

Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 240-134734-1 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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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.

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

Laboratory Job ID: 240-134734-1

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Definitions/Glossary

Client: ARCADIS U.S., Inc. Job ID: 240-134734-1

Project/Site: Ford LTP Off-Site

Qualifiers

GC/MS VOA

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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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

Duplicate Error Ratio (normalized absolute difference) **DER**

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)

Estimated Detection Limit (Dioxin) **EDL** 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 MLMinimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

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**

Relative Error Ratio (Radiochemistry) **RER**

Reporting Limit or Requested Limit (Radiochemistry) RL

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) **TEQ** Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count **TNTC**

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Case Narrative

Client: ARCADIS U.S., Inc.

Job ID: 240-134734-1

Project/Site: Ford LTP Off-Site

Job ID: 240-134734-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Off-Site

Report Number: 240-134734-1

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 8/11/2020 10:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.3° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TRIP BLANK (240-134734-1), MW-86S_080720 (240-134734-2) and MW-86_080720 (240-134734-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 08/20/2020.

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-86S_080720 (240-134734-2) and MW-86_080720 (240-134734-3) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 08/18/2020.

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

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Case Narrative

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Off-Site

Job ID: 240-134734-1

Job ID: 240-134734-1 (Continued)

Laboratory: Eurofins TestAmerica, Canton (Continued)

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Method Summary

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

Job ID: 240-134734-1

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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Sample Summary

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

Job ID: 240-134734-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-134734-1	TRIP BLANK	Water	08/07/20 00:00	08/11/20 10:30	
240-134734-2	MW-86S_080720	Water	08/07/20 11:56	08/11/20 10:30	
240-134734-3	MW-86_080720	Water	08/07/20 10:21	08/11/20 10:30	
240-134734-3	MW-86_080720	vvater	08/07/20 10:21	08/11/20 10:30	

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Detection Summary

Client: ARCADIS U.S., Inc. Project/Site: Ford LTP Off-Site	Job ID: 240-134734-1
Client Sample ID: TRIP BLANK	Lab Sample ID: 240-134734-1
No Detections.	
Client Sample ID: MW-86S_080720	Lab Sample ID: 240-134734-2
No Detections.	
Client Sample ID: MW-86_080720	Lab Sample ID: 240-134734-3

No Detections.

Client Sample Results

Client: ARCADIS U.S., Inc. Job ID: 240-134734-1

Project/Site: Ford LTP Off-Site

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-134734-1 Date Collected: 08/07/20 00:00

Matrix: Water Date Received: 08/11/20 10:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/20/20 16:27	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.38	ug/L			08/20/20 16:27	1
Tetrachloroethene	1.0	U	1.0	0.33	ug/L			08/20/20 16:27	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.43	ug/L			08/20/20 16:27	1
Trichloroethene	1.0	U	1.0	0.36	ug/L			08/20/20 16:27	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			08/20/20 16:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		75 - 130					08/20/20 16:27	1
4-Bromofluorobenzene (Surr)	110		47 - 134					08/20/20 16:27	1
Toluene-d8 (Surr)	101		69 - 122					08/20/20 16:27	1
Dibromofluoromethane (Surr)	112		78 - 129					08/20/20 16:27	1

Client Sample Results

Client: ARCADIS U.S., Inc. Job ID: 240-134734-1

Project/Site: Ford LTP Off-Site

Client Sample ID: MW-86S_080720

Date Collected: 08/07/20 11:56 Date Received: 08/11/20 10:30 Lab Sample ID: 240-134734-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			08/18/20 18:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		70 - 133					08/18/20 18:11	1
Method: 8260B - Volatile O	rganic Compo	unds (GC/	MS)						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/20/20 16:52	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.38	ug/L			08/20/20 16:52	1
Tetrachloroethene	1.0	U	1.0	0.33	ug/L			08/20/20 16:52	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.43	ug/L			08/20/20 16:52	1
Trichloroethene	1.0	U	1.0	0.36	ug/L			08/20/20 16:52	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			08/20/20 16:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		75 - 130					08/20/20 16:52	1
4-Bromofluorobenzene (Surr)	112		47 - 134					08/20/20 16:52	1
Toluene-d8 (Surr)	102		69 - 122					08/20/20 16:52	1
Dibromofluoromethane (Surr)	112		78 - 129					08/20/20 16:52	1

