

## ANALYTICAL REPORT

Eurofins TestAmerica, Canton  
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North Canton, OH 44720  
Tel: (330)497-9396

Laboratory Job ID: 240-144518-1  
Client Project/Site: Ford LTP - On Site

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

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.*

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# Definitions/Glossary

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

Job ID: 240-144518-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
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: 240-144518-1

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## Job ID: 240-144518-1

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Laboratory: Eurofins TestAmerica, Canton

### Narrative

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#### Job Narrative 240-144518-1

### Comments

No additional comments.

### Receipt

The samples were received on 2/13/2021 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.6° C.

### GC/MS VOA

Method 8260B: The laboratory control sample (LCS) for analytical batch 240-474305 recovered outside control limits for the following analyte: Tetrachloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data has been reported: MW-124\_021121 (240-144518-3), MW-09\_021121 (240-144518-4) and (LCS 240-474305/4).

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

### VOA Prep

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

# Method Summary

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

Job ID: 240-144518-1

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

**Protocol References:**

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

**Laboratory References:**

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

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# Sample Summary

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

Job ID: 240-144518-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-144518-1	TRIP BLANK	Water	02/11/21 00:00	02/13/21 08:00	
240-144518-2	MW-24_021121	Water	02/11/21 10:03	02/13/21 08:00	
240-144518-3	MW-124_021121	Water	02/11/21 12:33	02/13/21 08:00	
240-144518-4	MW-09_021121	Water	02/11/21 14:24	02/13/21 08:00	
240-144518-5	MW-14_021121	Water	02/11/21 16:03	02/13/21 08:00	

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- 10
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# Detection Summary

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

Job ID: 240-144518-1

## Client Sample ID: TRIP BLANK

Lab Sample ID: 240-144518-1

No Detections.

## Client Sample ID: MW-24\_021121

Lab Sample ID: 240-144518-2

No Detections.

## Client Sample ID: MW-124\_021121

Lab Sample ID: 240-144518-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.9		1.0	0.16	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.25	J	1.0	0.19	ug/L	1		8260B	Total/NA
Vinyl chloride	0.27	J	1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-09\_021121

Lab Sample ID: 240-144518-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	9.1		2.0	0.86	ug/L	1		8260B SIM	Total/NA
Vinyl chloride	1.9		1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-14\_021121

Lab Sample ID: 240-144518-5

No Detections.

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: 240-144518-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-144518-1**

**Date Collected: 02/11/21 00:00**

**Matrix: Water**

**Date Received: 02/13/21 08:00**

**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			02/22/21 22:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/22/21 22:46	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/22/21 22:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/22/21 22:46	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/22/21 22:46	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/22/21 22:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		75 - 130		02/22/21 22:46	1
4-Bromofluorobenzene (Surr)	64		47 - 134		02/22/21 22:46	1
Toluene-d8 (Surr)	78		69 - 122		02/22/21 22:46	1
Dibromofluoromethane (Surr)	124		78 - 129		02/22/21 22:46	1



# Client Sample Results

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

Job ID: 240-144518-1

**Client Sample ID: MW-24\_021121**

**Lab Sample ID: 240-144518-2**

**Date Collected: 02/11/21 10:03**

**Matrix: Water**

**Date Received: 02/13/21 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			02/22/21 14:54	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)	83		70 - 133					02/22/21 14:54	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			02/22/21 23:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/22/21 23:10	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/22/21 23:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/22/21 23:10	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/22/21 23:10	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/22/21 23:10	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)	108		75 - 130					02/22/21 23:10	1
4-Bromofluorobenzene (Surr)	61		47 - 134					02/22/21 23:10	1
Toluene-d8 (Surr)	75		69 - 122					02/22/21 23:10	1
Dibromofluoromethane (Surr)	119		78 - 129					02/22/21 23:10	1

