

ANALYTICAL REPORT

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

Laboratory Job ID: 240-130579-1
Client Project/Site: Ford LTP Off-Site

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

Attn: Kristoffer Hinskey



Authorized for release by:
6/3/2020 2:00:42 PM

Michael DelMonico, Project Manager I
(330)497-9396
michael.delmonico@testamericainc.com

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



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Method Summary	6
Sample Summary	7
Detection Summary	8
Client Sample Results	9
Surrogate Summary	19
QC Sample Results	20
QC Association Summary	24
Lab Chronicle	25
Certification Summary	27
Chain of Custody	28

Definitions/Glossary

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

Job ID: 240-130579-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

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

Job ID: 240-130579-1

Job ID: 240-130579-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Off-Site

Report Number: 240-130579-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Eurofins TestAmerica, Canton attests to the validity of the laboratory data generated by Eurofins TestAmerica facilities reported herein. All analyses performed by Eurofins TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Eurofins TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client.

RECEIPT

The samples were received on 5/21/2020 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.2° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TRIP BLANK (240-130579-1), MW-80SR_051920 (240-130579-2), MW-137S_051920 (240-130579-3), MW-136S_051920 (240-130579-4), MW-107S_051920 (240-130579-5), MW-139S_051920 (240-130579-6), MW-78_051920 (240-130579-7), MW-78S_051920 (240-130579-8), MW-98S_051920 (240-130579-9) and DUP-05 (240-130579-10) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/30/2020 and 06/01/2020.

The MS/MSD for batch 436251 was not analyzed due to an instrument malfunction: TRIP BLANK (240-130579-1), MW-80SR_051920 (240-130579-2), MW-137S_051920 (240-130579-3), MW-136S_051920 (240-130579-4), MW-139S_051920 (240-130579-6), MW-78_051920 (240-130579-7), MW-78S_051920 (240-130579-8), MW-98S_051920 (240-130579-9) and DUP-05 (240-130579-10).

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

VOLATILE ORGANIC COMPOUNDS (GCMS SIM)

Samples MW-80SR_051920 (240-130579-2), MW-137S_051920 (240-130579-3), MW-136S_051920 (240-130579-4), MW-107S_051920 (240-130579-5), MW-139S_051920 (240-130579-6), MW-78_051920 (240-130579-7), MW-78S_051920 (240-130579-8), MW-98S_051920 (240-130579-9) and DUP-05 (240-130579-10) were analyzed for volatile organic compounds (GCMS SIM) in accordance

Case Narrative

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

Job ID: 240-130579-1

Job ID: 240-130579-1 (Continued)

Laboratory: Eurofins TestAmerica, Canton (Continued)

with EPA SW-846 Method 8260B SIM. The samples were analyzed on 05/27/2020 and 05/28/2020.

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

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

Job ID: 240-130579-1

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: 240-130579-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-130579-1	TRIP BLANK	Water	05/19/20 00:00	05/21/20 09:20	
240-130579-2	MW-80SR_051920	Water	05/19/20 09:17	05/21/20 09:20	
240-130579-3	MW-137S_051920	Water	05/19/20 10:12	05/21/20 09:20	
240-130579-4	MW-136S_051920	Water	05/19/20 11:12	05/21/20 09:20	
240-130579-5	MW-107S_051920	Water	05/19/20 12:27	05/21/20 09:20	
240-130579-6	MW-139S_051920	Water	05/19/20 13:42	05/21/20 09:20	
240-130579-7	MW-78_051920	Water	05/19/20 14:42	05/21/20 09:20	
240-130579-8	MW-78S_051920	Water	05/19/20 15:42	05/21/20 09:20	
240-130579-9	MW-98S_051920	Water	05/19/20 16:47	05/21/20 09:20	
240-130579-10	DUP-05	Water	05/19/20 00:00	05/21/20 09:20	

Detection Summary

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

Job ID: 240-130579-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-130579-1

No Detections.

Client Sample ID: MW-80SR_051920

Lab Sample ID: 240-130579-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	2.2		1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-137S_051920

Lab Sample ID: 240-130579-3

No Detections.

Client Sample ID: MW-136S_051920

Lab Sample ID: 240-130579-4

No Detections.

Client Sample ID: MW-107S_051920

Lab Sample ID: 240-130579-5

No Detections.

