

## ANALYTICAL REPORT

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

Laboratory Job ID: 240-139756-1  
Client Project/Site: Ford LTP - On Site

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

Attn: Kristoffer Hinskey



---

Authorized for release by:  
11/23/2020 10:40:01 AM

Michael DelMonico, Project Manager I  
(330)497-9396  
[Michael.DelMonico@Eurofinset.com](mailto:Michael.DelMonico@Eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*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.*



# 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 . . . . .	15
QC Sample Results . . . . .	16
QC Association Summary . . . . .	21
Lab Chronicle . . . . .	22
Certification Summary . . . . .	24
Chain of Custody . . . . .	25

# Definitions/Glossary

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

Job ID: 240-139756-1

## 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

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

# Case Narrative

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

Job ID: 240-139756-1

**Job ID: 240-139756-1**

**Laboratory: Eurofins TestAmerica, Canton**

**Narrative**

## CASE NARRATIVE

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

**Project: Ford LTP - On Site**

**Report Number: 240-139756-1**

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

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

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

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

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

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

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

### **RECEIPT**

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

### **Receipt Exceptions**

One or more containers for the following sample(s) was received broken or leaking: Trip Blank

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

Samples MW-70\_110420 (240-139756-2), DUP-04 (240-139756-3), DUP-05 (240-139756-4), MW-45\_110420 (240-139756-5), MW-71\_110420 (240-139756-6) and MW-53\_110420 (240-139756-7) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/16/2020 and 11/17/2020.

Samples MW-70\_110420 (240-139756-2)[10X], MW-70\_110420 (240-139756-2)[6.25X], DUP-04 (240-139756-3)[10X], DUP-04 (240-139756-3)[2.5X], DUP-05 (240-139756-4)[10X], DUP-05 (240-139756-4)[6.25X] and MW-45\_110420 (240-139756-5)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

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

# Case Narrative

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

Job ID: 240-139756-1

---

## Job ID: 240-139756-1 (Continued)

---

### Laboratory: Eurofins TestAmerica, Canton (Continued)

Samples MW-70\_110420 (240-139756-2), DUP-04 (240-139756-3), DUP-05 (240-139756-4), MW-45\_110420 (240-139756-5), MW-71\_110420 (240-139756-6) and MW-53\_110420 (240-139756-7) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 11/10/2020 and 11/11/2020.

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 - On Site

Job ID: 240-139756-1

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 - On Site

Job ID: 240-139756-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-139756-2	MW-70_110420	Water	11/04/20 09:53	11/07/20 08:00	
240-139756-3	DUP-04	Water	11/04/20 00:00	11/07/20 08:00	
240-139756-4	DUP-05	Water	11/04/20 00:00	11/07/20 08:00	
240-139756-5	MW-45_110420	Water	11/04/20 11:20	11/07/20 08:00	
240-139756-6	MW-71_110420	Water	11/04/20 13:01	11/07/20 08:00	
240-139756-7	MW-53_110420	Water	11/04/20 14:08	11/07/20 08:00	

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

# Detection Summary

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

Job ID: 240-139756-1

## Client Sample ID: MW-70\_110420

## Lab Sample ID: 240-139756-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.5		2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	270		6.3	1.0	ug/L	6.25		8260B	Total/NA
trans-1,2-Dichloroethene	1.8	J	6.3	1.2	ug/L	6.25		8260B	Total/NA
Trichloroethene	1.2	J	6.3	0.63	ug/L	6.25		8260B	Total/NA
Vinyl chloride	550		10	2.0	ug/L	10		8260B	Total/NA

## Client Sample ID: DUP-04

## Lab Sample ID: 240-139756-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.5		2.0	0.86	ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethene	1.2	J	2.5	0.48	ug/L	2.5		8260B	Total/NA
cis-1,2-Dichloroethene	280		10	1.6	ug/L	10		8260B	Total/NA
trans-1,2-Dichloroethene	2.0	J	2.5	0.48	ug/L	2.5		8260B	Total/NA
Trichloroethene	1.3	J	2.5	0.25	ug/L	2.5		8260B	Total/NA
Vinyl chloride	590		10	2.0	ug/L	10		8260B	Total/NA