# Client Sample Results

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

Job ID: 240-144518-1

**Client Sample ID: MW-124\_021121**

**Lab Sample ID: 240-144518-3**

Date Collected: 02/11/21 12:33

Matrix: Water

Date Received: 02/13/21 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			02/22/21 16:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		70 - 133		02/22/21 16:10	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			02/24/21 17:07	1
<b>cis-1,2-Dichloroethene</b>	<b>1.9</b>		1.0	0.16	ug/L			02/24/21 17:07	1
Tetrachloroethene	1.0	U *+	1.0	0.15	ug/L			02/24/21 17:07	1
<b>trans-1,2-Dichloroethene</b>	<b>0.25</b>	<b>J</b>	1.0	0.19	ug/L			02/24/21 17:07	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/24/21 17:07	1
<b>Vinyl chloride</b>	<b>0.27</b>	<b>J</b>	1.0	0.20	ug/L			02/24/21 17:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		75 - 130		02/24/21 17:07	1
4-Bromofluorobenzene (Surr)	64		47 - 134		02/24/21 17:07	1
Toluene-d8 (Surr)	81		69 - 122		02/24/21 17:07	1
Dibromofluoromethane (Surr)	113		78 - 129		02/24/21 17:07	1

# Client Sample Results

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

Job ID: 240-144518-1

**Client Sample ID: MW-09\_021121**

**Lab Sample ID: 240-144518-4**

Date Collected: 02/11/21 14:24

Matrix: Water

Date Received: 02/13/21 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	9.1		2.0	0.86	ug/L			02/19/21 20:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		70 - 133					02/19/21 20:52	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			02/24/21 17:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/24/21 17:31	1
Tetrachloroethene	1.0	U *+	1.0	0.15	ug/L			02/24/21 17:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/24/21 17:31	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/24/21 17:31	1
Vinyl chloride	1.9		1.0	0.20	ug/L			02/24/21 17:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		75 - 130					02/24/21 17:31	1
4-Bromofluorobenzene (Surr)	63		47 - 134					02/24/21 17:31	1
Toluene-d8 (Surr)	79		69 - 122					02/24/21 17:31	1
Dibromofluoromethane (Surr)	104		78 - 129					02/24/21 17:31	1

# Client Sample Results

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

Job ID: 240-144518-1

**Client Sample ID: MW-14\_021121**

**Lab Sample ID: 240-144518-5**

Date Collected: 02/11/21 16:03

Matrix: Water

Date Received: 02/13/21 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			02/19/21 21:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		70 - 133		02/19/21 21:17	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			02/25/21 15:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/25/21 15:17	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/25/21 15:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/25/21 15:17	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/25/21 15:17	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/25/21 15:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		75 - 130		02/25/21 15:17	1
4-Bromofluorobenzene (Surr)	99		47 - 134		02/25/21 15:17	1
Toluene-d8 (Surr)	94		69 - 122		02/25/21 15:17	1
Dibromofluoromethane (Surr)	84		78 - 129		02/25/21 15:17	1

# Surrogate Summary

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

Job ID: 240-144518-1

## 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)
240-144518-1	TRIP BLANK	111	64	78	124
240-144518-2	MW-24_021121	108	61	75	119
240-144518-2 MS	MW-24-MS_021121	88	96	91	95
240-144518-2 MSD	MW-24-MSD_021121	80	87	87	96
240-144518-3	MW-124_021121	94	64	81	113
240-144518-4	MW-09_021121	88	63	79	104
240-144518-5	MW-14_021121	87	99	94	84
240-144568-B-3 MS	Matrix Spike	71 S1-	86	92	87
240-144568-E-3 MSD	Matrix Spike Duplicate	69 S1-	91	93	88
240-144661-D-2 MS	Matrix Spike	84	99	93	86
240-144661-E-2 MSD	Matrix Spike Duplicate	84	99	94	87
LCS 240-473958/4	Lab Control Sample	91	90	88	95
LCS 240-474305/4	Lab Control Sample	88	87	89	91
LCS 240-474500/4	Lab Control Sample	85	101	93	86
MB 240-473958/7	Method Blank	112	68	79	114
MB 240-474305/7	Method Blank	98	67	84	103
MB 240-474500/7	Method Blank	86	98	94	86