Client Sample ID: MW-139S_051920

Lab Sample ID: 240-130579-6

No Detections.

Client Sample ID: MW-78_051920

Lab Sample ID: 240-130579-7

No Detections.

Client Sample ID: MW-78S_051920

Lab Sample ID: 240-130579-8

No Detections.

Client Sample ID: MW-98S_051920

Lab Sample ID: 240-130579-9

No Detections.

Client Sample ID: DUP-05

Lab Sample ID: 240-130579-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	2.8		1.0	0.20	ug/L	1		8260B	Total/NA

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: 240-130579-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-130579-1

Date Collected: 05/19/20 00:00

Matrix: Water

Date Received: 05/21/20 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/30/20 15:45	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/30/20 15:45	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/30/20 15:45	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/30/20 15:45	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/30/20 15:45	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/30/20 15:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		75 - 130		05/30/20 15:45	1
4-Bromofluorobenzene (Surr)	106		47 - 134		05/30/20 15:45	1
Toluene-d8 (Surr)	94		69 - 122		05/30/20 15:45	1
Dibromofluoromethane (Surr)	102		78 - 129		05/30/20 15:45	1

Client Sample Results

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

Job ID: 240-130579-1

Client Sample ID: MW-80SR_051920

Lab Sample ID: 240-130579-2

Date Collected: 05/19/20 09:17

Matrix: Water

Date Received: 05/21/20 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/27/20 09:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 133					05/27/20 09:25	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			05/30/20 16:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/30/20 16:10	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/30/20 16:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/30/20 16:10	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/30/20 16:10	1
Vinyl chloride	2.2		1.0	0.20	ug/L			05/30/20 16:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		75 - 130					05/30/20 16:10	1
4-Bromofluorobenzene (Surr)	102		47 - 134					05/30/20 16:10	1
Toluene-d8 (Surr)	91		69 - 122					05/30/20 16:10	1
Dibromofluoromethane (Surr)	93		78 - 129					05/30/20 16:10	1

Client Sample Results

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

Job ID: 240-130579-1

Client Sample ID: MW-137S_051920

Lab Sample ID: 240-130579-3

Date Collected: 05/19/20 10:12

Matrix: Water

Date Received: 05/21/20 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/27/20 09:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 133		05/27/20 09:50	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			05/30/20 16:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/30/20 16:34	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/30/20 16:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/30/20 16:34	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/30/20 16:34	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/30/20 16:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		75 - 130		05/30/20 16:34	1
4-Bromofluorobenzene (Surr)	103		47 - 134		05/30/20 16:34	1
Toluene-d8 (Surr)	91		69 - 122		05/30/20 16:34	1
Dibromofluoromethane (Surr)	96		78 - 129		05/30/20 16:34	1

Client Sample Results

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

Job ID: 240-130579-1

Client Sample ID: MW-136S_051920

Lab Sample ID: 240-130579-4

Date Collected: 05/19/20 11:12

Matrix: Water

Date Received: 05/21/20 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/27/20 10:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 133		05/27/20 10:15	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			05/30/20 16:59	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/30/20 16:59	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/30/20 16:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/30/20 16:59	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/30/20 16:59	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/30/20 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		75 - 130		05/30/20 16:59	1
4-Bromofluorobenzene (Surr)	104		47 - 134		05/30/20 16:59	1
Toluene-d8 (Surr)	91		69 - 122		05/30/20 16:59	1
Dibromofluoromethane (Surr)	95		78 - 129		05/30/20 16:59	1

Client Sample Results

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

Job ID: 240-130579-1

Client Sample ID: MW-107S_051920

Lab Sample ID: 240-130579-5

Date Collected: 05/19/20 12:27

Matrix: Water

Date Received: 05/21/20 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/28/20 08:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 133		05/28/20 08:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/01/20 13:27	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			06/01/20 13:27	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			06/01/20 13:27	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/01/20 13:27	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			06/01/20 13:27	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/01/20 13:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		75 - 130		06/01/20 13:27	1
4-Bromofluorobenzene (Surr)	103		47 - 134		06/01/20 13:27	1
Toluene-d8 (Surr)	90		69 - 122		06/01/20 13:27	1
Dibromofluoromethane (Surr)	93		78 - 129		06/01/20 13:27	1

