

## ANALYTICAL REPORT

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

Laboratory Job ID: 240-130761-1  
Client Project/Site: Ford LTP Off-Site

For:  
ARCADIS U.S., Inc.  
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Novi, Michigan 48377

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.*

# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Definitions/Glossary . . . . .	3
Case Narrative . . . . .	4
Method Summary . . . . .	5
Sample Summary . . . . .	6
Detection Summary . . . . .	7
Client Sample Results . . . . .	8
Surrogate Summary . . . . .	14
QC Sample Results . . . . .	15
QC Association Summary . . . . .	17
Lab Chronicle . . . . .	18
Certification Summary . . . . .	19
Chain of Custody . . . . .	20



# Definitions/Glossary

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

Job ID: 240-130761-1

## 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)
MQL	Method Quantitation Limit
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: 240-130761-1

**Job ID: 240-130761-1**

**Laboratory: Eurofins TestAmerica, Canton**

**Narrative**

## CASE NARRATIVE

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

**Project: Ford LTP Off-Site**

**Report Number: 240-130761-1**

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 5/22/2020 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

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

Samples TRIP BLANK (240-130761-1), MW-105S\_052020 (240-130761-2), MW-79SR\_052020 (240-130761-3), MW-79D\_052020 (240-130761-4), DUP-06 (240-130761-5) and MW-72S\_052020 (240-130761-6) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/02/2020.

No MS/MSD in batch 436349 due to an incorrect dilution: TRIP BLANK (240-130761-1), MW-105S\_052020 (240-130761-2), MW-79SR\_052020 (240-130761-3), MW-79D\_052020 (240-130761-4), DUP-06 (240-130761-5) and MW-72S\_052020 (240-130761-6).

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-105S\_052020 (240-130761-2), MW-79SR\_052020 (240-130761-3), MW-79D\_052020 (240-130761-4), DUP-06 (240-130761-5) and MW-72S\_052020 (240-130761-6) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 05/30/2020.

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: 240-130761-1

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: 240-130761-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-130761-1	TRIP BLANK	Water	05/20/20 00:00	05/22/20 09:20	
240-130761-2	MW-105S_052020	Water	05/20/20 08:50	05/22/20 09:20	
240-130761-3	MW-79SR_052020	Water	05/20/20 10:24	05/22/20 09:20	
240-130761-4	MW-79D_052020	Water	05/20/20 11:48	05/22/20 09:20	
240-130761-5	DUP-06	Water	05/20/20 00:00	05/22/20 09:20	
240-130761-6	MW-72S_052020	Water	05/20/20 13:15	05/22/20 09:20	

# Detection Summary

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

Job ID: 240-130761-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-130761-1**

No Detections.

**Client Sample ID: MW-105S\_052020**

**Lab Sample ID: 240-130761-2**

No Detections.

**Client Sample ID: MW-79SR\_052020**

**Lab Sample ID: 240-130761-3**

No Detections.

**Client Sample ID: MW-79D\_052020**

**Lab Sample ID: 240-130761-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	1.8		1.0	0.20	ug/L	1		8260B	Total/NA

**Client Sample ID: DUP-06**

**Lab Sample ID: 240-130761-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	1.5		1.0	0.20	ug/L	1		8260B	Total/NA

**Client Sample ID: MW-72S\_052020**

**Lab Sample ID: 240-130761-6**

No Detections.

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: 240-130761-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-130761-1**

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

**Matrix: Water**

**Date Received: 05/22/20 09:20**

**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			06/02/20 01:25	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			06/02/20 01:25	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			06/02/20 01:25	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/02/20 01:25	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			06/02/20 01:25	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/02/20 01:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123		75 - 130		06/02/20 01:25	1
4-Bromofluorobenzene (Surr)	68		47 - 134		06/02/20 01:25	1
Toluene-d8 (Surr)	91		69 - 122		06/02/20 01:25	1
Dibromofluoromethane (Surr)	128		78 - 129		06/02/20 01:25	1



# Client Sample Results

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

Job ID: 240-130761-1

**Client Sample ID: MW-105S\_052020**

**Lab Sample ID: 240-130761-2**

Date Collected: 05/20/20 08:50

Matrix: Water

Date Received: 05/22/20 09:20

**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	-		05/30/20 13:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 133		05/30/20 13:32	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	-		06/02/20 01:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L	-		06/02/20 01:47	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L	-		06/02/20 01:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L	-		06/02/20 01:47	1
Trichloroethene	1.0	U	1.0	0.10	ug/L	-		06/02/20 01:47	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L	-		06/02/20 01:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		75 - 130		06/02/20 01:47	1
4-Bromofluorobenzene (Surr)	67		47 - 134		06/02/20 01:47	1
Toluene-d8 (Surr)	88		69 - 122		06/02/20 01:47	1
Dibromofluoromethane (Surr)	126		78 - 129		06/02/20 01:47	1