#### 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)
240-144516-G-2 MS	Matrix Spike	78
240-144516-G-2 MSD	Matrix Spike Duplicate	81
240-144518-2	MW-24_021121	83
240-144518-2 MS	MW-24-MS_021121	84
240-144518-2 MSD	MW-24-MSD_021121	84
240-144518-3	MW-124_021121	83
240-144518-4	MW-09_021121	81
240-144518-5	MW-14_021121	81
LCS 240-473720/4	Lab Control Sample	82
LCS 240-473970/4	Lab Control Sample	80
MB 240-473720/5	Method Blank	81
MB 240-473970/5	Method Blank	81

#### Surrogate Legend

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

# QC Sample Results

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

Job ID: 240-144518-1

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

**Lab Sample ID: MB 240-473958/7**  
**Matrix: Water**  
**Analysis Batch: 473958**

**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			02/22/21 16:24	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/22/21 16:24	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/22/21 16:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/22/21 16:24	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/22/21 16:24	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/22/21 16:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		75 - 130		02/22/21 16:24	1
4-Bromofluorobenzene (Surr)	68		47 - 134		02/22/21 16:24	1
Toluene-d8 (Surr)	79		69 - 122		02/22/21 16:24	1
Dibromofluoromethane (Surr)	114		78 - 129		02/22/21 16:24	1

**Lab Sample ID: LCS 240-473958/4**  
**Matrix: Water**  
**Analysis Batch: 473958**

**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	10.0	10.9		ug/L		109	73 - 129
cis-1,2-Dichloroethene	10.0	10.0		ug/L		100	75 - 124
Tetrachloroethene	10.0	12.2		ug/L		122	70 - 125
trans-1,2-Dichloroethene	10.0	11.0		ug/L		110	74 - 130
Trichloroethene	10.0	10.1		ug/L		101	71 - 121
Vinyl chloride	10.0	9.31		ug/L		93	61 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		75 - 130
4-Bromofluorobenzene (Surr)	90		47 - 134
Toluene-d8 (Surr)	88		69 - 122
Dibromofluoromethane (Surr)	95		78 - 129

**Lab Sample ID: 240-144518-2 MS**  
**Matrix: Water**  
**Analysis Batch: 473958**

**Client Sample ID: MW-24-MS\_021121**  
**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	10.0	9.71		ug/L		97	64 - 132
cis-1,2-Dichloroethene	1.0	U	10.0	9.40		ug/L		94	68 - 121
Tetrachloroethene	1.0	U	10.0	11.0		ug/L		110	52 - 129
trans-1,2-Dichloroethene	1.0	U	10.0	10.4		ug/L		104	69 - 126
Trichloroethene	1.0	U	10.0	9.67		ug/L		97	56 - 124
Vinyl chloride	1.0	U	10.0	9.16		ug/L		92	49 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		75 - 130
4-Bromofluorobenzene (Surr)	96		47 - 134
Toluene-d8 (Surr)	91		69 - 122

# QC Sample Results

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

Job ID: 240-144518-1

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

**Lab Sample ID: 240-144518-2 MS**  
**Matrix: Water**  
**Analysis Batch: 473958**

**Client Sample ID: MW-24-MS\_021121**  
**Prep Type: Total/NA**

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
<i>Dibromofluoromethane (Surr)</i>	95		78 - 129

**Lab Sample ID: 240-144518-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 473958**

**Client Sample ID: MW-24-MSD\_021121**  
**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	10.0	9.98		ug/L		100	64 - 132	3	35
cis-1,2-Dichloroethene	1.0	U	10.0	10.1		ug/L		101	68 - 121	7	35
Tetrachloroethene	1.0	U	10.0	10.7		ug/L		107	52 - 129	2	35
trans-1,2-Dichloroethene	1.0	U	10.0	10.2		ug/L		102	69 - 126	2	35
Trichloroethene	1.0	U	10.0	9.58		ug/L		96	56 - 124	1	35
Vinyl chloride	1.0	U	10.0	9.46		ug/L		95	49 - 136	3	35