8/24/2020

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Client Sample Results

Client: ARCADIS U.S., Inc. Job ID: 240-134734-1

Project/Site: Ford LTP Off-Site

Client Sample ID: MW-86_080720

Date Collected: 08/07/20 10:21 Date Received: 08/11/20 10:30 Lab Sample ID: 240-134734-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			08/18/20 18:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 133					08/18/20 18:35	1
Method: 8260B - Volatile O	rganic Compo	unds (GC/I	MS)						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/20/20 17:16	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.38	ug/L			08/20/20 17:16	1
Tetrachloroethene	1.0	U	1.0	0.33	ug/L			08/20/20 17:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.43	ug/L			08/20/20 17:16	1
Trichloroethene	1.0	U	1.0	0.36	ug/L			08/20/20 17:16	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			08/20/20 17:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		75 - 130					08/20/20 17:16	1
4-Bromofluorobenzene (Surr)	111		47 - 134					08/20/20 17:16	1
Toluene-d8 (Surr)	103		69 - 122					08/20/20 17:16	1
Dibromofluoromethane (Surr)	111		78 - 129					08/20/20 17:16	1

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Surrogate Summary

Client: ARCADIS U.S., Inc. Job ID: 240-134734-1

Project/Site: Ford LTP Off-Site

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

Matrix: Water Prep Type: Total/NA

			Pe	ercent Surre	ogate Reco
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(75-130)	(47-134)	(69-122)	(78-129)
240-134734-1	TRIP BLANK	103	110	101	112
240-134734-2	MW-86S_080720	102	112	102	112
240-134734-3	MW-86_080720	100	111	103	111
240-134734-3 MS	MW-86-MS_080720	98	112	105	109
240-134734-3 MSD	MW-86-MSD_080720	98	113	106	107
LCS 240-447979/5	Lab Control Sample	94	110	105	104
MB 240-447979/8	Method Blank	101	111	102	113

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)
		DCA	
Lab Sample ID	Client Sample ID	(70-133)	
240-134734-2	MW-86S_080720	89	
240-134734-3	MW-86_080720	92	
240-134734-3 MS	MW-86-MS_080720	91	
240-134734-3 MSD	MW-86-MSD_080720	92	
LCS 240-447609/4	Lab Control Sample	83	
MB 240-447609/5	Method Blank	87	

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

Client: ARCADIS U.S., Inc.

Job ID: 240-134734-1

Project/Site: Ford LTP Off-Site

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

Lab Sample ID: MB 240-447979/8

Matrix: Water

Analysis Batch: 447979

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

MB MB Result Qualifier RL **MDL** Unit Dil Fac Analyte D Prepared Analyzed 1,1-Dichloroethene 1.0 U 1.0 0.46 ug/L 08/20/20 12:44 cis-1,2-Dichloroethene 1.0 U 1.0 0.38 ug/L 08/20/20 12:44 1.0 U Tetrachloroethene 1.0 0.33 ug/L 08/20/20 12:44 0.43 ug/L 08/20/20 12:44 trans-1,2-Dichloroethene 1.0 U 1.0 Trichloroethene 10 U 1.0 0.36 ug/L 08/20/20 12:44 Vinyl chloride 1.0 U 1.0 0.50 ug/L 08/20/20 12:44

MB MB Surrogate %Recovery Qualifier Limits Prepared Dil Fac Analyzed 75 - 130 101 1,2-Dichloroethane-d4 (Surr) 08/20/20 12:44 4-Bromofluorobenzene (Surr) 111 47 - 134 08/20/20 12:44 102 69 - 122 08/20/20 12:44 Toluene-d8 (Surr) Dibromofluoromethane (Surr) 113 78 - 129 08/20/20 12:44

