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ANALYTICAL REPORT

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

Laboratory Job ID: 240-126251-1
Client Project/Site: Ford LTP Off Site

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

Attn: Kristoffer Hinskey

Authorized for release by:
2/27/2020 10:13:32 AM

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Definitions/Glossary

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

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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.
¤	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)

Job ID: 240-126251-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Off Site

Report Number: 240-126251-1

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 2/13/2020 8:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.6º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TRIP BLANK (240-126251-1), MW-86_021120 (240-126251-2), MW-83_021120 (240-126251-3), MW-81S_021120 (240-126251-4), MW-134S_021120 (240-126251-5) and MW-82D_021120 (240-126251-6) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 02/18/2020 and 02/19/2020.

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

VOLATILE ORGANIC COMPOUNDS (GCMS SIM)

Samples MW-86_021120 (240-126251-2), MW-83_021120 (240-126251-3), MW-81S_021120 (240-126251-4), MW-134S_021120 (240-126251-5) and MW-82D_021120 (240-126251-6) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 02/20/2020 and 02/21/2020.

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

Method Summary

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

Job ID: 240-126251-1

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

Protocol References:

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

Laboratory References:

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

Sample Summary

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

Job ID: 240-126251-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-126251-1	TRIP BLANK	Water	02/11/20 00:00	02/13/20 08:40	
240-126251-2	MW-86_021120	Water	02/11/20 16:50	02/13/20 08:40	
240-126251-3	MW-83_021120	Water	02/11/20 13:00	02/13/20 08:40	
240-126251-4	MW-81S_021120	Water	02/11/20 09:50	02/13/20 08:40	
240-126251-5	MW-134S_021120	Water	02/11/20 14:50	02/13/20 08:40	
240-126251-6	MW-82D_021120	Water	02/11/20 11:10	02/13/20 08:40	

Detection Summary

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

Job ID: 240-126251-1

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-126251-1

No Detections.

Client Sample ID: MW-86_021120 — Lab Sample ID: 240-126251-2

No Detections.

Client Sample ID: MW-83_021120 — Lab Sample ID: 240-126251-3

No Detections.

Client Sample ID: MW-81S_021120 — Lab Sample ID: 240-126251-4

No Detections.

Client Sample ID: MW-134S_021120 — Lab Sample ID: 240-126251-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.38	J	1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-82D_021120 — Lab Sample ID: 240-126251-6

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 240-126251-1

Client Sample ID: TRIP BLANK
Date Collected: 02/11/20 00:00
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-1
Matrix: Water

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			02/18/20 22:59	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/18/20 22:59	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/18/20 22:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/18/20 22:59	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/18/20 22:59	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/18/20 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*75 - 130*		*02/18/20 22:59*	*1*
4-Bromofluorobenzene (Surr)	*66*		*47 - 134*		*02/18/20 22:59*	*1*
Toluene-d8 (Surr)	*84*		*69 - 122*		*02/18/20 22:59*	*1*
Dibromofluoromethane (Surr)	*116*		*78 - 129*		*02/18/20 22:59*	*1*

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

Job ID: 240-126251-1

Client Sample ID: MW-86_021120
Date Collected: 02/11/20 16:50
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-2
Matrix: Water

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			02/20/20 10:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 133*		*02/20/20 10:02*	*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			02/18/20 22:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/18/20 22:36	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/18/20 22:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/18/20 22:36	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/18/20 22:36	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/18/20 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*75 - 130*		*02/18/20 22:36*	*1*
4-Bromofluorobenzene (Surr)	*67*		*47 - 134*		*02/18/20 22:36*	*1*
Toluene-d8 (Surr)	*85*		*69 - 122*		*02/18/20 22:36*	*1*
Dibromofluoromethane (Surr)	*114*		*78 - 129*		*02/18/20 22:36*	*1*

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

Job ID: 240-126251-1

Client Sample ID: MW-83_021120
Date Collected: 02/11/20 13:00
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-3
Matrix: Water