## Client Sample ID: DUP-05

## Lab Sample ID: 240-139756-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	290		6.3	1.0	ug/L	6.25		8260B	Total/NA
trans-1,2-Dichloroethene	1.3	J	6.3	1.2	ug/L	6.25		8260B	Total/NA
Vinyl chloride	510		10	2.0	ug/L	10		8260B	Total/NA

## Client Sample ID: MW-45\_110420

## Lab Sample ID: 240-139756-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	260		10	1.6	ug/L	10		8260B	Total/NA
Vinyl chloride	500		10	2.0	ug/L	10		8260B	Total/NA

## Client Sample ID: MW-71\_110420

## Lab Sample ID: 240-139756-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.1	J	2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	0.71	J	1.0	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	0.32	J	1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-53\_110420

## Lab Sample ID: 240-139756-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.5	J	2.0	0.86	ug/L	1		8260B SIM	Total/NA
Vinyl chloride	0.68	J	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 - On Site

Job ID: 240-139756-1

**Client Sample ID: MW-70\_110420**

**Lab Sample ID: 240-139756-2**

Date Collected: 11/04/20 09:53

Matrix: Water

Date Received: 11/07/20 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.5		2.0	0.86	ug/L			11/10/20 21:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 133					11/10/20 21:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	6.3	U	6.3	1.2	ug/L			11/16/20 17:20	6.25
cis-1,2-Dichloroethene	270		6.3	1.0	ug/L			11/16/20 17:20	6.25
Tetrachloroethene	6.3	U	6.3	0.94	ug/L			11/16/20 17:20	6.25
trans-1,2-Dichloroethene	1.8	J	6.3	1.2	ug/L			11/16/20 17:20	6.25
Trichloroethene	1.2	J	6.3	0.63	ug/L			11/16/20 17:20	6.25
Vinyl chloride	550		10	2.0	ug/L			11/17/20 18:20	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		75 - 130					11/16/20 17:20	6.25
1,2-Dichloroethane-d4 (Surr)	109		75 - 130					11/17/20 18:20	10
4-Bromofluorobenzene (Surr)	101		47 - 134					11/16/20 17:20	6.25
4-Bromofluorobenzene (Surr)	98		47 - 134					11/17/20 18:20	10
Toluene-d8 (Surr)	101		69 - 122					11/16/20 17:20	6.25
Toluene-d8 (Surr)	97		69 - 122					11/17/20 18:20	10
Dibromofluoromethane (Surr)	94		78 - 129					11/16/20 17:20	6.25
Dibromofluoromethane (Surr)	93		78 - 129					11/17/20 18:20	10

# Client Sample Results

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

Job ID: 240-139756-1

**Client Sample ID: DUP-04**

**Lab Sample ID: 240-139756-3**

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

**Matrix: Water**

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

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.5		2.0	0.86	ug/L			11/10/20 21:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		70 - 133					11/10/20 21:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.2	J	2.5	0.48	ug/L			11/16/20 17:45	2.5
cis-1,2-Dichloroethene	280		10	1.6	ug/L			11/17/20 18:44	10
Tetrachloroethene	2.5	U	2.5	0.38	ug/L			11/16/20 17:45	2.5
trans-1,2-Dichloroethene	2.0	J	2.5	0.48	ug/L			11/16/20 17:45	2.5
Trichloroethene	1.3	J	2.5	0.25	ug/L			11/16/20 17:45	2.5
Vinyl chloride	590		10	2.0	ug/L			11/17/20 18:44	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		75 - 130					11/16/20 17:45	2.5
1,2-Dichloroethane-d4 (Surr)	115		75 - 130					11/17/20 18:44	10
4-Bromofluorobenzene (Surr)	99		47 - 134					11/16/20 17:45	2.5
4-Bromofluorobenzene (Surr)	103		47 - 134					11/17/20 18:44	10
Toluene-d8 (Surr)	98		69 - 122					11/16/20 17:45	2.5
Toluene-d8 (Surr)	103		69 - 122					11/17/20 18:44	10
Dibromofluoromethane (Surr)	97		78 - 129					11/16/20 17:45	2.5
Dibromofluoromethane (Surr)	98		78 - 129					11/17/20 18:44	10