20.0

20.0

20.0

18.5

20.1

23.6

Lab Sample ID: LCS 240-447979/5

Matrix: Water

1,1-Dichloroethene

Tetrachloroethene

Trichloroethene

Vinyl chloride

cis-1,2-Dichloroethene

trans-1.2-Dichloroethene

Analyte

Analysis Batch: 447979

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

74 - 130

71 - 121

61 - 134

93

100

118

Spike LCS LCS %Rec. Added Result Qualifier Unit %Rec Limits 20.0 92 73 - 129 18.4 ug/L 20.0 18.5 93 ug/L 75 - 124 20.0 22.8 114 70 - 125 ug/L

ug/L

ug/L

ug/L

LCS LCS Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 75 - 130 4-Bromofluorobenzene (Surr) 110 47 - 134 69 - 122 Toluene-d8 (Surr) 105 78 - 129 Dibromofluoromethane (Surr) 104

Lab Sample ID: 240-134734-3 MS

Matrix: Water

Analysis Batch: 447979

Client Sample ID: MW-86-MS_080720 Prep Type: Total/NA

	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	1.0	U	20.0	16.2		ug/L		81	64 - 132
cis-1,2-Dichloroethene	1.0	U	20.0	15.8		ug/L		79	68 - 121
Tetrachloroethene	1.0	U	20.0	18.6		ug/L		93	52 - 129
trans-1,2-Dichloroethene	1.0	U	20.0	16.4		ug/L		82	69 - 126
Trichloroethene	1.0	U	20.0	17.0		ug/L		85	56 - 124
Vinyl chloride	1.0	U	20.0	24.7		ug/L		123	49 - 136

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		75 - 130
4-Bromofluorobenzene (Surr)	112		47 - 134
Toluene-d8 (Surr)	105		69 - 122

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Client: ARCADIS U.S., Inc. Project/Site: Ford LTP Off-Site Job ID: 240-134734-1

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

Lab Sample ID: 240-134734-3 MS

Matrix: Water

Analysis Batch: 447979

Client Sample ID: MW-86-MS_080720

Prep Type: Total/NA

MS MS

%Recovery Qualifier Surrogate Limits Dibromofluoromethane (Surr) 109 78 - 129

Lab Sample ID: 240-134734-3 MSD Client Sample ID: MW-86-MSD 080720

Matrix: Water

Analysis Batch: 447979

Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	1.0	U	20.0	17.1		ug/L		86	64 - 132	5	35
cis-1,2-Dichloroethene	1.0	U	20.0	16.7		ug/L		83	68 - 121	5	35
Tetrachloroethene	1.0	U	20.0	19.7		ug/L		98	52 - 129	5	35
trans-1,2-Dichloroethene	1.0	U	20.0	16.9		ug/L		84	69 - 126	3	35
Trichloroethene	1.0	U	20.0	17.8		ug/L		89	56 - 124	4	35
Vinyl chloride	1.0	U	20.0	23.9		ug/L		119	49 - 136	3	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		75 - 130
4-Bromofluorobenzene (Surr)	113		47 - 134
Toluene-d8 (Surr)	106		69 - 122
Dibromofluoromethane (Surr)	107		78 - 129

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

MB MB

Lab Sample ID: MB 240-447609/5

Matrix: Water

Analysis Batch: 447609

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

%Rec.