Client Sample Results

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

Job ID: 240-130579-1

Client Sample ID: MW-139S_051920

Lab Sample ID: 240-130579-6

Date Collected: 05/19/20 13:42

Matrix: Water

Date Received: 05/21/20 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L	-		05/27/20 10:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 133		05/27/20 10:41	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	-		05/30/20 17:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L	-		05/30/20 17:48	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L	-		05/30/20 17:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L	-		05/30/20 17:48	1
Trichloroethene	1.0	U	1.0	0.10	ug/L	-		05/30/20 17:48	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L	-		05/30/20 17:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		75 - 130		05/30/20 17:48	1
4-Bromofluorobenzene (Surr)	104		47 - 134		05/30/20 17:48	1
Toluene-d8 (Surr)	92		69 - 122		05/30/20 17:48	1
Dibromofluoromethane (Surr)	95		78 - 129		05/30/20 17:48	1

Client Sample Results

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

Job ID: 240-130579-1

Client Sample ID: MW-78_051920

Lab Sample ID: 240-130579-7

Date Collected: 05/19/20 14:42

Matrix: Water

Date Received: 05/21/20 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/27/20 11:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 133		05/27/20 11:06	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			05/30/20 18:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/30/20 18:13	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/30/20 18:13	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/30/20 18:13	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/30/20 18:13	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/30/20 18:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		75 - 130		05/30/20 18:13	1
4-Bromofluorobenzene (Surr)	104		47 - 134		05/30/20 18:13	1
Toluene-d8 (Surr)	91		69 - 122		05/30/20 18:13	1
Dibromofluoromethane (Surr)	95		78 - 129		05/30/20 18:13	1

Client Sample Results

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

Job ID: 240-130579-1

Client Sample ID: MW-78S_051920

Lab Sample ID: 240-130579-8

Date Collected: 05/19/20 15:42

Matrix: Water

Date Received: 05/21/20 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/27/20 11:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 133		05/27/20 11:31	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			05/30/20 18:38	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/30/20 18:38	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/30/20 18:38	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/30/20 18:38	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/30/20 18:38	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/30/20 18:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		75 - 130		05/30/20 18:38	1
4-Bromofluorobenzene (Surr)	106		47 - 134		05/30/20 18:38	1
Toluene-d8 (Surr)	93		69 - 122		05/30/20 18:38	1
Dibromofluoromethane (Surr)	93		78 - 129		05/30/20 18:38	1

Client Sample Results

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

Job ID: 240-130579-1

Client Sample ID: MW-98S_051920

Lab Sample ID: 240-130579-9

Date Collected: 05/19/20 16:47

Matrix: Water

Date Received: 05/21/20 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/27/20 11:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 133		05/27/20 11:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/30/20 19:03	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/30/20 19:03	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/30/20 19:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/30/20 19:03	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/30/20 19:03	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/30/20 19:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		75 - 130		05/30/20 19:03	1
4-Bromofluorobenzene (Surr)	102		47 - 134		05/30/20 19:03	1
Toluene-d8 (Surr)	93		69 - 122		05/30/20 19:03	1
Dibromofluoromethane (Surr)	94		78 - 129		05/30/20 19:03	1

Client Sample Results

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

Job ID: 240-130579-1

Client Sample ID: DUP-05

Lab Sample ID: 240-130579-10

Date Collected: 05/19/20 00:00

Matrix: Water

Date Received: 05/21/20 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L	-		05/27/20 12:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 133		05/27/20 12:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L	-		05/30/20 19:28	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L	-		05/30/20 19:28	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L	-		05/30/20 19:28	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L	-		05/30/20 19:28	1
Trichloroethene	1.0	U	1.0	0.10	ug/L	-		05/30/20 19:28	1
Vinyl chloride	2.8		1.0	0.20	ug/L	-		05/30/20 19:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		75 - 130		05/30/20 19:28	1
4-Bromofluorobenzene (Surr)	101		47 - 134		05/30/20 19:28	1
Toluene-d8 (Surr)	90		69 - 122		05/30/20 19:28	1
Dibromofluoromethane (Surr)	95		78 - 129		05/30/20 19:28	1

