# **ANALYTICAL REPORT**

Eurofins TestAmerica, Edison 777 New Durham Road Edison, NJ 08817 Tel: (732)549-3900

Laboratory Job ID: 460-197366-1 Client Project/Site: Ford LTP Off-Site

For:

ARCADIS U.S., Inc. 28550 Cabot Drive Suite 500 Novi, Michigan 48377

Attn: Kristoffer Hinskey

Mde Del Your

Authorized for release by: 12/5/2019 9:23:56 AM

Michael DelMonico, Project Manager I (330)497-9396

michael.delmonico@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: ARCADIS U.S., Inc. Laboratory Job ID: 460-197366-1 Project/Site: Ford LTP Off-Site

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# **Definitions/Glossary**

Client: ARCADIS U.S., Inc. Job ID: 460-197366-1

Project/Site: Ford LTP Off-Site

### **Qualifiers**

### **GC/MS VOA**

Qualifier **Qualifier Description** 

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U Indicates the analyte was analyzed for but not detected.

### **Glossary**

DL, RA, RE, IN

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)

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

Decision Level Concentration (Radiochemistry) DLC

Estimated Detection Limit (Dioxin) **EDL** LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

Minimum Detectable Activity (Radiochemistry) MDA MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit ML Minimum Level (Dioxin)

NC Not Calculated

Not Detected at the reporting limit (or MDL or EDL if shown) ND

**PQL** Practical Quantitation Limit

QC **Quality Control** 

Relative Error Ratio (Radiochemistry) **RER** 

RLReporting 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)

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# **Case Narrative**

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

Job ID: 460-197366-1

Job ID: 460-197366-1

Laboratory: Eurofins TestAmerica, Edison

**Narrative** 

### **CASE NARRATIVE**

Client: ARCADIS U.S., Inc.

**Project: Ford LTP Off-Site** 

Report Number: 460-197366-1

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, Edison 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 11/20/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5° C.

# **VOLATILE ORGANIC COMPOUNDS (GCMS)**

Samples TRIP BLANK (460-197366-1), MW-102S\_111819 (460-197366-2), MW-102\_111819 (460-197366-3) and DUP-05 (460-197366-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 11/27/2019.

The continuing calibration verification (CCV) associated with batch 460-658552 recovered above the upper control limit for 1,1-Dichloroethene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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

### **VOLATILE ORGANIC COMPOUNDS (GC/MS)**

Samples MW-102S\_111819 (460-197366-2), MW-102\_111819 (460-197366-3) and DUP-05 (460-197366-4) were analyzed for Volatile organic compounds (GC/MS) in accordance with SW-846 Method 8260C SIM. The samples were analyzed on 11/25/2019.

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

# **Detection Summary**

Client: ARCADIS U.S., Inc. Job ID: 460-197366-1

Project/Site: Ford LTP Off-Site

**Client Sample ID: TRIP BLANK** Lab Sample ID: 460-197366-1

No Detections.

Lab Sample ID: 460-197366-2 Client Sample ID: MW-102S\_111819

No Detections.

Lab Sample ID: 460-197366-3 **Client Sample ID: MW-102\_111819** 

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Р	rep Type
1,4-Dioxane	1.0	J	2.0	0.33	ug/L	1	_	8260C SIM	T	otal/NA
Vinyl chloride	1.4		1.0	0.17	ug/L	1		8260C	Т	otal/NA

**Client Sample ID: DUP-05** Lab Sample ID: 460-197366-4

 Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.81	J	2.0	0.33	ug/L		_	8260C SIM	Total/NA
Vinyl chloride	1.5		1.0	0.17	ug/L	1		8260C	Total/NA

Job ID: 460-197366-1

Client Sample ID: TRIP BLANK

Date Collected: 11/18/19 14:24 Date Received: 11/20/19 09:30 Lab Sample ID: 460-197366-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.26	ug/L			11/27/19 03:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.22	ug/L			11/27/19 03:56	1
Tetrachloroethene	1.0	U	1.0	0.25	ug/L			11/27/19 03:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			11/27/19 03:56	1
Trichloroethene	1.0	U	1.0	0.31	ug/L			11/27/19 03:56	1
Vinyl chloride	1.0	U	1.0	0.17	ug/L			11/27/19 03:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		74 - 132					11/27/19 03:56	1
Toluene-d8 (Surr)	91		80 - 120					11/27/19 03:56	1
Dibromofluoromethane (Surr)	101		72 - 131					11/27/19 03:56	1
4-Bromofluorobenzene	100		77 - 124					11/27/19 03:56	1

