

## ANALYTICAL REPORT

Eurofins TestAmerica, Canton  
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Laboratory Job ID: 240-126074-1  
Client Project/Site: Ford LTP On 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 On Site

Job ID: 240-126074-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

## 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 On Site

Job ID: 240-126074-1

**Job ID: 240-126074-1**

**Laboratory: Eurofins TestAmerica, Canton**

**Narrative**

## CASE NARRATIVE

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

**Project: Ford LTP On-Site - E203728**

**Report Number: 240-126074-1**

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 2/11/2020 8:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

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

Samples TRIP BLANK (240-126074-1) and MW-44\_020620 (240-126074-2) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 02/12/2020 and 02/13/2020.

1,2-Dichloroethane-d4 (Surr) and Dibromofluoromethane (Surr) failed the surrogate recovery criteria high for MW-44\_020620 (240-126074-2). Refer to the QC report for details.

Sample MW-44\_020620 (240-126074-2)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method 8260B: Surrogate recovery for the following sample was outside control limits: MW-44\_020620 (240-126074-2). Re-extraction and/or re-analysis was performed with concurring results. Therefore, the results have been reported.

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

# Case Narrative

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

Job ID: 240-126074-1

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## Job ID: 240-126074-1 (Continued)

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### Laboratory: Eurofins TestAmerica, Canton (Continued)

#### VOLATILE ORGANIC COMPOUNDS (GCMS SIM)

Sample MW-44\_020620 (240-126074-2) was analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 02/12/2020.

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

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# Method Summary

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

Job ID: 240-126074-1

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 On Site

Job ID: 240-126074-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-126074-1	TRIP BLANK	Water	02/06/20 00:00	02/11/20 08:40	
240-126074-2	MW-44_020620	Water	02/06/20 11:51	02/11/20 08:40	

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# Detection Summary

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

Job ID: 240-126074-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-126074-1**

No Detections.

**Client Sample ID: MW-44\_020620**

**Lab Sample ID: 240-126074-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	10		2.0	0.86	ug/L	1		8260B SIM	Total/NA
Vinyl chloride	260		10	2.0	ug/L	10		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 240-126074-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-126074-1**

**Date Collected: 02/06/20 00:00**

**Matrix: Water**

**Date Received: 02/11/20 08:40**

**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 18:42	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/12/20 18:42	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/12/20 18:42	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/12/20 18:42	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/12/20 18:42	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/12/20 18:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		75 - 130		02/12/20 18:42	1
4-Bromofluorobenzene (Surr)	70		47 - 134		02/12/20 18:42	1
Toluene-d8 (Surr)	89		69 - 122		02/12/20 18:42	1
Dibromofluoromethane (Surr)	126		78 - 129		02/12/20 18:42	1

# Client Sample Results

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

Job ID: 240-126074-1

**Client Sample ID: MW-44\_020620**

**Lab Sample ID: 240-126074-2**

Date Collected: 02/06/20 11:51

Matrix: Water

Date Received: 02/11/20 08:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	10		2.0	0.86	ug/L			02/12/20 23:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 133		02/12/20 23:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	10	U	10	1.9	ug/L			02/13/20 15:15	10
cis-1,2-Dichloroethene	10	U	10	1.6	ug/L			02/13/20 15:15	10
Tetrachloroethene	10	U	10	1.5	ug/L			02/13/20 15:15	10
trans-1,2-Dichloroethene	10	U	10	1.9	ug/L			02/13/20 15:15	10
Trichloroethene	10	U	10	1.0	ug/L			02/13/20 15:15	10
Vinyl chloride	260		10	2.0	ug/L			02/13/20 15:15	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	138	X	75 - 130		02/13/20 15:15	10
4-Bromofluorobenzene (Surr)	95		47 - 134		02/13/20 15:15	10
Toluene-d8 (Surr)	121		69 - 122		02/13/20 15:15	10
Dibromofluoromethane (Surr)	149	X	78 - 129		02/13/20 15:15	10

# Surrogate Summary

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

Job ID: 240-126074-1

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (75-130)	BFB (47-134)	TOL (69-122)	DBFM (78-129)
240-126028-B-20 MS	Matrix Spike	96	99	102	104
240-126028-B-20 MSD	Matrix Spike Duplicate	93	97	101	99
240-126074-1	TRIP BLANK	115	70	89	126
240-126074-2	MW-44_020620	138 X	95	121	149 X
240-126095-D-3 MS	Matrix Spike	98	103	101	104
240-126095-E-3 MSD	Matrix Spike Duplicate	95	99	99	102
LCS 240-422522/4	Lab Control Sample	95	97	105	103
LCS 240-422713/4	Lab Control Sample	89	98	102	99
MB 240-422522/7	Method Blank	106	71	90	118
MB 240-422713/7	Method Blank	108	70	90	118

