

## ANALYTICAL REPORT

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Laboratory Job ID: 460-197018-1  
Client Project/Site: Ford LTP On-Site

For:  
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Attn: Kristoffer Hinskey



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Authorized for release by:  
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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
Detection Summary . . . . .	6
Client Sample Results . . . . .	7
Surrogate Summary . . . . .	10
QC Sample Results . . . . .	11
QC Association Summary . . . . .	13
Lab Chronicle . . . . .	14
Certification Summary . . . . .	15
Method Summary . . . . .	16
Sample Summary . . . . .	17
Chain of Custody . . . . .	18
Receipt Checklists . . . . .	20

# Definitions/Glossary

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

Job ID: 460-197018-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
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.
□	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)
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 On-Site

Job ID: 460-197018-1

**Job ID: 460-197018-1**

**Laboratory: Eurofins TestAmerica, Edison**

## Narrative

### CASE NARRATIVE

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

**Project: Ford LTP On-Site**

**Report Number: 460-197018-1**

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

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

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

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

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

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

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

#### **RECEIPT**

The samples were received on 11/19/2019 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.4° C and 3.5° C.

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

Samples TRIP BLANK (460-197018-1), MW-114\_111519 (460-197018-2), MW-26\_111519 (460-197018-3), MW-113\_111519 (460-197018-4) and MW-124\_111519 (460-197018-5) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 11/26/2019.

trans-1,2-Dichloroethene failed the recovery criteria low for LCS 460-658365/4. trans-1,2-Dichloroethene failed the recovery criteria low for LCSD 460-658365/5. Refer to the QC report for details.

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 460-658365 recovered outside control limits for the following analyte: trans-1,2-Dichloroethene. This analyte was biased low in the LCS/LCSD and was not detected in the associated samples.

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

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

Samples MW-114\_111519 (460-197018-2), MW-26\_111519 (460-197018-3), MW-113\_111519 (460-197018-4) and MW-124\_111519

# Case Narrative

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

Job ID: 460-197018-1

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## Job ID: 460-197018-1 (Continued)

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

(460-197018-5) were analyzed for Volatile organic compounds (GC/MS) in accordance with SW-846 Method 8260C SIM. The samples were analyzed on 11/25/2019.

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

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# Detection Summary

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

Job ID: 460-197018-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 460-197018-1**

No Detections.

**Client Sample ID: MW-114\_111519**

**Lab Sample ID: 460-197018-2**

No Detections.

**Client Sample ID: MW-26\_111519**

**Lab Sample ID: 460-197018-3**

No Detections.

**Client Sample ID: MW-113\_111519**

**Lab Sample ID: 460-197018-4**

No Detections.

**Client Sample ID: MW-124\_111519**

**Lab Sample ID: 460-197018-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.3		1.0	0.22	ug/L	1			8260C	Total/NA
trans-1,2-Dichloroethene	0.27	J *	1.0	0.24	ug/L	1			8260C	Total/NA
Vinyl chloride	0.19	J	1.0	0.17	ug/L	1			8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Edison

# Client Sample Results

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

Job ID: 460-197018-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 460-197018-1**

Date Collected: 11/15/19 00:00

Matrix: Water

Date Received: 11/19/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.26	ug/L	-		11/26/19 13:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.22	ug/L	-		11/26/19 13:13	1
Tetrachloroethene	1.0	U	1.0	0.25	ug/L	-		11/26/19 13:13	1
trans-1,2-Dichloroethene	1.0	U *	1.0	0.24	ug/L	-		11/26/19 13:13	1
Trichloroethene	1.0	U	1.0	0.31	ug/L	-		11/26/19 13:13	1
Vinyl chloride	1.0	U	1.0	0.17	ug/L	-		11/26/19 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		74 - 132		11/26/19 13:13	1
Toluene-d8 (Surr)	100		80 - 120		11/26/19 13:13	1
Dibromofluoromethane (Surr)	105		72 - 131		11/26/19 13:13	1
4-Bromofluorobenzene	93		77 - 124		11/26/19 13:13	1