Client Sample ID: MW-102S\_111819

Date Collected: 11/18/19 12:50 Date Received: 11/20/19 09:30 Lab Sample ID: 460-197366-2

Matrix: Water

Method: 8260C 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 0.33 ug/L 11/25/19 12:29 Prepared Surrogate %Recovery Qualifier Limits Analyzed Dil Fac 4-Bromofluorobenzene 100 72 - 133 11/25/19 12:29

Method: 8260C - Volatile Organic Compounds by GC/MS Analyte Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac 1,1-Dichloroethene 1.0 U 1.0 0.26 ug/L 11/27/19 05:30 cis-1,2-Dichloroethene 1.0 U 0.22 ug/L 1.0 11/27/19 05:30 Tetrachloroethene 1.0 0.25 ug/L 1.0 U 11/27/19 05:30 trans-1,2-Dichloroethene 0.24 ug/L 1.0 U 1.0 11/27/19 05:30 Trichloroethene 1.0 U 1.0 0.31 ug/L 11/27/19 05:30 Vinyl chloride 0.17 ug/L 11/27/19 05:30 1.0 U 1.0 %Recovery Qualifier Surrogate Limits Prepared Analyzed Dil Fac

74 - 132 1,2-Dichloroethane-d4 (Surr) 106 11/27/19 05:30 Toluene-d8 (Surr) 105 80 - 120 11/27/19 05:30 Dibromofluoromethane (Surr) 117 72 - 131 11/27/19 05:30 4-Bromofluorobenzene 116 77 - 124 11/27/19 05:30

Client Sample ID: MW-102\_111819

Date Collected: 11/18/19 14:24

Date Collected: 11/18/19 14:24 Date Received: 11/20/19 09:30 Lab Sample ID: 460-197366-3

Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)											
Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac			
1,4-Dioxane	1.0	J	2.0	0.33 ug/L			11/25/19 12:53	1			
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac			
4-Bromofluorobenzene	94	-	72 - 133		•		11/25/19 12:53	1			

# **Client Sample Results**

Client: ARCADIS U.S., Inc. Job ID: 460-197366-1

Project/Site: Ford LTP Off-Site

Client Sample ID: MW-102\_111819

Date Collected: 11/18/19 14:24 Date Received: 11/20/19 09:30

Lab Sample ID: 460-197366-3

**Matrix: Water** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.26	ug/L			11/27/19 05:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.22	ug/L			11/27/19 05:54	1
Tetrachloroethene	1.0	U	1.0	0.25	ug/L			11/27/19 05:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			11/27/19 05:54	1
Trichloroethene	1.0	U	1.0	0.31	ug/L			11/27/19 05:54	1
Vinyl chloride	1.4		1.0	0.17	ug/L			11/27/19 05:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		74 - 132			-		11/27/19 05:54	1
Toluene-d8 (Surr)	89		80 - 120					11/27/19 05:54	1
Dibromofluoromethane (Surr)	100		72 - 131					11/27/19 05:54	1
4-Bromofluorobenzene	80		77 - 124					11/27/19 05:54	1

**Client Sample ID: DUP-05** Lab Sample ID: 460-197366-4 **Matrix: Water** 

Date Collected: 11/18/19 00:00

Date Received: 11/20/19 09:30

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)												
Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac				
1,4-Dioxane	0.81	J	2.0	0.33 ug/L			11/25/19 13:16	1				
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac				
4-Bromofluorobenzene	91		72 - 133				11/25/19 13:16	1				

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.26	ug/L			11/27/19 06:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.22	ug/L			11/27/19 06:17	1
Tetrachloroethene	1.0	U	1.0	0.25	ug/L			11/27/19 06:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			11/27/19 06:17	1
Trichloroethene	1.0	U	1.0	0.31	ug/L			11/27/19 06:17	1
Vinyl chloride	1.5		1.0	0.17	ug/L			11/27/19 06:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		74 - 132			-		11/27/19 06:17	1
Toluene-d8 (Surr)	84		80 - 120					11/27/19 06:17	1
Dibromofluoromethane (Surr)	100		72 - 131					11/27/19 06:17	1
4-Bromofluorobenzene	100		77 - 124					11/27/19 06:17	1

