

## ANALYTICAL REPORT

Eurofins TestAmerica, Canton  
4101 Shuffel Street NW  
North Canton, OH 44720  
Tel: (330)497-9396

Laboratory Job ID: 240-149765-1  
Client Project/Site: Ford LTP On-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:  
6/3/2021 2:47:20 PM

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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: 240-149765-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
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 On-Site

Job ID: 240-149765-1

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**Job ID: 240-149765-1**

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**Laboratory: Eurofins TestAmerica, Canton**

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**Narrative**

**Job Narrative  
240-149765-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 5/19/2021 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8° C.

**GC/MS VOA**

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

**VOA Prep**

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

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# Method Summary

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

Job ID: 240-149765-1

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

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- 12
- 13
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# Sample Summary

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

Job ID: 240-149765-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-149765-1	TRIP BLANK_102	Water	05/17/21 00:00	05/19/21 08:00	
240-149765-2	MW-15-60D_051721	Water	05/17/21 09:50	05/19/21 08:00	
240-149765-3	MW-15-59D_051721	Water	05/17/21 12:00	05/19/21 08:00	
240-149765-4	MW-220S_051721	Water	05/17/21 13:30	05/19/21 08:00	

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- 7
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- 10
- 11
- 12
- 13
- 14

# Detection Summary

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

Job ID: 240-149765-1

**Client Sample ID: TRIP BLANK\_102**

**Lab Sample ID: 240-149765-1**

No Detections.

**Client Sample ID: MW-15-60D\_051721**

**Lab Sample ID: 240-149765-2**

No Detections.

**Client Sample ID: MW-15-59D\_051721**

**Lab Sample ID: 240-149765-3**

No Detections.

**Client Sample ID: MW-220S\_051721**

**Lab Sample ID: 240-149765-4**

No Detections.

- 1
- 2
- 3
- 4
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- 6
- 7
- 8
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- 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 On-Site

Job ID: 240-149765-1

**Client Sample ID: TRIP BLANK\_102**

**Lab Sample ID: 240-149765-1**

**Date Collected: 05/17/21 00:00**

**Matrix: Water**

**Date Received: 05/19/21 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			05/27/21 21:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/27/21 21:00	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/27/21 21:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/27/21 21:00	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/27/21 21:00	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/27/21 21:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		75 - 130		05/27/21 21:00	1
4-Bromofluorobenzene (Surr)	113		47 - 134		05/27/21 21:00	1
Toluene-d8 (Surr)	105		69 - 122		05/27/21 21:00	1
Dibromofluoromethane (Surr)	109		78 - 129		05/27/21 21:00	1



# Client Sample Results

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

Job ID: 240-149765-1

**Client Sample ID: MW-15-60D\_051721**

**Lab Sample ID: 240-149765-2**

**Date Collected: 05/17/21 09:50**

**Matrix: Water**

**Date Received: 05/19/21 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			05/25/21 23:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		70 - 133		05/25/21 23:35	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			05/27/21 21:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/27/21 21:23	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/27/21 21:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/27/21 21:23	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/27/21 21:23	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/27/21 21:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		75 - 130		05/27/21 21:23	1
4-Bromofluorobenzene (Surr)	113		47 - 134		05/27/21 21:23	1
Toluene-d8 (Surr)	104		69 - 122		05/27/21 21:23	1
Dibromofluoromethane (Surr)	109		78 - 129		05/27/21 21:23	1

# Client Sample Results

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

Job ID: 240-149765-1

**Client Sample ID: MW-15-59D\_051721**

**Lab Sample ID: 240-149765-3**

Date Collected: 05/17/21 12:00

Matrix: Water

Date Received: 05/19/21 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			05/25/21 15:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		70 - 133		05/25/21 15:16	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			05/27/21 21:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/27/21 21:47	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/27/21 21:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/27/21 21:47	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/27/21 21:47	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/27/21 21:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		75 - 130		05/27/21 21:47	1
4-Bromofluorobenzene (Surr)	113		47 - 134		05/27/21 21:47	1
Toluene-d8 (Surr)	103		69 - 122		05/27/21 21:47	1
Dibromofluoromethane (Surr)	109		78 - 129		05/27/21 21:47	1

# Client Sample Results

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

Job ID: 240-149765-1

**Client Sample ID: MW-220S\_051721**

**Lab Sample ID: 240-149765-4**

**Date Collected: 05/17/21 13:30**

**Matrix: Water**

**Date Received: 05/19/21 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			05/25/21 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		70 - 133		05/25/21 15:41	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			05/27/21 22:11	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/27/21 22:11	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/27/21 22:11	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/27/21 22:11	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/27/21 22:11	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/27/21 22:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		75 - 130		05/27/21 22:11	1
4-Bromofluorobenzene (Surr)	114		47 - 134		05/27/21 22:11	1
Toluene-d8 (Surr)	106		69 - 122		05/27/21 22:11	1
Dibromofluoromethane (Surr)	111		78 - 129		05/27/21 22:11	1

