

## ANALYTICAL REPORT

Eurofins TestAmerica, Canton  
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Tel: (330)497-9396

Laboratory Job ID: 240-125920-1  
Client Project/Site: Ford LTP Off Site

For:  
ARCADIS U.S., Inc.  
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Attn: Kristoffer Hinskey



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Authorized for release by:  
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*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 Off Site

Job ID: 240-125920-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	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 Off Site

Job ID: 240-125920-1

**Job ID: 240-125920-1**

**Laboratory: Eurofins TestAmerica, Canton**

**Narrative**

## CASE NARRATIVE

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

**Project: Ford LTP Off Site**

**Report Number: 240-125920-1**

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.

Eurofins TestAmerica, Canton attests to the validity of the laboratory data generated by Eurofins TestAmerica facilities reported herein. All analyses performed by Eurofins TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Eurofins 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 Eurofins TestAmerica and its client.

### **RECEIPT**

The samples were received on 2/7/2020 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7° C.

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

Samples TRIP BLANK (240-125920-1) and MW-140S\_020520 (240-125920-2) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 02/11/2020 and 02/12/2020.

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

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

Sample MW-140S\_020520 (240-125920-2) was analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The sample was analyzed on 02/12/2020.

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 Off Site

Job ID: 240-125920-1

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 = Eurofins 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 Off Site

Job ID: 240-125920-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-125920-1	TRIP BLANK	Water	02/05/20 00:00	02/07/20 09:00	
240-125920-2	MW-140S_020520	Water	02/05/20 14:35	02/07/20 09:00	

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

# Detection Summary

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

Job ID: 240-125920-1

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**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-125920-1**

No Detections.

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**Client Sample ID: MW-140S\_020520**

**Lab Sample ID: 240-125920-2**

No Detections.

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

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

# Client Sample Results

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

Job ID: 240-125920-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-125920-1**

**Date Collected: 02/05/20 00:00**

**Matrix: Water**

**Date Received: 02/07/20 09:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/12/20 17:53	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/12/20 17:53	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/12/20 17:53	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/12/20 17:53	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/12/20 17:53	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/12/20 17:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		75 - 130		02/12/20 17:53	1
4-Bromofluorobenzene (Surr)	100		47 - 134		02/12/20 17:53	1
Toluene-d8 (Surr)	98		69 - 122		02/12/20 17:53	1
Dibromofluoromethane (Surr)	86		78 - 129		02/12/20 17:53	1



# Client Sample Results

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

Job ID: 240-125920-1

**Client Sample ID: MW-140S\_020520**

**Lab Sample ID: 240-125920-2**

Date Collected: 02/05/20 14:35

Matrix: Water

Date Received: 02/07/20 09:00

**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	0.86	ug/L			02/12/20 18:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 133					02/12/20 18:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/11/20 00:50	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/11/20 00:50	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/11/20 00:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/11/20 00:50	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/11/20 00:50	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/11/20 00:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	78		75 - 130					02/11/20 00:50	1
4-Bromofluorobenzene (Surr)	102		47 - 134					02/11/20 00:50	1
Toluene-d8 (Surr)	95		69 - 122					02/11/20 00:50	1
Dibromofluoromethane (Surr)	86		78 - 129					02/11/20 00:50	1

# Surrogate Summary

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

Job ID: 240-125920-1

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (75-130)	BFB (47-134)	TOL (69-122)	DBFM (78-129)
240-125920-1	TRIP BLANK	96	100	98	86
240-125920-2	MW-140S_020520	78	102	95	86
240-125920-2 MS	MW-140S-MS_020520	82	104	92	91
240-125920-2 MSD	MW-140S-MSD_020520	81	102	92	82
240-126004-D-3 MS	Matrix Spike	79	103	93	87
240-126004-E-3 MSD	Matrix Spike Duplicate	78	107	93	89
LCS 240-422132/4	Lab Control Sample	91	105	97	88
LCS 240-422520/4	Lab Control Sample	94	100	95	87
MB 240-422132/7	Method Blank	90	104	99	86
MB 240-422520/7	Method Blank	93	103	96	88

#### Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA
		(70-133)
240-125920-2	MW-140S_020520	99
240-125920-2 MS	MW-140S-MS_020520	101
240-125920-2 MSD	MW-140S-MSD_020520	102
LCS 240-422563/4	Lab Control Sample	97
MB 240-422563/5	Method Blank	96

#### Surrogate Legend

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

# QC Sample Results

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

Job ID: 240-125920-1

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

**Lab Sample ID: MB 240-422132/7**  
**Matrix: Water**  
**Analysis Batch: 422132**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/10/20 17:44	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/10/20 17:44	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/10/20 17:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/10/20 17:44	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/10/20 17:44	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/10/20 17:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		75 - 130		02/10/20 17:44	1
4-Bromofluorobenzene (Surr)	104		47 - 134		02/10/20 17:44	1
Toluene-d8 (Surr)	99		69 - 122		02/10/20 17:44	1
Dibromofluoromethane (Surr)	86		78 - 129		02/10/20 17:44	1

**Lab Sample ID: LCS 240-422132/4**  
**Matrix: Water**  
**Analysis Batch: 422132**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	10.0	9.55		ug/L		96	73 - 129
cis-1,2-Dichloroethene	10.0	9.84		ug/L		98	75 - 124
Tetrachloroethene	10.0	9.35		ug/L		94	70 - 125
trans-1,2-Dichloroethene	10.0	9.83		ug/L		98	74 - 130
Trichloroethene	10.0	8.79		ug/L		88	71 - 121
Vinyl chloride	10.0	9.94		ug/L		99	61 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		75 - 130
4-Bromofluorobenzene (Surr)	105		47 - 134
Toluene-d8 (Surr)	97		69 - 122
Dibromofluoromethane (Surr)	88		78 - 129

**Lab Sample ID: 240-125920-2 MS**  
**Matrix: Water**  
**Analysis Batch: 422132**

**Client Sample ID: MW-140S-MS\_020520**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	1.0	U	10.0	9.51		ug/L		95	64 - 132
cis-1,2-Dichloroethene	1.0	U	10.0	10.5		ug/L		105	68 - 121
Tetrachloroethene	1.0	U	10.0	9.00		ug/L		90	52 - 129
trans-1,2-Dichloroethene	1.0	U	10.0	10.1		ug/L		101	69 - 126
Trichloroethene	1.0	U	10.0	8.82		ug/L		88	56 - 124
Vinyl chloride	1.0	U	10.0	12.1		ug/L		121	49 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	82		75 - 130
4-Bromofluorobenzene (Surr)	104		47 - 134
Toluene-d8 (Surr)	92		69 - 122

Eurofins TestAmerica, Canton

# QC Sample Results

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

Job ID: 240-125920-1

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

**Lab Sample ID: 240-125920-2 MS**  
**Matrix: Water**  
**Analysis Batch: 422132**

**Client Sample ID: MW-140S-MS\_020520**  
**Prep Type: Total/NA**

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	91		78 - 129

**Lab Sample ID: 240-125920-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 422132**

**Client Sample ID: MW-140S-MSD\_020520**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	1.0	U	10.0	9.41		ug/L		94	64 - 132	1	35
cis-1,2-Dichloroethene	1.0	U	10.0	9.59		ug/L		96	68 - 121	9	35
Tetrachloroethene	1.0	U	10.0	8.68		ug/L		87	52 - 129	4	35
trans-1,2-Dichloroethene	1.0	U	10.0	9.65		ug/L		97	69 - 126	4	35
Trichloroethene	1.0	U	10.0	8.11		ug/L		81	56 - 124	8	35
Vinyl chloride	1.0	U	10.0	11.1		ug/L		111	49 - 136	9	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	81		75 - 130
4-Bromofluorobenzene (Surr)	102		47 - 134
Toluene-d8 (Surr)	92		69 - 122
Dibromofluoromethane (Surr)	82		78 - 129