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
<i>1,2-Dichloroethane-d4 (Surr)</i>	80		75 - 130
<i>4-Bromofluorobenzene (Surr)</i>	87		47 - 134
<i>Toluene-d8 (Surr)</i>	87		69 - 122
<i>Dibromofluoromethane (Surr)</i>	96		78 - 129

**Lab Sample ID: MB 240-474305/7**  
**Matrix: Water**  
**Analysis Batch: 474305**

**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			02/24/21 14:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/24/21 14:13	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/24/21 14:13	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/24/21 14:13	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/24/21 14:13	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/24/21 14:13	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>	98		75 - 130		02/24/21 14:13	1
<i>4-Bromofluorobenzene (Surr)</i>	67		47 - 134		02/24/21 14:13	1
<i>Toluene-d8 (Surr)</i>	84		69 - 122		02/24/21 14:13	1
<i>Dibromofluoromethane (Surr)</i>	103		78 - 129		02/24/21 14:13	1

**Lab Sample ID: LCS 240-474305/4**  
**Matrix: Water**  
**Analysis Batch: 474305**

**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	10.0	10.8		ug/L		108	73 - 129
cis-1,2-Dichloroethene	10.0	9.69		ug/L		97	75 - 124
Tetrachloroethene	10.0	12.6	*+	ug/L		126	70 - 125
trans-1,2-Dichloroethene	10.0	11.0		ug/L		110	74 - 130
Trichloroethene	10.0	10.3		ug/L		103	71 - 121

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# QC Sample Results

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

Job ID: 240-144518-1

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

**Lab Sample ID: LCS 240-474305/4**  
**Matrix: Water**  
**Analysis Batch: 474305**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	10.0	9.04		ug/L		90	61 - 134
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
1,2-Dichloroethane-d4 (Surr)	88		75 - 130				
4-Bromofluorobenzene (Surr)	87		47 - 134				
Toluene-d8 (Surr)	89		69 - 122				
Dibromofluoromethane (Surr)	91		78 - 129				

**Lab Sample ID: 240-144568-B-3 MS**  
**Matrix: Water**  
**Analysis Batch: 474305**

**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	10.0	9.41		ug/L		94	64 - 132
cis-1,2-Dichloroethene	1.0	U	10.0	8.71		ug/L		87	68 - 121
Tetrachloroethene	1.0	U *+	10.0	11.6		ug/L		116	52 - 129
trans-1,2-Dichloroethene	1.0	U	10.0	9.81		ug/L		98	69 - 126
Trichloroethene	1.0	U	10.0	9.03		ug/L		90	56 - 124
Vinyl chloride	1.0	U	10.0	8.44		ug/L		84	49 - 136
<b>MS MS</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	71	S1-	75 - 130						
4-Bromofluorobenzene (Surr)	86		47 - 134						
Toluene-d8 (Surr)	92		69 - 122						
Dibromofluoromethane (Surr)	87		78 - 129						

**Lab Sample ID: 240-144568-E-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 474305**

**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	10.0	9.22		ug/L		92	64 - 132	2	35
cis-1,2-Dichloroethene	1.0	U	10.0	8.56		ug/L		86	68 - 121	2	35
Tetrachloroethene	1.0	U *+	10.0	11.0		ug/L		110	52 - 129	6	35
trans-1,2-Dichloroethene	1.0	U	10.0	9.16		ug/L		92	69 - 126	7	35
Trichloroethene	1.0	U	10.0	8.83		ug/L		88	56 - 124	2	35
Vinyl chloride	1.0	U	10.0	8.72		ug/L		87	49 - 136	3	35
<b>MSD MSD</b>											
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
1,2-Dichloroethane-d4 (Surr)	69	S1-	75 - 130								
4-Bromofluorobenzene (Surr)	91		47 - 134								
Toluene-d8 (Surr)	93		69 - 122								
Dibromofluoromethane (Surr)	88		78 - 129								