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# **Surrogate Summary**

Client: ARCADIS U.S., Inc. Job ID: 460-197366-1

Project/Site: Ford LTP Off-Site

Method: 8260C - Volatile Organic Compounds by GC/MS

**Matrix: Water** Prep Type: Total/NA

			Pe	ercent Surre	ogate Reco
		DCA	TOL	DBFM	BFB
Lab Sample ID	Client Sample ID	(74-132)	(80-120)	(72-131)	(77-124)
460-197366-1	TRIP BLANK	92	91	101	100
460-197366-2	MW-102S_111819	106	105	117	116
460-197366-3	MW-102_111819	94	89	100	80
460-197366-4	DUP-05	97	84	100	100
LCS 460-658552/4	Lab Control Sample	91	92	98	102
LCSD 460-658552/5	Lab Control Sample Dup	90	91	97	101
MB 460-658552/9	Method Blank	92	91	99	100

# Surrogate Legend

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

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

BFB = 4-Bromofluorobenzene

BFB = 4-Bromofluorobenzene

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

**Matrix: Water** Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)
		BFB	
Lab Sample ID	Client Sample ID	(72-133)	
460-197366-2	MW-102S_111819	100	
460-197366-3	MW-102_111819	94	
460-197366-4	DUP-05	91	
LCS 460-658046/3	Lab Control Sample	99	
LCSD 460-658046/4	Lab Control Sample Dup	99	
MB 460-658046/8	Method Blank	94	

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Client: ARCADIS U.S., Inc. Job ID: 460-197366-1

Project/Site: Ford LTP Off-Site

# Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 460-658552/9

**Matrix: Water** 

Analysis Batch: 658552

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

MR MR Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 1,1-Dichloroethene 1.0 U 1.0 0.26 ug/L 11/26/19 23:01 cis-1,2-Dichloroethene 1.0 U 1.0 0.22 ug/L 11/26/19 23:01 Tetrachloroethene 1.0 U 1.0 0.25 ug/L 11/26/19 23:01 trans-1,2-Dichloroethene 1.0 U 1.0 0.24 ug/L 11/26/19 23:01 Trichloroethene 1.0 U 1.0 0.31 ug/L 11/26/19 23:01 Vinyl chloride 1.0 U 1.0 0.17 ug/L 11/26/19 23:01

MR MR Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 92 74 - 132 11/26/19 23:01 Toluene-d8 (Surr) 91 80 - 120 11/26/19 23:01 72 - 131 Dibromofluoromethane (Surr) 99 11/26/19 23:01 77 - 124 4-Bromofluorobenzene 100 11/26/19 23:01

Lab Sample ID: LCS 460-658552/4

**Matrix: Water** 

Analysis Batch: 658552

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Spike LCS LCS %Rec. Added Result Qualifier Unit **Analyte** D %Rec Limits 1,1-Dichloroethene 20.0 22.8 ug/L 114 74 - 123 cis-1,2-Dichloroethene 20.0 80 - 120 19 1 ug/L 96 Tetrachloroethene 20.0 19.6 ug/L 98 78 - 122 trans-1.2-Dichloroethene 20.0 19.7 ug/L 98 79 - 120 Trichloroethene 20.0 18.0 ug/L 90 77 - 120Vinyl chloride 20.0 20.5 ug/L 103 62 - 138

LCS LCS Limits Surrogate %Recovery Qualifier 1,2-Dichloroethane-d4 (Surr) 91 74 - 132 92 80 - 120 Toluene-d8 (Surr) Dibromofluoromethane (Surr) 98 72 - 131 4-Bromofluorobenzene 102 77 - 124

Lab Sample ID: LCSD 460-658552/5

**Matrix: Water** 

**Analysis Batch: 658552** 

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

	Spike	LCSD L	LCSD				%Rec.		RPD
Analyte	Added	Result (	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	20.0	19.2		ug/L		96	74 - 123	17	30
cis-1,2-Dichloroethene	20.0	17.7		ug/L		89	80 - 120	7	30
Tetrachloroethene	20.0	18.3		ug/L		91	78 - 122	7	30
trans-1,2-Dichloroethene	20.0	18.2		ug/L		91	79 - 120	8	30
Trichloroethene	20.0	16.7		ug/L		83	77 - 120	8	30
Vinyl chloride	20.0	18.0		ug/L		90	62 - 138	13	30

