97        |           | 73 - 120 |          | 05/15/18 14:16 | 1       |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-31\_050818**

**Lab Sample ID: 240-95404-7**

**Date Collected: 05/08/18 14:19**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 17:17 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 93        |           | 63 - 125 |      |      |   |          | 05/15/18 17:17 | 1       |

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

| Analyte                       | Result     | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------------|------------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                       | 10         | U         | 10  | 1.8  | ug/L |   |          | 05/14/18 15:44 | 1       |
| Benzene                       | 1.0        | U         | 1.0 | 0.28 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Bromodichloromethane          | 1.0        | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Bromoform                     | 1.0        | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Bromomethane                  | 1.0        | U         | 1.0 | 0.42 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 2-Butanone (MEK)              | 10         | U         | 10  | 1.0  | ug/L |   |          | 05/14/18 15:44 | 1       |
| Carbon disulfide              | 5.0        | U         | 5.0 | 0.34 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Carbon tetrachloride          | 1.0        | U         | 1.0 | 0.35 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Chlorobenzene                 | 1.0        | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Chloroethane                  | 1.0        | U*        | 1.0 | 0.41 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Chloroform                    | 1.0        | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Chloromethane                 | 1.0        | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 15:44 | 1       |
| cis-1,2-Dichloroethene        | 1.0        | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 15:44 | 1       |
| cis-1,3-Dichloropropene       | 1.0        | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Cyclohexane                   | 1.0        | U         | 1.0 | 0.44 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Dibromochloromethane          | 1.0        | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,2-Dibromo-3-Chloropropane   | 1.0        | U         | 1.0 | 0.47 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,2-Dibromoethane             | 1.0        | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,2-Dichlorobenzene           | 1.0        | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,3-Dichlorobenzene           | 1.0        | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,4-Dichlorobenzene           | 1.0        | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Dichlorodifluoromethane       | 1.0        | U         | 1.0 | 0.50 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,1-Dichloroethane            | 1.0        | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,2-Dichloroethane            | 1.0        | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,1-Dichloroethene            | 1.0        | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,2-Dichloropropane           | 1.0        | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Ethylbenzene                  | 1.0        | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 2-Hexanone                    | 10         | U         | 10  | 1.2  | ug/L |   |          | 05/14/18 15:44 | 1       |
| Isopropylbenzene              | 1.0        | U         | 1.0 | 0.21 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Methyl acetate                | 10         | U         | 10  | 1.4  | ug/L |   |          | 05/14/18 15:44 | 1       |
| Methylcyclohexane             | 1.0        | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Methylene Chloride            | 5.0        | U         | 5.0 | 0.53 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 4-Methyl-2-pentanone (MIBK)   | 10         | U         | 10  | 0.71 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Methyl tert-butyl ether       | 1.0        | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Styrene                       | 1.0        | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,1,2,2-Tetrachloroethane     | 1.0        | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Tetrachloroethene             | 1.0        | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Toluene                       | 1.0        | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 15:44 | 1       |
| trans-1,2-Dichloroethene      | 1.0        | U         | 1.0 | 0.29 | ug/L |   |          | 05/14/18 15:44 | 1       |
| trans-1,3-Dichloropropene     | 1.0        | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 15:44 | 1       |
| <b>1,2,4-Trichlorobenzene</b> | <b>1.1</b> |           | 1.0 | 0.27 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,1,1-Trichloroethane         | 1.0        | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,1,2-Trichloroethane         | 1.0        | U         | 1.0 | 0.34 | ug/L |   |          | 05/14/18 15:44 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-31\_050818**

**Lab Sample ID: 240-95404-7**

**Date Collected: 05/08/18 14:19**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Trichloroethene                       | 1.0    | U         | 1.0 | 0.33 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Trichlorofluoromethane                | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0    | U         | 1.0 | 0.41 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0    | U         | 5.0 | 0.22 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0    | U         | 1.0 | 0.24 | ug/L |   |          | 05/14/18 15:44 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0    | U         | 1.0 | 0.24 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Vinyl chloride                        | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Xylenes, Total                        | 2.0    | U         | 2.0 | 0.24 | ug/L |   |          | 05/14/18 15:44 | 1       |
| Diethyl ether                         | 2.0    | U         | 2.0 | 0.35 | ug/L |   |          | 05/14/18 15:44 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr)  | 75        |           | 69 - 120 |          | 05/14/18 15:44 | 1       |
| Dibromofluoromethane (Surr)  | 98        |           | 69 - 124 |          | 05/14/18 15:44 | 1       |
| 1,2-Dichloroethane-d4 (Surr) | 102       |           | 61 - 138 |          | 05/14/18 15:44 | 1       |
| Toluene-d8 (Surr)            | 104       |           | 73 - 120 |          | 05/14/18 15:44 | 1       |



# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-30\_050818**

**Lab Sample ID: 240-95404-8**

**Date Collected: 05/08/18 15:39**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 14        |           | 2.0      | 0.24 | ug/L |   |          | 05/15/18 17:42 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 94        |           | 63 - 125 |      |      |   |          | 05/15/18 17:42 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 10     | U         | 10  | 1.8  | ug/L |   |          | 05/14/18 16:06 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/14/18 16:06 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Chloroethane                | 1.0    | U*        | 1.0 | 0.41 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 16:06 | 1       |
| cis-1,2-Dichloroethene      | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:06 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/14/18 16:06 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/14/18 16:06 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,1,1,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:06 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:06 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/14/18 16:06 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:06 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/14/18 16:06 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-30\_050818**

**Lab Sample ID: 240-95404-8**

**Date Collected: 05/08/18 15:39**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result           | Qualifier        | RL            | MDL  | Unit | D | Prepared        | Analyzed        | Dil Fac        |
|---------------------------------------|------------------|------------------|---------------|------|------|---|-----------------|-----------------|----------------|
| Trichloroethene                       | 1.0              | U                | 1.0           | 0.33 | ug/L |   |                 | 05/14/18 16:06  | 1              |
| Trichlorofluoromethane                | 1.0              | U                | 1.0           | 0.50 | ug/L |   |                 | 05/14/18 16:06  | 1              |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0              | U                | 1.0           | 0.41 | ug/L |   |                 | 05/14/18 16:06  | 1              |
| 1,2,3-Trimethylbenzene                | 5.0              | U                | 5.0           | 0.22 | ug/L |   |                 | 05/14/18 16:06  | 1              |
| 1,2,4-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/14/18 16:06  | 1              |
| 1,3,5-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/14/18 16:06  | 1              |
| Vinyl chloride                        | 1.0              | U                | 1.0           | 0.45 | ug/L |   |                 | 05/14/18 16:06  | 1              |
| Xylenes, Total                        | 2.0              | U                | 2.0           | 0.24 | ug/L |   |                 | 05/14/18 16:06  | 1              |
| Diethyl ether                         | 2.0              | U                | 2.0           | 0.35 | ug/L |   |                 | 05/14/18 16:06  | 1              |
| <b>Surrogate</b>                      | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |      |      |   | <b>Prepared</b> | <b>Analyzed</b> | <b>Dil Fac</b> |
| 4-Bromofluorobenzene (Surr)           | 81               |                  | 69 - 120      |      |      |   |                 | 05/14/18 16:06  | 1              |
| Dibromofluoromethane (Surr)           | 106              |                  | 69 - 124      |      |      |   |                 | 05/14/18 16:06  | 1              |
| 1,2-Dichloroethane-d4 (Surr)          | 108              |                  | 61 - 138      |      |      |   |                 | 05/14/18 16:06  | 1              |
| Toluene-d8 (Surr)                     | 112              |                  | 73 - 120      |      |      |   |                 | 05/14/18 16:06  | 1              |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-41\_050818**

**Lab Sample ID: 240-95404-9**

**Date Collected: 05/08/18 16:26**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 0.75      | J         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 18:07 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 98        |           | 63 - 125 |      |      |   |          | 05/15/18 18:07 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 10     | U         | 10  | 1.8  | ug/L |   |          | 05/14/18 16:29 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/14/18 16:29 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Chloroethane                | 1.0    | U*        | 1.0 | 0.41 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 16:29 | 1       |
| cis-1,2-Dichloroethene      | 2.6    |           | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:29 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/14/18 16:29 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/14/18 16:29 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,1,2,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:29 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:29 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/14/18 16:29 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:29 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/14/18 16:29 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-41\_050818**

**Lab Sample ID: 240-95404-9**

**Date Collected: 05/08/18 16:26**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result           | Qualifier        | RL            | MDL  | Unit | D | Prepared        | Analyzed        | Dil Fac        |
|---------------------------------------|------------------|------------------|---------------|------|------|---|-----------------|-----------------|----------------|
| Trichloroethene                       | 1.0              | U                | 1.0           | 0.33 | ug/L |   |                 | 05/14/18 16:29  | 1              |
| Trichlorofluoromethane                | 1.0              | U                | 1.0           | 0.50 | ug/L |   |                 | 05/14/18 16:29  | 1              |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0              | U                | 1.0           | 0.41 | ug/L |   |                 | 05/14/18 16:29  | 1              |
| 1,2,3-Trimethylbenzene                | 5.0              | U                | 5.0           | 0.22 | ug/L |   |                 | 05/14/18 16:29  | 1              |
| 1,2,4-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/14/18 16:29  | 1              |
| 1,3,5-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/14/18 16:29  | 1              |
| <b>Vinyl chloride</b>                 | <b>5.3</b>       |                  | 1.0           | 0.45 | ug/L |   |                 | 05/14/18 16:29  | 1              |
| Xylenes, Total                        | 2.0              | U                | 2.0           | 0.24 | ug/L |   |                 | 05/14/18 16:29  | 1              |
| Diethyl ether                         | 2.0              | U                | 2.0           | 0.35 | ug/L |   |                 | 05/14/18 16:29  | 1              |
| <b>Surrogate</b>                      | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |      |      |   | <b>Prepared</b> | <b>Analyzed</b> | <b>Dil Fac</b> |
| 4-Bromofluorobenzene (Surr)           | 79               |                  | 69 - 120      |      |      |   |                 | 05/14/18 16:29  | 1              |
| Dibromofluoromethane (Surr)           | 107              |                  | 69 - 124      |      |      |   |                 | 05/14/18 16:29  | 1              |
| 1,2-Dichloroethane-d4 (Surr)          | 106              |                  | 61 - 138      |      |      |   |                 | 05/14/18 16:29  | 1              |
| Toluene-d8 (Surr)                     | 108              |                  | 73 - 120      |      |      |   |                 | 05/14/18 16:29  | 1              |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-34\_050818**

**Lab Sample ID: 240-95404-10**

**Date Collected: 05/08/18 17:32**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 4.9       |           | 2.0      | 0.24 | ug/L |   |          | 05/15/18 18:32 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 97        |           | 63 - 125 |      |      |   |          | 05/15/18 18:32 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 10     | U         | 10  | 1.8  | ug/L |   |          | 05/14/18 16:52 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/14/18 16:52 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Chloroethane                | 1.0    | U*        | 1.0 | 0.41 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 16:52 | 1       |
| cis-1,2-Dichloroethene      | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:52 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/14/18 16:52 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/14/18 16:52 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,1,2,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:52 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/14/18 16:52 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/14/18 16:52 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-34\_050818**

**Lab Sample ID: 240-95404-10**

**Date Collected: 05/08/18 17:32**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result      | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|-------------|-----------|----------|------|------|---|----------|----------------|---------|
| Trichloroethene                       | 1.0         | U         | 1.0      | 0.33 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Trichlorofluoromethane                | 1.0         | U         | 1.0      | 0.50 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0         | U         | 1.0      | 0.41 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0         | U         | 5.0      | 0.22 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0         | U         | 1.0      | 0.24 | ug/L |   |          | 05/14/18 16:52 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0         | U         | 1.0      | 0.24 | ug/L |   |          | 05/14/18 16:52 | 1       |
| <b>Vinyl chloride</b>                 | <b>0.87</b> | <b>J</b>  | 1.0      | 0.45 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Xylenes, Total                        | 2.0         | U         | 2.0      | 0.24 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Diethyl ether                         | 2.0         | U         | 2.0      | 0.35 | ug/L |   |          | 05/14/18 16:52 | 1       |
| Surrogate                             | %Recovery   | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 4-Bromofluorobenzene (Surr)           | 80          |           | 69 - 120 |      |      |   |          | 05/14/18 16:52 | 1       |
| Dibromofluoromethane (Surr)           | 107         |           | 69 - 124 |      |      |   |          | 05/14/18 16:52 | 1       |
| 1,2-Dichloroethane-d4 (Surr)          | 113         |           | 61 - 138 |      |      |   |          | 05/14/18 16:52 | 1       |
| Toluene-d8 (Surr)                     | 107         |           | 73 - 120 |      |      |   |          | 05/14/18 16:52 | 1       |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-42\_050918**

**Lab Sample ID: 240-95404-11**

**Date Collected: 05/09/18 07:31**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.2       |           | 2.0      | 0.24 | ug/L |   |          | 05/15/18 18:57 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 93        |           | 63 - 125 |      |      |   |          | 05/15/18 18:57 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 10     | U         | 10  | 1.8  | ug/L |   |          | 05/15/18 15:43 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/15/18 15:43 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Chloroethane                | 1.0    | U         | 1.0 | 0.41 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 15:43 | 1       |
| cis-1,2-Dichloroethene      | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 15:43 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/15/18 15:43 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/15/18 15:43 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,1,2,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 15:43 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 15:43 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/15/18 15:43 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 15:43 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/15/18 15:43 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-42\_050918**

**Lab Sample ID: 240-95404-11**

**Date Collected: 05/09/18 07:31**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result           | Qualifier        | RL            | MDL  | Unit | D | Prepared        | Analyzed        | Dil Fac        |
|---------------------------------------|------------------|------------------|---------------|------|------|---|-----------------|-----------------|----------------|
| Trichloroethene                       | 1.0              | U                | 1.0           | 0.33 | ug/L |   |                 | 05/15/18 15:43  | 1              |
| Trichlorofluoromethane                | 1.0              | U                | 1.0           | 0.50 | ug/L |   |                 | 05/15/18 15:43  | 1              |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0              | U                | 1.0           | 0.41 | ug/L |   |                 | 05/15/18 15:43  | 1              |
| 1,2,3-Trimethylbenzene                | 5.0              | U                | 5.0           | 0.22 | ug/L |   |                 | 05/15/18 15:43  | 1              |
| 1,2,4-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/15/18 15:43  | 1              |
| 1,3,5-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/15/18 15:43  | 1              |
| <b>Vinyl chloride</b>                 | <b>0.99</b>      | <b>J</b>         | 1.0           | 0.45 | ug/L |   |                 | 05/15/18 15:43  | 1              |
| Xylenes, Total                        | 2.0              | U                | 2.0           | 0.24 | ug/L |   |                 | 05/15/18 15:43  | 1              |
| Diethyl ether                         | 2.0              | U                | 2.0           | 0.35 | ug/L |   |                 | 05/15/18 15:43  | 1              |
| <b>Surrogate</b>                      | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |      |      |   | <b>Prepared</b> | <b>Analyzed</b> | <b>Dil Fac</b> |
| 4-Bromofluorobenzene (Surr)           | 78               |                  | 69 - 120      |      |      |   |                 | 05/15/18 15:43  | 1              |
| Dibromofluoromethane (Surr)           | 117              |                  | 69 - 124      |      |      |   |                 | 05/15/18 15:43  | 1              |
| 1,2-Dichloroethane-d4 (Surr)          | 118              |                  | 61 - 138      |      |      |   |                 | 05/15/18 15:43  | 1              |
| Toluene-d8 (Surr)                     | 99               |                  | 73 - 120      |      |      |   |                 | 05/15/18 15:43  | 1              |



# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-35\_050918**

**Lab Sample ID: 240-95404-12**

**Date Collected: 05/09/18 08:48**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 4.7       |           | 2.0      | 0.24 | ug/L |   |          | 05/15/18 19:21 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 90        |           | 63 - 125 |      |      |   |          | 05/15/18 19:21 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 10     | U         | 10  | 1.8  | ug/L |   |          | 05/14/18 18:09 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/14/18 18:09 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Chloroethane                | 1.0    | U*        | 1.0 | 0.41 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 18:09 | 1       |
| cis-1,2-Dichloroethene      | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 18:09 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/14/18 18:09 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/14/18 18:09 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,1,1,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 18:09 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 18:09 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/14/18 18:09 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 18:09 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/14/18 18:09 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-35\_050918**

**Lab Sample ID: 240-95404-12**

**Date Collected: 05/09/18 08:48**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result           | Qualifier        | RL            | MDL  | Unit | D | Prepared        | Analyzed        | Dil Fac        |
|---------------------------------------|------------------|------------------|---------------|------|------|---|-----------------|-----------------|----------------|
| Trichloroethene                       | 1.0              | U                | 1.0           | 0.33 | ug/L |   |                 | 05/14/18 18:09  | 1              |
| Trichlorofluoromethane                | 1.0              | U                | 1.0           | 0.50 | ug/L |   |                 | 05/14/18 18:09  | 1              |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0              | U                | 1.0           | 0.41 | ug/L |   |                 | 05/14/18 18:09  | 1              |
| 1,2,3-Trimethylbenzene                | 5.0              | U                | 5.0           | 0.22 | ug/L |   |                 | 05/14/18 18:09  | 1              |
| 1,2,4-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/14/18 18:09  | 1              |
| 1,3,5-Trimethylbenzene                | 1.0              | U                | 1.0           | 0.24 | ug/L |   |                 | 05/14/18 18:09  | 1              |
| <b>Vinyl chloride</b>                 | <b>7.2</b>       |                  | 1.0           | 0.45 | ug/L |   |                 | 05/14/18 18:09  | 1              |
| Xylenes, Total                        | 2.0              | U                | 2.0           | 0.24 | ug/L |   |                 | 05/14/18 18:09  | 1              |
| Diethyl ether                         | 2.0              | U                | 2.0           | 0.35 | ug/L |   |                 | 05/14/18 18:09  | 1              |
| <b>Surrogate</b>                      | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |      |      |   | <b>Prepared</b> | <b>Analyzed</b> | <b>Dil Fac</b> |
| 4-Bromofluorobenzene (Surr)           | 71               |                  | 69 - 120      |      |      |   |                 | 05/14/18 18:09  | 1              |
| Dibromofluoromethane (Surr)           | 99               |                  | 69 - 124      |      |      |   |                 | 05/14/18 18:09  | 1              |
| 1,2-Dichloroethane-d4 (Surr)          | 101              |                  | 61 - 138      |      |      |   |                 | 05/14/18 18:09  | 1              |
| Toluene-d8 (Surr)                     | 102              |                  | 73 - 120      |      |      |   |                 | 05/14/18 18:09  | 1              |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-71\_050818**

