

## ANALYTICAL REPORT

Eurofins TestAmerica, Canton  
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North Canton, OH 44720  
Tel: (330)497-9396

Laboratory Job ID: 240-139797-1  
Client Project/Site: Ford LTP - Off Site

For:  
ARCADIS U.S., Inc.  
28550 Cabot Drive  
Suite 500  
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.*

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# Definitions/Glossary

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

Job ID: 240-139797-1

## 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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Case Narrative

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

Job ID: 240-139797-1

**Job ID: 240-139797-1**

**Laboratory: Eurofins TestAmerica, Canton**

**Narrative**

## CASE NARRATIVE

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

**Project: Ford LTP - Off Site**

**Report Number: 240-139797-1**

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 11/7/2020 8:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.3° C.

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

Samples TRIP BLANK (240-139797-1), MW-83S\_110420 (240-139797-2), MW-83\_110420 (240-139797-3), MW-134S\_110420 (240-139797-4) and MW-133S\_110420 (240-139797-5) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/17/2020.

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

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

Samples MW-83S\_110420 (240-139797-2), MW-83\_110420 (240-139797-3), MW-134S\_110420 (240-139797-4) and MW-133S\_110420 (240-139797-5) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 11/11/2020 and 11/12/2020.

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: 240-139797-1

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: 240-139797-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-139797-1	TRIP BLANK	Water	11/04/20 00:00	11/09/20 08:00	
240-139797-2	MW-83S_110420	Water	11/04/20 10:30	11/09/20 08:00	
240-139797-3	MW-83_110420	Water	11/04/20 11:40	11/07/20 08:00	
240-139797-4	MW-134S_110420	Water	11/04/20 14:10	11/07/20 08:00	
240-139797-5	MW-133S_110420	Water	11/04/20 15:30	11/07/20 08:00	

- 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: 240-139797-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-139797-1**

No Detections.

**Client Sample ID: MW-83S\_110420**

**Lab Sample ID: 240-139797-2**

No Detections.

**Client Sample ID: MW-83\_110420**

**Lab Sample ID: 240-139797-3**

No Detections.

**Client Sample ID: MW-134S\_110420**

**Lab Sample ID: 240-139797-4**

No Detections.

**Client Sample ID: MW-133S\_110420**

**Lab Sample ID: 240-139797-5**

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: 240-139797-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-139797-1**

**Date Collected: 11/04/20 00:00**

**Matrix: Water**

**Date Received: 11/09/20 08:00**

**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			11/17/20 14:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			11/17/20 14:36	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			11/17/20 14:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/17/20 14:36	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			11/17/20 14:36	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			11/17/20 14:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		75 - 130		11/17/20 14:36	1
4-Bromofluorobenzene (Surr)	101		47 - 134		11/17/20 14:36	1
Toluene-d8 (Surr)	99		69 - 122		11/17/20 14:36	1
Dibromofluoromethane (Surr)	91		78 - 129		11/17/20 14:36	1



# Client Sample Results

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

Job ID: 240-139797-1

**Client Sample ID: MW-83S\_110420**

**Lab Sample ID: 240-139797-2**

Date Collected: 11/04/20 10:30

Matrix: Water

Date Received: 11/09/20 08:00

**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			11/11/20 23:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 133					11/11/20 23:36	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			11/17/20 15:01	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			11/17/20 15:01	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			11/17/20 15:01	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/17/20 15:01	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			11/17/20 15:01	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			11/17/20 15:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		75 - 130					11/17/20 15:01	1
4-Bromofluorobenzene (Surr)	100		47 - 134					11/17/20 15:01	1
Toluene-d8 (Surr)	97		69 - 122					11/17/20 15:01	1
Dibromofluoromethane (Surr)	94		78 - 129					11/17/20 15:01	1