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90		74 - 132
Toluene-d8 (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	97		72 - 131

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Client: ARCADIS U.S., Inc. Job ID: 460-197366-1

Project/Site: Ford LTP Off-Site Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 460-658552/5

**Matrix: Water** 

**Analysis Batch: 658552** 

LCSD LCSD

Surrogate Limits %Recovery Qualifier 4-Bromofluorobenzene 77 - 124 101

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

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

Lab Sample ID: MB 460-658046/8 Client Sample ID: Method Blank Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 658046** 

MB MB

Result Qualifier **MDL** Unit Analyte RL Prepared Analyzed Dil Fac 1,4-Dioxane 2.0 U 2.0 0.33 ug/L 11/25/19 11:20

MB MB

Surrogate %Recovery Qualifier Limits Analyzed Dil Fac Prepared 4-Bromofluorobenzene 94 72 - 133 11/25/19 11:20

Lab Sample ID: LCS 460-658046/3 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 658046** 

LCS LCS %Rec. Spike Analyte Added Result Qualifier Unit %Rec Limits 5.00 4.32 1.4-Dioxane ug/L 66 - 135

LCS LCS

%Recovery Qualifier Limits Surrogate 72 - 133 4-Bromofluorobenzene 99

Lab Sample ID: LCSD 460-658046/4 Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 658046** 

Spike LCSD LCSD **RPD** %Rec. Limits Added Result Qualifier Analyte Unit D %Rec RPD Limit 1,4-Dioxane 5.00 5.18 ug/L 104 66 - 135 18 30

LCSD LCSD

Surrogate %Recovery Qualifier Limits 72 - 133 4-Bromofluorobenzene 99

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# **QC Association Summary**

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Off-Site

Job ID: 460-197366-1

# **GC/MS VOA**

# Analysis Batch: 658046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-197366-2	MW-102S_111819	Total/NA	Water	8260C SIM	
460-197366-3	MW-102_111819	Total/NA	Water	8260C SIM	
460-197366-4	DUP-05	Total/NA	Water	8260C SIM	
MB 460-658046/8	Method Blank	Total/NA	Water	8260C SIM	
LCS 460-658046/3	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 460-658046/4	Lab Control Sample Dup	Total/NA	Water	8260C SIM	

# Analysis Batch: 658552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-197366-1	TRIP BLANK	Total/NA	Water	8260C	<u> </u>
460-197366-2	MW-102S_111819	Total/NA	Water	8260C	
460-197366-3	MW-102_111819	Total/NA	Water	8260C	
460-197366-4	DUP-05	Total/NA	Water	8260C	
MB 460-658552/9	Method Blank	Total/NA	Water	8260C	
LCS 460-658552/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 460-658552/5	Lab Control Sample Dup	Total/NA	Water	8260C	

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# Lab Chronicle

Client: ARCADIS U.S., Inc. Job ID: 460-197366-1

Project/Site: Ford LTP Off-Site

Client Sample ID: TRIP BLANK

Lab Sample ID: 460-197366-1 Date Collected: 11/18/19 14:24 **Matrix: Water** Date Received: 11/20/19 09:30

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Batch Batch Dilution Batch **Prepared** Method Factor or Analyzed **Prep Type** Type Run Number Analyst Lab Total/NA AVM TAL EDI Analysis 8260C 658552 11/27/19 03:56

Client Sample ID: MW-102S 111819 Lab Sample ID: 460-197366-2

Date Collected: 11/18/19 12:50 **Matrix: Water** 

Date Received: 11/20/19 09:30

Batch Dilution Batch Batch **Prepared Prep Type** Type Method Run **Factor** Number or Analyzed **Analyst** Lab TAL EDI Total/NA Analysis 8260C 658552 11/27/19 05:30 AVM Total/NA Analysis 8260C SIM 1 658046 11/25/19 12:29 SZD TAL EDI