**Lab Sample ID: 240-95404-13**

**Date Collected: 05/08/18 13:50**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 0.38      | J         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 19:46 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 95        |           | 63 - 125 |      |      |   |          | 05/15/18 19:46 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 10     | U         | 10  | 1.8  | ug/L |   |          | 05/14/18 18:31 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/14/18 18:31 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Chloroethane                | 1.0    | U*        | 1.0 | 0.41 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/14/18 18:31 | 1       |
| cis-1,2-Dichloroethene      | 0.40   | J         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 18:31 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/14/18 18:31 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/14/18 18:31 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,1,2,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 18:31 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/14/18 18:31 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/14/18 18:31 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-71\_050818**

**Lab Sample ID: 240-95404-13**

**Date Collected: 05/08/18 13:50**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result      | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|-------------|-----------|----------|------|------|---|----------|----------------|---------|
| Trichloroethene                       | 1.0         | U         | 1.0      | 0.33 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Trichlorofluoromethane                | 1.0         | U         | 1.0      | 0.50 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0         | U         | 1.0      | 0.41 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0         | U         | 5.0      | 0.22 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0         | U         | 1.0      | 0.24 | ug/L |   |          | 05/14/18 18:31 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0         | U         | 1.0      | 0.24 | ug/L |   |          | 05/14/18 18:31 | 1       |
| <b>Vinyl chloride</b>                 | <b>0.59</b> | <b>J</b>  | 1.0      | 0.45 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Xylenes, Total                        | 2.0         | U         | 2.0      | 0.24 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Diethyl ether                         | 2.0         | U         | 2.0      | 0.35 | ug/L |   |          | 05/14/18 18:31 | 1       |
| Surrogate                             | %Recovery   | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 4-Bromofluorobenzene (Surr)           | 75          |           | 69 - 120 |      |      |   |          | 05/14/18 18:31 | 1       |
| Dibromofluoromethane (Surr)           | 105         |           | 69 - 124 |      |      |   |          | 05/14/18 18:31 | 1       |
| 1,2-Dichloroethane-d4 (Surr)          | 107         |           | 61 - 138 |      |      |   |          | 05/14/18 18:31 | 1       |
| Toluene-d8 (Surr)                     | 110         |           | 73 - 120 |      |      |   |          | 05/14/18 18:31 | 1       |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-45\_050818**

**Lab Sample ID: 240-95404-14**

**Date Collected: 05/08/18 14:50**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 0.40      | J         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 20:11 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 94        |           | 63 - 125 |      |      |   |          | 05/15/18 20:11 | 1       |

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

| Analyte                       | Result      | Qualifier | RL  | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------------|-------------|-----------|-----|-----|------|---|----------|----------------|---------|
| Acetone                       | 670         | U         | 670 | 120 | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Benzene                       | 67          | U         | 67  | 19  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Bromodichloromethane          | 67          | U         | 67  | 20  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Bromoform                     | 67          | U         | 67  | 29  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Bromomethane                  | 67          | U         | 67  | 28  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 2-Butanone (MEK)              | 670         | U         | 670 | 68  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Carbon disulfide              | 330         | U         | 330 | 23  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Carbon tetrachloride          | 67          | U         | 67  | 23  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Chlorobenzene                 | 67          | U         | 67  | 21  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Chloroethane                  | 67          | U         | 67  | 27  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Chloroform                    | 67          | U         | 67  | 21  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Chloromethane                 | 67          | U         | 67  | 29  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| <b>cis-1,2-Dichloroethene</b> | <b>1200</b> |           | 67  | 20  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| cis-1,3-Dichloropropene       | 67          | U         | 67  | 17  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Cyclohexane                   | 67          | U         | 67  | 29  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Dibromochloromethane          | 67          | U         | 67  | 17  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,2-Dibromo-3-Chloropropane   | 67          | U         | 67  | 31  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,2-Dibromoethane             | 67          | U         | 67  | 15  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,2-Dichlorobenzene           | 67          | U         | 67  | 17  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,3-Dichlorobenzene           | 67          | U         | 67  | 21  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,4-Dichlorobenzene           | 67          | U         | 67  | 15  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Dichlorodifluoromethane       | 67          | U         | 67  | 33  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,1-Dichloroethane            | 67          | U         | 67  | 17  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,2-Dichloroethane            | 67          | U         | 67  | 20  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,1-Dichloroethene            | 67          | U         | 67  | 18  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,2-Dichloropropane           | 67          | U         | 67  | 20  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Ethylbenzene                  | 67          | U         | 67  | 17  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 2-Hexanone                    | 670         | U         | 670 | 82  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Isopropylbenzene              | 67          | U         | 67  | 14  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Methyl acetate                | 670         | U         | 670 | 95  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Methylcyclohexane             | 67          | U         | 67  | 30  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Methylene Chloride            | 330         | U         | 330 | 35  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 4-Methyl-2-pentanone (MIBK)   | 670         | U         | 670 | 47  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Methyl tert-butyl ether       | 67          | U         | 67  | 18  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Styrene                       | 67          | U         | 67  | 15  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,1,2,2-Tetrachloroethane     | 67          | U         | 67  | 21  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Tetrachloroethene             | 67          | U         | 67  | 20  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| Toluene                       | 67          | U         | 67  | 15  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| trans-1,2-Dichloroethene      | 67          | U         | 67  | 19  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| trans-1,3-Dichloropropene     | 67          | U         | 67  | 21  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,2,4-Trichlorobenzene        | 67          | U         | 67  | 18  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,1,1-Trichloroethane         | 67          | U         | 67  | 15  | ug/L |   |          | 05/15/18 16:05 | 66.67   |
| 1,1,2-Trichloroethane         | 67          | U         | 67  | 23  | ug/L |   |          | 05/15/18 16:05 | 66.67   |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-45\_050818**

**Lab Sample ID: 240-95404-14**

**Date Collected: 05/08/18 14:50**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result           | Qualifier        | RL            | MDL | Unit | D | Prepared        | Analyzed        | Dil Fac        |
|---------------------------------------|------------------|------------------|---------------|-----|------|---|-----------------|-----------------|----------------|
| Trichloroethene                       | 67               | U                | 67            | 22  | ug/L |   |                 | 05/15/18 16:05  | 66.67          |
| Trichlorofluoromethane                | 67               | U                | 67            | 33  | ug/L |   |                 | 05/15/18 16:05  | 66.67          |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 67               | U                | 67            | 27  | ug/L |   |                 | 05/15/18 16:05  | 66.67          |
| 1,2,3-Trimethylbenzene                | 330              | U                | 330           | 15  | ug/L |   |                 | 05/15/18 16:05  | 66.67          |
| 1,2,4-Trimethylbenzene                | 67               | U                | 67            | 16  | ug/L |   |                 | 05/15/18 16:05  | 66.67          |
| 1,3,5-Trimethylbenzene                | 67               | U                | 67            | 16  | ug/L |   |                 | 05/15/18 16:05  | 66.67          |
| <b>Vinyl chloride</b>                 | <b>1400</b>      |                  | 67            | 30  | ug/L |   |                 | 05/15/18 16:05  | 66.67          |
| Xylenes, Total                        | 130              | U                | 130           | 16  | ug/L |   |                 | 05/15/18 16:05  | 66.67          |
| Diethyl ether                         | 130              | U                | 130           | 23  | ug/L |   |                 | 05/15/18 16:05  | 66.67          |
| <b>Surrogate</b>                      | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |     |      |   | <b>Prepared</b> | <b>Analyzed</b> | <b>Dil Fac</b> |
| 4-Bromofluorobenzene (Surr)           | 81               |                  | 69 - 120      |     |      |   |                 | 05/15/18 16:05  | 66.67          |
| Dibromofluoromethane (Surr)           | 106              |                  | 69 - 124      |     |      |   |                 | 05/15/18 16:05  | 66.67          |
| 1,2-Dichloroethane-d4 (Surr)          | 106              |                  | 61 - 138      |     |      |   |                 | 05/15/18 16:05  | 66.67          |
| Toluene-d8 (Surr)                     | 94               |                  | 73 - 120      |     |      |   |                 | 05/15/18 16:05  | 66.67          |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-18\_050818**

**Lab Sample ID: 240-95404-15**

**Date Collected: 05/08/18 16:40**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 20:36 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 90        |           | 63 - 125 |      |      |   |          | 05/15/18 20:36 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 10     | U         | 10  | 1.8  | ug/L |   |          | 05/15/18 16:26 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/15/18 16:26 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Chloroethane                | 1.0    | U         | 1.0 | 0.41 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 16:26 | 1       |
| cis-1,2-Dichloroethene      | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 16:26 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/15/18 16:26 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/15/18 16:26 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,1,2,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 16:26 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/15/18 16:26 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/15/18 16:26 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-18\_050818**

**Lab Sample ID: 240-95404-15**

**Date Collected: 05/08/18 16:40**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| Trichloroethene                       | 1.0       | U         | 1.0      | 0.33 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Trichlorofluoromethane                | 1.0       | U         | 1.0      | 0.50 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0       | U         | 1.0      | 0.41 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0       | U         | 5.0      | 0.22 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0       | U         | 1.0      | 0.24 | ug/L |   |          | 05/15/18 16:26 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0       | U         | 1.0      | 0.24 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Vinyl chloride                        | 1.0       | U         | 1.0      | 0.45 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Xylenes, Total                        | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Diethyl ether                         | 2.0       | U         | 2.0      | 0.35 | ug/L |   |          | 05/15/18 16:26 | 1       |
| Surrogate                             | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 4-Bromofluorobenzene (Surr)           | 82        |           | 69 - 120 |      |      |   |          | 05/15/18 16:26 | 1       |
| Dibromofluoromethane (Surr)           | 116       |           | 69 - 124 |      |      |   |          | 05/15/18 16:26 | 1       |
| 1,2-Dichloroethane-d4 (Surr)          | 116       |           | 61 - 138 |      |      |   |          | 05/15/18 16:26 | 1       |
| Toluene-d8 (Surr)                     | 97        |           | 73 - 120 |      |      |   |          | 05/15/18 16:26 | 1       |



# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-43\_050918**

**Lab Sample ID: 240-95404-16**

**Date Collected: 05/09/18 09:43**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.8       |           | 2.0      | 0.24 | ug/L |   |          | 05/15/18 21:01 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 90        |           | 63 - 125 |      |      |   |          | 05/15/18 21:01 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 10     | U         | 10  | 1.8  | ug/L |   |          | 05/15/18 16:48 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/15/18 16:48 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Chloroethane                | 1.0    | U         | 1.0 | 0.41 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 16:48 | 1       |
| cis-1,2-Dichloroethene      | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 16:48 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/15/18 16:48 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/15/18 16:48 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,1,2,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 16:48 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/15/18 16:48 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/15/18 16:48 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-43\_050918**

**Lab Sample ID: 240-95404-16**

**Date Collected: 05/09/18 09:43**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result     | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|------------|-----------|----------|------|------|---|----------|----------------|---------|
| Trichloroethene                       | 1.0        | U         | 1.0      | 0.33 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Trichlorofluoromethane                | 1.0        | U         | 1.0      | 0.50 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0        | U         | 1.0      | 0.41 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0        | U         | 5.0      | 0.22 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0        | U         | 1.0      | 0.24 | ug/L |   |          | 05/15/18 16:48 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0        | U         | 1.0      | 0.24 | ug/L |   |          | 05/15/18 16:48 | 1       |
| <b>Vinyl chloride</b>                 | <b>6.4</b> |           | 1.0      | 0.45 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Xylenes, Total                        | 2.0        | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Diethyl ether                         | 2.0        | U         | 2.0      | 0.35 | ug/L |   |          | 05/15/18 16:48 | 1       |
| Surrogate                             | %Recovery  | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 4-Bromofluorobenzene (Surr)           | 87         |           | 69 - 120 |      |      |   |          | 05/15/18 16:48 | 1       |
| Dibromofluoromethane (Surr)           | 127        | X         | 69 - 124 |      |      |   |          | 05/15/18 16:48 | 1       |
| 1,2-Dichloroethane-d4 (Surr)          | 131        |           | 61 - 138 |      |      |   |          | 05/15/18 16:48 | 1       |
| Toluene-d8 (Surr)                     | 101        |           | 73 - 120 |      |      |   |          | 05/15/18 16:48 | 1       |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-52\_050918**

**Lab Sample ID: 240-95404-17**

**Date Collected: 05/09/18 11:00**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 0.30      | J         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 21:27 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 92        |           | 63 - 125 |      |      |   |          | 05/15/18 21:27 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 2.7    | J B       | 10  | 1.8  | ug/L |   |          | 05/15/18 02:08 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/15/18 02:08 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Chloroethane                | 1.0    | U         | 1.0 | 0.41 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 02:08 | 1       |
| cis-1,2-Dichloroethene      | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:08 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/15/18 02:08 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/15/18 02:08 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,1,2,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:08 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/15/18 02:08 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/15/18 02:08 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-52\_050918**

**Lab Sample ID: 240-95404-17**

**Date Collected: 05/09/18 11:00**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result     | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|------------|-----------|----------|------|------|---|----------|----------------|---------|
| Trichloroethene                       | 1.0        | U         | 1.0      | 0.33 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Trichlorofluoromethane                | 1.0        | U         | 1.0      | 0.50 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0        | U         | 1.0      | 0.41 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0        | U         | 5.0      | 0.22 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0        | U         | 1.0      | 0.24 | ug/L |   |          | 05/15/18 02:08 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0        | U         | 1.0      | 0.24 | ug/L |   |          | 05/15/18 02:08 | 1       |
| <b>Vinyl chloride</b>                 | <b>4.3</b> |           | 1.0      | 0.45 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Xylenes, Total                        | 2.0        | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Diethyl ether                         | 2.0        | U         | 2.0      | 0.35 | ug/L |   |          | 05/15/18 02:08 | 1       |
| Surrogate                             | %Recovery  | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 4-Bromofluorobenzene (Surr)           | 96         |           | 69 - 120 |      |      |   |          | 05/15/18 02:08 | 1       |
| Dibromofluoromethane (Surr)           | 97         |           | 69 - 124 |      |      |   |          | 05/15/18 02:08 | 1       |
| 1,2-Dichloroethane-d4 (Surr)          | 96         |           | 61 - 138 |      |      |   |          | 05/15/18 02:08 | 1       |
| Toluene-d8 (Surr)                     | 98         |           | 73 - 120 |      |      |   |          | 05/15/18 02:08 | 1       |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: DUP-01\_050818**

**Lab Sample ID: 240-95404-18**

**Date Collected: 05/08/18 00:00**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,4-Dioxane                  | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 21:52 | 1       |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 94        |           | 63 - 125 |      |      |   |          | 05/15/18 21:52 | 1       |

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

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 2.9    | J B       | 10  | 1.8  | ug/L |   |          | 05/15/18 02:31 | 1       |
| Benzene                     | 1.0    | U         | 1.0 | 0.28 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Bromodichloromethane        | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Bromoform                   | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Bromomethane                | 1.0    | U         | 1.0 | 0.42 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 2-Butanone (MEK)            | 10     | U         | 10  | 1.0  | ug/L |   |          | 05/15/18 02:31 | 1       |
| Carbon disulfide            | 5.0    | U         | 5.0 | 0.34 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Carbon tetrachloride        | 1.0    | U         | 1.0 | 0.35 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Chlorobenzene               | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Chloroethane                | 1.0    | U         | 1.0 | 0.41 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Chloroform                  | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Chloromethane               | 1.0    | U         | 1.0 | 0.43 | ug/L |   |          | 05/15/18 02:31 | 1       |
| cis-1,2-Dichloroethene      | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:31 | 1       |
| cis-1,3-Dichloropropene     | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Cyclohexane                 | 1.0    | U         | 1.0 | 0.44 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Dibromochloromethane        | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0    | U         | 1.0 | 0.47 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,2-Dibromoethane           | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,2-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,3-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,4-Dichlorobenzene         | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Dichlorodifluoromethane     | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,1-Dichloroethane          | 1.0    | U         | 1.0 | 0.25 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,2-Dichloroethane          | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,1-Dichloroethene          | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,2-Dichloropropane         | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Ethylbenzene                | 1.0    | U         | 1.0 | 0.26 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 2-Hexanone                  | 10     | U         | 10  | 1.2  | ug/L |   |          | 05/15/18 02:31 | 1       |
| Isopropylbenzene            | 1.0    | U         | 1.0 | 0.21 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Methyl acetate              | 10     | U         | 10  | 1.4  | ug/L |   |          | 05/15/18 02:31 | 1       |
| Methylcyclohexane           | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Methylene Chloride          | 5.0    | U         | 5.0 | 0.53 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10     | U         | 10  | 0.71 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Methyl tert-butyl ether     | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Styrene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,1,2,2-Tetrachloroethane   | 1.0    | U         | 1.0 | 0.32 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Tetrachloroethene           | 1.0    | U         | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Toluene                     | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:31 | 1       |
| trans-1,2-Dichloroethene    | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/15/18 02:31 | 1       |
| trans-1,3-Dichloropropene   | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,2,4-Trichlorobenzene      | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,1,1-Trichloroethane       | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,1,2-Trichloroethane       | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/15/18 02:31 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: DUP-01\_050818**