**Lab Sample ID: MB 240-422520/7**  
**Matrix: Water**  
**Analysis Batch: 422520**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/12/20 16:38	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/12/20 16:38	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/12/20 16:38	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/12/20 16:38	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/12/20 16:38	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/12/20 16:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		75 - 130		02/12/20 16:38	1
4-Bromofluorobenzene (Surr)	103		47 - 134		02/12/20 16:38	1
Toluene-d8 (Surr)	96		69 - 122		02/12/20 16:38	1
Dibromofluoromethane (Surr)	88		78 - 129		02/12/20 16:38	1

**Lab Sample ID: LCS 240-422520/4**  
**Matrix: Water**  
**Analysis Batch: 422520**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	10.0	9.66		ug/L		97	73 - 129
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	75 - 124
Tetrachloroethene	10.0	9.32		ug/L		93	70 - 125
trans-1,2-Dichloroethene	10.0	10.1		ug/L		101	74 - 130
Trichloroethene	10.0	9.09		ug/L		91	71 - 121

Eurofins TestAmerica, Canton

# QC Sample Results

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

Job ID: 240-125920-1

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

Lab Sample ID: LCS 240-422520/4

Matrix: Water

Analysis Batch: 422520

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	10.0	9.69		ug/L		97	61 - 134

  

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		75 - 130
4-Bromofluorobenzene (Surr)	100		47 - 134
Toluene-d8 (Surr)	95		69 - 122
Dibromofluoromethane (Surr)	87		78 - 129

Lab Sample ID: 240-126004-D-3 MS

Matrix: Water

Analysis Batch: 422520

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
1,1-Dichloroethene	1.0	U	10.0	9.19		ug/L		92	64 - 132
cis-1,2-Dichloroethene	1.0	U	10.0	9.76		ug/L		98	68 - 121
Tetrachloroethene	1.0	U	10.0	8.21		ug/L		82	52 - 129
trans-1,2-Dichloroethene	1.0	U	10.0	9.95		ug/L		100	69 - 126
Trichloroethene	1.0	U	10.0	8.18		ug/L		82	56 - 124
Vinyl chloride	1.0	U	10.0	10.2		ug/L		102	49 - 136

  

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	79		75 - 130
4-Bromofluorobenzene (Surr)	103		47 - 134
Toluene-d8 (Surr)	93		69 - 122
Dibromofluoromethane (Surr)	87		78 - 129

Lab Sample ID: 240-126004-E-3 MSD

Matrix: Water

Analysis Batch: 422520

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	1.0	U	10.0	8.85		ug/L		88	64 - 132	4	35
cis-1,2-Dichloroethene	1.0	U	10.0	9.43		ug/L		94	68 - 121	3	35
Tetrachloroethene	1.0	U	10.0	8.42		ug/L		84	52 - 129	3	35
trans-1,2-Dichloroethene	1.0	U	10.0	9.14		ug/L		91	69 - 126	9	35
Trichloroethene	1.0	U	10.0	7.83		ug/L		78	56 - 124	4	35
Vinyl chloride	1.0	U	10.0	10.9		ug/L		109	49 - 136	6	35

  

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	78		75 - 130
4-Bromofluorobenzene (Surr)	107		47 - 134
Toluene-d8 (Surr)	93		69 - 122
Dibromofluoromethane (Surr)	89		78 - 129

# QC Sample Results

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

Job ID: 240-125920-1

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

**Lab Sample ID: MB 240-422563/5**  
**Matrix: Water**  
**Analysis Batch: 422563**

**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	0.86	ug/L			02/12/20 14:10	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 133					02/12/20 14:10	1

**Lab Sample ID: LCS 240-422563/4**  
**Matrix: Water**  
**Analysis Batch: 422563**

**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	9.83		ug/L		98	80 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	97		70 - 133				

**Lab Sample ID: 240-125920-2 MS**  
**Matrix: Water**  
**Analysis Batch: 422563**

**Client Sample ID: MW-140S-MS\_020520**  
**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	9.37		ug/L		94	46 - 170
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	101		70 - 133						