# Client Sample Results

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

Job ID: 240-139797-1

**Client Sample ID: MW-83\_110420**

**Lab Sample ID: 240-139797-3**

Date Collected: 11/04/20 11:40

Matrix: Water

Date Received: 11/07/20 08:00

**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			11/12/20 00:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 133		11/12/20 00:50	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			11/17/20 15:26	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			11/17/20 15:26	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			11/17/20 15:26	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/17/20 15:26	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			11/17/20 15:26	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			11/17/20 15:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		75 - 130		11/17/20 15:26	1
4-Bromofluorobenzene (Surr)	100		47 - 134		11/17/20 15:26	1
Toluene-d8 (Surr)	100		69 - 122		11/17/20 15:26	1
Dibromofluoromethane (Surr)	95		78 - 129		11/17/20 15:26	1

# Client Sample Results

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

Job ID: 240-139797-1

**Client Sample ID: MW-134S\_110420**

**Lab Sample ID: 240-139797-4**

**Date Collected: 11/04/20 14:10**

**Matrix: Water**

**Date Received: 11/07/20 08:00**

**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			11/12/20 01:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		70 - 133		11/12/20 01:15	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			11/17/20 15:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			11/17/20 15:51	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			11/17/20 15:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/17/20 15:51	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			11/17/20 15:51	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			11/17/20 15:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		75 - 130		11/17/20 15:51	1
4-Bromofluorobenzene (Surr)	98		47 - 134		11/17/20 15:51	1
Toluene-d8 (Surr)	97		69 - 122		11/17/20 15:51	1
Dibromofluoromethane (Surr)	92		78 - 129		11/17/20 15:51	1

# Client Sample Results

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

Job ID: 240-139797-1

**Client Sample ID: MW-133S\_110420**

**Lab Sample ID: 240-139797-5**

**Date Collected: 11/04/20 15:30**

**Matrix: Water**

**Date Received: 11/07/20 08:00**

**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			11/12/20 01:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		70 - 133		11/12/20 01:40	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			11/17/20 16:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			11/17/20 16:15	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			11/17/20 16:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/17/20 16:15	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			11/17/20 16:15	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			11/17/20 16:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		75 - 130		11/17/20 16:15	1
4-Bromofluorobenzene (Surr)	98		47 - 134		11/17/20 16:15	1
Toluene-d8 (Surr)	98		69 - 122		11/17/20 16:15	1
Dibromofluoromethane (Surr)	91		78 - 129		11/17/20 16:15	1

# Surrogate Summary

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

Job ID: 240-139797-1

## 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)
240-139797-1	TRIP BLANK	110	101	99	91
240-139797-2	MW-83S_110420	109	100	97	94
240-139797-2 MS	MW-83S-MS_110420	99	107	104	83
240-139797-2 MSD	MW-83S-MSD_110420	98	105	101	84
240-139797-3	MW-83_110420	112	100	100	95
240-139797-4	MW-134S_110420	108	98	97	92
240-139797-5	MW-133S_110420	108	98	98	91
LCS 240-461325/5	Lab Control Sample	100	106	102	83
MB 240-461325/8	Method Blank	110	102	98	93

### 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)
240-139797-2	MW-83S_110420	108
240-139797-2 MS	MW-83S-MS_110420	110
240-139797-2 MSD	MW-83S-MSD_110420	108
240-139797-3	MW-83_110420	105
240-139797-4	MW-134S_110420	109
240-139797-5	MW-133S_110420	110
LCS 240-460452/4	Lab Control Sample	106
MB 240-460452/5	Method Blank	110

### Surrogate Legend

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

# QC Sample Results

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

Job ID: 240-139797-1

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

**Lab Sample ID: MB 240-461325/8**  
**Matrix: Water**  
**Analysis Batch: 461325**

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/17/20 11:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			11/17/20 11:36	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			11/17/20 11:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/17/20 11:36	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			11/17/20 11:36	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			11/17/20 11:36	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	110		75 - 130		11/17/20 11:36	1
4-Bromofluorobenzene (Surr)	102		47 - 134		11/17/20 11:36	1
Toluene-d8 (Surr)	98		69 - 122		11/17/20 11:36	1
Dibromofluoromethane (Surr)	93		78 - 129		11/17/20 11:36	1