**Lab Sample ID: 240-95404-18**

**Date Collected: 05/08/18 00:00**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| Trichloroethene                       | 1.0       | U         | 1.0      | 0.33 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Trichlorofluoromethane                | 1.0       | U         | 1.0      | 0.50 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0       | U         | 1.0      | 0.41 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0       | U         | 5.0      | 0.22 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0       | U         | 1.0      | 0.24 | ug/L |   |          | 05/15/18 02:31 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0       | U         | 1.0      | 0.24 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Vinyl chloride                        | 1.0       | U         | 1.0      | 0.45 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Xylenes, Total                        | 2.0       | U         | 2.0      | 0.24 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Diethyl ether                         | 2.0       | U         | 2.0      | 0.35 | ug/L |   |          | 05/15/18 02:31 | 1       |
| Surrogate                             | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 4-Bromofluorobenzene (Surr)           | 95        |           | 69 - 120 |      |      |   |          | 05/15/18 02:31 | 1       |
| Dibromofluoromethane (Surr)           | 97        |           | 69 - 124 |      |      |   |          | 05/15/18 02:31 | 1       |
| 1,2-Dichloroethane-d4 (Surr)          | 99        |           | 61 - 138 |      |      |   |          | 05/15/18 02:31 | 1       |
| Toluene-d8 (Surr)                     | 99        |           | 73 - 120 |      |      |   |          | 05/15/18 02:31 | 1       |

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-95404-19**

**Date Collected: 05/07/18 00:00**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte                               | Result      | Qualifier  | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|-------------|------------|-----|------|------|---|----------|----------------|---------|
| <b>Acetone</b>                        | <b>4.6</b>  | <b>J B</b> | 10  | 1.8  | ug/L |   |          | 05/15/18 02:54 | 1       |
| Benzene                               | 1.0         | U          | 1.0 | 0.28 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Bromodichloromethane                  | 1.0         | U          | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Bromoform                             | 1.0         | U          | 1.0 | 0.43 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Bromomethane                          | 1.0         | U          | 1.0 | 0.42 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 2-Butanone (MEK)                      | 10          | U          | 10  | 1.0  | ug/L |   |          | 05/15/18 02:54 | 1       |
| Carbon disulfide                      | 5.0         | U          | 5.0 | 0.34 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Carbon tetrachloride                  | 1.0         | U          | 1.0 | 0.35 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Chlorobenzene                         | 1.0         | U          | 1.0 | 0.32 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Chloroethane                          | 1.0         | U          | 1.0 | 0.41 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Chloroform                            | 1.0         | U          | 1.0 | 0.31 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Chloromethane                         | 1.0         | U          | 1.0 | 0.43 | ug/L |   |          | 05/15/18 02:54 | 1       |
| cis-1,2-Dichloroethene                | 1.0         | U          | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:54 | 1       |
| cis-1,3-Dichloropropene               | 1.0         | U          | 1.0 | 0.26 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Cyclohexane                           | 1.0         | U          | 1.0 | 0.44 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Dibromochloromethane                  | 1.0         | U          | 1.0 | 0.25 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,2-Dibromo-3-Chloropropane           | 1.0         | U          | 1.0 | 0.47 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,2-Dibromoethane                     | 1.0         | U          | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,2-Dichlorobenzene                   | 1.0         | U          | 1.0 | 0.26 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,3-Dichlorobenzene                   | 1.0         | U          | 1.0 | 0.32 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,4-Dichlorobenzene                   | 1.0         | U          | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Dichlorodifluoromethane               | 1.0         | U          | 1.0 | 0.50 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,1-Dichloroethane                    | 1.0         | U          | 1.0 | 0.25 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,2-Dichloroethane                    | 1.0         | U          | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,1-Dichloroethene                    | 1.0         | U          | 1.0 | 0.27 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,2-Dichloropropane                   | 1.0         | U          | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Ethylbenzene                          | 1.0         | U          | 1.0 | 0.26 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 2-Hexanone                            | 10          | U          | 10  | 1.2  | ug/L |   |          | 05/15/18 02:54 | 1       |
| Isopropylbenzene                      | 1.0         | U          | 1.0 | 0.21 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Methyl acetate                        | 10          | U          | 10  | 1.4  | ug/L |   |          | 05/15/18 02:54 | 1       |
| Methylcyclohexane                     | 1.0         | U          | 1.0 | 0.45 | ug/L |   |          | 05/15/18 02:54 | 1       |
| <b>Methylene Chloride</b>             | <b>0.81</b> | <b>J</b>   | 5.0 | 0.53 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 4-Methyl-2-pentanone (MIBK)           | 10          | U          | 10  | 0.71 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Methyl tert-butyl ether               | 1.0         | U          | 1.0 | 0.27 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Styrene                               | 1.0         | U          | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,1,1,2-Tetrachloroethane             | 1.0         | U          | 1.0 | 0.32 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Tetrachloroethene                     | 1.0         | U          | 1.0 | 0.30 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Toluene                               | 1.0         | U          | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:54 | 1       |
| trans-1,2-Dichloroethene              | 1.0         | U          | 1.0 | 0.29 | ug/L |   |          | 05/15/18 02:54 | 1       |
| trans-1,3-Dichloropropene             | 1.0         | U          | 1.0 | 0.31 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,2,4-Trichlorobenzene                | 1.0         | U          | 1.0 | 0.27 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,1,1-Trichloroethane                 | 1.0         | U          | 1.0 | 0.23 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,1,2-Trichloroethane                 | 1.0         | U          | 1.0 | 0.34 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Trichloroethene                       | 1.0         | U          | 1.0 | 0.33 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Trichlorofluoromethane                | 1.0         | U          | 1.0 | 0.50 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0         | U          | 1.0 | 0.41 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0         | U          | 5.0 | 0.22 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0         | U          | 1.0 | 0.24 | ug/L |   |          | 05/15/18 02:54 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0         | U          | 1.0 | 0.24 | ug/L |   |          | 05/15/18 02:54 | 1       |

TestAmerica Canton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-95404-19**

**Date Collected: 05/07/18 00:00**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

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

| Analyte        | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|----------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Vinyl chloride | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Xylenes, Total | 2.0    | U         | 2.0 | 0.24 | ug/L |   |          | 05/15/18 02:54 | 1       |
| Diethyl ether  | 2.0    | U         | 2.0 | 0.35 | ug/L |   |          | 05/15/18 02:54 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr)  | 93        |           | 69 - 120 |          | 05/15/18 02:54 | 1       |
| Dibromofluoromethane (Surr)  | 94        |           | 69 - 124 |          | 05/15/18 02:54 | 1       |
| 1,2-Dichloroethane-d4 (Surr) | 99        |           | 61 - 138 |          | 05/15/18 02:54 | 1       |
| Toluene-d8 (Surr)            | 99        |           | 73 - 120 |          | 05/15/18 02:54 | 1       |



# Surrogate Summary

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID     | Client Sample ID       | Percent Surrogate Recovery (Acceptance Limits) |                  |                 |                 |
|-------------------|------------------------|--|------------------|-----------------|-----------------|
|                   |                        | BFB<br>(69-120)                                | DBFM<br>(69-124) | DCA<br>(61-138) | TOL<br>(73-120) |
| 240-95062-B-1 MS  | Matrix Spike           | 99   | 97               | 98              | 98              |
| 240-95062-B-1 MSD | Matrix Spike Duplicate | 99   | 98               | 97              | 101             |
| 240-95404-1       | MW-23_050718           | 80   | 103              | 101             | 95              |
| 240-95404-2       | MW-38_050818           | 83   | 126 X            | 127             | 97              |
| 240-95404-3       | MW-33_050818           | 69   | 91               | 90              | 94              |
| 240-95404-4       | MW-39_050818           | 77   | 106              | 107             | 109             |
| 240-95404-5       | MW-32_050818           | 74   | 99               | 101             | 102             |
| 240-95404-6       | MW-40_050818           | 89   | 117              | 123             | 124 X           |
| 240-95404-6       | MW-40_050818           | 81   | 128 X            | 127             | 97              |
| 240-95404-6 MS    | MW-40_050818           | 82   | 106              | 112             | 109             |
| 240-95404-6 MS    | MW-40_050818           | 95   | 94               | 94              | 103             |
| 240-95404-6 MSD   | MW-40_050818           | 78   | 104              | 111             | 106             |
| 240-95404-6 MSD   | MW-40_050818           | 103  | 94               | 88              | 101             |
| 240-95404-7       | MW-31_050818           | 75   | 98               | 102             | 104             |
| 240-95404-8       | MW-30_050818           | 81   | 106              | 108             | 112             |
| 240-95404-9       | MW-41_050818           | 79   | 107              | 106             | 108             |
| 240-95404-10      | MW-34_050818           | 80   | 107              | 113             | 107             |
| 240-95404-11      | MW-42_050918           | 78   | 117              | 118             | 99              |
| 240-95404-12      | MW-35_050918           | 71   | 99               | 101             | 102             |
| 240-95404-13      | MW-71_050818           | 75   | 105              | 107             | 110             |
| 240-95404-14      | MW-45_050818           | 81   | 106              | 106             | 94              |
| 240-95404-15      | MW-18_050818           | 82   | 116              | 116             | 97              |
| 240-95404-16      | MW-43_050918           | 87   | 127 X            | 131             | 101             |
| 240-95404-17      | MW-52_050918           | 96   | 97               | 96              | 98              |
| 240-95404-18      | DUP-01_050818          | 95   | 97               | 99              | 99              |
| 240-95404-19      | TRIP BLANK             | 93   | 94               | 99              | 99              |
| LCS 240-326629/4  | Lab Control Sample     | 78   | 97               | 103             | 101             |
| LCS 240-326782/4  | Lab Control Sample     | 102  | 94               | 101             | 99              |
| LCS 240-326849/4  | Lab Control Sample     | 101  | 93               | 92              | 102             |
| MB 240-326629/6   | Method Blank           | 83   | 112              | 113             | 117             |
| MB 240-326782/6   | Method Blank           | 100  | 99               | 99              | 100             |
| MB 240-326849/6   | Method Blank           | 83   | 96               | 98              | 95              |

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

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

TOL = Toluene-d8 (Surr)

## Method: 8260B 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>(63-125)                                |
| 240-95404-1   | MW-23_050718     | 90   |
| 240-95404-2   | MW-38_050818     | 101  |
| 240-95404-3   | MW-33_050818     | 95   |
| 240-95404-4   | MW-39_050818     | 100  |

TestAmerica Canton

# Surrogate Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID    | Client Sample ID   | DCA<br>(63-125) |
|------------------|--------------------|-----------------|
| 240-95404-5      | MW-32_050818       | 96              |
| 240-95404-6      | MW-40_050818       | 100             |
| 240-95404-6 MS   | MW-40_050818       | 93              |
| 240-95404-6 MSD  | MW-40_050818       | 102             |
| 240-95404-7      | MW-31_050818       | 93              |
| 240-95404-8      | MW-30_050818       | 94              |
| 240-95404-9      | MW-41_050818       | 98              |
| 240-95404-10     | MW-34_050818       | 97              |
| 240-95404-11     | MW-42_050918       | 93              |
| 240-95404-12     | MW-35_050918       | 90              |
| 240-95404-13     | MW-71_050818       | 95              |
| 240-95404-14     | MW-45_050818       | 94              |
| 240-95404-15     | MW-18_050818       | 90              |
| 240-95404-16     | MW-43_050918       | 90              |
| 240-95404-17     | MW-52_050918       | 92              |
| 240-95404-18     | DUP-01_050818      | 94              |
| LCS 240-326885/4 | Lab Control Sample | 90              |
| MB 240-326885/5  | Method Blank       | 94              |

#### Surrogate Legend

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

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: MB 240-326629/6**

**Matrix: Water**

**Analysis Batch: 326629**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

| Analyte                               | MB Result | MB Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|-----------|--------------|-----|------|------|---|----------|----------------|---------|
| Acetone                               | 10        | U            | 10  | 1.8  | ug/L |   |          | 05/14/18 08:52 | 1       |
| Benzene                               | 1.0       | U            | 1.0 | 0.28 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Bromodichloromethane                  | 1.0       | U            | 1.0 | 0.30 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Bromoform                             | 1.0       | U            | 1.0 | 0.43 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Bromomethane                          | 1.0       | U            | 1.0 | 0.42 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 2-Butanone (MEK)                      | 10        | U            | 10  | 1.0  | ug/L |   |          | 05/14/18 08:52 | 1       |
| Carbon disulfide                      | 5.0       | U            | 5.0 | 0.34 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Carbon tetrachloride                  | 1.0       | U            | 1.0 | 0.35 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Chlorobenzene                         | 1.0       | U            | 1.0 | 0.32 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Chloroethane                          | 1.0       | U            | 1.0 | 0.41 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Chloroform                            | 1.0       | U            | 1.0 | 0.31 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Chloromethane                         | 1.0       | U            | 1.0 | 0.43 | ug/L |   |          | 05/14/18 08:52 | 1       |
| cis-1,2-Dichloroethene                | 1.0       | U            | 1.0 | 0.30 | ug/L |   |          | 05/14/18 08:52 | 1       |
| cis-1,3-Dichloropropene               | 1.0       | U            | 1.0 | 0.26 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Cyclohexane                           | 1.0       | U            | 1.0 | 0.44 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Dibromochloromethane                  | 1.0       | U            | 1.0 | 0.25 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,2-Dibromo-3-Chloropropane           | 1.0       | U            | 1.0 | 0.47 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,2-Dibromoethane                     | 1.0       | U            | 1.0 | 0.23 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,2-Dichlorobenzene                   | 1.0       | U            | 1.0 | 0.26 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,3-Dichlorobenzene                   | 1.0       | U            | 1.0 | 0.32 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,4-Dichlorobenzene                   | 1.0       | U            | 1.0 | 0.23 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Dichlorodifluoromethane               | 1.0       | U            | 1.0 | 0.50 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,1-Dichloroethane                    | 1.0       | U            | 1.0 | 0.25 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,2-Dichloroethane                    | 1.0       | U            | 1.0 | 0.30 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,1-Dichloroethene                    | 1.0       | U            | 1.0 | 0.27 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,2-Dichloropropane                   | 1.0       | U            | 1.0 | 0.30 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Ethylbenzene                          | 1.0       | U            | 1.0 | 0.26 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 2-Hexanone                            | 10        | U            | 10  | 1.2  | ug/L |   |          | 05/14/18 08:52 | 1       |
| Isopropylbenzene                      | 1.0       | U            | 1.0 | 0.21 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Methyl acetate                        | 10        | U            | 10  | 1.4  | ug/L |   |          | 05/14/18 08:52 | 1       |
| Methylcyclohexane                     | 1.0       | U            | 1.0 | 0.45 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Methylene Chloride                    | 5.0       | U            | 5.0 | 0.53 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 4-Methyl-2-pentanone (MIBK)           | 10        | U            | 10  | 0.71 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Methyl tert-butyl ether               | 1.0       | U            | 1.0 | 0.27 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Styrene                               | 1.0       | U            | 1.0 | 0.23 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,1,2,2-Tetrachloroethane             | 1.0       | U            | 1.0 | 0.32 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Tetrachloroethene                     | 1.0       | U            | 1.0 | 0.30 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Toluene                               | 1.0       | U            | 1.0 | 0.23 | ug/L |   |          | 05/14/18 08:52 | 1       |
| trans-1,2-Dichloroethene              | 1.0       | U            | 1.0 | 0.29 | ug/L |   |          | 05/14/18 08:52 | 1       |
| trans-1,3-Dichloropropene             | 1.0       | U            | 1.0 | 0.31 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,2,4-Trichlorobenzene                | 1.0       | U            | 1.0 | 0.27 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,1,1-Trichloroethane                 | 1.0       | U            | 1.0 | 0.23 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,1,2-Trichloroethane                 | 1.0       | U            | 1.0 | 0.34 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Trichloroethene                       | 1.0       | U            | 1.0 | 0.33 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Trichlorofluoromethane                | 1.0       | U            | 1.0 | 0.50 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0       | U            | 1.0 | 0.41 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0       | U            | 5.0 | 0.22 | ug/L |   |          | 05/14/18 08:52 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0       | U            | 1.0 | 0.24 | ug/L |   |          | 05/14/18 08:52 | 1       |

TestAmerica Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: MB 240-326629/6**  
**Matrix: Water**  
**Analysis Batch: 326629**

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

| Analyte                | MB     | MB        | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
|                        | Result | Qualifier |     |      |      |   |          |                |         |
| 1,3,5-Trimethylbenzene | 1.0    | U         | 1.0 | 0.24 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Vinyl chloride         | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Xylenes, Total         | 2.0    | U         | 2.0 | 0.24 | ug/L |   |          | 05/14/18 08:52 | 1       |
| Diethyl ether          | 2.0    | U         | 2.0 | 0.35 | ug/L |   |          | 05/14/18 08:52 | 1       |

| Surrogate                    | MB        | MB        | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
|                              | %Recovery | Qualifier |          |          |                |         |
| 4-Bromofluorobenzene (Surr)  | 83        |           | 69 - 120 |          | 05/14/18 08:52 | 1       |
| Dibromofluoromethane (Surr)  | 112       |           | 69 - 124 |          | 05/14/18 08:52 | 1       |
| 1,2-Dichloroethane-d4 (Surr) | 113       |           | 61 - 138 |          | 05/14/18 08:52 | 1       |
| Toluene-d8 (Surr)            | 117       |           | 73 - 120 |          | 05/14/18 08:52 | 1       |