Client Sample ID: MW-102 111819 Lab Sample ID: 460-197366-3

Date Collected: 11/18/19 14:24 **Matrix: Water** 

Date Received: 11/20/19 09:30

Batch **Batch** Dilution Batch Prepared or Analyzed **Prep Type** Type Method Run Factor Number Analyst Lab 11/27/19 05:54 Total/NA Analysis 8260C 658552 AVM TAL EDI Total/NA 8260C SIM 658046 11/25/19 12:53 SZD TAL EDI Analysis 1

Lab Sample ID: 460-197366-4 Client Sample ID: DUP-05

Date Collected: 11/18/19 00:00 **Matrix: Water** 

Date Received: 11/20/19 09:30

Dilution Batch **Batch** Batch **Prepared Prep Type** Type Method Run **Factor** Number or Analyzed **Analyst** Lab Total/NA Analysis 8260C 658552 11/27/19 06:17 AVM TAL EDI Total/NA Analysis 8260C SIM 1 658046 11/25/19 13:16 SZD TAL EDI

**Laboratory References:** 

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Eurofins TestAmerica, Edison

# **Accreditation/Certification Summary**

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Off-Site

Job ID: 460-197366-1

- - - -

# Laboratory: Eurofins TestAmerica, Edison

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

Authority	Program	Identification Number	<b>Expiration Date</b>
Connecticut	State	PH-0200	09-30-20
DE Haz. Subst. Cleanup Act (HSCA)	State	<cert no.=""></cert>	12-31-21
Georgia	State	12028 (NJ)	06-30-20
Massachusetts	State Program	M-NJ312	06-30-20
New Jersey	NELAP	12028	06-30-20
New York	NELAP	11452	04-01-20
Pennsylvania	NELAP	68-00522	02-28-20
Rhode Island	State	LAO00132	12-30-19
USDA	US Federal Programs	P330-18-00135	05-03-21

# **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	06-01-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
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	01-12-20
West Virginia DEP	State	210	12-31-19

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# **Method Summary**

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

Job ID: 460-197366-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL EDI
8260C SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL EDI
5030C	Purge and Trap	SW846	TAL EDI

### **Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

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# **Sample Summary**

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

Job ID: 460-197366-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset
460-197366-1	TRIP BLANK	Water	11/18/19 14:24	11/20/19 09:30	
460-197366-2	MW-102S_111819	Water	11/18/19 12:50	11/20/19 09:30	
460-197366-3	MW-102_111819	Water	11/18/19 14:24	11/20/19 09:30	
460-197366-4	DUP-05	Water	11/18/19 00:00	11/20/19 09:30	

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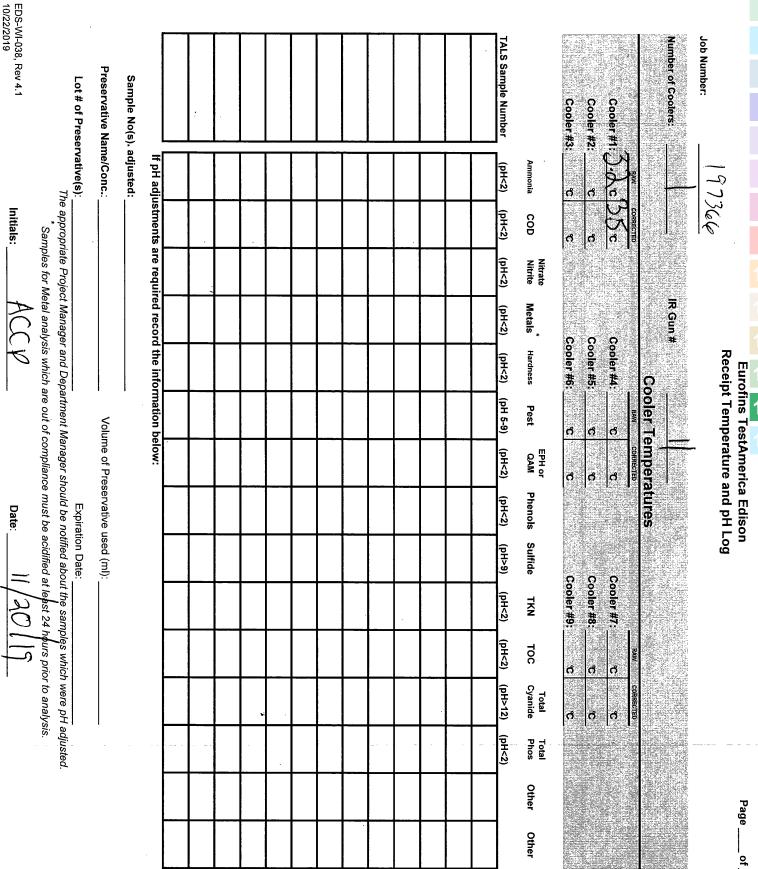
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# **Chain of Custody Record**