**Client Sample ID: MW-114\_111519**

**Lab Sample ID: 460-197018-2**

Date Collected: 11/15/19 10:17

Matrix: Water

Date Received: 11/19/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.33	ug/L	-		11/25/19 18:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	89		72 - 133		11/25/19 18:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.26	ug/L	-		11/26/19 15:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.22	ug/L	-		11/26/19 15:47	1
Tetrachloroethene	1.0	U	1.0	0.25	ug/L	-		11/26/19 15:47	1
trans-1,2-Dichloroethene	1.0	U *	1.0	0.24	ug/L	-		11/26/19 15:47	1
Trichloroethene	1.0	U	1.0	0.31	ug/L	-		11/26/19 15:47	1
Vinyl chloride	1.0	U	1.0	0.17	ug/L	-		11/26/19 15:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		74 - 132		11/26/19 15:47	1
Toluene-d8 (Surr)	99		80 - 120		11/26/19 15:47	1
Dibromofluoromethane (Surr)	107		72 - 131		11/26/19 15:47	1
4-Bromofluorobenzene	92		77 - 124		11/26/19 15:47	1

**Client Sample ID: MW-26\_111519**

**Lab Sample ID: 460-197018-3**

Date Collected: 11/15/19 11:22

Matrix: Water

Date Received: 11/19/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.33	ug/L	-		11/25/19 18:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	86		72 - 133		11/25/19 18:59	1

# Client Sample Results

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

Job ID: 460-197018-1

**Client Sample ID: MW-26\_111519**

**Lab Sample ID: 460-197018-3**

Date Collected: 11/15/19 11:22

Matrix: Water

Date Received: 11/19/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.26	ug/L	-		11/26/19 16:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.22	ug/L	-		11/26/19 16:13	1
Tetrachloroethene	1.0	U	1.0	0.25	ug/L	-		11/26/19 16:13	1
trans-1,2-Dichloroethene	1.0	U *	1.0	0.24	ug/L	-		11/26/19 16:13	1
Trichloroethene	1.0	U	1.0	0.31	ug/L	-		11/26/19 16:13	1
Vinyl chloride	1.0	U	1.0	0.17	ug/L	-		11/26/19 16:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		74 - 132		11/26/19 16:13	1
Toluene-d8 (Surr)	102		80 - 120		11/26/19 16:13	1
Dibromofluoromethane (Surr)	103		72 - 131		11/26/19 16:13	1
4-Bromofluorobenzene	95		77 - 124		11/26/19 16:13	1

**Client Sample ID: MW-113\_111519**

**Lab Sample ID: 460-197018-4**

Date Collected: 11/15/19 12:27

Matrix: Water

Date Received: 11/19/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.33	ug/L	-		11/25/19 19:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		72 - 133		11/25/19 19:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.26	ug/L	-		11/26/19 16:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.22	ug/L	-		11/26/19 16:39	1
Tetrachloroethene	1.0	U	1.0	0.25	ug/L	-		11/26/19 16:39	1
trans-1,2-Dichloroethene	1.0	U *	1.0	0.24	ug/L	-		11/26/19 16:39	1
Trichloroethene	1.0	U	1.0	0.31	ug/L	-		11/26/19 16:39	1
Vinyl chloride	1.0	U	1.0	0.17	ug/L	-		11/26/19 16:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		74 - 132		11/26/19 16:39	1
Toluene-d8 (Surr)	107		80 - 120		11/26/19 16:39	1
Dibromofluoromethane (Surr)	108		72 - 131		11/26/19 16:39	1
4-Bromofluorobenzene	97		77 - 124		11/26/19 16:39	1

**Client Sample ID: MW-124\_111519**

**Lab Sample ID: 460-197018-5**

Date Collected: 11/15/19 13:37

Matrix: Water

Date Received: 11/19/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.33	ug/L	-		11/25/19 19:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	89		72 - 133		11/25/19 19:49	1