Surrogate Summary

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

Job ID: 240-130579-1

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)
240-130579-1	TRIP BLANK	105	106	94	102
240-130579-2	MW-80SR_051920	99	102	91	93
240-130579-3	MW-137S_051920	102	103	91	96
240-130579-4	MW-136S_051920	102	104	91	95
240-130579-5	MW-107S_051920	100	103	90	93
240-130579-5 MS	MW-107S_MS_051920	92	107	93	85
240-130579-5 MSD	MW-107S_MSD_051920	92	107	94	86
240-130579-6	MW-139S_051920	105	104	92	95
240-130579-7	MW-78_051920	101	104	91	95
240-130579-8	MW-78S_051920	102	106	93	93
240-130579-9	MW-98S_051920	101	102	93	94
240-130579-10	DUP-05	102	101	90	95
LCS 240-436251/5	Lab Control Sample	92	107	93	86
LCS 240-436336/5	Lab Control Sample	94	106	93	87
MB 240-436251/8	Method Blank	102	103	89	95
MB 240-436336/8	Method Blank	103	102	91	94

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)
240-130579-2	MW-80SR_051920	95
240-130579-3	MW-137S_051920	92
240-130579-4	MW-136S_051920	96
240-130579-5	MW-107S_051920	97
240-130579-5 MS	MW-107S_MS_051920	92
240-130579-5 MSD	MW-107S_MSD_051920	98
240-130579-6	MW-139S_051920	92
240-130579-7	MW-78_051920	98
240-130579-8	MW-78S_051920	92
240-130579-9	MW-98S_051920	92
240-130579-10	DUP-05	100
240-130780-B-4 MS	Matrix Spike	99
240-130780-B-4 MSD	Matrix Spike Duplicate	97
LCS 240-435722/4	Lab Control Sample	97
LCS 240-435925/4	Lab Control Sample	92
MB 240-435722/5	Method Blank	95
MB 240-435925/5	Method Blank	95

Surrogate Legend

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

QC Sample Results

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

Job ID: 240-130579-1

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

Lab Sample ID: MB 240-436251/8
Matrix: Water
Analysis Batch: 436251

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/30/20 15:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/30/20 15:20	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/30/20 15:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/30/20 15:20	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/30/20 15:20	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/30/20 15:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		75 - 130		05/30/20 15:20	1
4-Bromofluorobenzene (Surr)	103		47 - 134		05/30/20 15:20	1
Toluene-d8 (Surr)	89		69 - 122		05/30/20 15:20	1
Dibromofluoromethane (Surr)	95		78 - 129		05/30/20 15:20	1

Lab Sample ID: LCS 240-436251/5
Matrix: Water
Analysis Batch: 436251

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	20.0	20.9		ug/L		104	73 - 129
cis-1,2-Dichloroethene	20.0	20.8		ug/L		104	75 - 124
Tetrachloroethene	20.0	20.0		ug/L		100	70 - 125
trans-1,2-Dichloroethene	20.0	20.7		ug/L		103	74 - 130
Trichloroethene	20.0	19.3		ug/L		97	71 - 121
Vinyl chloride	20.0	21.4		ug/L		107	61 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		75 - 130
4-Bromofluorobenzene (Surr)	107		47 - 134
Toluene-d8 (Surr)	93		69 - 122
Dibromofluoromethane (Surr)	86		78 - 129

Lab Sample ID: MB 240-436336/8
Matrix: Water
Analysis Batch: 436336

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/01/20 13:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			06/01/20 13:02	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			06/01/20 13:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/01/20 13:02	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			06/01/20 13:02	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/01/20 13:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		75 - 130		06/01/20 13:02	1
4-Bromofluorobenzene (Surr)	102		47 - 134		06/01/20 13:02	1
Toluene-d8 (Surr)	91		69 - 122		06/01/20 13:02	1

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-130579-1

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

Lab Sample ID: MB 240-436336/8
Matrix: Water
Analysis Batch: 436336

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

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	94		78 - 129		06/01/20 13:02	1