# Client Sample Results

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

Job ID: 240-130761-1

**Client Sample ID: MW-79SR\_052020**

**Lab Sample ID: 240-130761-3**

Date Collected: 05/20/20 10:24

Matrix: Water

Date Received: 05/22/20 09:20

**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			05/30/20 13:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 133		05/30/20 13:57	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			06/02/20 02:09	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			06/02/20 02:09	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			06/02/20 02:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/02/20 02:09	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			06/02/20 02:09	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/02/20 02:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		75 - 130		06/02/20 02:09	1
4-Bromofluorobenzene (Surr)	70		47 - 134		06/02/20 02:09	1
Toluene-d8 (Surr)	90		69 - 122		06/02/20 02:09	1
Dibromofluoromethane (Surr)	128		78 - 129		06/02/20 02:09	1

# Client Sample Results

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

Job ID: 240-130761-1

**Client Sample ID: MW-79D\_052020**

**Lab Sample ID: 240-130761-4**

Date Collected: 05/20/20 11:48

Matrix: Water

Date Received: 05/22/20 09:20

**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			05/30/20 14:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		70 - 133					05/30/20 14:23	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			06/02/20 02:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			06/02/20 02:31	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			06/02/20 02:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/02/20 02:31	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			06/02/20 02:31	1
<b>Vinyl chloride</b>	<b>1.8</b>		1.0	0.20	ug/L			06/02/20 02:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		75 - 130					06/02/20 02:31	1
4-Bromofluorobenzene (Surr)	71		47 - 134					06/02/20 02:31	1
Toluene-d8 (Surr)	90		69 - 122					06/02/20 02:31	1
Dibromofluoromethane (Surr)	122		78 - 129					06/02/20 02:31	1

# Client Sample Results

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

Job ID: 240-130761-1

**Client Sample ID: DUP-06**

**Lab Sample ID: 240-130761-5**

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

**Matrix: Water**

**Date Received: 05/22/20 09:20**

**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	-		05/30/20 14:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 133		05/30/20 14:48	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	-		06/02/20 02:53	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L	-		06/02/20 02:53	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L	-		06/02/20 02:53	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L	-		06/02/20 02:53	1
Trichloroethene	1.0	U	1.0	0.10	ug/L	-		06/02/20 02:53	1
<b>Vinyl chloride</b>	<b>1.5</b>		1.0	0.20	ug/L	-		06/02/20 02:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		75 - 130		06/02/20 02:53	1
4-Bromofluorobenzene (Surr)	67		47 - 134		06/02/20 02:53	1
Toluene-d8 (Surr)	91		69 - 122		06/02/20 02:53	1
Dibromofluoromethane (Surr)	124		78 - 129		06/02/20 02:53	1

# Client Sample Results

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

Job ID: 240-130761-1

**Client Sample ID: MW-72S\_052020**

**Lab Sample ID: 240-130761-6**

**Date Collected: 05/20/20 13:15**

**Matrix: Water**

**Date Received: 05/22/20 09:20**

**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			05/30/20 15:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 133					05/30/20 15:15	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			06/02/20 03:14	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			06/02/20 03:14	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			06/02/20 03:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/02/20 03:14	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			06/02/20 03:14	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/02/20 03:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		75 - 130					06/02/20 03:14	1
4-Bromofluorobenzene (Surr)	67		47 - 134					06/02/20 03:14	1
Toluene-d8 (Surr)	89		69 - 122					06/02/20 03:14	1
Dibromofluoromethane (Surr)	125		78 - 129					06/02/20 03:14	1

# Surrogate Summary

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

Job ID: 240-130761-1

## 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)
240-130761-1	TRIP BLANK	123	68	91	128
240-130761-2	MW-105S_052020	118	67	88	126
240-130761-3	MW-79SR_052020	121	70	90	128
240-130761-4	MW-79D_052020	120	71	90	122
240-130761-5	DUP-06	117	67	91	124
240-130761-6	MW-72S_052020	118	67	89	125
LCS 240-436349/4	Lab Control Sample	94	100	102	102
MB 240-436349/7	Method Blank	111	74	93	115