# QC Sample Results

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

Job ID: 240-144518-1

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

**Lab Sample ID: MB 240-474500/7**  
**Matrix: Water**  
**Analysis Batch: 474500**

**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			02/25/21 14:52	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/25/21 14:52	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/25/21 14:52	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/25/21 14:52	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/25/21 14:52	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/25/21 14:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		75 - 130		02/25/21 14:52	1
4-Bromofluorobenzene (Surr)	98		47 - 134		02/25/21 14:52	1
Toluene-d8 (Surr)	94		69 - 122		02/25/21 14:52	1
Dibromofluoromethane (Surr)	86		78 - 129		02/25/21 14:52	1

**Lab Sample ID: LCS 240-474500/4**  
**Matrix: Water**  
**Analysis Batch: 474500**

**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	10.0	8.93		ug/L		89	73 - 129
cis-1,2-Dichloroethene	10.0	9.08		ug/L		91	75 - 124
Tetrachloroethene	10.0	9.68		ug/L		97	70 - 125
trans-1,2-Dichloroethene	10.0	9.29		ug/L		93	74 - 130
Trichloroethene	10.0	8.87		ug/L		89	71 - 121
Vinyl chloride	10.0	10.7		ug/L		107	61 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	85		75 - 130
4-Bromofluorobenzene (Surr)	101		47 - 134
Toluene-d8 (Surr)	93		69 - 122
Dibromofluoromethane (Surr)	86		78 - 129

**Lab Sample ID: 240-144661-D-2 MS**  
**Matrix: Water**  
**Analysis Batch: 474500**

**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
cis-1,2-Dichloroethene	1.0	U	10.0	8.81		ug/L		88	68 - 121
Tetrachloroethene	1.0	U	10.0	8.35		ug/L		84	52 - 129
trans-1,2-Dichloroethene	1.0	U	10.0	8.36		ug/L		84	69 - 126
Trichloroethene	1.0	U	10.0	8.22		ug/L		82	56 - 124
Vinyl chloride	20		10.0	30.2		ug/L		102	49 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	84		75 - 130
4-Bromofluorobenzene (Surr)	99		47 - 134
Toluene-d8 (Surr)	93		69 - 122
Dibromofluoromethane (Surr)	86		78 - 129

# QC Sample Results

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

Job ID: 240-144518-1

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

**Lab Sample ID: 240-144661-E-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 474500**

**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
cis-1,2-Dichloroethene	1.0	U	10.0	8.80		ug/L		88	68 - 121	0	35
Tetrachloroethene	1.0	U	10.0	8.53		ug/L		85	52 - 129	2	35
trans-1,2-Dichloroethene	1.0	U	10.0	8.64		ug/L		86	69 - 126	3	35
Trichloroethene	1.0	U	10.0	8.36		ug/L		84	56 - 124	2	35
Vinyl chloride	20		10.0	29.8		ug/L		98	49 - 136	1	35
<b>MSD MSD</b>											
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
1,2-Dichloroethane-d4 (Surr)	84		75 - 130								
4-Bromofluorobenzene (Surr)	99		47 - 134								
Toluene-d8 (Surr)	94		69 - 122								
Dibromofluoromethane (Surr)	87		78 - 129								

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

**Lab Sample ID: MB 240-473720/5**  
**Matrix: Water**  
**Analysis Batch: 473720**

**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			02/19/21 11:08	1
<b>MB MB</b>									
<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)	81		70 - 133					02/19/21 11:08	1

**Lab Sample ID: LCS 240-473720/4**  
**Matrix: Water**  
**Analysis Batch: 473720**

**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	9.95		ug/L		100	80 - 135
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
1,2-Dichloroethane-d4 (Surr)	82		70 - 133				

**Lab Sample ID: 240-144516-G-2 MS**  
**Matrix: Water**  
**Analysis Batch: 473720**

**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	2.0	U	10.0	10.6		ug/L		106	46 - 170
<b>MS MS</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	78		70 - 133						