Client Sample ID: MW-86-MS 080720

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 1,4-Dioxane 2.0 U 2.0 0.86 ug/L 08/18/20 11:05

MB MB

%Recovery Qualifier Surrogate Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 70 - 133 08/18/20 11:05 87

Lab Sample ID: LCS 240-447609/4

Client Sample ID: Lab Control Sample **Matrix: Water** Prep Type: Total/NA **Analysis Batch: 447609**

LCS LCS

Added Result Qualifier Limits Analyte Unit D %Rec 10.0 1,4-Dioxane 10.6 ug/L 106 80 - 135

Spike

LCS LCS

%Recovery Qualifier Surrogate Limits 70 - 133 1,2-Dichloroethane-d4 (Surr) 83

Lab Sample ID: 240-134734-3 MS

Matrix: Water

Analysis Batch: 447609										
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1 4-Dioxane	2.0	U	10.0	10.3		ua/l		103	46 - 170	

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Prep Type: Total/NA

QC Sample Results

Client: ARCADIS U.S., Inc. Job ID: 240-134734-1 Project/Site: Ford LTP Off-Site

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

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		70 - 133

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		70 - 13
_			

Lab Sam	ple ID: 240-134734-3 MSD
Matrix: W	/ater

Analy	sis	Batch	า: 44 7	'609
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Analysis Batch: 447609	Sample	Sample	Spike	MSD	MSD		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D
1,4-Dioxane	2.0	U	10.0	10.1		ug/L	
	MSD	MSD					
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	92		70 - 133				

Prep Type: Total/NA

Client Sample ID: MW-86-MSD_080720

%Rec

101

%Rec.

Limits

46 - 170

RPD

RPD Limit

QC Association Summary

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Off-Site

Job ID: 240-134734-1

GC/MS VOA

Analysis Batch: 447609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-134734-2	MW-86S_080720	Total/NA	Water	8260B SIM	
240-134734-3	MW-86_080720	Total/NA	Water	8260B SIM	
MB 240-447609/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-447609/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-134734-3 MS	MW-86-MS_080720	Total/NA	Water	8260B SIM	
240-134734-3 MSD	MW-86-MSD_080720	Total/NA	Water	8260B SIM	

Analysis Batch: 447979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-134734-1	TRIP BLANK	Total/NA	Water	8260B	
240-134734-2	MW-86S_080720	Total/NA	Water	8260B	
240-134734-3	MW-86_080720	Total/NA	Water	8260B	
MB 240-447979/8	Method Blank	Total/NA	Water	8260B	
LCS 240-447979/5	Lab Control Sample	Total/NA	Water	8260B	
240-134734-3 MS	MW-86-MS_080720	Total/NA	Water	8260B	
240-134734-3 MSD	MW-86-MSD 080720	Total/NA	Water	8260B	

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Lab Chronicle

Client: ARCADIS U.S., Inc. Job ID: 240-134734-1

Project/Site: Ford LTP Off-Site

Date Received: 08/11/20 10:30

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-134734-1 Date Collected: 08/07/20 00:00

Matrix: Water

Lab

TAL CAN

Batch Batch Dilution Batch **Prepared** Method **Factor** or Analyzed **Prep Type** Type Run Number Analyst Total/NA Analysis 8260B 447979 08/20/20 16:27 HMB

Client Sample ID: MW-86S 080720 Lab Sample ID: 240-134734-2

Date Collected: 08/07/20 11:56 **Matrix: Water**

Date Received: 08/11/20 10:30

Batch Batch Dilution Batch **Prepared Prep Type** Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Analysis 8260B 447979 08/20/20 16:52 HMB TAL CAN Total/NA Analysis 8260B SIM 1 447609 08/18/20 18:11 SAM TAL CAN

Client Sample ID: MW-86 080720 Lab Sample ID: 240-134734-3

Date Collected: 08/07/20 10:21 **Matrix: Water**

Date Received: 08/11/20 10:30

Batch Dilution **Batch Batch** Prepared Method Number **Prep Type** Type Run **Factor** or Analyzed Analyst Lab Total/NA Analysis 8260B 447979 08/20/20 17:16 HMB TAL CAN Total/NA Analysis 8260B SIM 447609 08/18/20 18:35 SAM TAL CAN 1

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. Job ID: 240-134734-1 Project/Site: Ford LTP Off-Site

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	07-31-20 *
lowa	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	08-31-20
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

