

ANALYTICAL REPORT

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

Laboratory Job ID: 240-149704-1
Client Project/Site: Ford LTP On-Site

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

Attn: Kristoffer Hinskey



Authorized for release by:
6/4/2021 11:12:15 AM

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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: 240-149704-1

Qualifiers

GC/MS VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: 240-149704-1

Job ID: 240-149704-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

Job Narrative
240-149704-1

Comments

No additional comments.

Receipt

The samples were received on 5/20/2021 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 1.3° C.

GC/MS VOA

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

VOA Prep

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

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Method Summary

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

Job ID: 240-149704-1

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

Job ID: 240-149704-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-149704-1	TRIP BLANK_115	Water	05/18/21 00:00	05/20/21 08:00	
240-149704-2	PW-16-01_051821	Water	05/18/21 12:15	05/20/21 08:00	
240-149704-3	TW-16-01_051821	Water	05/18/21 13:30	05/20/21 08:00	

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

Detection Summary

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

Job ID: 240-149704-1

Client Sample ID: TRIP BLANK_115

Lab Sample ID: 240-149704-1

No Detections.

Client Sample ID: PW-16-01_051821

Lab Sample ID: 240-149704-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	73		1.0	0.16	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	7.6		1.0	0.19	ug/L	1		8260B	Total/NA
Vinyl chloride	180		3.3	0.67	ug/L	3.333		8260B	Total/NA

Client Sample ID: TW-16-01_051821

Lab Sample ID: 240-149704-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	41		2.5	0.40	ug/L	2.5		8260B	Total/NA
Vinyl chloride	150		2.5	0.50	ug/L	2.5		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-149704-1

Client Sample ID: TRIP BLANK_115

Lab Sample ID: 240-149704-1

Date Collected: 05/18/21 00:00

Matrix: Water

Date Received: 05/20/21 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			05/28/21 17:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/28/21 17:15	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/28/21 17:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/28/21 17:15	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/28/21 17:15	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/28/21 17:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		75 - 130		05/28/21 17:15	1
4-Bromofluorobenzene (Surr)	94		47 - 134		05/28/21 17:15	1
Toluene-d8 (Surr)	111		69 - 122		05/28/21 17:15	1
Dibromofluoromethane (Surr)	111		78 - 129		05/28/21 17:15	1

Client Sample Results

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

Job ID: 240-149704-1

Client Sample ID: PW-16-01_051821

Lab Sample ID: 240-149704-2

Date Collected: 05/18/21 12:15

Matrix: Water

Date Received: 05/20/21 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			05/24/21 21:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		70 - 133		05/24/21 21:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/28/21 21:26	1
cis-1,2-Dichloroethene	73		1.0	0.16	ug/L			05/28/21 21:26	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/28/21 21:26	1
trans-1,2-Dichloroethene	7.6		1.0	0.19	ug/L			05/28/21 21:26	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/28/21 21:26	1
Vinyl chloride	180		3.3	0.67	ug/L			05/29/21 16:15	3.333

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		75 - 130		05/28/21 21:26	1
1,2-Dichloroethane-d4 (Surr)	108		75 - 130		05/29/21 16:15	3.333
4-Bromofluorobenzene (Surr)	93		47 - 134		05/28/21 21:26	1
4-Bromofluorobenzene (Surr)	103		47 - 134		05/29/21 16:15	3.333
Toluene-d8 (Surr)	109		69 - 122		05/28/21 21:26	1
Toluene-d8 (Surr)	105		69 - 122		05/29/21 16:15	3.333
Dibromofluoromethane (Surr)	115		78 - 129		05/28/21 21:26	1
Dibromofluoromethane (Surr)	114		78 - 129		05/29/21 16:15	3.333