# Client Sample Results

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

Job ID: 240-139756-1

**Client Sample ID: DUP-05**

**Lab Sample ID: 240-139756-4**

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

**Matrix: Water**

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

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			11/10/20 22:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		70 - 133		11/10/20 22:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	6.3	U	6.3	1.2	ug/L			11/16/20 18:09	6.25
<b>cis-1,2-Dichloroethene</b>	<b>290</b>		6.3	1.0	ug/L			11/16/20 18:09	6.25
Tetrachloroethene	6.3	U	6.3	0.94	ug/L			11/16/20 18:09	6.25
<b>trans-1,2-Dichloroethene</b>	<b>1.3</b>	<b>J</b>	6.3	1.2	ug/L			11/16/20 18:09	6.25
Trichloroethene	6.3	U	6.3	0.63	ug/L			11/16/20 18:09	6.25
<b>Vinyl chloride</b>	<b>510</b>		10	2.0	ug/L			11/17/20 19:09	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		75 - 130		11/16/20 18:09	6.25
1,2-Dichloroethane-d4 (Surr)	113		75 - 130		11/17/20 19:09	10
4-Bromofluorobenzene (Surr)	102		47 - 134		11/16/20 18:09	6.25
4-Bromofluorobenzene (Surr)	101		47 - 134		11/17/20 19:09	10
Toluene-d8 (Surr)	103		69 - 122		11/16/20 18:09	6.25
Toluene-d8 (Surr)	99		69 - 122		11/17/20 19:09	10
Dibromofluoromethane (Surr)	99		78 - 129		11/16/20 18:09	6.25
Dibromofluoromethane (Surr)	98		78 - 129		11/17/20 19:09	10

# Client Sample Results

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

Job ID: 240-139756-1

**Client Sample ID: MW-45\_110420**

**Lab Sample ID: 240-139756-5**

Date Collected: 11/04/20 11:20

Matrix: Water

Date Received: 11/07/20 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			11/10/20 22:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		70 - 133					11/10/20 22:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	10	U	10	1.9	ug/L			11/17/20 19:34	10
<b>cis-1,2-Dichloroethene</b>	<b>260</b>		10	1.6	ug/L			11/17/20 19:34	10
Tetrachloroethene	10	U	10	1.5	ug/L			11/17/20 19:34	10
trans-1,2-Dichloroethene	10	U	10	1.9	ug/L			11/17/20 19:34	10
Trichloroethene	10	U	10	1.0	ug/L			11/17/20 19:34	10
<b>Vinyl chloride</b>	<b>500</b>		10	2.0	ug/L			11/17/20 19:34	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		75 - 130					11/17/20 19:34	10
4-Bromofluorobenzene (Surr)	99		47 - 134					11/17/20 19:34	10
Toluene-d8 (Surr)	100		69 - 122					11/17/20 19:34	10
Dibromofluoromethane (Surr)	91		78 - 129					11/17/20 19:34	10

# Client Sample Results

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

Job ID: 240-139756-1

**Client Sample ID: MW-71\_110420**

**Lab Sample ID: 240-139756-6**

Date Collected: 11/04/20 13:01

Matrix: Water

Date Received: 11/07/20 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.1	J	2.0	0.86	ug/L			11/10/20 22:59	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	106		70 - 133					11/10/20 22:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/16/20 18:59	1
cis-1,2-Dichloroethene	0.71	J	1.0	0.16	ug/L			11/16/20 18:59	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			11/16/20 18:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/16/20 18:59	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			11/16/20 18:59	1
Vinyl chloride	0.32	J	1.0	0.20	ug/L			11/16/20 18:59	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	110		75 - 130					11/16/20 18:59	1
4-Bromofluorobenzene (Surr)	97		47 - 134					11/16/20 18:59	1
Toluene-d8 (Surr)	97		69 - 122					11/16/20 18:59	1
Dibromofluoromethane (Surr)	94		78 - 129					11/16/20 18:59	1