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			02/20/20 10:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 133*		*02/20/20 10:27*	*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			02/18/20 23:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/18/20 23:23	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/18/20 23:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/18/20 23:23	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/18/20 23:23	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/18/20 23:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*75 - 130*		*02/18/20 23:23*	*1*
4-Bromofluorobenzene (Surr)	*65*		*47 - 134*		*02/18/20 23:23*	*1*
Toluene-d8 (Surr)	*85*		*69 - 122*		*02/18/20 23:23*	*1*
Dibromofluoromethane (Surr)	*123*		*78 - 129*		*02/18/20 23:23*	*1*

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

Job ID: 240-126251-1

Client Sample ID: MW-81S_021120
Date Collected: 02/11/20 09:50
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-4
Matrix: Water

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			02/20/20 10:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 133*		*02/20/20 10:53*	*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			02/18/20 23:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/18/20 23:47	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/18/20 23:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/18/20 23:47	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/18/20 23:47	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/18/20 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*75 - 130*		*02/18/20 23:47*	*1*
4-Bromofluorobenzene (Surr)	*63*		*47 - 134*		*02/18/20 23:47*	*1*
Toluene-d8 (Surr)	*85*		*69 - 122*		*02/18/20 23:47*	*1*
Dibromofluoromethane (Surr)	*120*		*78 - 129*		*02/18/20 23:47*	*1*

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

Job ID: 240-126251-1

Client Sample ID: MW-134S_021120
Date Collected: 02/11/20 14:50
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-5
Matrix: Water

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			02/20/20 11:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 133*		*02/20/20 11:18*	*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			02/19/20 17:33	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/19/20 17:33	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/19/20 17:33	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/19/20 17:33	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/19/20 17:33	1
Vinyl chloride	**0.38**	**J**	1.0	0.20	ug/L			02/19/20 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*75 - 130*		*02/19/20 17:33*	*1*
4-Bromofluorobenzene (Surr)	*102*		*47 - 134*		*02/19/20 17:33*	*1*
Toluene-d8 (Surr)	*94*		*69 - 122*		*02/19/20 17:33*	*1*
Dibromofluoromethane (Surr)	*90*		*78 - 129*		*02/19/20 17:33*	*1*

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

Job ID: 240-126251-1

Client Sample ID: MW-82D_021120

Date Collected: 02/11/20 11:10
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-6

Matrix: Water

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			02/21/20 07:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 133*		*02/21/20 07:05*	*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			02/19/20 19:06	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/19/20 19:06	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/19/20 19:06	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/19/20 19:06	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/19/20 19:06	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/19/20 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*75 - 130*		*02/19/20 19:06*	*1*
4-Bromofluorobenzene (Surr)	*66*		*47 - 134*		*02/19/20 19:06*	*1*
Toluene-d8 (Surr)	*82*		*69 - 122*		*02/19/20 19:06*	*1*
Dibromofluoromethane (Surr)	*118*		*78 - 129*		*02/19/20 19:06*	*1*

Surrogate Summary

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

Job ID: 240-126251-1

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

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(75-130)	(47-134)	(69-122)	(78-129)
240-126250-E-3 MS	Matrix Spike	94	96	96	101
240-126250-F-3 MSD	Matrix Spike Duplicate	91	92	93	94
240-126251-1	TRIP BLANK	111	66	84	116
240-126251-2	MW-86_021120	107	67	85	114
240-126251-3	MW-83_021120	114	65	85	123
240-126251-4	MW-81S_021120	114	63	85	120
240-126251-5	MW-134S_021120	86	102	94	90
240-126251-5 MS	MW-134S-MS_021120	86	101	93	90
240-126251-5 MSD	MW-134S-MSD_021120	86	106	93	90
240-126251-6	MW-82D_021120	112	66	82	118
240-126251-6 MS	MW-82D-MS_021120	94	96	99	101
240-126251-6 MSD	MW-82D-MSD_021120	97	92	96	99
LCS 240-423223/4	Lab Control Sample	91	93	96	103
LCS 240-423408/4	Lab Control Sample	84	100	92	88
LCS 240-423409/4	Lab Control Sample	94	92	98	101
MB 240-423223/7	Method Blank	108	69	88	116
MB 240-423408/7	Method Blank	90	105	94	95
MB 240-423409/7	Method Blank	111	68	91	122