TestA	TestAmerica Laboratory location: Brighton 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763	ghton 10448 Citation Drive	e, Suite 200 / Brighton, MI 481	16 / 810-229-2763		THE LEADER IN ENVIRONMENTAL TESTING	TESTING
Client Contact	Regulatory program:	T WW T	NPDES T RCRA	Other	-	TestAmerica Laboratories, Inc	es, Inc.
mpany mante, extenses	Client Project Manager: Kris Hinskey		Site Contact: Rachel Bielak	Lab Contact:	Lab Contact: Mike DelMonico	coc No: 1 9-3	366
Address: 28550 Cabot Drive, Suite 500	Telephone: 248-994-2240	Telep	Telephone: 248-946-6331	Telephone: 330-497-9396	0-497-9396	of Core	
City/State/Zip: Novi, MI, 48377	Email: kristoffer.hinskey@arcadis.com	s.com	nalysis; Lurnacound Jime (1)		Analyses	For lab use only	
Phone: 248-994-2240	Sampler Name:	3	TAT if different from below			Walk-in client	111111111111111111111111111111111111111
Project Name: Ford LTP Off-Site	Sampler Name: Julia N	McClatterty 10	10 day  2 weeks	7		Lab sampling	
Project Number: 30016346.0002B	Method of Shipment/Carrier:	,	☐ 1 week ☐ 2 days	Ď,≑G.			
PO # 30016346.0002B	Shipping/Tracking No:			37 <b>Gr</b> 30B 8260E		Job/SDGNo:	
		Matrix	Containions/& Preservatives	osite≑ E 826 -DCE 1,2-D	260B Chloric	Sample Specific Note	
Sample Identification	Sample Date Sample Time	Aqueous Sediment Solid Other:	HNO3 HCI NaOH ZnAc/ NaOH Unpres Other:	(Compo) 1,1-DCE cis-1,2-i Trans-1	PCE 82 TCE 82 Vinyl Ct	Sample Specific Notes / Special Instructions:	s: es/
TRIP BLANK		~	×	NGXXX	ナナナノ	1-trip blank	2
MW-1025_1/1819	11/18/19 1250	×	X	マチャットメ	x x	310.45 for 86	4 18 Signor 8
MW-102-111819	1424	X	X	マケナン	オメント		
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Possible Hazard Identification  ▼ Non-Hazard	□ Poison B	Jnknown	Return to Client  Disposal	sposal By Lab Arc	By Lab Archive For Months		
Submit all results through Cadena at jim.tomalia@cadena.com. Cadena #E203631 Level IV Reporting requested.	.com. Cadena #E203631						<u> </u>
Relinquished by:	Company: AIRadis	Date Time: (1/18/19/1846	Received by:	i Cold Straw		Date/Time: 1/84	lo
Relinquished by: PARCHET BIELAN BAN BINDAL	Company: AIR LANDIS	Date/Time:	Received by May	ZX XX		19	<u>6</u>
e slexion	Company: ETAL-M1	W19/19 1350	Į.	₹ by:	Company:	Date/lime:	
C2009, Test/merca Lubbiniories, Inc. Al rights reserved. Laboratories, Inc. Test/merca & Design <sup>to</sup> are trademarks of Fest/merca & Laboratories, Inc.	•	ر ا		3.20 18	4	ngela fimilia 11/20	lia
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Job Number: 460-197366-1

Client: ARCADIS U.S., Inc.

Login Number: 197366 List Source: Eurofins TestAmerica, Edison

List Number: 1

Creator: Jara, Kelly D

Creator: Jara, Kelly D		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	CS #1055341
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Eurofins TestAmerica, Edison