# Surrogate Summary

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

Job ID: 240-149765-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (75-130)	BFB (47-134)	TOL (69-122)	DBFM (78-129)
240-149765-1	TRIP BLANK_102	107	113	105	109
240-149765-2	MW-15-60D_051721	106	113	104	109
240-149765-3	MW-15-59D_051721	104	113	103	109
240-149765-4	MW-220S_051721	106	114	106	111
240-149802-B-2 MS	Matrix Spike	106	118	108	116
240-149802-B-2 MSD	Matrix Spike Duplicate	103	118	109	115
LCS 240-487868/4	Lab Control Sample	108	119	105	117
MB 240-487868/7	Method Blank	104	116	106	108

**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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DCA (70-133)
240-149244-J-2 MS	Matrix Spike	100
240-149244-J-2 MSD	Matrix Spike Duplicate	96
240-149630-G-3 MS	Matrix Spike	85
240-149630-M-3 MSD	Matrix Spike Duplicate	86
240-149765-2	MW-15-60D_051721	83
240-149765-3	MW-15-59D_051721	93
240-149765-4	MW-220S_051721	94
LCS 240-487432/4	Lab Control Sample	82
LCS 240-487433/4	Lab Control Sample	91
MB 240-487432/5	Method Blank	84
MB 240-487433/5	Method Blank	95

**Surrogate Legend**

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

# QC Sample Results

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

Job ID: 240-149765-1

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

**Lab Sample ID: MB 240-487868/7**  
**Matrix: Water**  
**Analysis Batch: 487868**

**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			05/27/21 15:28	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/27/21 15:28	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/27/21 15:28	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/27/21 15:28	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/27/21 15:28	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/27/21 15:28	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	104		75 - 130		05/27/21 15:28	1
4-Bromofluorobenzene (Surr)	116		47 - 134		05/27/21 15:28	1
Toluene-d8 (Surr)	106		69 - 122		05/27/21 15:28	1
Dibromofluoromethane (Surr)	108		78 - 129		05/27/21 15:28	1

**Lab Sample ID: LCS 240-487868/4**  
**Matrix: Water**  
**Analysis Batch: 487868**

**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	10.0	11.2		ug/L		112	73 - 129
cis-1,2-Dichloroethene	10.0	10.6		ug/L		106	75 - 124
Tetrachloroethene	10.0	9.20		ug/L		92	70 - 125
trans-1,2-Dichloroethene	10.0	10.6		ug/L		106	74 - 130
Trichloroethene	10.0	10.3		ug/L		103	71 - 121
Vinyl chloride	10.0	10.7		ug/L		107	61 - 134

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	108		75 - 130
4-Bromofluorobenzene (Surr)	119		47 - 134
Toluene-d8 (Surr)	105		69 - 122
Dibromofluoromethane (Surr)	117		78 - 129

**Lab Sample ID: 240-149802-B-2 MS**  
**Matrix: Water**  
**Analysis Batch: 487868**

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

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
1,1-Dichloroethene	1300	U	12500	15400		ug/L		123	64 - 132
cis-1,2-Dichloroethene	3800	F1	12500	19400	F1	ug/L		125	68 - 121
Tetrachloroethene	1300	U	12500	13200		ug/L		105	52 - 129
Trichloroethene	37000		12500	51900	E	ug/L		121	56 - 124
Vinyl chloride	250	J	12500	13900		ug/L		111	49 - 136

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	106		75 - 130
4-Bromofluorobenzene (Surr)	118		47 - 134
Toluene-d8 (Surr)	108		69 - 122
Dibromofluoromethane (Surr)	116		78 - 129

Eurofins TestAmerica, Canton

# QC Sample Results

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

Job ID: 240-149765-1

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

Lab Sample ID: 240-149802-B-2 MSD

Matrix: Water

Analysis Batch: 487868

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	1300	U	12500	15600		ug/L		125	64 - 132	1	35
cis-1,2-Dichloroethene	3800	F1	12500	19100	F1	ug/L		122	68 - 121	2	35
Tetrachloroethene	1300	U	12500	13100		ug/L		105	52 - 129	0	35
Trichloroethene	37000		12500	51500	E	ug/L		118	56 - 124	1	35
Vinyl chloride	250	J	12500	14500		ug/L		116	49 - 136	4	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		75 - 130
4-Bromofluorobenzene (Surr)	118		47 - 134
Toluene-d8 (Surr)	109		69 - 122
Dibromofluoromethane (Surr)	115		78 - 129

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

Lab Sample ID: MB 240-487432/5

Matrix: Water

Analysis Batch: 487432

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			05/25/21 14:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		70 - 133		05/25/21 14:06	1

Lab Sample ID: LCS 240-487432/4

Matrix: Water

Analysis Batch: 487432

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	10.1		ug/L		101	80 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	82		70 - 133