Surrogate Legend

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

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

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DCA
Lab Sample ID	Client Sample ID	(70-133)
240-126251-2	MW-86_021120	97
240-126251-3	MW-83_021120	98
240-126251-4	MW-81S_021120	98
240-126251-5	MW-134S_021120	99
240-126251-5 MS	MW-134S-MS_021120	100
240-126251-5 MSD	MW-134S-MSD_021120	100
240-126251-6	MW-82D_021120	93
240-126251-6 MS	MW-82D-MS_021120	104
240-126251-6 MSD	MW-82D-MSD_021120	101
LCS 240-423494/4	Lab Control Sample	100
LCS 240-423687/4	Lab Control Sample	99
MB 240-423494/5	Method Blank	98
MB 240-423687/5	Method Blank	97

Surrogate Legend

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

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

Lab Sample ID: MB 240-423223/7
Matrix: Water
Analysis Batch: 423223

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			02/18/20 14:40	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/18/20 14:40	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/18/20 14:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/18/20 14:40	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/18/20 14:40	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/18/20 14:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*75 - 130*		*02/18/20 14:40*	*1*
4-Bromofluorobenzene (Surr)	*69*		*47 - 134*		*02/18/20 14:40*	*1*
Toluene-d8 (Surr)	*88*		*69 - 122*		*02/18/20 14:40*	*1*
Dibromofluoromethane (Surr)	*116*		*78 - 129*		*02/18/20 14:40*	*1*

Lab Sample ID: LCS 240-423223/4
Matrix: Water
Analysis Batch: 423223

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	11.1		ug/L		111	73 - 129
cis-1,2-Dichloroethene	10.0	10.7		ug/L		107	75 - 124
Tetrachloroethene	10.0	10.2		ug/L		102	70 - 125
trans-1,2-Dichloroethene	10.0	11.4		ug/L		114	74 - 130
Trichloroethene	10.0	10.9		ug/L		109	71 - 121
Vinyl chloride	10.0	7.20		ug/L		72	61 - 134

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 130*
4-Bromofluorobenzene (Surr)	*93*		*47 - 134*
Toluene-d8 (Surr)	*96*		*69 - 122*
Dibromofluoromethane (Surr)	*103*		*78 - 129*

Lab Sample ID: 240-126250-E-3 MS
Matrix: Water
Analysis Batch: 423223

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	5.0	U	50.0	49.8		ug/L		100	64 - 132
cis-1,2-Dichloroethene	5.0	U	50.0	52.4		ug/L		105	68 - 121
Tetrachloroethene	5.0	U	50.0	48.9		ug/L		98	52 - 129
trans-1,2-Dichloroethene	5.0	U	50.0	60.0		ug/L		120	69 - 126
Trichloroethene	5.0	U	50.0	51.3		ug/L		103	56 - 124
Vinyl chloride	5.0	U	50.0	34.6		ug/L		69	49 - 136

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*75 - 130*
4-Bromofluorobenzene (Surr)	*96*		*47 - 134*
Toluene-d8 (Surr)	*96*		*69 - 122*

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

Lab Sample ID: 240-126250-E-3 MS
Matrix: Water
Analysis Batch: 423223

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

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	*101*		*78 - 129*

Lab Sample ID: 240-126250-F-3 MSD
Matrix: Water
Analysis Batch: 423223

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	5.0	U	50.0	51.4		ug/L		103	64 - 132	3	35
cis-1,2-Dichloroethene	5.0	U	50.0	50.6		ug/L		101	68 - 121	3	35
Tetrachloroethene	5.0	U	50.0	48.1		ug/L		96	52 - 129	2	35
trans-1,2-Dichloroethene	5.0	U	50.0	55.2		ug/L		110	69 - 126	8	35
Trichloroethene	5.0	U	50.0	50.2		ug/L		100	56 - 124	2	35
Vinyl chloride	5.0	U	50.0	35.4		ug/L		71	49 - 136	2	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 130*
4-Bromofluorobenzene (Surr)	*92*		*47 - 134*
Toluene-d8 (Surr)	*93*		*69 - 122*
Dibromofluoromethane (Surr)	*94*		*78 - 129*