**Lab Sample ID: LCS 240-461325/5**  
**Matrix: Water**  
**Analysis Batch: 461325**

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1-Dichloroethene	20.0	20.2		ug/L		101	73 - 129
cis-1,2-Dichloroethene	20.0	20.3		ug/L		102	75 - 124
Tetrachloroethene	20.0	19.3		ug/L		96	70 - 125
trans-1,2-Dichloroethene	20.0	20.0		ug/L		100	74 - 130
Trichloroethene	20.0	17.7		ug/L		88	71 - 121
Vinyl chloride	20.0	23.5		ug/L		118	61 - 134

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	100		75 - 130
4-Bromofluorobenzene (Surr)	106		47 - 134
Toluene-d8 (Surr)	102		69 - 122
Dibromofluoromethane (Surr)	83		78 - 129

**Lab Sample ID: 240-139797-2 MS**  
**Matrix: Water**  
**Analysis Batch: 461325**

**Client Sample ID: MW-83S-MS\_110420**  
**Prep Type: Total/NA**

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
1,1-Dichloroethene	1.0	U	20.0	19.1		ug/L		95	64 - 132
cis-1,2-Dichloroethene	1.0	U	20.0	19.2		ug/L		96	68 - 121
Tetrachloroethene	1.0	U	20.0	17.6		ug/L		88	52 - 129
trans-1,2-Dichloroethene	1.0	U	20.0	18.8		ug/L		94	69 - 126
Trichloroethene	1.0	U	20.0	15.8		ug/L		79	56 - 124
Vinyl chloride	1.0	U	20.0	22.8		ug/L		114	49 - 136

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	99		75 - 130
4-Bromofluorobenzene (Surr)	107		47 - 134
Toluene-d8 (Surr)	104		69 - 122

# QC Sample Results

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

Job ID: 240-139797-1

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

**Lab Sample ID: 240-139797-2 MS**  
**Matrix: Water**  
**Analysis Batch: 461325**

**Client Sample ID: MW-83S-MS\_110420**  
**Prep Type: Total/NA**

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	83		78 - 129

**Lab Sample ID: 240-139797-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 461325**

**Client Sample ID: MW-83S-MSD\_110420**  
**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	20.0	20.6		ug/L		103	64 - 132	8	35
cis-1,2-Dichloroethene	1.0	U	20.0	20.0		ug/L		100	68 - 121	4	35
Tetrachloroethene	1.0	U	20.0	17.8		ug/L		89	52 - 129	1	35
trans-1,2-Dichloroethene	1.0	U	20.0	19.9		ug/L		100	69 - 126	6	35
Trichloroethene	1.0	U	20.0	16.8		ug/L		84	56 - 124	6	35
Vinyl chloride	1.0	U	20.0	22.0		ug/L		110	49 - 136	4	35

  

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		75 - 130
4-Bromofluorobenzene (Surr)	105		47 - 134
Toluene-d8 (Surr)	101		69 - 122
Dibromofluoromethane (Surr)	84		78 - 129

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

**Lab Sample ID: MB 240-460452/5**  
**Matrix: Water**  
**Analysis Batch: 460452**

**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			11/11/20 16:36	1

  

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		70 - 133		11/11/20 16:36	1

**Lab Sample ID: LCS 240-460452/4**  
**Matrix: Water**  
**Analysis Batch: 460452**

**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	11.4		ug/L		114	80 - 135

  

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		70 - 133

**Lab Sample ID: 240-139797-2 MS**  
**Matrix: Water**  
**Analysis Batch: 460452**

**Client Sample ID: MW-83S-MS\_110420**  
**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	11.4		ug/L		114	46 - 170

Eurofins TestAmerica, Canton

# QC Sample Results

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

Job ID: 240-139797-1

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	110		70 - 133

**Lab Sample ID: 240-139797-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 460452**

**Client Sample ID: MW-83S-MSD\_110420**  
**Prep Type: Total/NA**

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MSD Result</i>	<i>MSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec. Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
1,4-Dioxane	2.0	U	10.0	10.9		ug/L		109	46 - 170	5	26