**Lab Sample ID: LCS 240-326629/4**  
**Matrix: Water**  
**Analysis Batch: 326629**

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

| Analyte                     | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|-----------------------------|-------------|------------|---------------|------|---|------|--------------|
|                             |             |            |               |      |   |      |              |
| Benzene                     | 10.0        | 10.3       |               | ug/L |   | 103  | 79 - 120     |
| Bromodichloromethane        | 10.0        | 10.2       |               | ug/L |   | 102  | 79 - 125     |
| Bromoform                   | 10.0        | 7.99       |               | ug/L |   | 80   | 55 - 145     |
| Bromomethane                | 10.0        | 15.6       |               | ug/L |   | 156  | 17 - 158     |
| 2-Butanone (MEK)            | 20.0        | 18.3       |               | ug/L |   | 92   | 43 - 149     |
| Carbon disulfide            | 10.0        | 9.90       |               | ug/L |   | 99   | 49 - 141     |
| Carbon tetrachloride        | 10.0        | 9.62       |               | ug/L |   | 96   | 55 - 171     |
| Chlorobenzene               | 10.0        | 9.62       |               | ug/L |   | 96   | 80 - 120     |
| Chloroethane                | 10.0        | 15.0       | *             | ug/L |   | 150  | 10 - 149     |
| Chloroform                  | 10.0        | 10.5       |               | ug/L |   | 105  | 80 - 120     |
| Chloromethane               | 10.0        | 12.1       |               | ug/L |   | 121  | 59 - 124     |
| cis-1,2-Dichloroethene      | 10.0        | 10.5       |               | ug/L |   | 105  | 77 - 120     |
| cis-1,3-Dichloropropene     | 10.0        | 10.2       |               | ug/L |   | 102  | 75 - 120     |
| Cyclohexane                 | 10.0        | 10.3       |               | ug/L |   | 103  | 66 - 135     |
| Dibromochloromethane        | 10.0        | 9.28       |               | ug/L |   | 93   | 64 - 129     |
| 1,2-Dibromo-3-Chloropropane | 10.0        | 7.33       |               | ug/L |   | 73   | 50 - 130     |
| 1,2-Dibromoethane           | 10.0        | 9.40       |               | ug/L |   | 94   | 80 - 120     |
| 1,2-Dichlorobenzene         | 10.0        | 8.90       |               | ug/L |   | 89   | 80 - 120     |
| 1,3-Dichlorobenzene         | 10.0        | 8.93       |               | ug/L |   | 89   | 80 - 120     |
| 1,4-Dichlorobenzene         | 10.0        | 8.83       |               | ug/L |   | 88   | 80 - 120     |
| Dichlorodifluoromethane     | 10.0        | 11.1       |               | ug/L |   | 111  | 42 - 141     |
| 1,1-Dichloroethane          | 10.0        | 11.0       |               | ug/L |   | 110  | 74 - 120     |
| 1,2-Dichloroethane          | 10.0        | 10.9       |               | ug/L |   | 109  | 68 - 133     |
| 1,1-Dichloroethene          | 10.0        | 9.19       |               | ug/L |   | 92   | 65 - 127     |
| 1,2-Dichloropropane         | 10.0        | 11.3       |               | ug/L |   | 113  | 78 - 127     |
| Ethylbenzene                | 10.0        | 9.30       |               | ug/L |   | 93   | 80 - 120     |
| 2-Hexanone                  | 20.0        | 16.3       |               | ug/L |   | 82   | 28 - 169     |
| Isopropylbenzene            | 10.0        | 8.22       |               | ug/L |   | 82   | 80 - 128     |
| Methyl acetate              | 20.0        | 20.2       |               | ug/L |   | 101  | 63 - 137     |
| Methylcyclohexane           | 10.0        | 8.49       |               | ug/L |   | 85   | 63 - 141     |
| Methylene Chloride          | 10.0        | 9.78       |               | ug/L |   | 98   | 64 - 140     |

TestAmerica Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: LCS 240-326629/4**

**Matrix: Water**

**Analysis Batch: 326629**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

| Analyte                               | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------------------------------|-------------|------------|---------------|------|---|------|--------------|
| 4-Methyl-2-pentanone (MIBK)           | 20.0        | 18.1       |               | ug/L |   | 90   | 53 - 144     |
| Methyl tert-butyl ether               | 10.0        | 9.26       |               | ug/L |   | 93   | 73 - 120     |
| Styrene                               | 10.0        | 8.56       |               | ug/L |   | 86   | 80 - 121     |
| 1,1,2,2-Tetrachloroethane             | 10.0        | 10.6       |               | ug/L |   | 106  | 58 - 122     |
| Tetrachloroethene                     | 10.0        | 9.43       |               | ug/L |   | 94   | 80 - 122     |
| Toluene                               | 10.0        | 10.5       |               | ug/L |   | 105  | 78 - 120     |
| trans-1,2-Dichloroethene              | 10.0        | 9.95       |               | ug/L |   | 100  | 74 - 124     |
| trans-1,3-Dichloropropene             | 10.0        | 9.96       |               | ug/L |   | 100  | 67 - 120     |
| 1,2,4-Trichlorobenzene                | 10.0        | 8.14       |               | ug/L |   | 81   | 34 - 141     |
| 1,1,1-Trichloroethane                 | 10.0        | 9.98       |               | ug/L |   | 100  | 64 - 147     |
| 1,1,2-Trichloroethane                 | 10.0        | 10.9       |               | ug/L |   | 109  | 76 - 121     |
| Trichloroethene                       | 10.0        | 9.83       |               | ug/L |   | 98   | 76 - 124     |
| Trichlorofluoromethane                | 10.0        | 12.5       |               | ug/L |   | 125  | 27 - 176     |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 10.0        | 8.52       |               | ug/L |   | 85   | 65 - 144     |
| 1,2,4-Trimethylbenzene                | 10.0        | 9.40       |               | ug/L |   | 94   | 80 - 120     |
| 1,3,5-Trimethylbenzene                | 10.0        | 9.53       |               | ug/L |   | 95   | 79 - 120     |
| Vinyl chloride                        | 10.0        | 12.0       |               | ug/L |   | 120  | 65 - 124     |
| Xylenes, Total                        | 20.0        | 17.9       |               | ug/L |   | 90   | 80 - 120     |
| 1,4-Dioxane                           | 200         | 169        |               | ug/L |   | 85   | 35 - 134     |
| Diethyl ether                         | 10.0        | 10.0       |               | ug/L |   | 100  | 72 - 125     |

| Surrogate                    | LCS %Recovery | LCS Qualifier | Limits   |
|------------------------------|---------------|---------------|----------|
| 4-Bromofluorobenzene (Surr)  | 78            |               | 69 - 120 |
| Dibromofluoromethane (Surr)  | 97            |               | 69 - 124 |
| 1,2-Dichloroethane-d4 (Surr) | 103           |               | 61 - 138 |
| Toluene-d8 (Surr)            | 101           |               | 73 - 120 |

**Lab Sample ID: 240-95404-6 MS**

**Matrix: Water**

**Analysis Batch: 326629**

**Client Sample ID: MW-40\_050818**

**Prep Type: Total/NA**

| Surrogate                    | MS %Recovery | MS Qualifier | Limits   |
|------------------------------|--------------|--------------|----------|
| 4-Bromofluorobenzene (Surr)  | 82           |              | 69 - 120 |
| Dibromofluoromethane (Surr)  | 106          |              | 69 - 124 |
| 1,2-Dichloroethane-d4 (Surr) | 112          |              | 61 - 138 |
| Toluene-d8 (Surr)            | 109          |              | 73 - 120 |

**Lab Sample ID: 240-95404-6 MSD**

**Matrix: Water**

**Analysis Batch: 326629**

**Client Sample ID: MW-40\_050818**

**Prep Type: Total/NA**

| Surrogate                    | MSD %Recovery | MSD Qualifier | Limits   |
|------------------------------|---------------|---------------|----------|
| 4-Bromofluorobenzene (Surr)  | 78            |               | 69 - 120 |
| Dibromofluoromethane (Surr)  | 104           |               | 69 - 124 |
| 1,2-Dichloroethane-d4 (Surr) | 111           |               | 61 - 138 |
| Toluene-d8 (Surr)            | 106           |               | 73 - 120 |

TestAmerica Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: MB 240-326782/6**

**Matrix: Water**

**Analysis Batch: 326782**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

| Analyte                               | MB Result | MB Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|-----------|--------------|-----|------|------|---|----------|----------------|---------|
| Acetone                               | 1.90      | J            | 10  | 1.8  | ug/L |   |          | 05/15/18 01:05 | 1       |
| Benzene                               | 1.0       | U            | 1.0 | 0.28 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Bromodichloromethane                  | 1.0       | U            | 1.0 | 0.30 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Bromoform                             | 1.0       | U            | 1.0 | 0.43 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Bromomethane                          | 1.0       | U            | 1.0 | 0.42 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 2-Butanone (MEK)                      | 10        | U            | 10  | 1.0  | ug/L |   |          | 05/15/18 01:05 | 1       |
| Carbon disulfide                      | 5.0       | U            | 5.0 | 0.34 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Carbon tetrachloride                  | 1.0       | U            | 1.0 | 0.35 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Chlorobenzene                         | 1.0       | U            | 1.0 | 0.32 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Chloroethane                          | 1.0       | U            | 1.0 | 0.41 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Chloroform                            | 1.0       | U            | 1.0 | 0.31 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Chloromethane                         | 1.0       | U            | 1.0 | 0.43 | ug/L |   |          | 05/15/18 01:05 | 1       |
| cis-1,2-Dichloroethene                | 1.0       | U            | 1.0 | 0.30 | ug/L |   |          | 05/15/18 01:05 | 1       |
| cis-1,3-Dichloropropene               | 1.0       | U            | 1.0 | 0.26 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Cyclohexane                           | 1.0       | U            | 1.0 | 0.44 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Dibromochloromethane                  | 1.0       | U            | 1.0 | 0.25 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,2-Dibromo-3-Chloropropane           | 1.0       | U            | 1.0 | 0.47 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,2-Dibromoethane                     | 1.0       | U            | 1.0 | 0.23 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,2-Dichlorobenzene                   | 1.0       | U            | 1.0 | 0.26 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,3-Dichlorobenzene                   | 1.0       | U            | 1.0 | 0.32 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,4-Dichlorobenzene                   | 1.0       | U            | 1.0 | 0.23 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Dichlorodifluoromethane               | 1.0       | U            | 1.0 | 0.50 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,1-Dichloroethane                    | 1.0       | U            | 1.0 | 0.25 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,2-Dichloroethane                    | 1.0       | U            | 1.0 | 0.30 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,1-Dichloroethene                    | 1.0       | U            | 1.0 | 0.27 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,2-Dichloropropane                   | 1.0       | U            | 1.0 | 0.30 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Ethylbenzene                          | 1.0       | U            | 1.0 | 0.26 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 2-Hexanone                            | 10        | U            | 10  | 1.2  | ug/L |   |          | 05/15/18 01:05 | 1       |
| Isopropylbenzene                      | 1.0       | U            | 1.0 | 0.21 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Methyl acetate                        | 10        | U            | 10  | 1.4  | ug/L |   |          | 05/15/18 01:05 | 1       |
| Methylcyclohexane                     | 1.0       | U            | 1.0 | 0.45 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Methylene Chloride                    | 5.0       | U            | 5.0 | 0.53 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 4-Methyl-2-pentanone (MIBK)           | 10        | U            | 10  | 0.71 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Methyl tert-butyl ether               | 1.0       | U            | 1.0 | 0.27 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Styrene                               | 1.0       | U            | 1.0 | 0.23 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,1,2,2-Tetrachloroethane             | 1.0       | U            | 1.0 | 0.32 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Tetrachloroethene                     | 1.0       | U            | 1.0 | 0.30 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Toluene                               | 1.0       | U            | 1.0 | 0.23 | ug/L |   |          | 05/15/18 01:05 | 1       |
| trans-1,2-Dichloroethene              | 1.0       | U            | 1.0 | 0.29 | ug/L |   |          | 05/15/18 01:05 | 1       |
| trans-1,3-Dichloropropene             | 1.0       | U            | 1.0 | 0.31 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,2,4-Trichlorobenzene                | 1.0       | U            | 1.0 | 0.27 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,1,1-Trichloroethane                 | 1.0       | U            | 1.0 | 0.23 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,1,2-Trichloroethane                 | 1.0       | U            | 1.0 | 0.34 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Trichloroethene                       | 1.0       | U            | 1.0 | 0.33 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Trichlorofluoromethane                | 1.0       | U            | 1.0 | 0.50 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0       | U            | 1.0 | 0.41 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0       | U            | 5.0 | 0.22 | ug/L |   |          | 05/15/18 01:05 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0       | U            | 1.0 | 0.24 | ug/L |   |          | 05/15/18 01:05 | 1       |

TestAmerica Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: MB 240-326782/6**  
**Matrix: Water**  
**Analysis Batch: 326782**

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

| Analyte                | MB Result | MB Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------|-----------|--------------|-----|------|------|---|----------|----------------|---------|
| 1,3,5-Trimethylbenzene | 1.0       | U            | 1.0 | 0.24 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Vinyl chloride         | 1.0       | U            | 1.0 | 0.45 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Xylenes, Total         | 2.0       | U            | 2.0 | 0.24 | ug/L |   |          | 05/15/18 01:05 | 1       |
| Diethyl ether          | 2.0       | U            | 2.0 | 0.35 | ug/L |   |          | 05/15/18 01:05 | 1       |

| Surrogate                    | MB %Recovery | MB Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|--------------|--------------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr)  | 100          |              | 69 - 120 |          | 05/15/18 01:05 | 1       |
| Dibromofluoromethane (Surr)  | 99           |              | 69 - 124 |          | 05/15/18 01:05 | 1       |
| 1,2-Dichloroethane-d4 (Surr) | 99           |              | 61 - 138 |          | 05/15/18 01:05 | 1       |
| Toluene-d8 (Surr)            | 100          |              | 73 - 120 |          | 05/15/18 01:05 | 1       |

**Lab Sample ID: LCS 240-326782/4**  
**Matrix: Water**  
**Analysis Batch: 326782**

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

| Analyte                     | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|-----------------------------|-------------|------------|---------------|------|---|------|--------------|
| Acetone                     | 20.0        | 19.1       |               | ug/L |   | 96   | 35 - 131     |
| Benzene                     | 10.0        | 9.17       |               | ug/L |   | 92   | 79 - 120     |
| Bromodichloromethane        | 10.0        | 9.19       |               | ug/L |   | 92   | 79 - 125     |
| Bromoform                   | 10.0        | 9.56       |               | ug/L |   | 96   | 55 - 145     |
| Bromomethane                | 10.0        | 8.69       |               | ug/L |   | 87   | 17 - 158     |
| 2-Butanone (MEK)            | 20.0        | 24.8       |               | ug/L |   | 124  | 43 - 149     |
| Carbon disulfide            | 10.0        | 7.53       |               | ug/L |   | 75   | 49 - 141     |
| Carbon tetrachloride        | 10.0        | 8.31       |               | ug/L |   | 83   | 55 - 171     |
| Chlorobenzene               | 10.0        | 9.32       |               | ug/L |   | 93   | 80 - 120     |
| Chloroethane                | 10.0        | 8.34       |               | ug/L |   | 83   | 10 - 149     |
| Chloroform                  | 10.0        | 9.53       |               | ug/L |   | 95   | 80 - 120     |
| Chloromethane               | 10.0        | 9.81       |               | ug/L |   | 98   | 59 - 124     |
| cis-1,2-Dichloroethene      | 10.0        | 8.95       |               | ug/L |   | 89   | 77 - 120     |
| cis-1,3-Dichloropropene     | 10.0        | 9.12       |               | ug/L |   | 91   | 75 - 120     |
| Cyclohexane                 | 10.0        | 8.38       |               | ug/L |   | 84   | 66 - 135     |
| Dibromochloromethane        | 10.0        | 9.86       |               | ug/L |   | 99   | 64 - 129     |
| 1,2-Dibromo-3-Chloropropane | 10.0        | 9.90       |               | ug/L |   | 99   | 50 - 130     |
| 1,2-Dibromoethane           | 10.0        | 10.2       |               | ug/L |   | 102  | 80 - 120     |
| 1,2-Dichlorobenzene         | 10.0        | 9.55       |               | ug/L |   | 95   | 80 - 120     |
| 1,3-Dichlorobenzene         | 10.0        | 9.24       |               | ug/L |   | 92   | 80 - 120     |
| 1,4-Dichlorobenzene         | 10.0        | 9.19       |               | ug/L |   | 92   | 80 - 120     |
| Dichlorodifluoromethane     | 10.0        | 8.78       |               | ug/L |   | 88   | 42 - 141     |
| 1,1-Dichloroethane          | 10.0        | 9.08       |               | ug/L |   | 91   | 74 - 120     |
| 1,2-Dichloroethane          | 10.0        | 10.3       |               | ug/L |   | 103  | 68 - 133     |
| 1,1-Dichloroethene          | 10.0        | 8.74       |               | ug/L |   | 87   | 65 - 127     |
| 1,2-Dichloropropane         | 10.0        | 9.63       |               | ug/L |   | 96   | 78 - 127     |
| Ethylbenzene                | 10.0        | 8.97       |               | ug/L |   | 90   | 80 - 120     |
| 2-Hexanone                  | 20.0        | 25.1       |               | ug/L |   | 126  | 28 - 169     |
| Isopropylbenzene            | 10.0        | 8.71       |               | ug/L |   | 87   | 80 - 128     |
| Methyl acetate              | 20.0        | 21.6       |               | ug/L |   | 108  | 63 - 137     |
| Methylcyclohexane           | 10.0        | 8.01       |               | ug/L |   | 80   | 63 - 141     |
| Methylene Chloride          | 10.0        | 8.48       |               | ug/L |   | 85   | 64 - 140     |