Lab Sample ID: MB 240-423408/7
Matrix: Water
Analysis Batch: 423408

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			02/19/20 14:37	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/19/20 14:37	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/19/20 14:37	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/19/20 14:37	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/19/20 14:37	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/19/20 14:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*90*		*75 - 130*		*02/19/20 14:37*	*1*
4-Bromofluorobenzene (Surr)	*105*		*47 - 134*		*02/19/20 14:37*	*1*
Toluene-d8 (Surr)	*94*		*69 - 122*		*02/19/20 14:37*	*1*
Dibromofluoromethane (Surr)	*95*		*78 - 129*		*02/19/20 14:37*	*1*

Lab Sample ID: LCS 240-423408/4
Matrix: Water
Analysis Batch: 423408

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	10.4		ug/L		104	73 - 129
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	75 - 124
Tetrachloroethene	10.0	10.5		ug/L		105	70 - 125
trans-1,2-Dichloroethene	10.0	10.6		ug/L		106	74 - 130
Trichloroethene	10.0	9.49		ug/L		95	71 - 121

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

Lab Sample ID: LCS 240-423408/4
Matrix: Water
Analysis Batch: 423408

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	11.4		ug/L		114	61 - 134		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*84*		*75 - 130*
4-Bromofluorobenzene (Surr)	*100*		*47 - 134*
Toluene-d8 (Surr)	*92*		*69 - 122*
Dibromofluoromethane (Surr)	*88*		*78 - 129*

Lab Sample ID: 240-126251-5 MS
Matrix: Water
Analysis Batch: 423408

Client Sample ID: MW-134S-MS_021120
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	10.5		ug/L		105	64 - 132		
cis-1,2-Dichloroethene	1.0	U	10.0	10.5		ug/L		105	68 - 121		
Tetrachloroethene	1.0	U	10.0	9.65		ug/L		96	52 - 129		
trans-1,2-Dichloroethene	1.0	U	10.0	10.5		ug/L		105	69 - 126		
Trichloroethene	1.0	U	10.0	9.08		ug/L		91	56 - 124		
Vinyl chloride	0.38	J	10.0	11.4		ug/L		110	49 - 136		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*75 - 130*
4-Bromofluorobenzene (Surr)	*101*		*47 - 134*
Toluene-d8 (Surr)	*93*		*69 - 122*
Dibromofluoromethane (Surr)	*90*		*78 - 129*

Lab Sample ID: 240-126251-5 MSD
Matrix: Water
Analysis Batch: 423408

Client Sample ID: MW-134S-MSD_021120
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	10.3		ug/L		103	64 - 132	1	35
cis-1,2-Dichloroethene	1.0	U	10.0	10.7		ug/L		107	68 - 121	2	35
Tetrachloroethene	1.0	U	10.0	9.57		ug/L		96	52 - 129	1	35
trans-1,2-Dichloroethene	1.0	U	10.0	10.7		ug/L		107	69 - 126	2	35
Trichloroethene	1.0	U	10.0	8.91		ug/L		89	56 - 124	2	35
Vinyl chloride	0.38	J	10.0	11.5		ug/L		111	49 - 136	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*75 - 130*
4-Bromofluorobenzene (Surr)	*106*		*47 - 134*
Toluene-d8 (Surr)	*93*		*69 - 122*
Dibromofluoromethane (Surr)	*90*		*78 - 129*