# Client Sample Results

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

Job ID: 460-197018-1

**Client Sample ID: MW-124\_111519**

**Lab Sample ID: 460-197018-5**

Date Collected: 11/15/19 13:37

Matrix: Water

Date Received: 11/19/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.26	ug/L			11/26/19 17:05	1
<b>cis-1,2-Dichloroethene</b>	<b>2.3</b>		1.0	0.22	ug/L			11/26/19 17:05	1
Tetrachloroethene	1.0	U	1.0	0.25	ug/L			11/26/19 17:05	1
<b>trans-1,2-Dichloroethene</b>	<b>0.27</b>	<b>J *</b>	1.0	0.24	ug/L			11/26/19 17:05	1
Trichloroethene	1.0	U	1.0	0.31	ug/L			11/26/19 17:05	1
<b>Vinyl chloride</b>	<b>0.19</b>	<b>J</b>	1.0	0.17	ug/L			11/26/19 17:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		74 - 132		11/26/19 17:05	1
Toluene-d8 (Surr)	102		80 - 120		11/26/19 17:05	1
Dibromofluoromethane (Surr)	104		72 - 131		11/26/19 17:05	1
4-Bromofluorobenzene	95		77 - 124		11/26/19 17:05	1

# Surrogate Summary

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

Job ID: 460-197018-1

## Method: 8260C - Volatile Organic Compounds by 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 (74-132)	TOL (80-120)	DBFM (72-131)	BFB (77-124)
460-197018-1	TRIP BLANK	104	100	105	93
460-197018-2	MW-114_111519	105	99	107	92
460-197018-3	MW-26_111519	106	102	103	95
460-197018-4	MW-113_111519	104	107	108	97
460-197018-5	MW-124_111519	104	102	104	95
LCS 460-658365/4	Lab Control Sample	82	93	94	114
LCSD 460-658365/5	Lab Control Sample Dup	80	91	90	115
MB 460-658365/9	Method Blank	117	114	116	103

#### Surrogate Legend

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

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

BFB = 4-Bromofluorobenzene

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB
		(72-133)
460-197018-2	MW-114_111519	89
460-197018-3	MW-26_111519	86
460-197018-4	MW-113_111519	90
460-197018-5	MW-124_111519	89
LCS 460-658048/3	Lab Control Sample	90
LCSD 460-658048/4	Lab Control Sample Dup	88
MB 460-658048/8	Method Blank	91

#### Surrogate Legend

BFB = 4-Bromofluorobenzene

# QC Sample Results

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

Job ID: 460-197018-1

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

**Lab Sample ID: MB 460-658365/9**  
**Matrix: Water**  
**Analysis Batch: 658365**

**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	0.26	ug/L			11/26/19 11:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.22	ug/L			11/26/19 11:30	1
Tetrachloroethene	1.0	U	1.0	0.25	ug/L			11/26/19 11:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			11/26/19 11:30	1
Trichloroethene	1.0	U	1.0	0.31	ug/L			11/26/19 11:30	1
Vinyl chloride	1.0	U	1.0	0.17	ug/L			11/26/19 11:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		74 - 132		11/26/19 11:30	1
Toluene-d8 (Surr)	114		80 - 120		11/26/19 11:30	1
Dibromofluoromethane (Surr)	116		72 - 131		11/26/19 11:30	1
4-Bromofluorobenzene	103		77 - 124		11/26/19 11:30	1

**Lab Sample ID: LCS 460-658365/4**  
**Matrix: Water**  
**Analysis Batch: 658365**

**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	15.7		ug/L		78	74 - 123
cis-1,2-Dichloroethene	20.0	19.8		ug/L		99	80 - 120
Tetrachloroethene	20.0	20.2		ug/L		101	78 - 122
trans-1,2-Dichloroethene	20.0	15.3	*	ug/L		76	79 - 120
Trichloroethene	20.0	20.4		ug/L		102	77 - 120
Vinyl chloride	20.0	17.4		ug/L		87	62 - 138

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	82		74 - 132
Toluene-d8 (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	94		72 - 131
4-Bromofluorobenzene	114		77 - 124