TestAmerica Canton



# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: LCS 240-326782/4**

**Matrix: Water**

**Analysis Batch: 326782**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

| Analyte                               | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------------------------------|-------------|------------|---------------|------|---|------|--------------|
| 4-Methyl-2-pentanone (MIBK)           | 20.0        | 23.1       |               | ug/L |   | 115  | 53 - 144     |
| Methyl tert-butyl ether               | 10.0        | 9.27       |               | ug/L |   | 93   | 73 - 120     |
| Styrene                               | 10.0        | 9.11       |               | ug/L |   | 91   | 80 - 121     |
| 1,1,2,2-Tetrachloroethane             | 10.0        | 11.2       |               | ug/L |   | 112  | 58 - 122     |
| Tetrachloroethene                     | 10.0        | 9.00       |               | ug/L |   | 90   | 80 - 122     |
| Toluene                               | 10.0        | 9.34       |               | ug/L |   | 93   | 78 - 120     |
| trans-1,2-Dichloroethene              | 10.0        | 9.29       |               | ug/L |   | 93   | 74 - 124     |
| trans-1,3-Dichloropropene             | 10.0        | 9.05       |               | ug/L |   | 90   | 67 - 120     |
| 1,2,4-Trichlorobenzene                | 10.0        | 9.63       |               | ug/L |   | 96   | 34 - 141     |
| 1,1,1-Trichloroethane                 | 10.0        | 9.06       |               | ug/L |   | 91   | 64 - 147     |
| 1,1,2-Trichloroethane                 | 10.0        | 10.3       |               | ug/L |   | 103  | 76 - 121     |
| Trichloroethene                       | 10.0        | 8.97       |               | ug/L |   | 90   | 76 - 124     |
| Trichlorofluoromethane                | 10.0        | 10.1       |               | ug/L |   | 101  | 27 - 176     |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 10.0        | 7.93       |               | ug/L |   | 79   | 65 - 144     |
| 1,2,4-Trimethylbenzene                | 10.0        | 9.16       |               | ug/L |   | 92   | 80 - 120     |
| 1,3,5-Trimethylbenzene                | 10.0        | 9.14       |               | ug/L |   | 91   | 79 - 120     |
| Vinyl chloride                        | 10.0        | 10.3       |               | ug/L |   | 103  | 65 - 124     |
| Xylenes, Total                        | 20.0        | 17.8       |               | ug/L |   | 89   | 80 - 120     |
| 1,4-Dioxane                           | 200         | 125        |               | ug/L |   | 63   | 35 - 134     |
| Diethyl ether                         | 10.0        | 10.2       |               | ug/L |   | 102  | 72 - 125     |

| Surrogate                    | LCS %Recovery | LCS Qualifier | LCS Limits |
|------------------------------|---------------|---------------|------------|
| 4-Bromofluorobenzene (Surr)  | 102           |               | 69 - 120   |
| Dibromofluoromethane (Surr)  | 94            |               | 69 - 124   |
| 1,2-Dichloroethane-d4 (Surr) | 101           |               | 61 - 138   |
| Toluene-d8 (Surr)            | 99            |               | 73 - 120   |

**Lab Sample ID: 240-95062-B-1 MS**

**Matrix: Water**

**Analysis Batch: 326782**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

| Analyte                 | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|-------------------------|---------------|------------------|-------------|-----------|--------------|------|---|------|--------------|
| Acetone                 | 42            | J F2 B           | 200         | 196       |              | ug/L |   | 77   | 19 - 133     |
| Benzene                 | 10            | U                | 100         | 88.5      |              | ug/L |   | 89   | 69 - 127     |
| Bromodichloromethane    | 10            | U                | 100         | 90.6      |              | ug/L |   | 91   | 75 - 128     |
| Bromoform               | 10            | U                | 100         | 84.0      |              | ug/L |   | 84   | 61 - 135     |
| Bromomethane            | 10            | U                | 100         | 99.8      |              | ug/L |   | 100  | 10 - 148     |
| 2-Butanone (MEK)        | 100           | U                | 200         | 204       |              | ug/L |   | 102  | 34 - 153     |
| Carbon disulfide        | 50            | U                | 100         | 81.9      |              | ug/L |   | 82   | 46 - 143     |
| Carbon tetrachloride    | 10            | U                | 100         | 79.8      |              | ug/L |   | 80   | 53 - 175     |
| Chlorobenzene           | 10            | U                | 100         | 86.3      |              | ug/L |   | 86   | 76 - 120     |
| Chloroethane            | 10            | U                | 100         | 106       |              | ug/L |   | 106  | 10 - 141     |
| Chloroform              | 190           |                  | 100         | 286       |              | ug/L |   | 93   | 74 - 125     |
| Chloromethane           | 10            | U                | 100         | 100       |              | ug/L |   | 100  | 34 - 127     |
| cis-1,2-Dichloroethene  | 190           |                  | 100         | 274       |              | ug/L |   | 86   | 69 - 127     |
| cis-1,3-Dichloropropene | 10            | U                | 100         | 84.7      |              | ug/L |   | 85   | 68 - 120     |
| Cyclohexane             | 10            | U                | 100         | 75.9      |              | ug/L |   | 76   | 56 - 135     |

TestAmerica Canton



# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: 240-95062-B-1 MS**

**Matrix: Water**

**Analysis Batch: 326782**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

| Analyte                               | Sample | Sample    | Spike | MS     | MS        | Unit | D | %Rec | %Rec. Limits |
|---------------------------------------|--------|-----------|-------|--------|-----------|------|---|------|--------------|
|                                       | Result | Qualifier | Added | Result | Qualifier |      |   |      |              |
| Dibromochloromethane                  | 10     | U         | 100   | 90.4   |           | ug/L |   | 90   | 62 - 131     |
| 1,2-Dibromo-3-Chloropropane           | 10     | U         | 100   | 76.4   |           | ug/L |   | 76   | 48 - 130     |
| 1,2-Dibromoethane                     | 10     | U         | 100   | 95.6   |           | ug/L |   | 96   | 73 - 121     |
| 1,2-Dichlorobenzene                   | 10     | U         | 100   | 83.1   |           | ug/L |   | 83   | 70 - 120     |
| 1,3-Dichlorobenzene                   | 10     | U         | 100   | 82.1   |           | ug/L |   | 82   | 71 - 120     |
| 1,4-Dichlorobenzene                   | 10     | U         | 100   | 82.8   |           | ug/L |   | 83   | 72 - 120     |
| Dichlorodifluoromethane               | 10     | U         | 100   | 85.3   |           | ug/L |   | 85   | 45 - 130     |
| 1,1-Dichloroethane                    | 3.7    | J         | 100   | 96.1   |           | ug/L |   | 92   | 69 - 122     |
| 1,2-Dichloroethane                    | 40     |           | 100   | 142    |           | ug/L |   | 102  | 64 - 138     |
| 1,1-Dichloroethene                    | 10     | U         | 100   | 87.3   |           | ug/L |   | 87   | 62 - 127     |
| 1,2-Dichloropropane                   | 21     |           | 100   | 116    |           | ug/L |   | 95   | 72 - 131     |
| Ethylbenzene                          | 10     | U         | 100   | 77.7   |           | ug/L |   | 78   | 72 - 121     |
| 2-Hexanone                            | 100    | U         | 200   | 198    |           | ug/L |   | 99   | 21 - 184     |
| Isopropylbenzene                      | 10     | U         | 100   | 75.6   |           | ug/L |   | 76   | 70 - 132     |
| Methyl acetate                        | 100    | U         | 200   | 186    |           | ug/L |   | 93   | 52 - 139     |
| Methylcyclohexane                     | 10     | U         | 100   | 65.8   |           | ug/L |   | 66   | 46 - 139     |
| Methylene Chloride                    | 28     | J         | 100   | 113    |           | ug/L |   | 86   | 52 - 137     |
| 4-Methyl-2-pentanone (MIBK)           | 100    | U         | 200   | 188    |           | ug/L |   | 94   | 53 - 147     |
| Methyl tert-butyl ether               | 10     | U         | 100   | 84.3   |           | ug/L |   | 84   | 67 - 125     |
| Styrene                               | 10     | U         | 100   | 82.3   |           | ug/L |   | 82   | 74 - 125     |
| 1,1,2,2-Tetrachloroethane             | 10     | U         | 100   | 97.4   |           | ug/L |   | 97   | 51 - 123     |
| Tetrachloroethene                     | 13     |           | 100   | 86.7   |           | ug/L |   | 74   | 69 - 126     |
| Toluene                               | 10     | U         | 100   | 86.2   |           | ug/L |   | 86   | 69 - 125     |
| trans-1,2-Dichloroethene              | 10     | U         | 100   | 91.8   |           | ug/L |   | 92   | 66 - 131     |
| trans-1,3-Dichloropropene             | 10     | U         | 100   | 81.4   |           | ug/L |   | 81   | 59 - 120     |
| 1,2,4-Trichlorobenzene                | 10     | U         | 100   | 80.8   |           | ug/L |   | 81   | 26 - 138     |
| 1,1,1-Trichloroethane                 | 10     | U         | 100   | 85.9   |           | ug/L |   | 86   | 57 - 156     |
| 1,1,2-Trichloroethane                 | 10     | U         | 100   | 101    |           | ug/L |   | 101  | 68 - 127     |
| Trichloroethene                       | 25     |           | 100   | 105    |           | ug/L |   | 80   | 68 - 129     |
| Trichlorofluoromethane                | 10     | U         | 100   | 95.6   |           | ug/L |   | 96   | 28 - 172     |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 10     | U         | 100   | 69.3   |           | ug/L |   | 69   | 58 - 137     |
| Vinyl chloride                        | 88     |           | 100   | 191    |           | ug/L |   | 103  | 55 - 123     |
| Xylenes, Total                        | 20     | U         | 200   | 160    |           | ug/L |   | 80   | 71 - 122     |

  

| Surrogate                    | MS        | MS        | Limits   |
|------------------------------|-----------|-----------|----------|
|                              | %Recovery | Qualifier |          |
| 4-Bromofluorobenzene (Surr)  | 99        |           | 69 - 120 |
| Dibromofluoromethane (Surr)  | 97        |           | 69 - 124 |
| 1,2-Dichloroethane-d4 (Surr) | 98        |           | 61 - 138 |
| Toluene-d8 (Surr)            | 98        |           | 73 - 120 |

**Lab Sample ID: 240-95062-B-1 MSD**

**Matrix: Water**

**Analysis Batch: 326782**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

| Analyte | Sample | Sample    | Spike | MSD    | MSD       | Unit | D | %Rec | %Rec. Limits | RPD | Limit |
|---------|--------|-----------|-------|--------|-----------|------|---|------|--------------|-----|-------|
|         | Result | Qualifier | Added | Result | Qualifier |      |   |      |              |     |       |
| Acetone | 42     | J F2 B    | 200   | 128    | F2        | ug/L |   | 43   | 19 - 133     | 42  | 35    |
| Benzene | 10     | U         | 100   | 90.0   |           | ug/L |   | 90   | 69 - 127     | 2   | 10    |

TestAmerica Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: 240-95062-B-1 MSD**

**Client Sample ID: Matrix Spike Duplicate**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 326782**

| Analyte                               | Sample | Sample    | Spike | MSD    | MSD       | Unit | D | %Rec | %Rec.    | RPD | RPD |
|---------------------------------------|--------|-----------|-------|--------|-----------|------|---|------|----------|-----|-----|
|                                       | Result | Qualifier | Added | Result | Qualifier |      |   |      | Limits   |     |     |
| Bromodichloromethane                  | 10     | U         | 100   | 90.0   |           | ug/L |   | 90   | 75 - 128 | 1   | 13  |
| Bromoform                             | 10     | U         | 100   | 80.8   |           | ug/L |   | 81   | 61 - 135 | 4   | 13  |
| Bromomethane                          | 10     | U         | 100   | 102    |           | ug/L |   | 102  | 10 - 148 | 2   | 35  |
| 2-Butanone (MEK)                      | 100    | U         | 200   | 166    |           | ug/L |   | 83   | 34 - 153 | 21  | 23  |
| Carbon disulfide                      | 50     | U         | 100   | 88.6   |           | ug/L |   | 89   | 46 - 143 | 8   | 18  |
| Carbon tetrachloride                  | 10     | U         | 100   | 85.0   |           | ug/L |   | 85   | 53 - 175 | 6   | 17  |
| Chlorobenzene                         | 10     | U         | 100   | 88.2   |           | ug/L |   | 88   | 76 - 120 | 2   | 12  |
| Chloroethane                          | 10     | U         | 100   | 107    |           | ug/L |   | 107  | 10 - 141 | 2   | 35  |
| Chloroform                            | 190    |           | 100   | 297    |           | ug/L |   | 105  | 74 - 125 | 4   | 11  |
| Chloromethane                         | 10     | U         | 100   | 101    |           | ug/L |   | 101  | 34 - 127 | 1   | 25  |
| cis-1,2-Dichloroethene                | 190    |           | 100   | 286    |           | ug/L |   | 97   | 69 - 127 | 4   | 11  |
| cis-1,3-Dichloropropene               | 10     | U         | 100   | 80.9   |           | ug/L |   | 81   | 68 - 120 | 5   | 13  |
| Cyclohexane                           | 10     | U         | 100   | 80.4   |           | ug/L |   | 80   | 56 - 135 | 6   | 35  |
| Dibromochloromethane                  | 10     | U         | 100   | 92.1   |           | ug/L |   | 92   | 62 - 131 | 2   | 15  |
| 1,2-Dibromo-3-Chloropropane           | 10     | U         | 100   | 72.0   |           | ug/L |   | 72   | 48 - 130 | 6   | 31  |
| 1,2-Dibromoethane                     | 10     | U         | 100   | 94.4   |           | ug/L |   | 94   | 73 - 121 | 1   | 12  |
| 1,2-Dichlorobenzene                   | 10     | U         | 100   | 86.9   |           | ug/L |   | 87   | 70 - 120 | 4   | 19  |
| 1,3-Dichlorobenzene                   | 10     | U         | 100   | 84.5   |           | ug/L |   | 84   | 71 - 120 | 3   | 18  |
| 1,4-Dichlorobenzene                   | 10     | U         | 100   | 84.7   |           | ug/L |   | 85   | 72 - 120 | 2   | 17  |
| Dichlorodifluoromethane               | 10     | U         | 100   | 82.4   |           | ug/L |   | 82   | 45 - 130 | 3   | 34  |
| 1,1-Dichloroethane                    | 3.7    | J         | 100   | 103    |           | ug/L |   | 99   | 69 - 122 | 7   | 11  |
| 1,2-Dichloroethane                    | 40     |           | 100   | 141    |           | ug/L |   | 101  | 64 - 138 | 1   | 11  |
| 1,1-Dichloroethene                    | 10     | U         | 100   | 93.5   |           | ug/L |   | 94   | 62 - 127 | 7   | 14  |
| 1,2-Dichloropropane                   | 21     |           | 100   | 116    |           | ug/L |   | 95   | 72 - 131 | 0   | 12  |
| Ethylbenzene                          | 10     | U         | 100   | 84.2   |           | ug/L |   | 84   | 72 - 121 | 8   | 15  |
| 2-Hexanone                            | 100    | U         | 200   | 189    |           | ug/L |   | 94   | 21 - 184 | 5   | 12  |
| Isopropylbenzene                      | 10     | U         | 100   | 76.3   |           | ug/L |   | 76   | 70 - 132 | 1   | 16  |
| Methyl acetate                        | 100    | U         | 200   | 176    |           | ug/L |   | 88   | 52 - 139 | 5   | 14  |
| Methylcyclohexane                     | 10     | U         | 100   | 70.7   |           | ug/L |   | 71   | 46 - 139 | 7   | 35  |
| Methylene Chloride                    | 28     | J         | 100   | 117    |           | ug/L |   | 89   | 52 - 137 | 3   | 12  |
| 4-Methyl-2-pentanone (MIBK)           | 100    | U         | 200   | 165    |           | ug/L |   | 83   | 53 - 147 | 13  | 16  |
| Methyl tert-butyl ether               | 10     | U         | 100   | 86.0   |           | ug/L |   | 86   | 67 - 125 | 2   | 12  |
| Styrene                               | 10     | U         | 100   | 83.1   |           | ug/L |   | 83   | 74 - 125 | 1   | 14  |
| 1,1,2,2-Tetrachloroethane             | 10     | U         | 100   | 95.4   |           | ug/L |   | 95   | 51 - 123 | 2   | 17  |
| Tetrachloroethene                     | 13     |           | 100   | 90.6   |           | ug/L |   | 78   | 69 - 126 | 4   | 18  |
| Toluene                               | 10     | U         | 100   | 90.6   |           | ug/L |   | 91   | 69 - 125 | 5   | 14  |
| trans-1,2-Dichloroethene              | 10     | U         | 100   | 97.3   |           | ug/L |   | 97   | 66 - 131 | 6   | 11  |
| trans-1,3-Dichloropropene             | 10     | U         | 100   | 78.1   |           | ug/L |   | 78   | 59 - 120 | 4   | 14  |
| 1,2,4-Trichlorobenzene                | 10     | U         | 100   | 80.6   |           | ug/L |   | 81   | 26 - 138 | 0   | 35  |
| 1,1,1-Trichloroethane                 | 10     | U         | 100   | 90.3   |           | ug/L |   | 90   | 57 - 156 | 5   | 13  |
| 1,1,2-Trichloroethane                 | 10     | U         | 100   | 101    |           | ug/L |   | 101  | 68 - 127 | 0   | 11  |
| Trichloroethene                       | 25     |           | 100   | 107    |           | ug/L |   | 82   | 68 - 129 | 2   | 12  |
| Trichlorofluoromethane                | 10     | U         | 100   | 95.8   |           | ug/L |   | 96   | 28 - 172 | 0   | 26  |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 10     | U         | 100   | 76.3   |           | ug/L |   | 76   | 58 - 137 | 10  | 35  |
| Vinyl chloride                        | 88     |           | 100   | 197    |           | ug/L |   | 110  | 55 - 123 | 4   | 12  |
| Xylenes, Total                        | 20     | U         | 200   | 167    |           | ug/L |   | 84   | 71 - 122 | 4   | 14  |