Client Sample Results

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

Job ID: 240-149704-1

Client Sample ID: TW-16-01_051821

Lab Sample ID: 240-149704-3

Date Collected: 05/18/21 13:30

Matrix: Water

Date Received: 05/20/21 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			05/24/21 22:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		70 - 133		05/24/21 22:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	2.5	U	2.5	0.48	ug/L			05/29/21 16:38	2.5
cis-1,2-Dichloroethene	41		2.5	0.40	ug/L			05/29/21 16:38	2.5
Tetrachloroethene	2.5	U	2.5	0.38	ug/L			05/29/21 16:38	2.5
trans-1,2-Dichloroethene	2.5	U	2.5	0.48	ug/L			05/29/21 16:38	2.5
Trichloroethene	2.5	U	2.5	0.25	ug/L			05/29/21 16:38	2.5
Vinyl chloride	150		2.5	0.50	ug/L			05/29/21 16:38	2.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		75 - 130		05/29/21 16:38	2.5
4-Bromofluorobenzene (Surr)	100		47 - 134		05/29/21 16:38	2.5
Toluene-d8 (Surr)	104		69 - 122		05/29/21 16:38	2.5
Dibromofluoromethane (Surr)	114		78 - 129		05/29/21 16:38	2.5

Surrogate Summary

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

Job ID: 240-149704-1

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)
240-149704-1	TRIP BLANK_115	110	94	111	111
240-149704-2	PW-16-01_051821	112	93	109	115
240-149704-2	PW-16-01_051821	108	103	105	114
240-149704-3	TW-16-01_051821	110	100	104	114
240-149874-J-2 MS	Matrix Spike	98	102	104	103
240-149874-R-2 MSD	Matrix Spike Duplicate	94	102	105	103
LCS 240-488079/5	Lab Control Sample	101	102	105	107
LCS 240-488191/5	Lab Control Sample	106	111	110	113
MB 240-488079/7	Method Blank	106	96	111	107
MB 240-488191/7	Method Blank	108	104	107	112

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)
240-149704-2	PW-16-01_051821	86
240-149704-3	TW-16-01_051821	85
LCS 240-487235/4	Lab Control Sample	81
MB 240-487235/5	Method Blank	82

Surrogate Legend

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

QC Sample Results

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

Job ID: 240-149704-1

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

Lab Sample ID: MB 240-488079/7
Matrix: Water
Analysis Batch: 488079

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/28/21 13:53	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/28/21 13:53	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/28/21 13:53	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/28/21 13:53	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/28/21 13:53	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/28/21 13:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		75 - 130		05/28/21 13:53	1
4-Bromofluorobenzene (Surr)	96		47 - 134		05/28/21 13:53	1
Toluene-d8 (Surr)	111		69 - 122		05/28/21 13:53	1
Dibromofluoromethane (Surr)	107		78 - 129		05/28/21 13:53	1

Lab Sample ID: LCS 240-488079/5
Matrix: Water
Analysis Batch: 488079

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	25.0	23.7		ug/L		95	73 - 129
cis-1,2-Dichloroethene	25.0	27.8		ug/L		111	75 - 124
Tetrachloroethene	25.0	27.7		ug/L		111	70 - 125
trans-1,2-Dichloroethene	25.0	25.8		ug/L		103	74 - 130
Trichloroethene	25.0	26.6		ug/L		106	71 - 121
Vinyl chloride	25.0	19.3		ug/L		77	61 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		75 - 130
4-Bromofluorobenzene (Surr)	102		47 - 134
Toluene-d8 (Surr)	105		69 - 122
Dibromofluoromethane (Surr)	107		78 - 129

Lab Sample ID: MB 240-488191/7
Matrix: Water
Analysis Batch: 488191

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/29/21 13:33	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/29/21 13:33	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/29/21 13:33	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/29/21 13:33	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/29/21 13:33	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/29/21 13:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		75 - 130		05/29/21 13:33	1
4-Bromofluorobenzene (Surr)	104		47 - 134		05/29/21 13:33	1
Toluene-d8 (Surr)	107		69 - 122		05/29/21 13:33	1

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QC Sample Results

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

Job ID: 240-149704-1

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

Lab Sample ID: MB 240-488191/7
Matrix: Water
Analysis Batch: 488191

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

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	112		78 - 129		05/29/21 13:33	1