# Client Sample Results

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

Job ID: 240-139756-1

**Client Sample ID: MW-53\_110420**

**Lab Sample ID: 240-139756-7**

Date Collected: 11/04/20 14:08

Matrix: Water

Date Received: 11/07/20 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.5	J	2.0	0.86	ug/L			11/11/20 20:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		70 - 133					11/11/20 20:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/16/20 19:24	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			11/16/20 19:24	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			11/16/20 19:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/16/20 19:24	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			11/16/20 19:24	1
Vinyl chloride	0.68	J	1.0	0.20	ug/L			11/16/20 19:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		75 - 130					11/16/20 19:24	1
4-Bromofluorobenzene (Surr)	98		47 - 134					11/16/20 19:24	1
Toluene-d8 (Surr)	100		69 - 122					11/16/20 19:24	1
Dibromofluoromethane (Surr)	96		78 - 129					11/16/20 19:24	1

# Surrogate Summary

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

Job ID: 240-139756-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (75-130)	BFB (47-134)	TOL (69-122)	DBFM (78-129)
240-139756-2	MW-70_110420	113	101	101	94
240-139756-2	MW-70_110420	109	98	97	93
240-139756-3	DUP-04	113	99	98	97
240-139756-3	DUP-04	115	103	103	98
240-139756-4	DUP-05	114	102	103	99
240-139756-4	DUP-05	113	101	99	98
240-139756-5	MW-45_110420	109	99	100	91
240-139756-6	MW-71_110420	110	97	97	94
240-139756-7	MW-53_110420	113	98	100	96
240-139756-7 MS	MW-53-MS_110420	97	104	100	83
240-139756-7 MSD	MW-53-MSD_110420	100	106	103	87
240-139797-E-2 MS	Matrix Spike	99	107	104	83
240-139797-F-2 MSD	Matrix Spike Duplicate	98	105	101	84
LCS 240-461097/5	Lab Control Sample	97	103	101	83
LCS 240-461325/5	Lab Control Sample	100	106	102	83
MB 240-461097/11	Method Blank	110	97	95	92
MB 240-461325/8	Method Blank	110	102	98	93

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)  
BFB = 4-Bromofluorobenzene (Surr)  
TOL = Toluene-d8 (Surr)  
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DCA (70-133)
240-139618-A-4 MS	Matrix Spike	105
240-139618-A-4 MSD	Matrix Spike Duplicate	109
240-139756-2	MW-70_110420	108
240-139756-3	DUP-04	110
240-139756-4	DUP-05	111
240-139756-5	MW-45_110420	109
240-139756-6	MW-71_110420	106
240-139756-7	MW-53_110420	109
240-139756-7 MS	MW-53-MS_110420	107
240-139756-7 MSD	MW-53-MSD_110420	108
LCS 240-460152/4	Lab Control Sample	106
LCS 240-460452/4	Lab Control Sample	106
MB 240-460152/5	Method Blank	104
MB 240-460452/5	Method Blank	110

### Surrogate Legend

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

# QC Sample Results

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

Job ID: 240-139756-1

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

**Lab Sample ID: MB 240-461097/11**  
**Matrix: Water**  
**Analysis Batch: 461097**

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/16/20 12:22	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			11/16/20 12:22	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			11/16/20 12:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			11/16/20 12:22	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			11/16/20 12:22	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			11/16/20 12:22	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	110		75 - 130		11/16/20 12:22	1
4-Bromofluorobenzene (Surr)	97		47 - 134		11/16/20 12:22	1
Toluene-d8 (Surr)	95		69 - 122		11/16/20 12:22	1
Dibromofluoromethane (Surr)	92		78 - 129		11/16/20 12:22	1

**Lab Sample ID: LCS 240-461097/5**  
**Matrix: Water**  
**Analysis Batch: 461097**

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1-Dichloroethene	20.0	19.4		ug/L		97	73 - 129
cis-1,2-Dichloroethene	20.0	19.3		ug/L		96	75 - 124
Tetrachloroethene	20.0	18.6		ug/L		93	70 - 125
trans-1,2-Dichloroethene	20.0	19.1		ug/L		95	74 - 130
Trichloroethene	20.0	16.9		ug/L		85	71 - 121
Vinyl chloride	20.0	22.0		ug/L		110	61 - 134