**Lab Sample ID: 240-125920-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 422563**

**Client Sample ID: MW-140S-MSD\_020520**  
**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	10.5		ug/L		105	46 - 170	12	26
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	102		70 - 133								

# QC Association Summary

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

Job ID: 240-125920-1

## GC/MS VOA

### Analysis Batch: 422132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-125920-2	MW-140S_020520	Total/NA	Water	8260B	
MB 240-422132/7	Method Blank	Total/NA	Water	8260B	
LCS 240-422132/4	Lab Control Sample	Total/NA	Water	8260B	
240-125920-2 MS	MW-140S-MS_020520	Total/NA	Water	8260B	
240-125920-2 MSD	MW-140S-MSD_020520	Total/NA	Water	8260B	

### Analysis Batch: 422520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-125920-1	TRIP BLANK	Total/NA	Water	8260B	
MB 240-422520/7	Method Blank	Total/NA	Water	8260B	
LCS 240-422520/4	Lab Control Sample	Total/NA	Water	8260B	
240-126004-D-3 MS	Matrix Spike	Total/NA	Water	8260B	
240-126004-E-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 422563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-125920-2	MW-140S_020520	Total/NA	Water	8260B SIM	
MB 240-422563/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-422563/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-125920-2 MS	MW-140S-MS_020520	Total/NA	Water	8260B SIM	
240-125920-2 MSD	MW-140S-MSD_020520	Total/NA	Water	8260B SIM	

# Lab Chronicle

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

Job ID: 240-125920-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-125920-1**

**Date Collected: 02/05/20 00:00**

**Matrix: Water**

**Date Received: 02/07/20 09:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	422520	02/12/20 17:53	LRW	TAL CAN

**Client Sample ID: MW-140S\_020520**

**Lab Sample ID: 240-125920-2**

**Date Collected: 02/05/20 14:35**

**Matrix: Water**

**Date Received: 02/07/20 09:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	422132	02/11/20 00:50	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	422563	02/12/20 18:01	SAM	TAL CAN

**Laboratory References:**

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



# Accreditation/Certification Summary

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

Job ID: 240-125920-1

## Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-20 *
Connecticut	State	PH-0590	12-31-19 *
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20 *
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20 *
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-16-00404	12-28-19 *
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

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



Chain of Custody Record

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

1-0/17

<b>Client Contact</b> Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240 Project Name: Ford LTP Off-Site Project Number: 30042006.0402.02 PO # 30042006.0402.02		<b>Regulatory program:</b> <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other		<b>Client Project Manager:</b> Kris Hinskey Telephone: 248-994-2240 Email: kris@ford.ltp.hinskey@arcadis.com Sampler Name:		<b>Site Contact:</b> Julia McClafferty Telephone: 734-644-5131 Analysis Turnaround Time TAT if different from below: 10 day <input type="checkbox"/> 3 weeks <input type="checkbox"/> 1 week <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day <input type="checkbox"/>		<b>Lab Contact:</b> Mike DeMontico Telephone: 330-497-9396		TestAmerica Laboratories, Inc. COC No: _____ of _____ COCs for lab use only	
Method of Shipment/Carrier: Shipping/Tracking No: Jon Lust		<b>Containers &amp; Preservatives</b> H2SO4 <input type="checkbox"/> HNO3 <input type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> ZnAc <input type="checkbox"/> LiPres <input type="checkbox"/> Other:		<b>Matrix</b> Aqueous <input type="checkbox"/> Solid <input type="checkbox"/> Other:		<b>Filtered Sample (Y/N)</b> Composite=C/Grab=G		<b>Analyses</b> 1,1-DCE 8260B <input type="checkbox"/> 1,2-DCE 8260B <input type="checkbox"/> Trans-1,2-DCE 8260B <input type="checkbox"/> PCE 8260B <input type="checkbox"/> TCE 8260B <input type="checkbox"/> Vinyl Chloride 8260B <input type="checkbox"/> 1,4-Dioxane 8260B SIM <input type="checkbox"/>		Walk-in client <input type="checkbox"/> Lab sampling <input type="checkbox"/> Job/SDG No: _____ Sample Specific Notes / Special Instructions:	
Sample Identification TRIP BLANK MW-1405-020520 MW-1405-MS-020520 MW-1405-MSD-020520		Sample Date 2-5-20 2-5-20 2-5-20 2-5-20		Sample Time --- 1435 1435 1435		Matrix X + + +		Date/Time 2-5-20 1800 2-16-20 1037 2-16-20 1435		Date/Time 2-5-20 1900 2/16/20 1037 2-7-20 0830	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Irritant		<input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Relinquished by: [Signature] Relinquished by: RACHEL BIELEK Relinquished by: Holly Heston		Received by: [Signature] Received by: NOLLY HESTON Received in laboratory by: [Signature]		Company: Arcadis Company: Arcadis Company: ETAL-MI	
Special Instructions/OC Requirements & Comments: Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203631 Level IV Reporting requested.		240-125920 Chain of Custody		Barcode		Date/Time: 2-7-20 0830		Date/Time: 2-7-20 0830		Date/Time: 2-7-20 0830	