Lab Sample ID: 240-149630-G-3 MS

Matrix: Water

Analysis Batch: 487432

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	2.2		10.0	13.3		ug/L		111	46 - 170

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	85		70 - 133

# QC Sample Results

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

Job ID: 240-149765-1

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

**Lab Sample ID: 240-149630-M-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 487432**

**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	2.2		10.0	13.2		ug/L		110	46 - 170	1	26
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
1,2-Dichloroethane-d4 (Surr)	86		70 - 133								

**Lab Sample ID: MB 240-487433/5**  
**Matrix: Water**  
**Analysis Batch: 487433**

**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			05/25/21 14:21	1	
<b>Surrogate</b>	<b>%Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>				
1,2-Dichloroethane-d4 (Surr)	95		70 - 133		05/25/21 14:21	1				

**Lab Sample ID: LCS 240-487433/4**  
**Matrix: Water**  
**Analysis Batch: 487433**

**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	10.5		ug/L		105	80 - 135
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>				
1,2-Dichloroethane-d4 (Surr)	91		70 - 133				

**Lab Sample ID: 240-149244-J-2 MS**  
**Matrix: Water**  
**Analysis Batch: 487433**

**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	10.2		ug/L		102	46 - 170
<b>Surrogate</b>	<b>%Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	100		70 - 133						

**Lab Sample ID: 240-149244-J-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 487433**

**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	9.96		ug/L		100	46 - 170	2	26
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
1,2-Dichloroethane-d4 (Surr)	96		70 - 133								

Eurofins TestAmerica, Canton

# QC Association Summary

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

Job ID: 240-149765-1

## GC/MS VOA

### Analysis Batch: 487432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-149765-2	MW-15-60D_051721	Total/NA	Water	8260B SIM	
MB 240-487432/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-487432/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-149630-G-3 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-149630-M-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

### Analysis Batch: 487433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-149765-3	MW-15-59D_051721	Total/NA	Water	8260B SIM	
240-149765-4	MW-220S_051721	Total/NA	Water	8260B SIM	
MB 240-487433/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-487433/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-149244-J-2 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-149244-J-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

### Analysis Batch: 487868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-149765-1	TRIP BLANK_102	Total/NA	Water	8260B	
240-149765-2	MW-15-60D_051721	Total/NA	Water	8260B	
240-149765-3	MW-15-59D_051721	Total/NA	Water	8260B	
240-149765-4	MW-220S_051721	Total/NA	Water	8260B	
MB 240-487868/7	Method Blank	Total/NA	Water	8260B	
LCS 240-487868/4	Lab Control Sample	Total/NA	Water	8260B	
240-149802-B-2 MS	Matrix Spike	Total/NA	Water	8260B	
240-149802-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	



# Lab Chronicle

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

Job ID: 240-149765-1

**Client Sample ID: TRIP BLANK\_102**

**Lab Sample ID: 240-149765-1**

Date Collected: 05/17/21 00:00

Matrix: Water

Date Received: 05/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	487868	05/27/21 21:00	LRW	TAL CAN

**Client Sample ID: MW-15-60D\_051721**

**Lab Sample ID: 240-149765-2**

Date Collected: 05/17/21 09:50

Matrix: Water

Date Received: 05/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	487868	05/27/21 21:23	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	487432	05/25/21 23:35	CS	TAL CAN

**Client Sample ID: MW-15-59D\_051721**

**Lab Sample ID: 240-149765-3**

Date Collected: 05/17/21 12:00

Matrix: Water

Date Received: 05/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	487868	05/27/21 21:47	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	487433	05/25/21 15:16	CS	TAL CAN

**Client Sample ID: MW-220S\_051721**

**Lab Sample ID: 240-149765-4**

Date Collected: 05/17/21 13:30

Matrix: Water

Date Received: 05/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	487868	05/27/21 22:11	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	487433	05/25/21 15:41	CS	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: 240-149765-1

## 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	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21 *
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
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	01-12-22
West Virginia DEP	State	210	12-31-21

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





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

Login # : 149705

Client Arcadis Site Name \_\_\_\_\_  
 Cooler Received on 6-19-21 Opened on 6-20-21  
 FedEx: 1<sup>st</sup> Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Cooler unpacked by:  
Trent C

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 +0.1 °C) Observed Cooler Temp. 2.7 °C Corrected Cooler Temp. 2.8 °C  
 IR GUN #IR-12 (CF +0.2°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 Yes
5. Were the custody papers relinquished & signed in the appropriate place? Yes No Yes
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No Yes
7. Did all bottles arrive in good condition (Unbroken)? Yes No Yes
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No Yes
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? Yes No Yes
11. Sufficient quantity received to perform indicated analyses? Yes No Yes
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# HC022887
14. Were VOAs on the COC? Yes No Yes
15. Were air bubbles >6 mm in any VOA vials? Yes  Larger than this. Yes No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Lot covered Yes No Yes
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: \_\_\_\_\_