#### 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)
240-130724-B-4 MS	Matrix Spike	95
240-130724-B-4 MSD	Matrix Spike Duplicate	96
240-130761-2	MW-105S_052020	96
240-130761-3	MW-79SR_052020	95
240-130761-4	MW-79D_052020	94
240-130761-5	DUP-06	96
240-130761-6	MW-72S_052020	96
LCS 240-436242/4	Lab Control Sample	95
MB 240-436242/5	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: 240-130761-1

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

**Lab Sample ID: MB 240-436349/7**  
**Matrix: Water**  
**Analysis Batch: 436349**

**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			06/01/20 19:21	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			06/01/20 19:21	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			06/01/20 19:21	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/01/20 19:21	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			06/01/20 19:21	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/01/20 19:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		75 - 130		06/01/20 19:21	1
4-Bromofluorobenzene (Surr)	74		47 - 134		06/01/20 19:21	1
Toluene-d8 (Surr)	93		69 - 122		06/01/20 19:21	1
Dibromofluoromethane (Surr)	115		78 - 129		06/01/20 19:21	1

**Lab Sample ID: LCS 240-436349/4**  
**Matrix: Water**  
**Analysis Batch: 436349**

**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	11.0		ug/L		110	73 - 129
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	75 - 124
Tetrachloroethene	10.0	10.6		ug/L		106	70 - 125
trans-1,2-Dichloroethene	10.0	10.4		ug/L		104	74 - 130
Trichloroethene	10.0	10.1		ug/L		101	71 - 121
Vinyl chloride	10.0	8.88		ug/L		89	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)	102		69 - 122
Dibromofluoromethane (Surr)	102		78 - 129

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

**Lab Sample ID: MB 240-436242/5**  
**Matrix: Water**  
**Analysis Batch: 436242**

**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			05/30/20 06:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 133		05/30/20 06:10	1

# QC Sample Results

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

Job ID: 240-130761-1

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

**Lab Sample ID: LCS 240-436242/4**  
**Matrix: Water**  
**Analysis Batch: 436242**

**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	8.98		ug/L		90	80 - 135
<b>LCS LCS</b>							
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	95		70 - 133				

**Lab Sample ID: 240-130724-B-4 MS**  
**Matrix: Water**  
**Analysis Batch: 436242**

**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	10.7		ug/L		107	46 - 170
<b>MS MS</b>									
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	95		70 - 133						

**Lab Sample ID: 240-130724-B-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 436242**

**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	9.79		ug/L		98	46 - 170	9	26
<b>MSD MSD</b>											
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	96		70 - 133								



# QC Association Summary

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

Job ID: 240-130761-1

## GC/MS VOA

### Analysis Batch: 436242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-130761-2	MW-105S_052020	Total/NA	Water	8260B SIM	
240-130761-3	MW-79SR_052020	Total/NA	Water	8260B SIM	
240-130761-4	MW-79D_052020	Total/NA	Water	8260B SIM	
240-130761-5	DUP-06	Total/NA	Water	8260B SIM	
240-130761-6	MW-72S_052020	Total/NA	Water	8260B SIM	
MB 240-436242/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-436242/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-130724-B-4 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-130724-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

### Analysis Batch: 436349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-130761-1	TRIP BLANK	Total/NA	Water	8260B	
240-130761-2	MW-105S_052020	Total/NA	Water	8260B	
240-130761-3	MW-79SR_052020	Total/NA	Water	8260B	
240-130761-4	MW-79D_052020	Total/NA	Water	8260B	
240-130761-5	DUP-06	Total/NA	Water	8260B	
240-130761-6	MW-72S_052020	Total/NA	Water	8260B	
MB 240-436349/7	Method Blank	Total/NA	Water	8260B	
LCS 240-436349/4	Lab Control Sample	Total/NA	Water	8260B	

# Lab Chronicle

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

Job ID: 240-130761-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-130761-1**

Date Collected: 05/20/20 00:00

Matrix: Water

Date Received: 05/22/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436349	06/02/20 01:25	LEE	TAL CAN

**Client Sample ID: MW-105S\_052020**

**Lab Sample ID: 240-130761-2**

Date Collected: 05/20/20 08:50

Matrix: Water

Date Received: 05/22/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436349	06/02/20 01:47	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	436242	05/30/20 13:32	TJL2	TAL CAN

**Client Sample ID: MW-79SR\_052020**

**Lab Sample ID: 240-130761-3**

Date Collected: 05/20/20 10:24

Matrix: Water

Date Received: 05/22/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436349	06/02/20 02:09	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	436242	05/30/20 13:57	TJL2	TAL CAN