 $^{^{\}star} \ \text{Accreditation/Certification renewal pending - accreditation/certification considered valid}.$

MICHIGAN 190 retain	erica Laboratory location: Brighton	Chain of Custody Record 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2783	310-229-2763	THE LEADER IN ENVIRONMENTAL TESTING
Client Contact	Regulatory program: DW	□ NPDES □ RCRA	Other	
ompany Name: Arcadis	Client Project Manager: Kris Hinskey	Site Contact: Julia McClafferty	Lab Contact: Mike DelMonico	TestAmerica Laboratories, Inc. COC No:
ddress: 28550 Cabot Drive, Suite 500	Telephone: 248-994-2240	Telephone: 734-644-5131	Telephone: 340-497-0396	
Jity/State/Zip: Novi, MI, 48377	1	Analysis arrestoard	Andrews	/ of / cocs
hone: 248-994-2240	Email: kristoffer fildskey(a arcadis, com	Anna San Carter Carre	CONTRACTOR OF THE PARTY OF THE	roc lab use only
roject Name: Ford LTP Off-Site	Sampler Name:	TAT if different from below. \(\times \text{ 3 weeks} \) 10 day \(\times \text{ 2 weeks} \)		Walk-in client Lab sampline
roject Number: 30050315,402,04	Method of Shipment/Carrier:	T week	80	Simplifies our
O#30050315.402.04	Shipping/Tracking No:	/ A) aid	6 85608 35 8560 85608	Job/SDG No:
Sample Identification	Sample Date Sample Time Addment Addment	Piltered Sammers & Precentification of there:	Composite Composite Scenary 1,1-DCE 82608 Trans-1,2-DCE Tr	Sample Specific Notes / Special Instructions:
TRIP BLANK		C	X X X X	
NNV-845_080720	x 35.11 36/13/8	. 2	X	310AS FX 82613 310 AS 65, 824013 CTM
	X 10:01 0:01	72	× × × × × × ×	
AW-86-MS-080720	8/07/26 10:21 X) (e	X X X X X	
MW-86-MSD, 010720	8/67/30 10:21 X	9	X X X X X X X X X X X X X X X X X X X	4
		240	240-134734 Chain of Custody	
Possible Hazard Identification Non-Hazard Tammable tin Irritant	ritant Poison B Unknown	Sample Disposal (A fee may be assessed if sample Return to Client F Disposal By Lab	Sample Disposal (A fee may be assessed if samples are retained longer than I month) Return to Client	
ipecial Instructions/QC Requirements & Comments: Submit all results through Gadena at jtomalia@cadenaco.com. Gadena #E203631 evel IV Reporting requested.	naco.com. Gadena #E203631			
celinguished by:	cechis	3	Storace Company: 0.	19:00 8:01
Relinquished by Mary M. Willy	Company Course S/10/30	1450	Company:	Bate-Time: 8-10-20
Relinquished by:/	Company: LTA TANATA	Received in Laboratory by:	Company:	Date/Time:

Canton Facility		ceipt Form/Narrativ	e	Login #:_	134734
lient Arcadi's		Site Name		Cooler un	packed by:
ooler Received on 4	11.X)	Opened on &	05/1	mo H	SAIRS
edEx: 1 st Grd Exp	UPS FAS Clippe		TestAmerica Courier	Other	2114014
eceipt After-hours: Dr		a Cheft Drop Off	Storage Location	Other	
estAmerica Cooler #		Box Client Cooler	Box Other		
Packing material use		Foam Plastic Bag	None Other		
COOLANT:	Wet Ice) Blue Ice	The state of the s	- Contractor Contractor		
. Cooler temperature u		Dij ice water	See Multiple Cooler F	orm	
IR GUN# IR-10 (C		ed Cooler Temp.	°C Corrected Cooler		°C
IR GUN #IR-11 (C		ed Cooler Temp. 4.1			°C
. Were tamper/custody	v seals on the outside	of the cooler(s)? If Ye	s Ouantity	No	-
		oler(s) signed & dated?		No NA	
		e(s) or bottle kits (LLH	g/MeHg)? Ye	es (No)	
	ody seals intact and un			s No NA	
. Shippers' packing sli	ip attached to the cool	er(s)?	€ C	No No	
. Did custody papers a	accompany the sample	e(s)?	To	s)No	Tests that are not
		gned in the appropriate		s No	checked for pH by
		samples clearly identif	ied on the COC? Ye	es No	Receiving:
	in good condition (U			No	
. Come an control moe	ls be reconciled with t	ine coc.		s) No	VOAs Oil and Grease
	s) used for the test(s) i			S)No	TOC
Sufficient quantity re		licated analyses?		No No	
1. Are these work share				es (No)	
		at the originating labo		.55	
2. Were all preserved s		t pH upon receipt?			oH Strip Lot# <u>HC9112</u>
3. Were VOAs on the (0 0 1 1		S No	
	mm in any VOA vials			NO NA	
	ale argonant in the scale	TINE THO DIANK LOLF		es No	
5. Was a VOA trip blan			V		
5. Was a VOA trip blar6. Was a LL Hg or Me	Hg trip blank present	?			
5. Was a VOA trip blar6. Was a LL Hg or Me	Hg trip blank present	?			her
5. Was a VOA trip blar 6. Was a LL Hg or Me	Hg trip blank present	by			her
5. Was a VOA trip blar 6. Was a LL Hg or Me Contacted PM Concerning	Hg trip blank present	by		Voice Mail Ot	s processed by:
5. Was a VOA trip blar 6. Was a LL Hg or Me Contacted PM	Hg trip blank present	by		Voice Mail Ot	
5. Was a VOA trip blar 6. Was a LL Hg or Me Contacted PM	Hg trip blank present	by		Voice Mail Ot	
5. Was a VOA trip blar 6. Was a LL Hg or Me Contacted PM Concerning 7. CHAIN OF CUSTO	Date DDY & SAMPLE DI	by	via Verbal	Voice Mail Ot Sample	
5. Was a VOA trip blar 6. Was a LL Hg or Me Contacted PM Concerning 7. CHAIN OF CUSTO	Date DDY & SAMPLE DI	by SCREPANCIES	via Verbal	Voice Mail Ot Sample	
5. Was a VOA trip blar 6. Was a LL Hg or Me contacted PM concerning 7. CHAIN OF CUSTO 8. SAMPLE CONDIT	Date DDY & SAMPLE DI	by SCREPANCIES	via Verbal	Voice Mail Ot Sample	s processed by:
5. Was a VOA trip blar 6. Was a LL Hg or Me contacted PM concerning 7. CHAIN OF CUSTO 8. SAMPLE CONDIT ample(s)	Date DDY & SAMPLE DI	byby	via Verbal	Voice Mail Ot Sample	s processed by:
5. Was a VOA trip blar 6. Was a LL Hg or Me Contacted PM Concerning 7. CHAIN OF CUSTO 8. SAMPLE CONDIT ample(s) ample(s)	Date Date DDY & SAMPLE DI	byby	the recommended hole	Voice Mail Ot Sample ding time had ed in a broken co	s processed by:
5. Was a VOA trip blar 6. Was a LL Hg or Me Contacted PM Concerning 7. CHAIN OF CUSTO 8. SAMPLE CONDIT ample(s) ample(s) ample(s)	Date Date DODY & SAMPLE DI	byby	the recommended hole	Voice Mail Ot Sample ding time had ed in a broken co	s processed by:
5. Was a VOA trip blar 6. Was a LL Hg or Me Contacted PM Concerning 7. CHAIN OF CUSTO 8. SAMPLE CONDIT ample(s) ample(s) ample(s)	Date Date DODY & SAMPLE DI	byby	the recommended hole	Voice Mail Ot Sample ding time had ed in a broken co	s processed by:
5. Was a VOA trip blar 6. Was a LL Hg or Me Contacted PM Concerning 7. CHAIN OF CUSTO 8. SAMPLE CONDIT ample(s) ample(s) ample(s) 9. SAMPLE PRESER	Date Date DDY & SAMPLE DI FION	byby	the recommended hole were received with bubble >6 mm	Voice Mail Ot Sample ding time had ed in a broken coin diameter. (N	s processed by: expired. container. Notify PM)
5. Was a VOA trip blar 6. Was a LL Hg or Me Contacted PM Concerning 7. CHAIN OF CUSTO	Date Date DDY & SAMPLE DI FION	byby	the recommended hole were received with bubble >6 mm	Voice Mail Ot Sample ding time had ed in a broken coin diameter. (N	s processed by: expired. container. Notify PM)