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	108		70 - 133





# QC Association Summary

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

Job ID: 240-139797-1

## GC/MS VOA

### Analysis Batch: 460452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-139797-2	MW-83S_110420	Total/NA	Water	8260B SIM	
240-139797-3	MW-83_110420	Total/NA	Water	8260B SIM	
240-139797-4	MW-134S_110420	Total/NA	Water	8260B SIM	
240-139797-5	MW-133S_110420	Total/NA	Water	8260B SIM	
MB 240-460452/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-460452/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-139797-2 MS	MW-83S-MS_110420	Total/NA	Water	8260B SIM	
240-139797-2 MSD	MW-83S-MSD_110420	Total/NA	Water	8260B SIM	

### Analysis Batch: 461325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-139797-1	TRIP BLANK	Total/NA	Water	8260B	
240-139797-2	MW-83S_110420	Total/NA	Water	8260B	
240-139797-3	MW-83_110420	Total/NA	Water	8260B	
240-139797-4	MW-134S_110420	Total/NA	Water	8260B	
240-139797-5	MW-133S_110420	Total/NA	Water	8260B	
MB 240-461325/8	Method Blank	Total/NA	Water	8260B	
LCS 240-461325/5	Lab Control Sample	Total/NA	Water	8260B	
240-139797-2 MS	MW-83S-MS_110420	Total/NA	Water	8260B	
240-139797-2 MSD	MW-83S-MSD_110420	Total/NA	Water	8260B	

# Lab Chronicle

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

Job ID: 240-139797-1

## Client Sample ID: TRIP BLANK

Date Collected: 11/04/20 00:00

Date Received: 11/09/20 08:00

## Lab Sample ID: 240-139797-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	461325	11/17/20 14:36	HMB	TAL CAN

## Client Sample ID: MW-83S\_110420

Date Collected: 11/04/20 10:30

Date Received: 11/09/20 08:00

## Lab Sample ID: 240-139797-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	461325	11/17/20 15:01	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	460452	11/11/20 23:36	SAM	TAL CAN

## Client Sample ID: MW-83\_110420

Date Collected: 11/04/20 11:40

Date Received: 11/07/20 08:00

## Lab Sample ID: 240-139797-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	461325	11/17/20 15:26	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	460452	11/12/20 00:50	SAM	TAL CAN

## Client Sample ID: MW-134S\_110420

Date Collected: 11/04/20 14:10

Date Received: 11/07/20 08:00

## Lab Sample ID: 240-139797-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	461325	11/17/20 15:51	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	460452	11/12/20 01:15	SAM	TAL CAN

## Client Sample ID: MW-133S\_110420

Date Collected: 11/04/20 15:30

Date Received: 11/07/20 08:00

## Lab Sample ID: 240-139797-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	461325	11/17/20 16:15	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	460452	11/12/20 01:40	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: 240-139797-1

## 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	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
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	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20





**Canton Facility**

Client Arcadis Site Name \_\_\_\_\_ Cooler unpacked by: \_\_\_\_\_  
 Cooler Received on 11-7-20 Opened on 11-7-20

FedEx: 1<sup>st</sup> Grd  Exp  UPS  FAS  Clipper  Client Drop Off  TestAmerica Courier  Other \_\_\_\_\_

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

TestAmerica Cooler # \_\_\_\_\_ 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-11 (CF +0.9°C) Observed Cooler Temp. 1.9 °C Corrected Cooler Temp. 2.3 °C  
 IR GUN #IR-12 (CF +0.5°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 (ID/Date/Time) be reconciled with the COC? Yes No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? Y/N
10. Were correct bottle(s) used for the test(s) indicated? Yes No
11. Sufficient quantity received to perform indicated analyses? Yes No
12. Are these work share samples and all listed on the COC? Yes No
- If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC907861
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials?  Larger than this. Yes No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # NA Yes No
17. 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 \_\_\_\_\_

**18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES**  additional next page Samples processed by: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

**20. SAMPLE PRESERVATION**  
 Sample(s) \_\_\_\_\_ were further preserved in the laboratory.  
 Time preserved: \_\_\_\_\_ Preservative(s) added/Lot number(s): \_\_\_\_\_  
 VOA Sample Preservation - Date/Time VOAs Frozen: \_\_\_\_\_