**Client Sample ID: MW-79D\_052020**

**Lab Sample ID: 240-130761-4**

Date Collected: 05/20/20 11:48

Matrix: Water

Date Received: 05/22/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436349	06/02/20 02:31	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	436242	05/30/20 14:23	TJL2	TAL CAN

**Client Sample ID: DUP-06**

**Lab Sample ID: 240-130761-5**

Date Collected: 05/20/20 00:00

Matrix: Water

Date Received: 05/22/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436349	06/02/20 02:53	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	436242	05/30/20 14:48	TJL2	TAL CAN

**Client Sample ID: MW-72S\_052020**

**Lab Sample ID: 240-130761-6**

Date Collected: 05/20/20 13:15

Matrix: Water

Date Received: 05/22/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436349	06/02/20 03:14	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	436242	05/30/20 15:15	TJL2	TAL CAN

**Laboratory References:**

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

Eurofins TestAmerica, Canton

# Accreditation/Certification Summary

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

Job ID: 240-130761-1

## 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	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
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	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Chain of Custody Record

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

1.3.20

<b>Client Contact</b> Company Name: Arcadis Address: 28550 Chobot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240 Project Name: Ford LTP Off-Site Project Number: 30050315.402.04 PO # 30050315.402.04			<b>Regulatory program:</b> <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other			<b>Client Project Manager: Kris Hinskey</b> Telephone: 248-994-2240 Email: kris@for.hinskey@arcadis.com Sampler Name: Julia McClefferty Method of Shipment/Carrier: Shipping/Tracking No:			<b>Site Contact: Julia McClefferty</b> Telephone: 734-644-5131 <b>Lab Contact: Mike DelMonico</b> Telephone: 330-497-9396			TestAmerica Laboratories, Inc. COC No: _____ of _____ COCs For lab use only Walk-in client Lab sampling Job/SDG No: _____ Sample Specific Notes / Special Instructions:		
<b>Sample Identification</b>		<b>Matrix</b> Air <input type="checkbox"/> Aqueous <input type="checkbox"/> Sediment <input type="checkbox"/> Solid <input type="checkbox"/> Other: _____		<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"/> NaOH <input type="checkbox"/> Other: _____		<b>Filtered Sample (Y/N)</b> Composite-C / Grab-G 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		<b>Analyses</b>		Special Instructions:				
TRIP BLANK										1 trip blank				
MW-1055-052020	5/20/20									X	3 Vials for 8260B 3 Vials for 8260B SIM			
MW-795A-052020	5/20/20	1024								X				
MW-79D-052020	5/20/20	1148								X				
DUP-06	5/20/20									X				
MW-725-052020	5/20/20	1315								X				



240-130761 Chain of Custody

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Irritant  Unknown

**Special Instructions/OC Requirements & Comments:**  
 Submit all results through Cadena at jformalia@cadenaco.com. Cadena #E203631 Level IV Reporting requested.

Relinquished by: Julia McClefferty Date/Time: 5/20/20 1527 Company: ARCADIS

Relinquished by: RACHEL BIELAK for John Date/Time: 5/20/20 1620 Company: ARCADIS

Relinquished by: Adam Ganett Date/Time: 5/21/20 0845 Company: ARCADIS

Relinquished by: Angelo M. Jr Date/Time: 5/21/20 8:56 Company: EMR m1

Relinquished by: Adam Ganett Date/Time: 5/21/20 9:20 Company: EMR



**Eurofins TestAmerica Canton Sample Receipt Form/Narrative**  
**Canton Facility**


Login # : 210-130761

Client Arcadis Site Name \_\_\_\_\_  
 Cooler Received on 5-22-20 Opened on 5-22-20  
 FedEx: 1<sup>st</sup>  Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other \_\_\_\_\_

Cooler unpacked by:  
Adam Jensen

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

TestAmerica Cooler # 78 Foam Box \_\_\_\_\_ Client Cooler \_\_\_\_\_ Box \_\_\_\_\_ Other \_\_\_\_\_  
 Packing material used: Bubble Wrap Foam Plastic Bag None Other \_\_\_\_\_  
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt  See Multiple Cooler Form  
 IR GUN# IR-10 (CF +0.7°C) Observed Cooler Temp. 13 °C Corrected Cooler Temp. 20 °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 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# HC902937
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 # 0417701E  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: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**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): \_\_\_\_\_  
 VOA Sample Preservation - Date/Time VOAs Frozen: \_\_\_\_\_