WI-NC-099

MICHIGAN	Test America I observance Incesion, Brighton	1	nain of Cu	Chain of Custody Record 10448 Citation Drive. Suite 2007 Brindson, MI 48116 / 810-229-2783	48116 / 810-229-274	63		TestAmerica
	Regulatory program:	-	NPDES	DES RCRA	Other			
mpany Name: Areadis		- 10	0.00			The state of the s	n m	TestAmerica Laboratories, Inc.
idress; 28550 Cabot Drive, Suite 500	Chent Project Manager; Kris Hinskey	15 Hinskey	Sife Cont	Site Contact; Julia McClafferly	3	ab Contact: Mike	Delylonica	COC 308
ty/State/Zip: Novi, MI, 48377	Telephone: 248-994-2240		Telephon	Felephone: 734-644-5131		Telephone: 330-497-9396	7-9396	/ of / cocs
one: 248-994-2240	Email: kristoffer.hinskey@arcadis.com	arcadis.com	Anal	Analysis Turnaround Time			Analyses	For lab use only
LTP Off-Site	Sampler Name:	4	TAT if differ	FAT if different from below 3 weeks				Walk-in client
oject Number: 30050315.402.04	Method of Shipment/Carrie	2 =		LL		80	_	Audies and
0 # 30050315,402.04	Shipping/Tracking No:			1 day	C/Grab			Job/SDG No:
Sample Identification	Sample Date Sample Time	Aqueous Sediment Solid	HYSO4	HO3 Containers & Preservatives NaOH NaOH Uartes Unpres	Filtered Sam Composited	cis-1,2-DCE Trans-1,2-D PCE 82608	TCE 8260B	Sample Specific Notes Special Instructions:
TRIP BLANK					×	X	X	
OE LUSO 2018- NAVA	8/07/30 11:56	×		5 5	7 7 3	X	×	300AS FOR 8260B 300 AR FOR 8240BGGTM
	1			2 9	X	X	×	
OELC				0	X	×	^	
	8/67/20 18:21	>		٩	NCX	X	×××	4
							- - -	
					240-134734	240-134734 Chain of Custody	stody	
Possible Hazard Identification Non-Hazard Ilammable tin Irritani	Poison B	☐ Unknown	Samp	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return to Client	be assessed if samples Disposal By Lab	s are retained longer Archive For	ger than I mouth)	
ocial Instructions/QC Requirements & Comments: ubmit all results through Cadena at jtomalia@cadenaco.com, Cadena #E203631 evel IV Reporting requested.	.com. Cadena #E203631							
Finguished by:	Company: Cochis	Baty Time:	8:00	Received by:	cold storage		Company: Jr	19/5/20 8:01
chinquished by My Mary	Company	SIIO/30	05/1 00	Received by:			Company:	1
clinquished by:	Company:	Date/Time;		Received in Laboratory by:	atory by:		Company:	Date/Time:

*	
8. 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 PRESERVAT	ION
Sample(s)	were further preserved in the laboratory.
Time preserved:	Preservative(s) added/Lot number(s):
VOA Sample Preservation - D	ate/Time VOAs Frozen:

WI-NC-099