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	97		75 - 130
4-Bromofluorobenzene (Surr)	103		47 - 134
Toluene-d8 (Surr)	101		69 - 122
Dibromofluoromethane (Surr)	83		78 - 129

**Lab Sample ID: 240-139756-7 MS**  
**Matrix: Water**  
**Analysis Batch: 461097**

**Client Sample ID: MW-53-MS\_110420**  
**Prep Type: Total/NA**

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
1,1-Dichloroethene	1.0	U	20.0	19.2		ug/L		96	64 - 132
cis-1,2-Dichloroethene	1.0	U	20.0	20.0		ug/L		100	68 - 121
Tetrachloroethene	1.0	U	20.0	17.0		ug/L		85	52 - 129
trans-1,2-Dichloroethene	1.0	U	20.0	19.6		ug/L		98	69 - 126
Trichloroethene	1.0	U	20.0	15.8		ug/L		79	56 - 124
Vinyl chloride	0.68	J	20.0	21.5		ug/L		104	49 - 136

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	97		75 - 130
4-Bromofluorobenzene (Surr)	104		47 - 134
Toluene-d8 (Surr)	100		69 - 122



# QC Sample Results

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

Job ID: 240-139756-1

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

**Lab Sample ID: 240-139756-7 MS**  
**Matrix: Water**  
**Analysis Batch: 461097**

**Client Sample ID: MW-53-MS\_110420**  
**Prep Type: Total/NA**

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
<i>Dibromofluoromethane (Surr)</i>	83		78 - 129

**Lab Sample ID: 240-139756-7 MSD**  
**Matrix: Water**  
**Analysis Batch: 461097**

**Client Sample ID: MW-53-MSD\_110420**  
**Prep Type: Total/NA**

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MSD Result</i>	<i>MSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec. Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
1,1-Dichloroethene	1.0	U	20.0	20.2		ug/L		101	64 - 132	5	35
cis-1,2-Dichloroethene	1.0	U	20.0	20.1		ug/L		100	68 - 121	0	35
Tetrachloroethene	1.0	U	20.0	17.8		ug/L		89	52 - 129	4	35
trans-1,2-Dichloroethene	1.0	U	20.0	20.0		ug/L		100	69 - 126	2	35
Trichloroethene	1.0	U	20.0	16.3		ug/L		82	56 - 124	3	35
Vinyl chloride	0.68	J	20.0	22.6		ug/L		109	49 - 136	5	35

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
<i>1,2-Dichloroethane-d4 (Surr)</i>	100		75 - 130
<i>4-Bromofluorobenzene (Surr)</i>	106		47 - 134
<i>Toluene-d8 (Surr)</i>	103		69 - 122
<i>Dibromofluoromethane (Surr)</i>	87		78 - 129

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

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

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

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

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

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

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

Eurofins TestAmerica, Canton

# QC Sample Results

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

Job ID: 240-139756-1

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

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

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	20.0	23.5		ug/L		118	61 - 134
<b>Surrogate</b>							
	<b>LCS %Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>				
1,2-Dichloroethane-d4 (Surr)	100		75 - 130				
4-Bromofluorobenzene (Surr)	106		47 - 134				
Toluene-d8 (Surr)	102		69 - 122				
Dibromofluoromethane (Surr)	83		78 - 129				

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

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	1.0	U	20.0	19.1		ug/L		95	64 - 132
cis-1,2-Dichloroethene	1.0	U	20.0	19.2		ug/L		96	68 - 121
Tetrachloroethene	1.0	U	20.0	17.6		ug/L		88	52 - 129
trans-1,2-Dichloroethene	1.0	U	20.0	18.8		ug/L		94	69 - 126
Trichloroethene	1.0	U	20.0	15.8		ug/L		79	56 - 124
Vinyl chloride	1.0	U	20.0	22.8		ug/L		114	49 - 136
<b>Surrogate</b>									
	<b>MS %Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	99		75 - 130						
4-Bromofluorobenzene (Surr)	107		47 - 134						
Toluene-d8 (Surr)	104		69 - 122						
Dibromofluoromethane (Surr)	83		78 - 129						