TestAmerica Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: 240-95062-B-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 326782**

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

| Surrogate                    | MSD<br>%Recovery | MSD<br>Qualifier | Limits   |
|------------------------------|------------------|------------------|----------|
| 4-Bromofluorobenzene (Surr)  | 99               |                  | 69 - 120 |
| Dibromofluoromethane (Surr)  | 98               |                  | 69 - 124 |
| 1,2-Dichloroethane-d4 (Surr) | 97               |                  | 61 - 138 |
| Toluene-d8 (Surr)            | 101              |                  | 73 - 120 |

**Lab Sample ID: MB 240-326849/6**  
**Matrix: Water**  
**Analysis Batch: 326849**

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

| Analyte                     | MB<br>Result | MB<br>Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------------|-----------------|-----|------|------|---|----------|----------------|---------|
| Acetone                     | 10           | U               | 10  | 1.8  | ug/L |   |          | 05/15/18 09:54 | 1       |
| Benzene                     | 1.0          | U               | 1.0 | 0.28 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Bromodichloromethane        | 1.0          | U               | 1.0 | 0.30 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Bromoform                   | 1.0          | U               | 1.0 | 0.43 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Bromomethane                | 1.0          | U               | 1.0 | 0.42 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 2-Butanone (MEK)            | 10           | U               | 10  | 1.0  | ug/L |   |          | 05/15/18 09:54 | 1       |
| Carbon disulfide            | 5.0          | U               | 5.0 | 0.34 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Carbon tetrachloride        | 1.0          | U               | 1.0 | 0.35 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Chlorobenzene               | 1.0          | U               | 1.0 | 0.32 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Chloroethane                | 1.0          | U               | 1.0 | 0.41 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Chloroform                  | 1.0          | U               | 1.0 | 0.31 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Chloromethane               | 1.0          | U               | 1.0 | 0.43 | ug/L |   |          | 05/15/18 09:54 | 1       |
| cis-1,2-Dichloroethene      | 1.0          | U               | 1.0 | 0.30 | ug/L |   |          | 05/15/18 09:54 | 1       |
| cis-1,3-Dichloropropene     | 1.0          | U               | 1.0 | 0.26 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Cyclohexane                 | 1.0          | U               | 1.0 | 0.44 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Dibromochloromethane        | 1.0          | U               | 1.0 | 0.25 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,2-Dibromo-3-Chloropropane | 1.0          | U               | 1.0 | 0.47 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,2-Dibromoethane           | 1.0          | U               | 1.0 | 0.23 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,2-Dichlorobenzene         | 1.0          | U               | 1.0 | 0.26 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,3-Dichlorobenzene         | 1.0          | U               | 1.0 | 0.32 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,4-Dichlorobenzene         | 1.0          | U               | 1.0 | 0.23 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Dichlorodifluoromethane     | 1.0          | U               | 1.0 | 0.50 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,1-Dichloroethane          | 1.0          | U               | 1.0 | 0.25 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,2-Dichloroethane          | 1.0          | U               | 1.0 | 0.30 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,1-Dichloroethene          | 1.0          | U               | 1.0 | 0.27 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,2-Dichloropropane         | 1.0          | U               | 1.0 | 0.30 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Ethylbenzene                | 1.0          | U               | 1.0 | 0.26 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 2-Hexanone                  | 10           | U               | 10  | 1.2  | ug/L |   |          | 05/15/18 09:54 | 1       |
| Isopropylbenzene            | 1.0          | U               | 1.0 | 0.21 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Methyl acetate              | 10           | U               | 10  | 1.4  | ug/L |   |          | 05/15/18 09:54 | 1       |
| Methylcyclohexane           | 1.0          | U               | 1.0 | 0.45 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Methylene Chloride          | 5.0          | U               | 5.0 | 0.53 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 4-Methyl-2-pentanone (MIBK) | 10           | U               | 10  | 0.71 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Methyl tert-butyl ether     | 1.0          | U               | 1.0 | 0.27 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Styrene                     | 1.0          | U               | 1.0 | 0.23 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,1,1,2,2-Tetrachloroethane | 1.0          | U               | 1.0 | 0.32 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Tetrachloroethene           | 1.0          | U               | 1.0 | 0.30 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Toluene                     | 1.0          | U               | 1.0 | 0.23 | ug/L |   |          | 05/15/18 09:54 | 1       |

TestAmerica Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: MB 240-326849/6**  
**Matrix: Water**  
**Analysis Batch: 326849**

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

| Analyte                               | MB     | MB        | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
|                                       | Result | Qualifier |     |      |      |   |          |                |         |
| trans-1,2-Dichloroethene              | 1.0    | U         | 1.0 | 0.29 | ug/L |   |          | 05/15/18 09:54 | 1       |
| trans-1,3-Dichloropropene             | 1.0    | U         | 1.0 | 0.31 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,2,4-Trichlorobenzene                | 1.0    | U         | 1.0 | 0.27 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,1,1-Trichloroethane                 | 1.0    | U         | 1.0 | 0.23 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,1,2-Trichloroethane                 | 1.0    | U         | 1.0 | 0.34 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Trichloroethene                       | 1.0    | U         | 1.0 | 0.33 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Trichlorofluoromethane                | 1.0    | U         | 1.0 | 0.50 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0    | U         | 1.0 | 0.41 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,2,3-Trimethylbenzene                | 5.0    | U         | 5.0 | 0.22 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,2,4-Trimethylbenzene                | 1.0    | U         | 1.0 | 0.24 | ug/L |   |          | 05/15/18 09:54 | 1       |
| 1,3,5-Trimethylbenzene                | 1.0    | U         | 1.0 | 0.24 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Vinyl chloride                        | 1.0    | U         | 1.0 | 0.45 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Xylenes, Total                        | 2.0    | U         | 2.0 | 0.24 | ug/L |   |          | 05/15/18 09:54 | 1       |
| Diethyl ether                         | 2.0    | U         | 2.0 | 0.35 | ug/L |   |          | 05/15/18 09:54 | 1       |

| Surrogate                    | MB        | MB        | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
|                              | %Recovery | Qualifier |          |          |                |         |
| 4-Bromofluorobenzene (Surr)  | 83        |           | 69 - 120 |          | 05/15/18 09:54 | 1       |
| Dibromofluoromethane (Surr)  | 96        |           | 69 - 124 |          | 05/15/18 09:54 | 1       |
| 1,2-Dichloroethane-d4 (Surr) | 98        |           | 61 - 138 |          | 05/15/18 09:54 | 1       |
| Toluene-d8 (Surr)            | 95        |           | 73 - 120 |          | 05/15/18 09:54 | 1       |

**Lab Sample ID: LCS 240-326849/4**  
**Matrix: Water**  
**Analysis Batch: 326849**

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

| Analyte                     | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|-----------------------------|-------------|------------|---------------|------|---|------|--------------|
|                             |             |            |               |      |   |      |              |
| Benzene                     | 10.0        | 10.0       |               | ug/L |   | 100  | 79 - 120     |
| Bromodichloromethane        | 10.0        | 9.85       |               | ug/L |   | 98   | 79 - 125     |
| Bromoform                   | 10.0        | 8.62       |               | ug/L |   | 86   | 55 - 145     |
| Bromomethane                | 10.0        | 14.2       |               | ug/L |   | 142  | 17 - 158     |
| 2-Butanone (MEK)            | 20.0        | 18.0       |               | ug/L |   | 90   | 43 - 149     |
| Carbon disulfide            | 10.0        | 9.27       |               | ug/L |   | 93   | 49 - 141     |
| Carbon tetrachloride        | 10.0        | 9.79       |               | ug/L |   | 98   | 55 - 171     |
| Chlorobenzene               | 10.0        | 10.8       |               | ug/L |   | 108  | 80 - 120     |
| Chloroethane                | 10.0        | 10.4       |               | ug/L |   | 104  | 10 - 149     |
| Chloroform                  | 10.0        | 10.1       |               | ug/L |   | 101  | 80 - 120     |
| Chloromethane               | 10.0        | 9.74       |               | ug/L |   | 97   | 59 - 124     |
| cis-1,2-Dichloroethene      | 10.0        | 9.70       |               | ug/L |   | 97   | 77 - 120     |
| cis-1,3-Dichloropropene     | 10.0        | 8.48       |               | ug/L |   | 85   | 75 - 120     |
| Cyclohexane                 | 10.0        | 9.61       |               | ug/L |   | 96   | 66 - 135     |
| Dibromochloromethane        | 10.0        | 9.37       |               | ug/L |   | 94   | 64 - 129     |
| 1,2-Dibromo-3-Chloropropane | 10.0        | 8.00       |               | ug/L |   | 80   | 50 - 130     |
| 1,2-Dibromoethane           | 10.0        | 10.0       |               | ug/L |   | 100  | 80 - 120     |
| 1,2-Dichlorobenzene         | 10.0        | 10.1       |               | ug/L |   | 101  | 80 - 120     |
| 1,3-Dichlorobenzene         | 10.0        | 10.1       |               | ug/L |   | 101  | 80 - 120     |
| 1,4-Dichlorobenzene         | 10.0        | 10.1       |               | ug/L |   | 101  | 80 - 120     |
| Dichlorodifluoromethane     | 10.0        | 9.43       |               | ug/L |   | 94   | 42 - 141     |

TestAmerica Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: LCS 240-326849/4**  
**Matrix: Water**  
**Analysis Batch: 326849**

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

| Analyte                               | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------------------------------|-------------|------------|---------------|------|---|------|--------------|
| 1,1-Dichloroethane                    | 10.0        | 9.71       |               | ug/L |   | 97   | 74 - 120     |
| 1,2-Dichloroethane                    | 10.0        | 9.85       |               | ug/L |   | 99   | 68 - 133     |
| 1,1-Dichloroethene                    | 10.0        | 10.2       |               | ug/L |   | 102  | 65 - 127     |
| 1,2-Dichloropropane                   | 10.0        | 10.6       |               | ug/L |   | 106  | 78 - 127     |
| Ethylbenzene                          | 10.0        | 10.6       |               | ug/L |   | 106  | 80 - 120     |
| 2-Hexanone                            | 20.0        | 16.8       |               | ug/L |   | 84   | 28 - 169     |
| Isopropylbenzene                      | 10.0        | 10.3       |               | ug/L |   | 103  | 80 - 128     |
| Methyl acetate                        | 20.0        | 17.7       |               | ug/L |   | 89   | 63 - 137     |
| Methylcyclohexane                     | 10.0        | 8.91       |               | ug/L |   | 89   | 63 - 141     |
| Methylene Chloride                    | 10.0        | 10.2       |               | ug/L |   | 102  | 64 - 140     |
| 4-Methyl-2-pentanone (MIBK)           | 20.0        | 16.4       |               | ug/L |   | 82   | 53 - 144     |
| Methyl tert-butyl ether               | 10.0        | 7.84       |               | ug/L |   | 78   | 73 - 120     |
| Styrene                               | 10.0        | 10.8       |               | ug/L |   | 108  | 80 - 121     |
| 1,1,2,2-Tetrachloroethane             | 10.0        | 9.71       |               | ug/L |   | 97   | 58 - 122     |
| Tetrachloroethene                     | 10.0        | 10.6       |               | ug/L |   | 106  | 80 - 122     |
| Toluene                               | 10.0        | 10.8       |               | ug/L |   | 108  | 78 - 120     |
| trans-1,2-Dichloroethene              | 10.0        | 10.3       |               | ug/L |   | 103  | 74 - 124     |
| trans-1,3-Dichloropropene             | 10.0        | 7.99       |               | ug/L |   | 80   | 67 - 120     |
| 1,2,4-Trichlorobenzene                | 10.0        | 8.01       |               | ug/L |   | 80   | 34 - 141     |
| 1,1,1-Trichloroethane                 | 10.0        | 9.59       |               | ug/L |   | 96   | 64 - 147     |
| 1,1,2-Trichloroethane                 | 10.0        | 10.9       |               | ug/L |   | 109  | 76 - 121     |
| Trichloroethene                       | 10.0        | 9.72       |               | ug/L |   | 97   | 76 - 124     |
| Trichlorofluoromethane                | 10.0        | 13.3       |               | ug/L |   | 133  | 27 - 176     |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 10.0        | 10.2       |               | ug/L |   | 102  | 65 - 144     |
| 1,2,4-Trimethylbenzene                | 10.0        | 9.78       |               | ug/L |   | 98   | 80 - 120     |
| 1,3,5-Trimethylbenzene                | 10.0        | 9.85       |               | ug/L |   | 98   | 79 - 120     |
| Vinyl chloride                        | 10.0        | 10.7       |               | ug/L |   | 107  | 65 - 124     |
| Xylenes, Total                        | 20.0        | 21.3       |               | ug/L |   | 107  | 80 - 120     |
| 1,4-Dioxane                           | 200         | 175        |               | ug/L |   | 88   | 35 - 134     |
| Diethyl ether                         | 10.0        | 10.1       |               | ug/L |   | 101  | 72 - 125     |

| Surrogate                    | LCS %Recovery | LCS Qualifier | Limits   |
|------------------------------|---------------|---------------|----------|
| 4-Bromofluorobenzene (Surr)  | 101           |               | 69 - 120 |
| Dibromofluoromethane (Surr)  | 93            |               | 69 - 124 |
| 1,2-Dichloroethane-d4 (Surr) | 92            |               | 61 - 138 |
| Toluene-d8 (Surr)            | 102           |               | 73 - 120 |

**Lab Sample ID: 240-95404-6 MS**  
**Matrix: Water**  
**Analysis Batch: 326849**

**Client Sample ID: MW-40\_050818**  
**Prep Type: Total/NA**

| Analyte              | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|----------------------|---------------|------------------|-------------|-----------|--------------|------|---|------|--------------|
| Acetone              | 10            | U F2             | 20.0        | 16.9      |              | ug/L |   | 85   | 19 - 133     |
| Benzene              | 1.0           | U                | 10.0        | 8.84      |              | ug/L |   | 88   | 69 - 127     |
| Bromodichloromethane | 1.0           | U                | 10.0        | 8.61      |              | ug/L |   | 86   | 75 - 128     |
| Bromoform            | 1.0           | U                | 10.0        | 7.55      |              | ug/L |   | 75   | 61 - 135     |
| Bromomethane         | 1.0           | U                | 10.0        | 13.5      |              | ug/L |   | 135  | 10 - 148     |

TestAmerica Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

Lab Sample ID: 240-95404-6 MS

Matrix: Water

Analysis Batch: 326849

Client Sample ID: MW-40\_050818

Prep Type: Total/NA

| Analyte                               | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------------------------------|---------------|------------------|-------------|-----------|--------------|------|---|------|--------------|
| 2-Butanone (MEK)                      | 10            | U                | 20.0        | 18.2      |              | ug/L |   | 91   | 34 - 153     |
| Carbon disulfide                      | 5.0           | U                | 10.0        | 8.16      |              | ug/L |   | 82   | 46 - 143     |
| Carbon tetrachloride                  | 1.0           | U                | 10.0        | 7.84      |              | ug/L |   | 78   | 53 - 175     |
| Chlorobenzene                         | 1.0           | U                | 10.0        | 9.45      |              | ug/L |   | 95   | 76 - 120     |
| Chloroethane                          | 1.0           | U                | 10.0        | 10.2      |              | ug/L |   | 102  | 10 - 141     |
| Chloroform                            | 1.0           | U                | 10.0        | 8.93      |              | ug/L |   | 89   | 74 - 125     |
| Chloromethane                         | 1.0           | U                | 10.0        | 9.83      |              | ug/L |   | 98   | 34 - 127     |
| cis-1,2-Dichloroethene                | 2.3           |                  | 10.0        | 10.5      |              | ug/L |   | 82   | 69 - 127     |
| cis-1,3-Dichloropropene               | 1.0           | U F1             | 10.0        | 6.81      |              | ug/L |   | 68   | 68 - 120     |
| Cyclohexane                           | 1.0           | U                | 10.0        | 6.63      |              | ug/L |   | 66   | 56 - 135     |
| Dibromochloromethane                  | 1.0           | U                | 10.0        | 8.54      |              | ug/L |   | 85   | 62 - 131     |
| 1,2-Dibromo-3-Chloropropane           | 1.0           | U                | 10.0        | 6.98      |              | ug/L |   | 70   | 48 - 130     |
| 1,2-Dibromoethane                     | 1.0           | U                | 10.0        | 9.15      |              | ug/L |   | 92   | 73 - 121     |
| 1,2-Dichlorobenzene                   | 1.0           | U                | 10.0        | 8.63      |              | ug/L |   | 86   | 70 - 120     |
| 1,3-Dichlorobenzene                   | 1.0           | U                | 10.0        | 8.46      |              | ug/L |   | 85   | 71 - 120     |
| 1,4-Dichlorobenzene                   | 1.0           | U                | 10.0        | 8.63      |              | ug/L |   | 86   | 72 - 120     |
| Dichlorodifluoromethane               | 1.0           | U                | 10.0        | 9.29      |              | ug/L |   | 93   | 45 - 130     |
| 1,1-Dichloroethane                    | 1.0           | U                | 10.0        | 8.63      |              | ug/L |   | 86   | 69 - 122     |
| 1,2-Dichloroethane                    | 1.0           | U                | 10.0        | 8.92      |              | ug/L |   | 89   | 64 - 138     |
| 1,1-Dichloroethene                    | 1.0           | U                | 10.0        | 8.62      |              | ug/L |   | 86   | 62 - 127     |
| 1,2-Dichloropropane                   | 1.0           | U                | 10.0        | 9.26      |              | ug/L |   | 93   | 72 - 131     |
| Ethylbenzene                          | 1.0           | U                | 10.0        | 9.10      |              | ug/L |   | 91   | 72 - 121     |
| 2-Hexanone                            | 10            | U                | 20.0        | 21.1      |              | ug/L |   | 105  | 21 - 184     |
| Isopropylbenzene                      | 1.0           | U                | 10.0        | 8.20      |              | ug/L |   | 82   | 70 - 132     |
| Methyl acetate                        | 10            | U F2             | 20.0        | 17.1      |              | ug/L |   | 86   | 52 - 139     |
| Methylcyclohexane                     | 1.0           | U                | 10.0        | 5.94      |              | ug/L |   | 59   | 46 - 139     |
| Methylene Chloride                    | 5.0           | U                | 10.0        | 8.78      |              | ug/L |   | 88   | 52 - 137     |
| 4-Methyl-2-pentanone (MIBK)           | 10            | U                | 20.0        | 19.4      |              | ug/L |   | 97   | 53 - 147     |
| Methyl tert-butyl ether               | 1.0           | U                | 10.0        | 7.32      |              | ug/L |   | 73   | 67 - 125     |
| Styrene                               | 1.0           | U                | 10.0        | 9.00      |              | ug/L |   | 90   | 74 - 125     |
| 1,1,2,2-Tetrachloroethane             | 1.0           | U                | 10.0        | 9.20      |              | ug/L |   | 92   | 51 - 123     |
| Tetrachloroethene                     | 1.0           | U                | 10.0        | 9.19      |              | ug/L |   | 92   | 69 - 126     |
| Toluene                               | 1.0           | U                | 10.0        | 9.76      |              | ug/L |   | 98   | 69 - 125     |
| trans-1,2-Dichloroethene              | 0.34          | J                | 10.0        | 9.55      |              | ug/L |   | 92   | 66 - 131     |
| trans-1,3-Dichloropropene             | 1.0           | U                | 10.0        | 7.03      |              | ug/L |   | 70   | 59 - 120     |
| 1,2,4-Trichlorobenzene                | 1.0           | U                | 10.0        | 5.28      |              | ug/L |   | 53   | 26 - 138     |
| 1,1,1-Trichloroethane                 | 1.0           | U                | 10.0        | 8.05      |              | ug/L |   | 81   | 57 - 156     |
| 1,1,2-Trichloroethane                 | 1.0           | U                | 10.0        | 10.1      |              | ug/L |   | 101  | 68 - 127     |
| Trichloroethene                       | 1.0           | U                | 10.0        | 8.52      |              | ug/L |   | 85   | 68 - 129     |
| Trichlorofluoromethane                | 1.0           | U                | 10.0        | 13.4      |              | ug/L |   | 134  | 28 - 172     |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0           | U F2             | 10.0        | 7.14      |              | ug/L |   | 71   | 58 - 137     |
| 1,2,4-Trimethylbenzene                | 1.0           | U                | 10.0        | 8.07      |              | ug/L |   | 81   | 64 - 120     |
| 1,3,5-Trimethylbenzene                | 1.0           | U                | 10.0        | 8.09      |              | ug/L |   | 81   | 67 - 120     |
| Vinyl chloride                        | 1.3           |                  | 10.0        | 11.6      |              | ug/L |   | 103  | 55 - 123     |
| Xylenes, Total                        | 2.0           | U                | 20.0        | 17.8      |              | ug/L |   | 89   | 71 - 122     |
| 1,4-Dioxane                           | 50            | U                | 200         | 98.6      |              | ug/L |   | 49   | 13 - 155     |
| Diethyl ether                         | 2.0           | U                | 10.0        | 9.28      |              | ug/L |   | 93   | 65 - 124     |