Lab Sample ID: LCS 240-436336/5
Matrix: Water
Analysis Batch: 436336

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
1,1-Dichloroethene	20.0	20.9		ug/L		104	73 - 129	
cis-1,2-Dichloroethene	20.0	20.8		ug/L		104	75 - 124	
Tetrachloroethene	20.0	19.9		ug/L		99	70 - 125	
trans-1,2-Dichloroethene	20.0	20.4		ug/L		102	74 - 130	
Trichloroethene	20.0	19.5		ug/L		97	71 - 121	
Vinyl chloride	20.0	21.9		ug/L		109	61 - 134	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	94		75 - 130
4-Bromofluorobenzene (Surr)	106		47 - 134
Toluene-d8 (Surr)	93		69 - 122
Dibromofluoromethane (Surr)	87		78 - 129

Lab Sample ID: 240-130579-5 MS
Matrix: Water
Analysis Batch: 436336

Client Sample ID: MW-107S_MS_051920
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	
1,1-Dichloroethene	1.0	U	20.0	19.9		ug/L		100	64 - 132	
cis-1,2-Dichloroethene	1.0	U	20.0	19.3		ug/L		96	68 - 121	
Tetrachloroethene	1.0	U	20.0	19.2		ug/L		96	52 - 129	
trans-1,2-Dichloroethene	1.0	U	20.0	19.0		ug/L		95	69 - 126	
Trichloroethene	1.0	U	20.0	18.0		ug/L		90	56 - 124	
Vinyl chloride	1.0	U	20.0	19.4		ug/L		97	49 - 136	

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	92		75 - 130
4-Bromofluorobenzene (Surr)	107		47 - 134
Toluene-d8 (Surr)	93		69 - 122
Dibromofluoromethane (Surr)	85		78 - 129

Lab Sample ID: 240-130579-5 MSD
Matrix: Water
Analysis Batch: 436336

Client Sample ID: MW-107S_MSD_051920
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	21.9		ug/L		109	64 - 132	9	35	
cis-1,2-Dichloroethene	1.0	U	20.0	21.5		ug/L		108	68 - 121	11	35	
Tetrachloroethene	1.0	U	20.0	20.8		ug/L		104	52 - 129	8	35	
trans-1,2-Dichloroethene	1.0	U	20.0	20.9		ug/L		104	69 - 126	9	35	
Trichloroethene	1.0	U	20.0	19.6		ug/L		98	56 - 124	9	35	

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-130579-1

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

Lab Sample ID: 240-130579-5 MSD

Client Sample ID: MW-107S_MSD_051920

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 436336

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	1.0	U	20.0	20.6		ug/L		103	49 - 136	6	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	92		75 - 130								
4-Bromofluorobenzene (Surr)	107		47 - 134								
Toluene-d8 (Surr)	94		69 - 122								
Dibromofluoromethane (Surr)	86		78 - 129								

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

Lab Sample ID: MB 240-435722/5

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 435722

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			05/27/20 04:14	1
Surrogate	MB %Recovery	MB Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	95		70 - 133						
							Prepared	Analyzed	Dil Fac
								05/27/20 04:14	1

Lab Sample ID: LCS 240-435722/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 435722

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	10.0	9.50		ug/L		95	80 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	97		70 - 133				

Lab Sample ID: 240-130780-B-4 MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 435722

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.0		10.0	10.9		ug/L		90	46 - 170
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	99		70 - 133						

Lab Sample ID: 240-130780-B-4 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 435722

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	2.0		10.0	10.0		ug/L		81	46 - 170	9	26

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-130579-1

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

Lab Sample ID: 240-130780-B-4 MSD
Matrix: Water
Analysis Batch: 435722

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

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 133

Lab Sample ID: MB 240-435925/5
Matrix: Water
Analysis Batch: 435925

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	-		05/28/20 06:45	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 133					05/28/20 06:45	1

Lab Sample ID: LCS 240-435925/4
Matrix: Water
Analysis Batch: 435925

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	10.0	8.55		ug/L	-	86	80 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	92		70 - 133				

Lab Sample ID: 240-130579-5 MS
Matrix: Water
Analysis Batch: 435925

Client Sample ID: MW-107S_MS_051920
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
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	92		70 - 133						

Lab Sample ID: 240-130579-5 MSD
Matrix: Water
Analysis Batch: 435925

Client Sample ID: MW-107S_MSD_051920
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,4-Dioxane	2.0	U	10.0	9.63		ug/L	-	96	46 - 170	6	26
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	98		70 - 133								