# QC Sample Results

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

Job ID: 240-144518-1

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

**Lab Sample ID: 240-144516-G-2 MSD**

**Matrix: Water**  
**Analysis Batch: 473720**

**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
1,4-Dioxane	2.0	U	10.0	10.3		ug/L		103	46 - 170	3	26
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>MSD Limits</b>								
1,2-Dichloroethane-d4 (Surr)	81		70 - 133								

**Lab Sample ID: MB 240-473970/5**

**Matrix: Water**  
**Analysis Batch: 473970**

**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			02/22/21 14:03	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	81		70 - 133					02/22/21 14:03	1

**Lab Sample ID: LCS 240-473970/4**

**Matrix: Water**  
**Analysis Batch: 473970**

**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	10.3		ug/L		103	80 - 135
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>				
1,2-Dichloroethane-d4 (Surr)	80		70 - 133				

**Lab Sample ID: 240-144518-2 MS**

**Matrix: Water**  
**Analysis Batch: 473970**

**Client Sample ID: MW-24-MS\_021121**  
**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	10.3		ug/L		103	46 - 170
<b>Surrogate</b>	<b>%Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	84		70 - 133						

**Lab Sample ID: 240-144518-2 MSD**

**Matrix: Water**  
**Analysis Batch: 473970**

**Client Sample ID: MW-24-MSD\_021121**  
**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	2.0	U	10.0	10.4		ug/L		104	46 - 170	1	26
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
1,2-Dichloroethane-d4 (Surr)	84		70 - 133								

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# QC Association Summary

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

Job ID: 240-144518-1

## GC/MS VOA

### Analysis Batch: 473720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-144518-4	MW-09_021121	Total/NA	Water	8260B SIM	
240-144518-5	MW-14_021121	Total/NA	Water	8260B SIM	
MB 240-473720/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-473720/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-144516-G-2 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-144516-G-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

### Analysis Batch: 473958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-144518-1	TRIP BLANK	Total/NA	Water	8260B	
240-144518-2	MW-24_021121	Total/NA	Water	8260B	
MB 240-473958/7	Method Blank	Total/NA	Water	8260B	
LCS 240-473958/4	Lab Control Sample	Total/NA	Water	8260B	
240-144518-2 MS	MW-24-MS_021121	Total/NA	Water	8260B	
240-144518-2 MSD	MW-24-MSD_021121	Total/NA	Water	8260B	

### Analysis Batch: 473970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-144518-2	MW-24_021121	Total/NA	Water	8260B SIM	
240-144518-3	MW-124_021121	Total/NA	Water	8260B SIM	
MB 240-473970/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-473970/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-144518-2 MS	MW-24-MS_021121	Total/NA	Water	8260B SIM	
240-144518-2 MSD	MW-24-MSD_021121	Total/NA	Water	8260B SIM	

### Analysis Batch: 474305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-144518-3	MW-124_021121	Total/NA	Water	8260B	
240-144518-4	MW-09_021121	Total/NA	Water	8260B	
MB 240-474305/7	Method Blank	Total/NA	Water	8260B	
LCS 240-474305/4	Lab Control Sample	Total/NA	Water	8260B	
240-144568-B-3 MS	Matrix Spike	Total/NA	Water	8260B	
240-144568-E-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 474500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-144518-5	MW-14_021121	Total/NA	Water	8260B	
MB 240-474500/7	Method Blank	Total/NA	Water	8260B	
LCS 240-474500/4	Lab Control Sample	Total/NA	Water	8260B	
240-144661-D-2 MS	Matrix Spike	Total/NA	Water	8260B	
240-144661-E-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

# Lab Chronicle

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

Job ID: 240-144518-1

## Client Sample ID: TRIP BLANK

Date Collected: 02/11/21 00:00

Date Received: 02/13/21 08:00

## Lab Sample ID: 240-144518-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	473958	02/22/21 22:46	LRW	TAL CAN

## Client Sample ID: MW-24\_021121

Date Collected: 02/11/21 10:03

Date Received: 02/13/21 08:00

## Lab Sample ID: 240-144518-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	473958	02/22/21 23:10	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	473970	02/22/21 14:54	SAM	TAL CAN