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

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	1.0	U	20.0	20.6		ug/L		103	64 - 132	8	35
cis-1,2-Dichloroethene	1.0	U	20.0	20.0		ug/L		100	68 - 121	4	35
Tetrachloroethene	1.0	U	20.0	17.8		ug/L		89	52 - 129	1	35
trans-1,2-Dichloroethene	1.0	U	20.0	19.9		ug/L		100	69 - 126	6	35
Trichloroethene	1.0	U	20.0	16.8		ug/L		84	56 - 124	6	35
Vinyl chloride	1.0	U	20.0	22.0		ug/L		110	49 - 136	4	35
<b>Surrogate</b>											
	<b>MSD %Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
1,2-Dichloroethane-d4 (Surr)	98		75 - 130								
4-Bromofluorobenzene (Surr)	105		47 - 134								
Toluene-d8 (Surr)	101		69 - 122								
Dibromofluoromethane (Surr)	84		78 - 129								

# QC Sample Results

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

Job ID: 240-139756-1

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

**Lab Sample ID: MB 240-460152/5**  
**Matrix: Water**  
**Analysis Batch: 460152**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			11/10/20 13:04	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 133					11/10/20 13:04	1

**Lab Sample ID: LCS 240-460152/4**  
**Matrix: Water**  
**Analysis Batch: 460152**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	10.0	11.1		ug/L		111	80 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	106		70 - 133				

**Lab Sample ID: 240-139618-A-4 MS**  
**Matrix: Water**  
**Analysis Batch: 460152**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	1.7	J	10.0	12.3		ug/L		106	46 - 170
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	105		70 - 133						

**Lab Sample ID: 240-139618-A-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 460152**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,4-Dioxane	1.7	J	10.0	12.5		ug/L		108	46 - 170	1	26
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	109		70 - 133								

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

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			11/11/20 16:36	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		70 - 133					11/11/20 16:36	1

# QC Sample Results

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

Job ID: 240-139756-1

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

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

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	10.0	11.4		ug/L		114	80 - 135
<b>Surrogate</b>							
	%Recovery	LCS Qualifier	LCS Limits				
1,2-Dichloroethane-d4 (Surr)	106		70 - 133				

**Lab Sample ID: 240-139756-7 MS**  
**Matrix: Water**  
**Analysis Batch: 460452**

**Client Sample ID: MW-53-MS\_110420**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	1.5	J	10.0	12.1		ug/L		106	46 - 170
<b>Surrogate</b>									
	%Recovery	MS Qualifier	MS Limits						
1,2-Dichloroethane-d4 (Surr)	107		70 - 133						

**Lab Sample ID: 240-139756-7 MSD**  
**Matrix: Water**  
**Analysis Batch: 460452**

**Client Sample ID: MW-53-MSD\_110420**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	1.5	J	10.0	12.8		ug/L		113	46 - 170	6	26
<b>Surrogate</b>											
	%Recovery	MSD Qualifier	MSD Limits								
1,2-Dichloroethane-d4 (Surr)	108		70 - 133								

# QC Association Summary

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

Job ID: 240-139756-1

## GC/MS VOA

### Analysis Batch: 460152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-139756-2	MW-70_110420	Total/NA	Water	8260B SIM	
240-139756-3	DUP-04	Total/NA	Water	8260B SIM	
240-139756-4	DUP-05	Total/NA	Water	8260B SIM	
240-139756-5	MW-45_110420	Total/NA	Water	8260B SIM	
240-139756-6	MW-71_110420	Total/NA	Water	8260B SIM	
MB 240-460152/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-460152/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-139618-A-4 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-139618-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

### Analysis Batch: 460452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-139756-7	MW-53_110420	Total/NA	Water	8260B SIM	
MB 240-460452/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-460452/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-139756-7 MS	MW-53-MS_110420	Total/NA	Water	8260B SIM	
240-139756-7 MSD	MW-53-MSD_110420	Total/NA	Water	8260B SIM	