QC Association Summary

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

Job ID: 240-130579-1

GC/MS VOA

Analysis Batch: 435722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-130579-2	MW-80SR_051920	Total/NA	Water	8260B SIM	
240-130579-3	MW-137S_051920	Total/NA	Water	8260B SIM	
240-130579-4	MW-136S_051920	Total/NA	Water	8260B SIM	
240-130579-6	MW-139S_051920	Total/NA	Water	8260B SIM	
240-130579-7	MW-78_051920	Total/NA	Water	8260B SIM	
240-130579-8	MW-78S_051920	Total/NA	Water	8260B SIM	
240-130579-9	MW-98S_051920	Total/NA	Water	8260B SIM	
240-130579-10	DUP-05	Total/NA	Water	8260B SIM	
MB 240-435722/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-435722/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-130780-B-4 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-130780-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 435925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-130579-5	MW-107S_051920	Total/NA	Water	8260B SIM	
MB 240-435925/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-435925/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-130579-5 MS	MW-107S_MS_051920	Total/NA	Water	8260B SIM	
240-130579-5 MSD	MW-107S_MSD_051920	Total/NA	Water	8260B SIM	

Analysis Batch: 436251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-130579-1	TRIP BLANK	Total/NA	Water	8260B	
240-130579-2	MW-80SR_051920	Total/NA	Water	8260B	
240-130579-3	MW-137S_051920	Total/NA	Water	8260B	
240-130579-4	MW-136S_051920	Total/NA	Water	8260B	
240-130579-6	MW-139S_051920	Total/NA	Water	8260B	
240-130579-7	MW-78_051920	Total/NA	Water	8260B	
240-130579-8	MW-78S_051920	Total/NA	Water	8260B	
240-130579-9	MW-98S_051920	Total/NA	Water	8260B	
240-130579-10	DUP-05	Total/NA	Water	8260B	
MB 240-436251/8	Method Blank	Total/NA	Water	8260B	
LCS 240-436251/5	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 436336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-130579-5	MW-107S_051920	Total/NA	Water	8260B	
MB 240-436336/8	Method Blank	Total/NA	Water	8260B	
LCS 240-436336/5	Lab Control Sample	Total/NA	Water	8260B	
240-130579-5 MS	MW-107S_MS_051920	Total/NA	Water	8260B	
240-130579-5 MSD	MW-107S_MSD_051920	Total/NA	Water	8260B	

Lab Chronicle

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

Job ID: 240-130579-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-130579-1

Date Collected: 05/19/20 00:00

Matrix: Water

Date Received: 05/21/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436251	05/30/20 15:45	HMB	TAL CAN

Client Sample ID: MW-80SR_051920

Lab Sample ID: 240-130579-2

Date Collected: 05/19/20 09:17

Matrix: Water

Date Received: 05/21/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436251	05/30/20 16:10	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	435722	05/27/20 09:25	SAM	TAL CAN

Client Sample ID: MW-137S_051920

Lab Sample ID: 240-130579-3

Date Collected: 05/19/20 10:12

Matrix: Water

Date Received: 05/21/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436251	05/30/20 16:34	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	435722	05/27/20 09:50	SAM	TAL CAN

Client Sample ID: MW-136S_051920

Lab Sample ID: 240-130579-4

Date Collected: 05/19/20 11:12

Matrix: Water

Date Received: 05/21/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436251	05/30/20 16:59	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	435722	05/27/20 10:15	SAM	TAL CAN

Client Sample ID: MW-107S_051920

Lab Sample ID: 240-130579-5

Date Collected: 05/19/20 12:27

Matrix: Water

Date Received: 05/21/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436336	06/01/20 13:27	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	435925	05/28/20 08:55	TJL2	TAL CAN

Client Sample ID: MW-139S_051920

Lab Sample ID: 240-130579-6

Date Collected: 05/19/20 13:42

Matrix: Water

Date Received: 05/21/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436251	05/30/20 17:48	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	435722	05/27/20 10:41	SAM	TAL CAN

Lab Chronicle

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

Job ID: 240-130579-1

Client Sample ID: MW-78_051920

Lab Sample ID: 240-130579-7

Date Collected: 05/19/20 14:42

Matrix: Water

Date Received: 05/21/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436251	05/30/20 18:13	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	435722	05/27/20 11:06	SAM	TAL CAN