## Client Sample ID: MW-124\_021121

Date Collected: 02/11/21 12:33

Date Received: 02/13/21 08:00

## Lab Sample ID: 240-144518-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	474305	02/24/21 17:07	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	473970	02/22/21 16:10	SAM	TAL CAN

## Client Sample ID: MW-09\_021121

Date Collected: 02/11/21 14:24

Date Received: 02/13/21 08:00

## Lab Sample ID: 240-144518-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	474305	02/24/21 17:31	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	473720	02/19/21 20:52	SAM	TAL CAN

## Client Sample ID: MW-14\_021121

Date Collected: 02/11/21 16:03

Date Received: 02/13/21 08:00

## Lab Sample ID: 240-144518-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	474500	02/25/21 15:17	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	473720	02/19/21 21:17	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 - On Site

Job ID: 240-144518-1

## 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	12-31-21
Minnesota	NELAP	OH00048	12-31-21
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	12-21-23
Oregon	NELAP	4062	02-23-22
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	01-12-22
West Virginia DEP	State	210	12-31-21

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.



# 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  
Project Name: Ford I, TP On-Site  
Project Number: 30050315.401.03  
PO # 30050315.401.03

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

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

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

Sampler Name: *Kan Donlin*  
Method of Shipment/Carrier:  
Shipping/Tracking No:

Analysis Turnaround Time  
TAT if different from below  
10 day  3 weeks   
 2 weeks   
 1 week   
 2 days   
 1 day

Sample Identification	Sample Date	Sample Time	Matrix				Containers & Preservatives				Filtered Sample (Y/N)	Composite C / Grab G		
			Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl			NaOH	ZnAc
TRIP BLANK														
MW-24-021121	2/11/21	1003												
MW-24-MS-021121	2/11/21	1003												
MW-24-MSD-021121	2/11/21	1003												
MW-124-021121	2/11/21	1233												
MW-09-021121	2/11/21	1424												
MW-14-021121	2/11/21	1003												

Analyses	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
1 Trip Blank	X	X	X	X	X	X	X
3 VOAs for 8260 B	X	X	X	X	X	X	X
3 VOAs for 8260 B SIM	X	X	X	X	X	X	X
RUA MS/MSD	X	X	X	X	X	X	X
	X	X	X	X	X	X	X
	X	X	X	X	X	X	X
	X	X	X	X	X	X	X

Sample Specific Notes / Special Instructions:  
1 Trip Blank  
3 VOAs for 8260 B  
3 VOAs for 8260 B SIM  
RUA MS/MSD

Sample Disposal (A fee may be assessed)	Return to Client	Disc
	<input type="checkbox"/>	<input type="checkbox"/>

Possible Hazard Identification  
 Non-Hazard  Flammable  Irritant  Poison B  Unknown

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
<i>Kan Donlin</i>	Arcadis	2/11/21 1718	<i>Mu, Gold Strase</i>	Arcadis	2/11/21 1718
<i>Judith McWhorter</i>	Arcadis	2/12/2021	<i>Amanda Battistuzzi</i>	ETA	2/12/21 10:05
<i>Amanda Battistuzzi</i>	ETA	2/12/21 11:01	<i>Jal</i>	ETA	2/13-21 800

Barcode: 240-144518 Chain of Custody




Client Accadis Site Name \_\_\_\_\_ Cooler unpacked by: Ryan C  
 Cooler Received on 2-13-21 Opened on 2-13-21  
 FedEx: 1<sup>st</sup> Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other \_\_\_\_\_

**Receipt After-hours: Drop-off Date/Time** \_\_\_\_\_ **Storage Location** \_\_\_\_\_

TestAmerica Cooler # 7A 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 +0.1 °C) Observed Cooler Temp. 1.5 °C Corrected Cooler Temp. 1.6 °C  
 IR GUN# IR-12 (CF +0.2 °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 (ID/Date/Time) be reconciled with the COC? Yes No

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

9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
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 # 59072 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) \_\_\_\_\_ 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: \_\_\_\_\_