Lab Sample ID: LCS 240-488191/5
Matrix: Water
Analysis Batch: 488191

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	25.0	24.3		ug/L		97	73 - 129	
cis-1,2-Dichloroethene	25.0	26.8		ug/L		107	75 - 124	
Tetrachloroethene	25.0	28.2		ug/L		113	70 - 125	
trans-1,2-Dichloroethene	25.0	26.7		ug/L		107	74 - 130	
Trichloroethene	25.0	27.7		ug/L		111	71 - 121	
Vinyl chloride	25.0	29.4		ug/L		117	61 - 134	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	106		75 - 130
4-Bromofluorobenzene (Surr)	111		47 - 134
Toluene-d8 (Surr)	110		69 - 122
Dibromofluoromethane (Surr)	113		78 - 129

Lab Sample ID: 240-149874-J-2 MS
Matrix: Water
Analysis Batch: 488191

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	25.0	20.9		ug/L		83	64 - 132	
cis-1,2-Dichloroethene	1.0	U	25.0	23.3		ug/L		93	68 - 121	
Tetrachloroethene	1.0	U	25.0	24.8		ug/L		99	52 - 129	
trans-1,2-Dichloroethene	1.0	U	25.0	22.5		ug/L		90	69 - 126	
Trichloroethene	1.0	U	25.0	23.7		ug/L		95	56 - 124	
Vinyl chloride	1.0	U	25.0	25.2		ug/L		101	49 - 136	

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	98		75 - 130
4-Bromofluorobenzene (Surr)	102		47 - 134
Toluene-d8 (Surr)	104		69 - 122
Dibromofluoromethane (Surr)	103		78 - 129

Lab Sample ID: 240-149874-R-2 MSD
Matrix: Water
Analysis Batch: 488191

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	25.0	22.1		ug/L		89	64 - 132	6	35	
cis-1,2-Dichloroethene	1.0	U	25.0	24.3		ug/L		97	68 - 121	4	35	
Tetrachloroethene	1.0	U	25.0	26.4		ug/L		106	52 - 129	6	35	
trans-1,2-Dichloroethene	1.0	U	25.0	23.6		ug/L		95	69 - 126	5	35	
Trichloroethene	1.0	U	25.0	25.0		ug/L		100	56 - 124	5	35	

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QC Sample Results

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

Job ID: 240-149704-1

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

Lab Sample ID: 240-149874-R-2 MSD
Matrix: Water
Analysis Batch: 488191

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
Vinyl chloride	1.0	U	25.0	27.7		ug/L		111	49 - 136	10	35
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	94		75 - 130								
4-Bromofluorobenzene (Surr)	102		47 - 134								
Toluene-d8 (Surr)	105		69 - 122								
Dibromofluoromethane (Surr)	103		78 - 129								

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

Lab Sample ID: MB 240-487235/5
Matrix: Water
Analysis Batch: 487235

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/24/21 14:36	1
MB MB									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		70 - 133					05/24/21 14:36	1

Lab Sample ID: LCS 240-487235/4
Matrix: Water
Analysis Batch: 487235

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	10.5		ug/L		105	80 - 135
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	81		70 - 133				

QC Association Summary

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

Job ID: 240-149704-1

GC/MS VOA

Analysis Batch: 487235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-149704-2	PW-16-01_051821	Total/NA	Water	8260B SIM	
240-149704-3	TW-16-01_051821	Total/NA	Water	8260B SIM	
MB 240-487235/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-487235/4	Lab Control Sample	Total/NA	Water	8260B SIM	

Analysis Batch: 488079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-149704-1	TRIP BLANK_115	Total/NA	Water	8260B	
240-149704-2	PW-16-01_051821	Total/NA	Water	8260B	
MB 240-488079/7	Method Blank	Total/NA	Water	8260B	
LCS 240-488079/5	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 488191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-149704-2	PW-16-01_051821	Total/NA	Water	8260B	
240-149704-3	TW-16-01_051821	Total/NA	Water	8260B	
MB 240-488191/7	Method Blank	Total/NA	Water	8260B	
LCS 240-488191/5	Lab Control Sample	Total/NA	Water	8260B	
240-149874-J-2 MS	Matrix Spike	Total/NA	Water	8260B	
240-149874-R-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Lab Chronicle