Client Sample ID: MW-78S_051920

Lab Sample ID: 240-130579-8

Date Collected: 05/19/20 15:42

Matrix: Water

Date Received: 05/21/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436251	05/30/20 18:38	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	435722	05/27/20 11:31	SAM	TAL CAN

Client Sample ID: MW-98S_051920

Lab Sample ID: 240-130579-9

Date Collected: 05/19/20 16:47

Matrix: Water

Date Received: 05/21/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436251	05/30/20 19:03	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	435722	05/27/20 11:57	SAM	TAL CAN

Client Sample ID: DUP-05

Lab Sample ID: 240-130579-10

Date Collected: 05/19/20 00:00

Matrix: Water

Date Received: 05/21/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	436251	05/30/20 19:28	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	435722	05/27/20 12:23	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: 240-130579-1

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20



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

Client Contact Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240 Project Name: Ford LTP Off-Site Project Number: 30050315.402.04 PO # 30050315.402.04		Regulatory program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other	
Client Project Manager: Kris Hinskey Telephone: 248-994-2240 Email: kris@hinskey@arcadis.com		Lab Contact: Mike DeMonico Telephone: 330-497-9396	
Sampler Name: H. Woodburn		Analysis Turnaround Time TAT if different from below: 10 day <input checked="" type="checkbox"/> 3 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 weeks <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day <input type="checkbox"/>	
Method of Shipment/Carrier: Shipping/Tracking No:		Containers & Preservatives HCl <input type="checkbox"/> NaOH <input type="checkbox"/> ZnAc <input type="checkbox"/> Urepres <input type="checkbox"/> Others:	
Sample Identification Sample Date Sample Time		Matrix Air <input type="checkbox"/> Aqueous <input type="checkbox"/> Sediment <input type="checkbox"/> Solid <input type="checkbox"/> Other:	
TRIP BLANK MW-805R-051920 MW-137S-051920 MW-136S-051920 MW-107S-051920 MW-107S-M5D-051920 MW-107S-051920 MW-78-051920 MW-78S-051920		Analyses 1,1-DCE 8260B <input checked="" type="checkbox"/> Composite C/Grab-C <input checked="" type="checkbox"/> cis-1,2-DCE 8260B <input checked="" type="checkbox"/> Trans-1,2-DCE 8260B <input checked="" type="checkbox"/> PCE 8260B <input checked="" type="checkbox"/> TCE 8260B <input checked="" type="checkbox"/> Vinyl Chloride 8260B <input checked="" type="checkbox"/> 1,4-Dioxane 8260B SIM <input checked="" type="checkbox"/>	
Sample Specific Notes / Special Instructions: TRIP BLANK 3 Vol for 8260B 3 Vol for 8260B SIM Run MS/MSD Run MS/MSD		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input checked="" type="checkbox"/> Return to Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Month	



240-130579 Chain of Custody

Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown	Date/Time: 5/19/20 1745 Date/Time: 5/20/20 10:58 Date/Time: 5-21-20 920
Company: Arcadis Company: Arcadis Company: ETH MI	Received by: Non Lab Storage Received by: Case my Received in Laboratory by: [Signature]
Date/Time: 5/19/20 1745 Date/Time: 5/20/20 10:58 Date/Time: 5/20/20 11:00	Company: Arcadis Company: Arcadis Company: ETH MI

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240-130579

Eurofins TestAmerica Canton Sample Receipt Form/Narrative

Login # : _____

Canton Facility

Client Aradite

Site Name _____

Cooler unpacked by:

Cooler Received on 5-21-20

Opened on 5-21-20 920

Ryan C

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time

Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
IR GUN# IR-10 (CF +0.7°C) Observed Cooler Temp. 3.5 °C Corrected Cooler Temp. 4.2 °C
IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
-Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels be reconciled with the COC? Yes No

9. Were correct bottle(s) used for the test(s) indicated? Yes No

10. Sufficient quantity received to perform indicated analyses? Yes No

11. Are these work share samples? Yes No

If yes, Questions 12-16 have been checked at the originating laboratory.

12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC902937

13. Were VOAs on the COC? Yes No

14. Were air bubbles >6 mm in any VOA vials? Larger than this. Yes No NA

15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 59072 Yes No

16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____