**Lab Sample ID: LCSD 460-658365/5**  
**Matrix: Water**  
**Analysis Batch: 658365**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	20.0	15.7		ug/L		79	74 - 123	0	30
cis-1,2-Dichloroethene	20.0	20.1		ug/L		100	80 - 120	1	30
Tetrachloroethene	20.0	19.4		ug/L		97	78 - 122	4	30
trans-1,2-Dichloroethene	20.0	15.5	*	ug/L		77	79 - 120	1	30
Trichloroethene	20.0	20.1		ug/L		101	77 - 120	1	30
Vinyl chloride	20.0	18.2		ug/L		91	62 - 138	4	30

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

# QC Sample Results

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

Job ID: 460-197018-1

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

Lab Sample ID: LCSD 460-658365/5  
Matrix: Water  
Analysis Batch: 658365

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

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	115		77 - 124

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

Lab Sample ID: MB 460-658048/8  
Matrix: Water  
Analysis Batch: 658048

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	0.33	ug/L			11/25/19 11:28	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
4-Bromofluorobenzene	91		72 - 133		11/25/19 11:28	1			

Lab Sample ID: LCS 460-658048/3  
Matrix: Water  
Analysis Batch: 658048

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	5.00	4.57		ug/L		91	66 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene	90		72 - 133				

Lab Sample ID: LCSD 460-658048/4  
Matrix: Water  
Analysis Batch: 658048

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	5.00	3.89		ug/L		78	66 - 135	16	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene	88		72 - 133						

# QC Association Summary

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

Job ID: 460-197018-1

## GC/MS VOA

### Analysis Batch: 658048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-197018-2	MW-114_111519	Total/NA	Water	8260C SIM	
460-197018-3	MW-26_111519	Total/NA	Water	8260C SIM	
460-197018-4	MW-113_111519	Total/NA	Water	8260C SIM	
460-197018-5	MW-124_111519	Total/NA	Water	8260C SIM	
MB 460-658048/8	Method Blank	Total/NA	Water	8260C SIM	
LCS 460-658048/3	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 460-658048/4	Lab Control Sample Dup	Total/NA	Water	8260C SIM	

### Analysis Batch: 658365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-197018-1	TRIP BLANK	Total/NA	Water	8260C	
460-197018-2	MW-114_111519	Total/NA	Water	8260C	
460-197018-3	MW-26_111519	Total/NA	Water	8260C	
460-197018-4	MW-113_111519	Total/NA	Water	8260C	
460-197018-5	MW-124_111519	Total/NA	Water	8260C	
MB 460-658365/9	Method Blank	Total/NA	Water	8260C	
LCS 460-658365/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 460-658365/5	Lab Control Sample Dup	Total/NA	Water	8260C	

# Lab Chronicle

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

Job ID: 460-197018-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 460-197018-1**

**Date Collected: 11/15/19 00:00**

**Matrix: Water**

**Date Received: 11/19/19 09:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	658365	11/26/19 13:13	EMM	TAL EDI

**Client Sample ID: MW-114\_111519**

**Lab Sample ID: 460-197018-2**

**Date Collected: 11/15/19 10:17**

**Matrix: Water**

**Date Received: 11/19/19 09:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	658365	11/26/19 15:47	EMM	TAL EDI
Total/NA	Analysis	8260C SIM		1	658048	11/25/19 18:34	SZD	TAL EDI

**Client Sample ID: MW-26\_111519**

**Lab Sample ID: 460-197018-3**

**Date Collected: 11/15/19 11:22**

**Matrix: Water**

**Date Received: 11/19/19 09:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	658365	11/26/19 16:13	EMM	TAL EDI
Total/NA	Analysis	8260C SIM		1	658048	11/25/19 18:59	SZD	TAL EDI

**Client Sample ID: MW-113\_111519**

**Lab Sample ID: 460-197018-4**

**Date Collected: 11/15/19 12:27**

**Matrix: Water**

**Date Received: 11/19/19 09:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	658365	11/26/19 16:39	EMM	TAL EDI
Total/NA	Analysis	8260C SIM		1	658048	11/25/19 19:24	SZD	TAL EDI