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

Lab Sample ID: MB 240-423409/7
Matrix: Water
Analysis Batch: 423409

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			02/19/20 15:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/19/20 15:51	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/19/20 15:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/19/20 15:51	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/19/20 15:51	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/19/20 15:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*75 - 130*		*02/19/20 15:51*	*1*
4-Bromofluorobenzene (Surr)	*68*		*47 - 134*		*02/19/20 15:51*	*1*
Toluene-d8 (Surr)	*91*		*69 - 122*		*02/19/20 15:51*	*1*
Dibromofluoromethane (Surr)	*122*		*78 - 129*		*02/19/20 15:51*	*1*

Lab Sample ID: LCS 240-423409/4
Matrix: Water
Analysis Batch: 423409

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	10.8		ug/L		108	73 - 129
cis-1,2-Dichloroethene	10.0	10.6		ug/L		106	75 - 124
Tetrachloroethene	10.0	10.3		ug/L		103	70 - 125
trans-1,2-Dichloroethene	10.0	11.7		ug/L		117	74 - 130
Trichloroethene	10.0	11.0		ug/L		110	71 - 121
Vinyl chloride	10.0	7.36		ug/L		74	61 - 134

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*75 - 130*
4-Bromofluorobenzene (Surr)	*92*		*47 - 134*
Toluene-d8 (Surr)	*98*		*69 - 122*
Dibromofluoromethane (Surr)	*101*		*78 - 129*

Lab Sample ID: 240-126251-6 MS
Matrix: Water
Analysis Batch: 423409

Client Sample ID: MW-82D-MS_021120
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	10.4		ug/L		104	64 - 132
cis-1,2-Dichloroethene	1.0	U	10.0	10.3		ug/L		103	68 - 121
Tetrachloroethene	1.0	U	10.0	10.5		ug/L		105	52 - 129
trans-1,2-Dichloroethene	1.0	U	10.0	11.3		ug/L		113	69 - 126
Trichloroethene	1.0	U	10.0	10.3		ug/L		103	56 - 124
Vinyl chloride	1.0	U	10.0	7.32		ug/L		73	49 - 136

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*75 - 130*
4-Bromofluorobenzene (Surr)	*96*		*47 - 134*
Toluene-d8 (Surr)	*99*		*69 - 122*

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

Lab Sample ID: 240-126251-6 MS
Matrix: Water
Analysis Batch: 423409

Client Sample ID: MW-82D-MS_021120
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	*101*		*78 - 129*

Lab Sample ID: 240-126251-6 MSD
Matrix: Water
Analysis Batch: 423409

Client Sample ID: MW-82D-MSD_021120
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	10.2		ug/L		102	64 - 132	2	35
cis-1,2-Dichloroethene	1.0	U	10.0	10.5		ug/L		105	68 - 121	2	35
Tetrachloroethene	1.0	U	10.0	10.0		ug/L		100	52 - 129	5	35
trans-1,2-Dichloroethene	1.0	U	10.0	11.2		ug/L		112	69 - 126	1	35
Trichloroethene	1.0	U	10.0	10.3		ug/L		103	56 - 124	0	35
Vinyl chloride	1.0	U	10.0	7.24		ug/L		72	49 - 136	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*97*		*75 - 130*
4-Bromofluorobenzene (Surr)	*92*		*47 - 134*
Toluene-d8 (Surr)	*96*		*69 - 122*
Dibromofluoromethane (Surr)	*99*		*78 - 129*

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

Lab Sample ID: MB 240-423494/5
Matrix: Water
Analysis Batch: 423494

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			02/20/20 06:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 133*		*02/20/20 06:39*	*1*

Lab Sample ID: LCS 240-423494/4
Matrix: Water
Analysis Batch: 423494

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	9.25		ug/L		93	80 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 133*

Lab Sample ID: 240-126251-5 MS
Matrix: Water
Analysis Batch: 423494

Client Sample ID: MW-134S-MS_021120
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	8.86		ug/L		89	46 - 170

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

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 133*

Lab Sample ID: 240-126251-5 MSD — **Client Sample ID: MW-134S-MSD_021120**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423494

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	9.55		ug/L		95	46 - 170	7	26

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 133*

Lab Sample ID: MB 240-423687/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423687

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			02/21/20 06:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 133*		*02/21/20 06:15*	*1*