<b>Eurofins TestAmerica Canton Sample Receipt Form/Narrative</b>		Login # : <u>125970</u>
<b>Canton Facility</b>		
Client <u>Arcadis</u>	Site Name _____	Cooler unpacked by: <u>Adam Jensen</u>
Cooler Received on <u>2-7-20</u>	Opened on <u>2-7-20</u>	
FedEx: 1 <sup>st</sup> <input checked="" type="checkbox"/> <u>Grid</u> Exp UPS FAS Clipper	Client Drop Off TestAmerica Courier	Other _____
<b>Receipt After-hours: Drop-off Date/Time</b>		<b>Storage Location</b>
TestAmerica Cooler # <u>7A</u>	Foam Box _____	Client Cooler _____
Packing material used: <u>Bubble Wrap</u>	Foam _____	Plastic Bag _____
COOLANT: <u>Wet Ice</u>	Blue Ice _____	Dry Ice _____
	Water _____	None _____
1. Cooler temperature upon receipt	<input type="checkbox"/> See Multiple Cooler Form	
IR GUN# IR-10 (CF +0.7°C)	Observed Cooler Temp. <u>1.0</u> °C	Corrected Cooler Temp. <u>1.7</u> °C
IR GUN #IR-11 (CF +0.9°C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
-Were the seals on the outside of the cooler(s) signed & dated?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	<input checked="" type="radio"/> Yes <input checked="" type="radio"/> No	
-Were tamper/custody seals intact and uncompromised?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA	
3. Shippers' packing slip attached to the cooler(s)?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
4. Did custody papers accompany the sample(s)?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
5. Were the custody papers relinquished & signed in the appropriate place?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
6. Was/were the person(s) who collected the samples clearly identified on the COC?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
7. Did all bottles arrive in good condition (Unbroken)?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
8. Could all bottle labels be reconciled with the COC?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
9. Were correct bottle(s) used for the test(s) indicated?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
10. Sufficient quantity received to perform indicated analyses?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
11. Are these work share samples?	<input checked="" type="radio"/> Yes <input checked="" type="radio"/> 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?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> NA pH Strip Lot# <u>HC995364</u>	
13. Were VOAs on the COC?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
14. Were air bubbles >6 mm in any VOA vials?  Larger than this.	<input checked="" type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> NA	
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # <u>017701E</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
16. Was a LL Hg or Me Hg trip blank present?	<input checked="" type="radio"/> Yes <input checked="" type="radio"/> No	
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____		
Concerning _____		

Tests that are not checked for pH by Receiving:

VOAs  
Oil and Grease  
TOC

<b>17. CHAIN OF CUSTODY &amp; SAMPLE DISCREPANCIES</b>	Samples processed by: <u>Ab</u>
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	
<b>18. SAMPLE CONDITION</b>	
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)	
<b>19. SAMPLE PRESERVATION</b>	
Sample(s) _____ were further preserved in the laboratory.	
Time preserved: _____ Preservative(s) added/Lot number(s): _____	
VOA Sample Preservation - Date/Time VOAs Frozen: _____	