**Client Sample ID: MW-124\_111519**

**Lab Sample ID: 460-197018-5**

**Date Collected: 11/15/19 13:37**

**Matrix: Water**

**Date Received: 11/19/19 09:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	658365	11/26/19 17:05	EMM	TAL EDI
Total/NA	Analysis	8260C SIM		1	658048	11/25/19 19:49	SZD	TAL EDI

## Laboratory References:

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

# Accreditation/Certification Summary

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

Job ID: 460-197018-1

## Laboratory: Eurofins TestAmerica, Edison

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

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

## Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-20
Connecticut	State	PH-0590	12-31-19
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-16-00404	12-28-19
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-20
West Virginia DEP	State	210	12-31-19

# Method Summary

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

Job ID: 460-197018-1

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

**Protocol References:**

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

**Laboratory References:**

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





# Sample Summary

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

Job ID: 460-197018-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
460-197018-1	TRIP BLANK	Water	11/15/19 00:00	11/19/19 09:10	
460-197018-2	MW-114_111519	Water	11/15/19 10:17	11/19/19 09:10	
460-197018-3	MW-26_111519	Water	11/15/19 11:22	11/19/19 09:10	
460-197018-4	MW-113_111519	Water	11/15/19 12:27	11/19/19 09:10	
460-197018-5	MW-124_111519	Water	11/15/19 13:37	11/19/19 09:10	

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TestAmerica Laboratory location: Brighton --- 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-225-2763

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 On-Site  
Project Number: 30016346.0001B  
PO # 30016346.0001B

Regulatory program:  DW  NPDES  RCRA  Other

Site Contact: Rachel Bielak  
Telephone: 248-946-6331  
Email: kristoffer.hinskey@arcadis.com

Client Project Manager: Kris Hinskey  
Telephone: 248-994-2240  
Email: kristoffer.hinskey@arcadis.com

Sampler Name: Heather Harsan  
Method of Shipment/Carrier:  
Shipping/Tracking No:

Lab Contact: Mike DelMonico  
Telephone: 330-497-9396

COC No:  
of  
COCs

For lab use only  
Walk-in client  
Lab sampling  
Job/SDG No: 197-018

Sample Identification	Sample Date	Sample Time	Matrix				Containers & Preservatives				Filtered Sample (Y/N)	Analyses						Sample Specific Notes / Special Instructions:				
			Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl		NaOH	NaOH	Unpres	Other:	1'-DCE 8260B	cis-1,2-DCE 8260B		Trans-1,2-DCE 8260B	PCE 8260B	TCE 8260B	Vinyl Chloride 8260B
TRIP BLANK	---	---	X																			1 Trip Blank
MW-114-111519	11/15/19	1017	X																			3 VOA for 8260B 3 VOA for 8260BSIM
MW-26-111519	11/15/19	1122	X																			
MW-113-111519	11/15/19	1227	X																			
MW-124-111519	11/15/19	1337	X																			



Possible Hazard Identification  
 Non-Hazard  Flammable  Irritant  Poison B  Unknown

Special Instructions/QC Requirements & Comments:  
Submit all results through Cadena at jim.tomalia@cadena.com. Cadena #E203728  
Level IV Reporting requested.

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Heather Harsan	Arcadis	11/15/19 1615	Novi Corp/Storage	Arcadis	11/15/19 1615
RACHEL BIELEK Paul Paulak	Arcadis	11/18/19 1240	Molly Harsan	ETAL-MI	11/18/19 1240
Molly Harsan	ETAL-MI	11/18/19 1516	Kyara KNOX	ETA	11/18/19 916

seal-1055338, 1055339  
IR # 11-3-1154 3.2/3.5



## Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 460-197018-1

**Login Number: 197018**

**List Source: Eurofins TestAmerica, Edison**

**List Number: 1**

**Creator: Infante, Warleny M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	CS#1055338,1055339
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	