TestAmerica Canton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: 240-95404-6 MS**

**Matrix: Water**

**Analysis Batch: 326849**

**Client Sample ID: MW-40\_050818**

**Prep Type: Total/NA**

| Surrogate                    | MS<br>%Recovery | MS<br>Qualifier | Limits   |
|------------------------------|-----------------|-----------------|----------|
| 4-Bromofluorobenzene (Surr)  | 95              |                 | 69 - 120 |
| Dibromofluoromethane (Surr)  | 94              |                 | 69 - 124 |
| 1,2-Dichloroethane-d4 (Surr) | 94              |                 | 61 - 138 |
| Toluene-d8 (Surr)            | 103             |                 | 73 - 120 |

**Lab Sample ID: 240-95404-6 MSD**

**Matrix: Water**

**Analysis Batch: 326849**

**Client Sample ID: MW-40\_050818**

**Prep Type: Total/NA**

| Analyte                     | Sample<br>Result | Sample<br>Qualifier | Spike<br>Added | MSD<br>Result | MSD<br>Qualifier | Unit | D | %Rec | %Rec.<br>Limits | RPD | RPD<br>Limit |
|-----------------------------|------------------|---------------------|----------------|---------------|------------------|------|---|------|-----------------|-----|--------------|
| Acetone                     | 10               | U F2                | 20.0           | 11.7          | F2               | ug/L |   | 59   | 19 - 133        | 36  | 35           |
| Benzene                     | 1.0              | U                   | 10.0           | 8.93          |                  | ug/L |   | 89   | 69 - 127        | 1   | 10           |
| Bromodichloromethane        | 1.0              | U                   | 10.0           | 8.43          |                  | ug/L |   | 84   | 75 - 128        | 2   | 13           |
| Bromoform                   | 1.0              | U                   | 10.0           | 7.50          |                  | ug/L |   | 75   | 61 - 135        | 1   | 13           |
| Bromomethane                | 1.0              | U                   | 10.0           | 14.3          |                  | ug/L |   | 143  | 10 - 148        | 5   | 35           |
| 2-Butanone (MEK)            | 10               | U                   | 20.0           | 15.3          |                  | ug/L |   | 76   | 34 - 153        | 17  | 23           |
| Carbon disulfide            | 5.0              | U                   | 10.0           | 8.80          |                  | ug/L |   | 88   | 46 - 143        | 8   | 18           |
| Carbon tetrachloride        | 1.0              | U                   | 10.0           | 9.15          |                  | ug/L |   | 92   | 53 - 175        | 16  | 17           |
| Chlorobenzene               | 1.0              | U                   | 10.0           | 9.46          |                  | ug/L |   | 95   | 76 - 120        | 0   | 12           |
| Chloroethane                | 1.0              | U                   | 10.0           | 10.9          |                  | ug/L |   | 109  | 10 - 141        | 6   | 35           |
| Chloroform                  | 1.0              | U                   | 10.0           | 9.06          |                  | ug/L |   | 91   | 74 - 125        | 1   | 11           |
| Chloromethane               | 1.0              | U                   | 10.0           | 10.4          |                  | ug/L |   | 104  | 34 - 127        | 6   | 25           |
| cis-1,2-Dichloroethene      | 2.3              |                     | 10.0           | 10.6          |                  | ug/L |   | 83   | 69 - 127        | 1   | 11           |
| cis-1,3-Dichloropropene     | 1.0              | U F1                | 10.0           | 6.69          | F1               | ug/L |   | 67   | 68 - 120        | 2   | 13           |
| Cyclohexane                 | 1.0              | U                   | 10.0           | 8.98          |                  | ug/L |   | 90   | 56 - 135        | 30  | 35           |
| Dibromochloromethane        | 1.0              | U                   | 10.0           | 7.95          |                  | ug/L |   | 80   | 62 - 131        | 7   | 15           |
| 1,2-Dibromo-3-Chloropropane | 1.0              | U                   | 10.0           | 7.16          |                  | ug/L |   | 72   | 48 - 130        | 3   | 31           |
| 1,2-Dibromoethane           | 1.0              | U                   | 10.0           | 8.54          |                  | ug/L |   | 85   | 73 - 121        | 7   | 12           |
| 1,2-Dichlorobenzene         | 1.0              | U                   | 10.0           | 9.02          |                  | ug/L |   | 90   | 70 - 120        | 4   | 19           |
| 1,3-Dichlorobenzene         | 1.0              | U                   | 10.0           | 8.75          |                  | ug/L |   | 88   | 71 - 120        | 3   | 18           |
| 1,4-Dichlorobenzene         | 1.0              | U                   | 10.0           | 8.94          |                  | ug/L |   | 89   | 72 - 120        | 3   | 17           |
| Dichlorodifluoromethane     | 1.0              | U                   | 10.0           | 9.83          |                  | ug/L |   | 98   | 45 - 130        | 6   | 34           |
| 1,1-Dichloroethane          | 1.0              | U                   | 10.0           | 8.85          |                  | ug/L |   | 89   | 69 - 122        | 2   | 11           |
| 1,2-Dichloroethane          | 1.0              | U                   | 10.0           | 8.40          |                  | ug/L |   | 84   | 64 - 138        | 6   | 11           |
| 1,1-Dichloroethene          | 1.0              | U                   | 10.0           | 9.83          |                  | ug/L |   | 98   | 62 - 127        | 13  | 14           |
| 1,2-Dichloropropane         | 1.0              | U                   | 10.0           | 8.86          |                  | ug/L |   | 89   | 72 - 131        | 4   | 12           |
| Ethylbenzene                | 1.0              | U                   | 10.0           | 9.40          |                  | ug/L |   | 94   | 72 - 121        | 3   | 15           |
| 2-Hexanone                  | 10               | U                   | 20.0           | 19.5          |                  | ug/L |   | 98   | 21 - 184        | 8   | 12           |
| Isopropylbenzene            | 1.0              | U                   | 10.0           | 9.31          |                  | ug/L |   | 93   | 70 - 132        | 13  | 16           |
| Methyl acetate              | 10               | U F2                | 20.0           | 14.8          | F2               | ug/L |   | 74   | 52 - 139        | 15  | 14           |
| Methylcyclohexane           | 1.0              | U                   | 10.0           | 8.21          |                  | ug/L |   | 82   | 46 - 139        | 32  | 35           |
| Methylene Chloride          | 5.0              | U                   | 10.0           | 9.19          |                  | ug/L |   | 92   | 52 - 137        | 5   | 12           |
| 4-Methyl-2-pentanone (MIBK) | 10               | U                   | 20.0           | 18.7          |                  | ug/L |   | 93   | 53 - 147        | 4   | 16           |
| Methyl tert-butyl ether     | 1.0              | U                   | 10.0           | 7.08          |                  | ug/L |   | 71   | 67 - 125        | 3   | 12           |
| Styrene                     | 1.0              | U                   | 10.0           | 9.49          |                  | ug/L |   | 95   | 74 - 125        | 5   | 14           |
| 1,1,2,2-Tetrachloroethane   | 1.0              | U                   | 10.0           | 8.40          |                  | ug/L |   | 84   | 51 - 123        | 9   | 17           |
| Tetrachloroethene           | 1.0              | U                   | 10.0           | 9.90          |                  | ug/L |   | 99   | 69 - 126        | 7   | 18           |
| Toluene                     | 1.0              | U                   | 10.0           | 9.63          |                  | ug/L |   | 96   | 69 - 125        | 1   | 14           |

TestAmerica Canton



# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: 240-95404-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 326849**

**Client Sample ID: MW-40\_050818**  
**Prep Type: Total/NA**

| Analyte                               | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---------------------------------------|---------------|------------------|-------------|------------|---------------|------|---|------|--------------|-----|-----------|
| trans-1,2-Dichloroethene              | 0.34          | J                | 10.0        | 9.94       |               | ug/L |   | 96   | 66 - 131     | 4   | 11        |
| trans-1,3-Dichloropropene             | 1.0           | U                | 10.0        | 6.65       |               | ug/L |   | 66   | 59 - 120     | 6   | 14        |
| 1,2,4-Trichlorobenzene                | 1.0           | U                | 10.0        | 7.02       |               | ug/L |   | 70   | 26 - 138     | 28  | 35        |
| 1,1,1-Trichloroethane                 | 1.0           | U                | 10.0        | 8.78       |               | ug/L |   | 88   | 57 - 156     | 9   | 13        |
| 1,1,2-Trichloroethane                 | 1.0           | U                | 10.0        | 9.60       |               | ug/L |   | 96   | 68 - 127     | 5   | 11        |
| Trichloroethene                       | 1.0           | U                | 10.0        | 8.75       |               | ug/L |   | 88   | 68 - 129     | 3   | 12        |
| Trichlorofluoromethane                | 1.0           | U                | 10.0        | 14.2       |               | ug/L |   | 142  | 28 - 172     | 6   | 26        |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0           | U F2             | 10.0        | 10.3       | F2            | ug/L |   | 103  | 58 - 137     | 36  | 35        |
| 1,2,4-Trimethylbenzene                | 1.0           | U                | 10.0        | 8.49       |               | ug/L |   | 85   | 64 - 120     | 5   | 22        |
| 1,3,5-Trimethylbenzene                | 1.0           | U                | 10.0        | 8.48       |               | ug/L |   | 85   | 67 - 120     | 5   | 25        |
| Vinyl chloride                        | 1.3           |                  | 10.0        | 12.4       |               | ug/L |   | 110  | 55 - 123     | 6   | 12        |
| Xylenes, Total                        | 2.0           | U                | 20.0        | 19.1       |               | ug/L |   | 95   | 71 - 122     | 7   | 14        |
| 1,4-Dioxane                           | 50            | U                | 200         | 103        |               | ug/L |   | 51   | 13 - 155     | 4   | 35        |
| Diethyl ether                         | 2.0           | U                | 10.0        | 9.58       |               | ug/L |   | 96   | 65 - 124     | 3   | 11        |

| Surrogate                    | MSD %Recovery | MSD Qualifier | Limits   |
|------------------------------|---------------|---------------|----------|
| 4-Bromofluorobenzene (Surr)  | 103           |               | 69 - 120 |
| Dibromofluoromethane (Surr)  | 94            |               | 69 - 124 |
| 1,2-Dichloroethane-d4 (Surr) | 88            |               | 61 - 138 |
| Toluene-d8 (Surr)            | 101           |               | 73 - 120 |

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

**Lab Sample ID: MB 240-326885/5**  
**Matrix: Water**  
**Analysis Batch: 326885**

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

| Analyte     | MB Result | MB Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------|-----------|--------------|-----|------|------|---|----------|----------------|---------|
| 1,4-Dioxane | 2.0       | U            | 2.0 | 0.24 | ug/L |   |          | 05/15/18 11:50 | 1       |

| Surrogate                    | MB %Recovery | MB Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|--------------|--------------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 94           |              | 63 - 125 |          | 05/15/18 11:50 | 1       |

**Lab Sample ID: LCS 240-326885/4**  
**Matrix: Water**  
**Analysis Batch: 326885**

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

| Analyte     | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|-------------|-------------|------------|---------------|------|---|------|--------------|
| 1,4-Dioxane | 10.0        | 9.20       |               | ug/L |   | 92   | 59 - 131     |

| Surrogate                    | LCS %Recovery | LCS Qualifier | Limits   |
|------------------------------|---------------|---------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 90            |               | 63 - 125 |

TestAmerica Canton



# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

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

**Lab Sample ID: 240-95404-6 MS**  
**Matrix: Water**  
**Analysis Batch: 326885**

**Client Sample ID: MW-40\_050818**  
**Prep Type: Total/NA**

| Analyte                      | Sample Result    | Sample Qualifier | Spike Added   | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|------------------------------|------------------|------------------|---------------|-----------|--------------|------|---|------|--------------|
| 1,4-Dioxane                  | 2.0              | U                | 10.0          | 8.57      |              | ug/L |   | 86   | 52 - 129     |
| <b>MS MS</b>                 |                  |                  |               |           |              |      |   |      |              |
| <b>Surrogate</b>             | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |           |              |      |   |      |              |
| 1,2-Dichloroethane-d4 (Surr) | 93               |                  | 63 - 125      |           |              |      |   |      |              |

**Lab Sample ID: 240-95404-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 326885**

**Client Sample ID: MW-40\_050818**  
**Prep Type: Total/NA**

| Analyte                      | Sample Result    | Sample Qualifier | Spike Added   | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|------------------------------|------------------|------------------|---------------|------------|---------------|------|---|------|--------------|-----|-----------|
| 1,4-Dioxane                  | 2.0              | U                | 10.0          | 9.19       |               | ug/L |   | 92   | 52 - 129     | 7   | 13        |
| <b>MSD MSD</b>               |                  |                  |               |            |               |      |   |      |              |     |           |
| <b>Surrogate</b>             | <b>%Recovery</b> | <b>Qualifier</b> | <b>Limits</b> |            |               |      |   |      |              |     |           |
| 1,2-Dichloroethane-d4 (Surr) | 102              |                  | 63 - 125      |            |               |      |   |      |              |     |           |

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# QC Association Summary

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

## GC/MS VOA

### Analysis Batch: 326629

| Lab Sample ID    | Client Sample ID   | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------|-----------|--------|--------|------------|
| 240-95404-3      | MW-33_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-4      | MW-39_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-5      | MW-32_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-6      | MW-40_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-7      | MW-31_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-8      | MW-30_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-9      | MW-41_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-10     | MW-34_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-12     | MW-35_050918       | Total/NA  | Water  | 8260B  |            |
| 240-95404-13     | MW-71_050818       | Total/NA  | Water  | 8260B  |            |
| MB 240-326629/6  | Method Blank       | Total/NA  | Water  | 8260B  |            |
| LCS 240-326629/4 | Lab Control Sample | Total/NA  | Water  | 8260B  |            |
| 240-95404-6 MS   | MW-40_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-6 MSD  | MW-40_050818       | Total/NA  | Water  | 8260B  |            |

### Analysis Batch: 326782

| Lab Sample ID     | Client Sample ID       | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|--------|--------|------------|
| 240-95404-17      | MW-52_050918           | Total/NA  | Water  | 8260B  |            |
| 240-95404-18      | DUP-01_050818          | Total/NA  | Water  | 8260B  |            |
| 240-95404-19      | TRIP BLANK             | Total/NA  | Water  | 8260B  |            |
| MB 240-326782/6   | Method Blank           | Total/NA  | Water  | 8260B  |            |
| LCS 240-326782/4  | Lab Control Sample     | Total/NA  | Water  | 8260B  |            |
| 240-95062-B-1 MS  | Matrix Spike           | Total/NA  | Water  | 8260B  |            |
| 240-95062-B-1 MSD | Matrix Spike Duplicate | Total/NA  | Water  | 8260B  |            |