Lab Sample ID: LCS 240-423687/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423687

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			10.0	8.99		ug/L		90	80 - 135		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 133*

Lab Sample ID: 240-126251-6 MS — **Client Sample ID: MW-82D-MS_021120**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423687

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		

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 133*

Lab Sample ID: 240-126251-6 MSD — **Client Sample ID: MW-82D-MSD_021120**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423687

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	8.65		ug/L		87	46 - 170	17	26

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

Lab Sample ID: 240-126251-6 MSD
Matrix: Water
Analysis Batch: 423687

Client Sample ID: MW-82D-MSD_021120
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 133*

GC/MS VOA

Analysis Batch: 423223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-126251-1	TRIP BLANK	Total/NA	Water	8260B	
240-126251-2	MW-86_021120	Total/NA	Water	8260B	
240-126251-3	MW-83_021120	Total/NA	Water	8260B	
240-126251-4	MW-81S_021120	Total/NA	Water	8260B	
MB 240-423223/7	Method Blank	Total/NA	Water	8260B	
LCS 240-423223/4	Lab Control Sample	Total/NA	Water	8260B	
240-126250-E-3 MS	Matrix Spike	Total/NA	Water	8260B	
240-126250-F-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 423408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-126251-5	MW-134S_021120	Total/NA	Water	8260B	
MB 240-423408/7	Method Blank	Total/NA	Water	8260B	
LCS 240-423408/4	Lab Control Sample	Total/NA	Water	8260B	
240-126251-5 MS	MW-134S-MS_021120	Total/NA	Water	8260B	
240-126251-5 MSD	MW-134S-MSD_021120	Total/NA	Water	8260B	

Analysis Batch: 423409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-126251-6	MW-82D_021120	Total/NA	Water	8260B	
MB 240-423409/7	Method Blank	Total/NA	Water	8260B	
LCS 240-423409/4	Lab Control Sample	Total/NA	Water	8260B	
240-126251-6 MS	MW-82D-MS_021120	Total/NA	Water	8260B	
240-126251-6 MSD	MW-82D-MSD_021120	Total/NA	Water	8260B	

Analysis Batch: 423494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-126251-2	MW-86_021120	Total/NA	Water	8260B SIM	
240-126251-3	MW-83_021120	Total/NA	Water	8260B SIM	
240-126251-4	MW-81S_021120	Total/NA	Water	8260B SIM	
240-126251-5	MW-134S_021120	Total/NA	Water	8260B SIM	
MB 240-423494/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-423494/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-126251-5 MS	MW-134S-MS_021120	Total/NA	Water	8260B SIM	
240-126251-5 MSD	MW-134S-MSD_021120	Total/NA	Water	8260B SIM	

Analysis Batch: 423687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-126251-6	MW-82D_021120	Total/NA	Water	8260B SIM	
MB 240-423687/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-423687/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-126251-6 MS	MW-82D-MS_021120	Total/NA	Water	8260B SIM	
240-126251-6 MSD	MW-82D-MSD_021120	Total/NA	Water	8260B SIM	

Lab Chronicle

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

Job ID: 240-126251-1

Client Sample ID: TRIP BLANK
Date Collected: 02/11/20 00:00
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	423223	02/18/20 22:59	LRW	TAL CAN

Client Sample ID: MW-86_021120
Date Collected: 02/11/20 16:50
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	423223	02/18/20 22:36	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	423494	02/20/20 10:02	SAM	TAL CAN

Client Sample ID: MW-83_021120
Date Collected: 02/11/20 13:00
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	423223	02/18/20 23:23	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	423494	02/20/20 10:27	SAM	TAL CAN

Client Sample ID: MW-81S_021120
Date Collected: 02/11/20 09:50
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	423223	02/18/20 23:47	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	423494	02/20/20 10:53	SAM	TAL CAN

Client Sample ID: MW-134S_021120
Date Collected: 02/11/20 14:50
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	423408	02/19/20 17:33	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	423494	02/20/20 11:18	SAM	TAL CAN

Client Sample ID: MW-82D_021120
Date Collected: 02/11/20 11:10
Date Received: 02/13/20 08:40

Lab Sample ID: 240-126251-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	423409	02/19/20 19:06	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	423687	02/21/20 07:05	SAM	TAL CAN

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 240-126251-1

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	02-23-20 *
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	06-01-21
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
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	01-12-21
West Virginia DEP	State	210	12-31-20

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

MICHIGAN 190

Chain of Custody Record

TestAmerica

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

TestAmerica Laboratories, Inc.