#### 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)
240-126004-C-3 MS	Matrix Spike	100
240-126004-C-3 MSD	Matrix Spike Duplicate	100
240-126074-2	MW-44_020620	101
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 On Site

Job ID: 240-126074-1

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

**Lab Sample ID: MB 240-422522/7**  
**Matrix: Water**  
**Analysis Batch: 422522**

**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 13:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/12/20 13:57	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/12/20 13:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/12/20 13:57	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/12/20 13:57	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/12/20 13:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		75 - 130		02/12/20 13:57	1
4-Bromofluorobenzene (Surr)	71		47 - 134		02/12/20 13:57	1
Toluene-d8 (Surr)	90		69 - 122		02/12/20 13:57	1
Dibromofluoromethane (Surr)	118		78 - 129		02/12/20 13:57	1

**Lab Sample ID: LCS 240-422522/4**  
**Matrix: Water**  
**Analysis Batch: 422522**

**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	10.4		ug/L		104	73 - 129
cis-1,2-Dichloroethene	10.0	10.3		ug/L		103	75 - 124
Tetrachloroethene	10.0	10.4		ug/L		104	70 - 125
trans-1,2-Dichloroethene	10.0	11.4		ug/L		114	74 - 130
Trichloroethene	10.0	10.4		ug/L		104	71 - 121
Vinyl chloride	10.0	7.92		ug/L		79	61 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		75 - 130
4-Bromofluorobenzene (Surr)	97		47 - 134
Toluene-d8 (Surr)	105		69 - 122
Dibromofluoromethane (Surr)	103		78 - 129

**Lab Sample ID: 240-126095-D-3 MS**  
**Matrix: Water**  
**Analysis Batch: 422522**

**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	9.62		ug/L		96	64 - 132
cis-1,2-Dichloroethene	1.0	U	10.0	9.74		ug/L		97	68 - 121
Tetrachloroethene	1.0	U	10.0	9.82		ug/L		98	52 - 129
trans-1,2-Dichloroethene	1.0	U	10.0	10.9		ug/L		109	69 - 126
Trichloroethene	1.0	U	10.0	9.62		ug/L		96	56 - 124
Vinyl chloride	1.0	U	10.0	7.23		ug/L		72	49 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		75 - 130
4-Bromofluorobenzene (Surr)	103		47 - 134
Toluene-d8 (Surr)	101		69 - 122

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# QC Sample Results

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

Job ID: 240-126074-1

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

**Lab Sample ID: 240-126095-D-3 MS**  
**Matrix: Water**  
**Analysis Batch: 422522**

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

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	104		78 - 129

**Lab Sample ID: 240-126095-E-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 422522**

**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	9.65		ug/L		97	64 - 132	0	35
cis-1,2-Dichloroethene	1.0	U	10.0	9.88		ug/L		99	68 - 121	1	35
Tetrachloroethene	1.0	U	10.0	9.50		ug/L		95	52 - 129	3	35
trans-1,2-Dichloroethene	1.0	U	10.0	11.1		ug/L		111	69 - 126	2	35
Trichloroethene	1.0	U	10.0	9.49		ug/L		95	56 - 124	1	35
Vinyl chloride	1.0	U	10.0	7.56		ug/L		76	49 - 136	5	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		75 - 130
4-Bromofluorobenzene (Surr)	99		47 - 134
Toluene-d8 (Surr)	99		69 - 122
Dibromofluoromethane (Surr)	102		78 - 129

**Lab Sample ID: MB 240-422713/7**  
**Matrix: Water**  
**Analysis Batch: 422713**

**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			02/13/20 14:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/13/20 14:51	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/13/20 14:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/13/20 14:51	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/13/20 14:51	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/13/20 14:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		75 - 130		02/13/20 14:51	1
4-Bromofluorobenzene (Surr)	70		47 - 134		02/13/20 14:51	1
Toluene-d8 (Surr)	90		69 - 122		02/13/20 14:51	1
Dibromofluoromethane (Surr)	118		78 - 129		02/13/20 14:51	1

**Lab Sample ID: LCS 240-422713/4**  
**Matrix: Water**  
**Analysis Batch: 422713**

**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	10.4		ug/L		104	73 - 129
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	75 - 124
Tetrachloroethene	10.0	10.8		ug/L		108	70 - 125
trans-1,2-Dichloroethene	10.0	11.1		ug/L		111	74 - 130
Trichloroethene	10.0	9.97		ug/L		100	71 - 121