### Analysis Batch: 326849

| Lab Sample ID    | Client Sample ID   | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------|-----------|--------|--------|------------|
| 240-95404-1      | MW-23_050718       | Total/NA  | Water  | 8260B  |            |
| 240-95404-2      | MW-38_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-6      | MW-40_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-11     | MW-42_050918       | Total/NA  | Water  | 8260B  |            |
| 240-95404-14     | MW-45_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-15     | MW-18_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-16     | MW-43_050918       | Total/NA  | Water  | 8260B  |            |
| MB 240-326849/6  | Method Blank       | Total/NA  | Water  | 8260B  |            |
| LCS 240-326849/4 | Lab Control Sample | Total/NA  | Water  | 8260B  |            |
| 240-95404-6 MS   | MW-40_050818       | Total/NA  | Water  | 8260B  |            |
| 240-95404-6 MSD  | MW-40_050818       | Total/NA  | Water  | 8260B  |            |

### Analysis Batch: 326885

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method    | Prep Batch |
|---------------|------------------|-----------|--------|-----------|------------|
| 240-95404-1   | MW-23_050718     | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-2   | MW-38_050818     | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-3   | MW-33_050818     | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-4   | MW-39_050818     | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-5   | MW-32_050818     | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-6   | MW-40_050818     | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-7   | MW-31_050818     | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-8   | MW-30_050818     | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-9   | MW-41_050818     | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-10  | MW-34_050818     | Total/NA  | Water  | 8260B SIM |            |

TestAmerica Canton

# QC Association Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

## GC/MS VOA (Continued)

### Analysis Batch: 326885 (Continued)

| Lab Sample ID    | Client Sample ID   | Prep Type | Matrix | Method    | Prep Batch |
|------------------|--------------------|-----------|--------|-----------|------------|
| 240-95404-11     | MW-42_050918       | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-12     | MW-35_050918       | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-13     | MW-71_050818       | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-14     | MW-45_050818       | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-15     | MW-18_050818       | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-16     | MW-43_050918       | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-17     | MW-52_050918       | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-18     | DUP-01_050818      | Total/NA  | Water  | 8260B SIM |            |
| MB 240-326885/5  | Method Blank       | Total/NA  | Water  | 8260B SIM |            |
| LCS 240-326885/4 | Lab Control Sample | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-6 MS   | MW-40_050818       | Total/NA  | Water  | 8260B SIM |            |
| 240-95404-6 MSD  | MW-40_050818       | Total/NA  | Water  | 8260B SIM |            |

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-23\_050718**

**Date Collected: 05/07/18 15:27**

**Date Received: 05/10/18 09:50**

**Lab Sample ID: 240-95404-1**

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 100             | 326849       | 05/15/18 13:32       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 13:56       | SAM     | TAL CAN |

**Client Sample ID: MW-38\_050818**

**Date Collected: 05/08/18 08:40**

**Date Received: 05/10/18 09:50**

**Lab Sample ID: 240-95404-2**

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326849       | 05/15/18 13:54       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 14:21       | SAM     | TAL CAN |

**Client Sample ID: MW-33\_050818**

**Date Collected: 05/08/18 10:02**

**Date Received: 05/10/18 09:50**

**Lab Sample ID: 240-95404-3**

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326629       | 05/14/18 13:27       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 14:46       | SAM     | TAL CAN |

**Client Sample ID: MW-39\_050818**

**Date Collected: 05/08/18 10:53**

**Date Received: 05/10/18 09:50**

**Lab Sample ID: 240-95404-4**

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326629       | 05/14/18 13:50       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 15:11       | SAM     | TAL CAN |

**Client Sample ID: MW-32\_050818**

**Date Collected: 05/08/18 12:26**

**Date Received: 05/10/18 09:50**

**Lab Sample ID: 240-95404-5**

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326629       | 05/14/18 14:13       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 15:36       | SAM     | TAL CAN |

**Client Sample ID: MW-40\_050818**

**Date Collected: 05/08/18 13:23**

**Date Received: 05/10/18 09:50**

**Lab Sample ID: 240-95404-6**

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326629       | 05/14/18 14:36       | LEE     | TAL CAN |

TestAmerica Canton

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-40\_050818**

**Lab Sample ID: 240-95404-6**

**Date Collected: 05/08/18 13:23**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326849       | 05/15/18 14:16       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 16:01       | SAM     | TAL CAN |

**Client Sample ID: MW-31\_050818**

**Lab Sample ID: 240-95404-7**

**Date Collected: 05/08/18 14:19**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326629       | 05/14/18 15:44       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 17:17       | SAM     | TAL CAN |

**Client Sample ID: MW-30\_050818**

**Lab Sample ID: 240-95404-8**

**Date Collected: 05/08/18 15:39**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326629       | 05/14/18 16:06       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 17:42       | SAM     | TAL CAN |

**Client Sample ID: MW-41\_050818**

**Lab Sample ID: 240-95404-9**

**Date Collected: 05/08/18 16:26**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326629       | 05/14/18 16:29       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 18:07       | SAM     | TAL CAN |

**Client Sample ID: MW-34\_050818**

**Lab Sample ID: 240-95404-10**

**Date Collected: 05/08/18 17:32**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326629       | 05/14/18 16:52       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 18:32       | SAM     | TAL CAN |

**Client Sample ID: MW-42\_050918**

**Lab Sample ID: 240-95404-11**

**Date Collected: 05/09/18 07:31**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326849       | 05/15/18 15:43       | LEE     | TAL CAN |

TestAmerica Canton

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
 Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-42\_050918**

**Lab Sample ID: 240-95404-11**

Date Collected: 05/09/18 07:31

Matrix: Water

Date Received: 05/10/18 09:50

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 18:57       | SAM     | TAL CAN |

**Client Sample ID: MW-35\_050918**

**Lab Sample ID: 240-95404-12**

Date Collected: 05/09/18 08:48

Matrix: Water

Date Received: 05/10/18 09:50

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326629       | 05/14/18 18:09       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 19:21       | SAM     | TAL CAN |

**Client Sample ID: MW-71\_050818**

**Lab Sample ID: 240-95404-13**

Date Collected: 05/08/18 13:50

Matrix: Water

Date Received: 05/10/18 09:50

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326629       | 05/14/18 18:31       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 19:46       | SAM     | TAL CAN |

**Client Sample ID: MW-45\_050818**

**Lab Sample ID: 240-95404-14**

Date Collected: 05/08/18 14:50

Matrix: Water

Date Received: 05/10/18 09:50

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 66.67           | 326849       | 05/15/18 16:05       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 20:11       | SAM     | TAL CAN |

**Client Sample ID: MW-18\_050818**

**Lab Sample ID: 240-95404-15**

Date Collected: 05/08/18 16:40

Matrix: Water

Date Received: 05/10/18 09:50

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326849       | 05/15/18 16:26       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 20:36       | SAM     | TAL CAN |

**Client Sample ID: MW-43\_050918**

**Lab Sample ID: 240-95404-16**

Date Collected: 05/09/18 09:43

Matrix: Water

Date Received: 05/10/18 09:50

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326849       | 05/15/18 16:48       | LEE     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 21:01       | SAM     | TAL CAN |

TestAmerica Canton

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95404-1

**Client Sample ID: MW-52\_050918**

**Lab Sample ID: 240-95404-17**

**Date Collected: 05/09/18 11:00**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326782       | 05/15/18 02:08       | LRW     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 21:27       | SAM     | TAL CAN |

**Client Sample ID: DUP-01\_050818**

**Lab Sample ID: 240-95404-18**

**Date Collected: 05/08/18 00:00**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326782       | 05/15/18 02:31       | LRW     | TAL CAN |
| Total/NA  | Analysis   | 8260B SIM    |     | 1               | 326885       | 05/15/18 21:52       | SAM     | TAL CAN |

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-95404-19**

**Date Collected: 05/07/18 00:00**

**Matrix: Water**

**Date Received: 05/10/18 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA  | Analysis   | 8260B        |     | 1               | 326782       | 05/15/18 02:54       | LRW     | TAL CAN |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.

TestAmerica Job ID: 240-95404-1

Project/Site: Ford LTP Livonia MI - E203728

## Laboratory: TestAmerica Canton

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

| Authority             | Program       | EPA Region | Identification Number | Expiration Date |
|-----------------------|---------------|------------|-----------------------|-----------------|
| California            | State Program | 9          | 2927                  | 02-23-19        |
| Connecticut           | State Program | 1          | PH-0590               | 12-31-19        |
| Florida               | NELAP         | 4          | E87225                | 06-30-18 *      |
| Illinois              | NELAP         | 5          | 200004                | 07-31-18 *      |
| Kansas                | NELAP         | 7          | E-10336               | 01-31-19        |
| Kentucky (UST)        | State Program | 4          | 58                    | 02-23-19        |
| Kentucky (WW)         | State Program | 4          | 98016                 | 12-31-18        |
| Minnesota             | NELAP         | 5          | 039-999-348           | 12-31-18        |
| Minnesota (Petrofund) | State Program | 1          | 3506                  | 07-31-18 *      |
| Nevada                | State Program | 9          | OH-000482008A         | 07-31-18 *      |
| New Jersey            | NELAP         | 2          | OH001                 | 06-30-18 *      |
| New York              | NELAP         | 2          | 10975                 | 03-31-19        |
| Ohio VAP              | State Program | 5          | CL0024                | 09-06-19        |
| Oregon                | NELAP         | 10         | 4062                  | 02-23-19        |
| Pennsylvania          | NELAP         | 3          | 68-00340              | 08-31-18 *      |
| Texas                 | NELAP         | 6          | T104704517-17-9       | 08-31-18 *      |
| USDA                  | Federal       |            | P330-16-00404         | 12-28-19        |
| Virginia              | NELAP         | 3          | 460175                | 09-14-18 *      |
| Washington            | State Program | 10         | C971                  | 01-12-19        |
| West Virginia DEP     | State Program | 3          | 210                   | 12-31-18        |

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

TestAmerica Canton



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

Regulatory program:  DW  NPDES  RCRA  Other

Client Contact  
Company Name: Arcadis  
Address: 28550 Cabot Drive, Suite 500  
City/State/Zip: Novi, MI, 48377  
Phone: 248-994-2240  
Project Name: Ford LTP  
Project Number: M1001454.0004.00001  
PO # M1001454.0004.00001

Client Project Manager: Kris Hinskey  
Telephone: 248-994-2240  
Email: kristoffer.hinskey@arcadis.com

Site Contact: Angela DeGrandis  
Telephone: 330-966-9789

Analysis Turnaround Time  
TAT if different from below:  
10 day  3 weeks   
 2 weeks   
 1 week   
 2 days   
 1 day

Method of Shipment/Carrier:  
Shipping/Tracking No:

| Sample Identification | Sample Date | Sample Time | Matrix |         |          | Containers & Preservatives |        |       |      |     |      |      | Filtered Sample (Y/N) | Composite=C / Grab=C | VOCs 8260B | 1,4-Dioxane 8260B SIM | MS/MSD |        |
|-----------------------|-------------|-------------|--------|---------|----------|----------------------------|--------|-------|------|-----|------|------|-----------------------|----------------------|------------|-----------------------|--------|--------|
|                       |             |             | Air    | Aqueous | Sediment | Solid                      | Other: | H2SO4 | HNO3 | HCl | NaOH | ZnAc |                       |                      |            |                       |        | LiPres |
| MW-23-050718          | 5/11/18     | 1527        | X      |         |          |                            |        |       |      |     |      |      |                       |                      |            |                       |        |        |
| MW-32-050818          | 5/12/18     | 840         | X      |         |          |                            |        |       |      |     |      |      |                       |                      |            |                       |        |        |
| MW-33-050818          |             | 1002        | X      |         |          |                            |        |       |      |     |      |      |                       |                      |            |                       |        |        |
| MW-34-050818          |             | 1053        | X      |         |          |                            |        |       |      |     |      |      |                       |                      |            |                       |        |        |
| MW-32-050818          |             | 1226        | X      |         |          |                            |        |       |      |     |      |      |                       |                      |            |                       |        |        |
| MW-40-050818          |             | 1323        | X      |         |          |                            |        |       |      |     |      |      |                       |                      |            |                       |        |        |
| MW-31-050818          |             | 1419        | X      |         |          |                            |        |       |      |     |      |      |                       |                      |            |                       |        |        |
| MW-30-050818          |             | 1539        | X      |         |          |                            |        |       |      |     |      |      |                       |                      |            |                       |        |        |
| MW-41-050818          |             | 1626        | X      |         |          |                            |        |       |      |     |      |      |                       |                      |            |                       |        |        |
| MW-34-050818          |             | 1732        | X      |         |          |                            |        |       |      |     |      |      |                       |                      |            |                       |        |        |

Possible Hazard Identification  
 Non-Hazard  Lammable  Irritant  Poison B  Unknown  Return to Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/OC Requirements & Comments:  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 240-95404 Chain of Custody

Submit all results through Carlton at jim.tornella@arcadis.com, California #E203728  
 Lab#:

| Relinquished by:    | Company:    | Date/Time   | Received by:        | Company:    | Date/Time   |
|---------------------|-------------|-------------|---------------------|-------------|-------------|
| <i>Kellan B...</i>  | ARCADIS     | 5-9-18 1752 | <i>Ashley Rubel</i> | ARCADIS     | 5/9/18 1307 |
| <i>Ashley Rubel</i> | ARCADIS     | 5/9/18      | <i>[Signature]</i>  | TESTAMERICA | 5-10-18 950 |
| <i>[Signature]</i>  | TESTAMERICA | 5/9/18 1450 | <i>[Signature]</i>  | TAL         |             |

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

Regulatory program:  DW  NPDES  RCRA  Other

Client Contact  
Company Name: Arcadis  
Address: 28550 Cabot Drive, Suite 500  
City/State/Zip: Novi, MI, 48377  
Phone: 248-994-2240  
Project Name: Ford LTP  
Project Number: MI001454.0004.00001  
PO # MI001454.0004.00001

Client Project Manager: Kris Hinskey  
Telephone: 248-994-2240  
Email: kris@hinskey.com

Site Contact: Angela DeGrandis  
Telephone: 734-320-0065

Lab Contact: Denise Pohl  
Telephone: 330-966-9789

TestAmerica Laboratories, Inc.  
COC No: Z

Analysis Turnaround Time  
TAT if different from below  
10 day  3 weeks  2 weeks  1 week  2 days  1 day

Method of Shipment/Carrier:  
Shipping/Tracking No:

Lab Contact: Denise Pohl  
Telephone: 330-966-9789

Analyses

| Sample Identification | Sample Date | Sample Time | Matrix  |          |       | Containers & Preservatives |       |      |     |      |      |       | Filtered Sample (Y/N) | VOCs 8260B | Composite C/Grab-C | 1,4-Dioxane 8260B SIM | Sample Specific Notes / Special Instructions |        |
|-----------------------|-------------|-------------|---------|----------|-------|----------------------------|-------|------|-----|------|------|-------|-----------------------|------------|--------------------|-----------------------|--|--------|
|                       |             |             | Aqueous | Sediment | Solid | Other:                     | H2SO4 | HNO3 | HCl | NaOH | ZnOH | Lihrs |                       |            |                    |                       |  | Other: |
| MW-42-050918          | 5-9-18      | 731         | X       |          |       |                            |       |      |     |      |      |       |                       |            |                    |                       |  |        |
| MW-35-050918          | 5-9-18      | 848         | X       |          |       |                            |       |      |     |      |      |       |                       |            |                    |                       |  |        |
| MW-71-050818          | 5-8-18      | 1350        | X       |          |       |                            |       |      |     |      |      |       |                       |            |                    |                       |  |        |
| MW-45-050818          | 5-8-18      | 1450        | X       |          |       |                            |       |      |     |      |      |       |                       |            |                    |                       |  |        |
| MW-18-050818          | 5-8-18      | 1640        | X       |          |       |                            |       |      |     |      |      |       |                       |            |                    |                       |  |        |
| MW-43-050918          | 5-9-18      | 943         | X       |          |       |                            |       |      |     |      |      |       |                       |            |                    |                       |  |        |
| MW-52-050918          | 5-9-18      | 1100        | X       |          |       |                            |       |      |     |      |      |       |                       |            |                    |                       |  |        |
| DUP-01-050818         | 5-8-18      | -           | X       |          |       |                            |       |      |     |      |      |       |                       |            |                    |                       |  |        |
| TRUP BLANK            | -           | -           | X       |          |       |                            |       |      |     |      |      |       |                       |            |                    |                       |  |        |

Possible Hazard Identification  
 Non-Hazard  Irritant  Poison B  Unknown

Special Instructions/QC Requirements & Comments:  
Submit all results through Cardena at jim.tomalia@cardena.com, Cardena #E203724

Received by: Ashley Ribel Ashley Ribel  
Received by: Ashley Ribel Ashley Ribel  
Received in Laboratory by: Ashley Ribel Ashley Ribel

Date/Time: 5/9/18 12:52  
Date/Time: 5/9/18  
Date/Time: 5/9/18 13:07

Company: ARCADIS  
Company: ARCADIS  
Company: TESTAMERICA



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America Canton Sample Receipt Form/Narrative

Login #: 95404

antion Facility

Client Arcadis Site Name Cooler unpacked by: 80P
Cooler Received on 5-10-18 Opened on 5-10-18
FedEx: 1st Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

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

TestAmerica Cooler # TA 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
IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
IR GUN #36 (CF +0.3 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
IR GUN # 627 (CF -1.3 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
-Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC732776
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Yes No NA Larger than this.
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B734501V5 Yes No
16. Was a LL Hg or Me Hg trip blank present? Yes No

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

Contacted PM Date by via Verbal Voice Mail Other

Concerning

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: P.O.P

18. SAMPLE CONDITION

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

19. SAMPLE PRESERVATION

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