Client Contact	Regulatory program:	Client Project Manager: Kris Hinskey	Site Contact: Julia McClafferty	Lab Contact: Mike DelMonico	COC No:
Company Name: Arcadis	☐ DW ☐ NPDES ☐ RCRA ☐ Other	Telephone: 248-994-2240	Telephone: 734-644-5131	Telephone: 330-497-9396	of COCs
Address: 28550 Cabot Drive, Suite 500		Email: kristoffer.hinskey@arcadis.com	Analysis Turnaround Time		For lab use only
City/State/Zip: Novi, MI, 48377		Sampler Name: Ellen Redner	TAT if different from below: 10 day; ☐ 3 weeks ☑ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Phone: 248-994-2240		Method of Shipment/Carrier:			
Project Name: Ford LTP Off-Site		Shipping/Tracking No:			
Project Number: 30042006.0402.02					
PO # 30042006.0402.02					

240-126251 Chain of Custody

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y / N)	Composite=C / Grab=G	Analyses: 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	Sample Specific Notes / Special Instructions:
TRIP BLANK	—	—		1						1					N	G	X	X	X	X	X	X	X	1 TRIP BLANK
MW-86_021120	2/11/20	1650		6						6					N	G	X	X	X	X	X	X	X	3 VOAs for 8260B 3 VOAs for 8260B SIM
MW-83_021120	2/11/20	1300		6						6					N	G	X	X	X	X	X	X	X	3 VOAs for 8260B 3 VOAs for 8260B SIM
MW-81S_021120	2/11/20	0950		6						6					N	G	X	X	X	X	X	X	X	3 VOAs for 8260B 3 VOAs for 8260B SIM
MW-134S_021120	2/11/20	1450		6						6					N	G	X	X	X	X	X	X	X	
MW-134S-MSD_021120	2/11/20	1450		6						6					N	G	X	X	X	X	X	X	X	RUN MS/MSD
MW-134S-MS_021120	2/11/20	1450		6						6					N	G	X	X	X	X	X	X	X	RUN MS/MSD
MW-82D_021120	2/11/20	1110		6						6					N	G	X	X	X	X	X	X	X	
MW-82D-MS_021120	2/11/20	1110		6						6					N	G	X	X	X	X	X	X	X	RUN MS/MSD
MW-82D-MSD_021120	2/11/20	1110		6						6					N	G	X	X	X	X	X	X	X	RUN MS/MSD

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☑ Disposal By Lab ☐ Archive For ☐ Months

Special Instructions/QC Requirements & Comments:

Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203631
Level IV Reporting requested.

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Arcadis	2/11/20 1730	[signature]	Arcadis	2/11/20 1730
[signature]	Arcadis	2/11/20 1800	Now Cold Storage	Arcadis	2/11/20 1800
[signature] Relinquished	ARCADIS	2/12/20 12:15	Received in Laboratory by: Molly Marlow	Company: ETAL-MI	Date/Time: 2/12/20 1230
Molly Marlow	ETAL-MI	2/12/20 1635	[signature]	IEPA	2-13-20 840

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # : 126251**

Canton Facility

Client Arcadis Site Name _____ Cooler unpacked by: Ryan C

Cooler Received on 2-13-20 Opened on 2-15-20 840

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

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

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

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 2.9 °C Corrected Cooler Temp. 3.6 °C
   IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes No	NA pH Strip Lot# HC995364
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
16. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

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

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: AG

18. SAMPLE CONDITION

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

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

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

19. SAMPLE PRESERVATION

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

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

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099