Eurofins TestAmerica, Canton

# QC Sample Results

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

Job ID: 240-126074-1

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

**Lab Sample ID: LCS 240-422713/4**  
**Matrix: Water**  
**Analysis Batch: 422713**

**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	7.34		ug/L		73	61 - 134
<b>Surrogate</b>							
	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>				
1,2-Dichloroethane-d4 (Surr)	89		75 - 130				
4-Bromofluorobenzene (Surr)	98		47 - 134				
Toluene-d8 (Surr)	102		69 - 122				
Dibromofluoromethane (Surr)	99		78 - 129				

**Lab Sample ID: 240-126028-B-20 MS**  
**Matrix: Water**  
**Analysis Batch: 422713**

**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	5.0	U	50.0	50.5		ug/L		101	64 - 132
cis-1,2-Dichloroethene	84		50.0	127		ug/L		86	68 - 121
trans-1,2-Dichloroethene	8.8		50.0	65.4		ug/L		113	69 - 126
Trichloroethene	5.0	U	50.0	50.4		ug/L		101	56 - 124
Vinyl chloride	5.0	U	50.0	36.9		ug/L		74	49 - 136
<b>Surrogate</b>									
	<b>%Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	96		75 - 130						
4-Bromofluorobenzene (Surr)	99		47 - 134						
Toluene-d8 (Surr)	102		69 - 122						
Dibromofluoromethane (Surr)	104		78 - 129						

**Lab Sample ID: 240-126028-B-20 MSD**  
**Matrix: Water**  
**Analysis Batch: 422713**

**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	5.0	U	50.0	51.1		ug/L		102	64 - 132	1	35
cis-1,2-Dichloroethene	84		50.0	129		ug/L		90	68 - 121	2	35
trans-1,2-Dichloroethene	8.8		50.0	64.5		ug/L		111	69 - 126	1	35
Trichloroethene	5.0	U	50.0	51.9		ug/L		104	56 - 124	3	35
Vinyl chloride	5.0	U	50.0	37.8		ug/L		76	49 - 136	2	35
<b>Surrogate</b>											
	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
1,2-Dichloroethane-d4 (Surr)	93		75 - 130								
4-Bromofluorobenzene (Surr)	97		47 - 134								
Toluene-d8 (Surr)	101		69 - 122								
Dibromofluoromethane (Surr)	99		78 - 129								

# QC Sample Results

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

Job ID: 240-126074-1

## 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: 240-126004-C-3 MS**  
**Matrix: Water**  
**Analysis Batch: 422563**

**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
1,4-Dioxane	2.0	U	10.0	9.76		ug/L		98	46 - 170
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	100		70 - 133						

**Lab Sample ID: 240-126004-C-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 422563**

**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
1,4-Dioxane	2.0	U	10.0	9.19		ug/L		92	46 - 170	6	26
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	100		70 - 133								

# QC Association Summary

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

Job ID: 240-126074-1

## GC/MS VOA

### Analysis Batch: 422522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-126074-1	TRIP BLANK	Total/NA	Water	8260B	
MB 240-422522/7	Method Blank	Total/NA	Water	8260B	
LCS 240-422522/4	Lab Control Sample	Total/NA	Water	8260B	
240-126095-D-3 MS	Matrix Spike	Total/NA	Water	8260B	
240-126095-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
240-126074-2	MW-44_020620	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	
240-126004-C-3 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-126004-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

### Analysis Batch: 422713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-126074-2	MW-44_020620	Total/NA	Water	8260B	
MB 240-422713/7	Method Blank	Total/NA	Water	8260B	
LCS 240-422713/4	Lab Control Sample	Total/NA	Water	8260B	
240-126028-B-20 MS	Matrix Spike	Total/NA	Water	8260B	
240-126028-B-20 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	



# Lab Chronicle

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

Job ID: 240-126074-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-126074-1**

**Date Collected: 02/06/20 00:00**

**Matrix: Water**

**Date Received: 02/11/20 08:40**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	422522	02/12/20 18:42	LRW	TAL CAN

**Client Sample ID: MW-44\_020620**

**Lab Sample ID: 240-126074-2**

**Date Collected: 02/06/20 11:51**

**Matrix: Water**

**Date Received: 02/11/20 08:40**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	422713	02/13/20 15:15	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	422563	02/12/20 23:11	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 On Site

Job ID: 240-126074-1

## 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.

Eurofins 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 On-Site  
 Project Number: 30042006.0401.02  
 PO # 30042006.0401.02

Client Project Manager: Kris Hinskey  
 Telephone: 248-994-2240  
 Email: kris@hinskey.com  
 Site Contact: Julia McClafferty  
 Telephone: 734-644-5131

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

TestAmerica Laboratories, Inc.  
 COC No: / of / COCs

For lab use only  
 Walk-in client  
 Lab sampling  
 Job/SDG No:

Sample Identification

Sample Date Sample Time Matrix  
 Air Aqueous Sediment Solid Other

Containers & Preservatives  
 H2SO4 HNO3 HCl NaOH Zinc Moly Other

Filtered Sample (Y/N) Composite (C/Grab/G)

Analyses  
 1,1-DCE 8260B Cis-1,2-DCE 8260B Trans-1,2-DCE 8260B PCE 8260B TCE 8260B Vinyl Chloride 8260B 1,4-Dioxane 8260B SIM

Sample Specific Notes / Special Instructions

Shipping/Tracking No:

Sampler Name: *Gregory Schaefer*  
 Method of Shipment/Carrier:

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

Possible Hazard Identification  
 Non-Hazard  Flammable  Irritant  Poison B  Unknown

Special Instructions/OC Requirements & Comments:  
 Submit all results through Cadena at jtomalia@cademaco.com. Cadena #E203728  
 Level IV Reporting requested.

Relinquished by: *Julia McClafferty*  
 Relinquished by: *Michael J. ...*  
 Relinquished by: *Julia McClafferty*

Date Type: 02/06/20 1414  
 Date Type: 2/16/20 1820  
 Date Type: 2/17/20 1030

Company: Arcadis  
 Company: Arcadis  
 Company: Arcadis

Received in Laboratory by: *Molly Musrow*  
 Received by: *Michael J. ...*  
 Received by: *Julia McClafferty*

Company: Arcadis MI  
 Company: Arcadis  
 Company: Arcadis

Date Type: 2/7/20 1035  
 Date Type: 2/10/20 1315  
 Date Type: 2/10/20 1320

Company: Arcadis MI  
 Company: Arcadis  
 Company: Arcadis

Date Type: 2/10/20 1035  
 Date Type: 2/10/20 1320  
 Date Type: 2/10/20 1320

Company: Arcadis MI  
 Company: Arcadis  
 Company: Arcadis

Date Type: 2/10/20 1035  
 Date Type: 2/10/20 1320  
 Date Type: 2/10/20 1320

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 Company: Arcadis

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 Date Type: 2/10/20 1320

Company: Arcadis MI  
 Company: Arcadis  
 Company: Arcadis

Date Type: 2/10/20 1035  
 Date Type: 2/10/20 1320  
 Date Type: 2/10/20 1320

0.4/1.1

*pm*  
 DUP-13  
 already  
 picked  
 up on  
 2/7.  
 Do not  
 analyze.  
 Please  
 dispose.



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

TA 2/11/20 840

ETA 2/10/20 1320

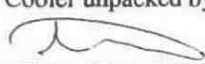

ETA 2/10/20 1320

ETA 2/10/20 1320

ETA 2/10/20 1320

ETA 2/10/20 1320



<b>Eurofins TestAmerica Canton Sample Receipt Form/Narrative</b>		Login # : <u>124074</u>
<b>Canton Facility</b>		
Client <u>Arcadis</u>	Site Name _____	Cooler unpacked by: 
Cooler Received on <u>2-11-20</u>	Opened on <u>2-11-20</u>	
FedEx: 1 <sup>st</sup> <input checked="" type="checkbox"/> 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>TA</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>0.4</u> °C Corrected Cooler Temp. <u>1.1</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="checkbox"/> Yes No		
-Were the seals on the outside of the cooler(s) signed & dated? <input checked="" type="checkbox"/> Yes No NA		
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
-Were tamper/custody seals intact and uncompromised? <input checked="" type="checkbox"/> Yes No NA		
3. Shippers' packing slip attached to the cooler(s)? <input checked="" type="checkbox"/> Yes No		
4. Did custody papers accompany the sample(s)? <input checked="" type="checkbox"/> Yes No		
5. Were the custody papers relinquished & signed in the appropriate place? <input checked="" type="checkbox"/> Yes No		
6. Was/were the person(s) who collected the samples clearly identified on the COC? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
7. Did all bottles arrive in good condition (Unbroken)? <input checked="" type="checkbox"/> Yes No		
8. Could all bottle labels be reconciled with the COC? <input checked="" type="checkbox"/> Yes No		
9. Were correct bottle(s) used for the test(s) indicated? <input checked="" type="checkbox"/> Yes No		
10. Sufficient quantity received to perform indicated analyses? <input checked="" type="checkbox"/> Yes No		
11. Are these work share samples? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> 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="checkbox"/> Yes No <input checked="" type="checkbox"/> NA pH Strip Lot# <u>HC995364</u>		
13. Were VOAs on the COC? <input checked="" type="checkbox"/> Yes No		
14. Were air bubbles >6 mm in any VOA vials? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA  Larger than this.		
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ <input checked="" type="checkbox"/> Yes No		
16. Was a LL Hg or Me Hg trip blank present? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> 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>AG</u>
<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: _____