### Analysis Batch: 461097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-139756-2	MW-70_110420	Total/NA	Water	8260B	
240-139756-3	DUP-04	Total/NA	Water	8260B	
240-139756-4	DUP-05	Total/NA	Water	8260B	
240-139756-6	MW-71_110420	Total/NA	Water	8260B	
240-139756-7	MW-53_110420	Total/NA	Water	8260B	
MB 240-461097/11	Method Blank	Total/NA	Water	8260B	
LCS 240-461097/5	Lab Control Sample	Total/NA	Water	8260B	
240-139756-7 MS	MW-53-MS_110420	Total/NA	Water	8260B	
240-139756-7 MSD	MW-53-MSD_110420	Total/NA	Water	8260B	

### Analysis Batch: 461325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-139756-2	MW-70_110420	Total/NA	Water	8260B	
240-139756-3	DUP-04	Total/NA	Water	8260B	
240-139756-4	DUP-05	Total/NA	Water	8260B	
240-139756-5	MW-45_110420	Total/NA	Water	8260B	
MB 240-461325/8	Method Blank	Total/NA	Water	8260B	
LCS 240-461325/5	Lab Control Sample	Total/NA	Water	8260B	
240-139797-E-2 MS	Matrix Spike	Total/NA	Water	8260B	
240-139797-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

# Lab Chronicle

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

Job ID: 240-139756-1

**Client Sample ID: MW-70\_110420**

**Lab Sample ID: 240-139756-2**

**Date Collected: 11/04/20 09:53**

**Matrix: Water**

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

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		6.25	461097	11/16/20 17:20	HMB	TAL CAN
Total/NA	Analysis	8260B		10	461325	11/17/20 18:20	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	460152	11/10/20 21:20	SAM	TAL CAN

**Client Sample ID: DUP-04**

**Lab Sample ID: 240-139756-3**

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

**Matrix: Water**

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

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2.5	461097	11/16/20 17:45	HMB	TAL CAN
Total/NA	Analysis	8260B		10	461325	11/17/20 18:44	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	460152	11/10/20 21:45	SAM	TAL CAN

**Client Sample ID: DUP-05**

**Lab Sample ID: 240-139756-4**

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

**Matrix: Water**

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

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		6.25	461097	11/16/20 18:09	HMB	TAL CAN
Total/NA	Analysis	8260B		10	461325	11/17/20 19:09	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	460152	11/10/20 22:10	SAM	TAL CAN

**Client Sample ID: MW-45\_110420**

**Lab Sample ID: 240-139756-5**

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

**Matrix: Water**

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

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	461325	11/17/20 19:34	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	460152	11/10/20 22:35	SAM	TAL CAN

**Client Sample ID: MW-71\_110420**

**Lab Sample ID: 240-139756-6**

**Date Collected: 11/04/20 13:01**

**Matrix: Water**

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

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	461097	11/16/20 18:59	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	460152	11/10/20 22:59	SAM	TAL CAN

**Client Sample ID: MW-53\_110420**

**Lab Sample ID: 240-139756-7**

**Date Collected: 11/04/20 14:08**

**Matrix: Water**

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

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	461097	11/16/20 19:24	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	460452	11/11/20 20:19	SAM	TAL CAN

Eurofins TestAmerica, Canton

# Lab Chronicle

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

Job ID: 240-139756-1

**Laboratory References:**

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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

# Accreditation/Certification Summary

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

Job ID: 240-139756-1

## Laboratory: Eurofins TestAmerica, Canton

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

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



### Chain of Custody Record

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

Regulatory program:  DW  NPDES  RCRA  Other

---

**Client Contact**  
 Company Name: Arcadis  
 Address: 28550 Cabot Drive, Suite 500  
 City/State/Zip: Novi, MI, 48377  
 Phone: 248-994-2240