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

Job ID: 240-149704-1

Client Sample ID: TRIP BLANK_115

Lab Sample ID: 240-149704-1

Date Collected: 05/18/21 00:00

Matrix: Water

Date Received: 05/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	488079	05/28/21 17:15	SAM	TAL CAN

Client Sample ID: PW-16-01_051821

Lab Sample ID: 240-149704-2

Date Collected: 05/18/21 12:15

Matrix: Water

Date Received: 05/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	488079	05/28/21 21:26	SAM	TAL CAN
Total/NA	Analysis	8260B		3.333	488191	05/29/21 16:15	SAM	TAL CAN
Total/NA	Analysis	8260B SIM		1	487235	05/24/21 21:37	CS	TAL CAN

Client Sample ID: TW-16-01_051821

Lab Sample ID: 240-149704-3

Date Collected: 05/18/21 13:30

Matrix: Water

Date Received: 05/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2.5	488191	05/29/21 16:38	SAM	TAL CAN
Total/NA	Analysis	8260B SIM		1	487235	05/24/21 22:02	CS	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: 240-149704-1

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	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21 *
Kentucky (UST)	State	112225	02-23-22
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	03-31-22
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.



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

MICHIGAN
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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 LTP On-Site
Project Number: 30080642.401.03
PO # 30080642.401.03

Client Project Manager: Kris Hinskey
Site Contact: Julia McClafferty
Telephone: 248-994-2240
Email: kristoffor.hinskey@arcadis.com
Telephone: 734-644-5131

Sampler Name: CHRISTINA WEAVER
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

Containers & Preservatives
HCl NaOH HNO3 H2SO4 Other:

Matrix
Air Aqueous Sediment Solid Other:

Sample Identification

Sample Date	Sample Time	Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	Unpres	Other:
TRIP BLANK - 115	----	X							1			
PW-16-01-051821	5/18/21 1215	X							6			
TW-16-01-051821	5/18/21 1330	X							6			

Filtered Sample (Y/N) Y N

Composite C / Grab G C G

Analyses

Analysis	TRIP BLANK - 115	PW-16-01-051821	TW-16-01-051821
1-DCE 8260B	X	X	X
cis-1,2-DCE 8260B	X	X	X
Trans-1,2-DCE 8260B	X	X	X
PCE 8260B	X	X	X
TCE 8260B	X	X	X
Vinyl Chloride 8260B	X	X	X
1,4-Dioxane 8260B SIM	X	X	X

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

For lab use only
1 of 1 COCs
Walk-in client
Lab sampling
Job/SDG No:

TestAmerica Laboratories, Inc.
COC No:
Telephone: 330-497-9396

Lab Contact: Mike DelMontico

Sample Disposal (A fee may be assessed if samples are retained longer)
 Return to Client Disposal By Lab Archive By Lab

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: Christina Wever
Relinquished by: Christina Wever
Relinquished by: Christa Wever

Company: ARCADIS
Date/Time: 5/18/21/1600
Company: ARCADIS
Date/Time: 5/19/21/
Company: ETA
Date/Time: 5/19/21 15:20

Received by: LOUIE BOO STORKE
Relinquished by: Christa Wever
Relinquished by: Christa Wever
Relinquished by: Christa Wever

Company: ARCADIS
Date/Time: 5/18/21/1600
Company: ETA
Date/Time: 5/18/21/1956
Company: ETA
Date/Time: 5/20/21 8:00

240-149704 Chain of Custody



Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login #: 149704
Canton Facility

Client Areadis Site Name _____ Cooler unpacked by: [Signature]
Cooler Received on 5/20/21 Opened on 5/20/21
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

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

TestAmerica Cooler # _____ 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. 1.2 °C Corrected Cooler Temp. 1.3 °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
-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 NA
-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
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? Yes No
10. Were correct bottle(s) used for the test(s) indicated? Yes No
11. Sufficient quantity received to perform indicated analyses? Yes No
12. Are these work share samples and all listed on the COC? Yes No

If yes, Questions 13-17 have been checked at the originating laboratory.

13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC022887
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? Yes No NA ← Larger than this.
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # covered 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 _____

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

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: _____