---

**Client Project Manager: Kris Hinskey**  
 Telephone: 248-994-2240

---

**Site Contact: Julia McClafferty**  
 Telephone: 734-644-5131

---

**Lab Contact: Mike DelMontico**  
 Telephone: 330-497-9396

---

TestAmerica Laboratories, Inc.  
 COC No: \_\_\_\_\_ of \_\_\_\_\_ CDC's

For lab use only

Walk-in client  
 Lab sampling  
 Job/SDG No: \_\_\_\_\_

Sample Specific Notes /  
 Special Instructions: \_\_\_\_\_

Sample Identification	Sample Date	Sample Time	Matrix										Filtered Sample (Y / N)	Composite=C / Grab=G	Analyses								Sample Specific Notes / Special Instructions:		
			Containers & Preservatives												1,1-DCE 8260B	cis-1,2-DCE 8260B	Trans-1,2-DCE 8260B	PCE 8260B	TCE 8260B	Vinyl Chloride 8260B	1,4-Dioxane 8260B SIM				
			Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc										NaOH		Other:	
			TAT if different from below 10 day	<input type="checkbox"/> 3 weeks <input checked="checked" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day	Other:																				
TRIP BLANK	---	---																							1 Trip Blank 3 vials for 8260B 3 vials for 8260B SIM
MW-70-110420	11/4/20	953															X	X	X	X	X	X	X	X	
DUP-04	11/4/20	---															X	X	X	X	X	X	X	X	
DUP-05	11/4/20	---															X	X	X	X	X	X	X	X	
MW-45-110420	11/4/20	1120															X	X	X	X	X	X	X	X	
MW-71-110420	11/4/20	1301															X	X	X	X	X	X	X	X	
MW-53-110420	11/4/20	1408															X	X	X	X	X	X	X	X	
MW-53-MS-110420	11/4/20	1408															X	X	X	X	X	X	X	X	RUN MS/MSD
MW-53-MSD-110420	11/4/20	1408															X	X	X	X	X	X	X	X	RUN MS/MSD

Possible Hazard Identification  
 Non-Hazard  Irritant  Flammable  Corrosive  Other

Special Instructions/QC Requirements & Comments:  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return to Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Relinquished by: John Date/Time: 11/4/20 1505  
 Relinquished by: Arcadis Date/Time: 11/6/20 0915  
 Relinquished by: ETA Date/Time: 11-6-20 0925

Received by: Non Cold Storage Date/Time: 11/4/20 1505  
 Received by: ETA Date/Time: 11-6-20 0915  
 Received by: ETA Date/Time: 11-6-20 0925

Company: Arcadis  
 Company: Arcadis  
 Company: ETA



240-139756 Chain of Custody

MICHIGAN  
190

©2019 TestAmerica Laboratories, Inc. All rights reserved. Environmental & Design, Inc. is an authorized TestAmerica Laboratories, Inc. reseller.



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

Login # : 139756

Client Arcadis Site Name \_\_\_\_\_  
 Cooler Received on 11-7-20 Opened on 11-7-20  
 FedEx: 1<sup>st</sup> Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other \_\_\_\_\_

Cooler unpacked by:  
Matt Snyder

**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-11 (CF +0.9 °C) Observed Cooler Temp. 1.4 °C Corrected Cooler Temp. 2.3 °C  
 IR GUN #IR-12 (CF +0.5 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C

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

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

3. Shippers' packing slip attached to the cooler(s)? Yes No  
 4. Did custody papers accompany the sample(s)? Yes No  
 5. Were the custody papers relinquished & signed in the appropriate place? Yes No  
 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No  
 7. Did all bottles arrive in good condition (Unbroken)? Yes No  
 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No  
 9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? Yes No  
 10. Were correct bottle(s) used for the test(s) indicated? Yes No  
 11. Sufficient quantity received to perform indicated analyses? Yes No  
 12. Are these work share samples and all listed on the COC? Yes No

If yes, Questions 13-17 have been checked at the originating laboratory.  
 13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC907861  
 14. Were VOAs on the COC? Yes No  
 15. Were air bubbles >6 mm in any VOA vials?  Larger than this. Yes No NA  
 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # \_\_\_\_\_ Yes No  
 17. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other \_\_\_\_\_

Concerning \_\_\_\_\_

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

**19. SAMPLE CONDITION**  
 Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.  
 Sample(s) T13 were received in a broken container.  
 Sample(s) \_\_\_\_\_ were received with bubble >6 mm in diameter. (Notify PM)

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