

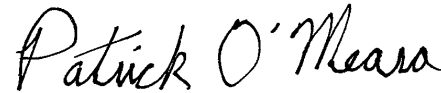
ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-166651-1
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:
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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: 240-166651-1

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: 240-166651-1

Job ID: 240-166651-1

Laboratory: Eurofins Canton

Narrative

**Job Narrative
240-166651-1**

Comments

No additional comments.

Receipt

The samples were received on 5/14/2022 @ 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 3.0° 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.

- 1
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- 11
- 12
- 13
- 14

Method Summary

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

Job ID: 240-166651-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
8260D SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
5030C	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 Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

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- 5
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- 9
- 10
- 11
- 12
- 13
- 14

Sample Summary

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

Job ID: 240-166651-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-166651-1	TRIP BLANK_75	Water	05/11/22 00:00	05/14/22 08:00
240-166651-2	MW-39_051122	Water	05/11/22 10:35	05/14/22 08:00
240-166651-3	MW-218S_051122	Water	05/11/22 12:00	05/14/22 08:00
240-166651-4	MW-32_051122	Water	05/11/22 13:55	05/14/22 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: 240-166651-1

Client Sample ID: TRIP BLANK_75

Lab Sample ID: 240-166651-1

No Detections.

Client Sample ID: MW-39_051122

Lab Sample ID: 240-166651-2

No Detections.

Client Sample ID: MW-218S_051122

Lab Sample ID: 240-166651-3

No Detections.

Client Sample ID: MW-32_051122

Lab Sample ID: 240-166651-4

No Detections.

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

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

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

Job ID: 240-166651-1

Client Sample ID: TRIP BLANK_75

Lab Sample ID: 240-166651-1

Date Collected: 05/11/22 00:00

Matrix: Water

Date Received: 05/14/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/23/22 13:37	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/23/22 13:37	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/23/22 13:37	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/23/22 13:37	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/23/22 13:37	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/23/22 13:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		62 - 137		05/23/22 13:37	1
4-Bromofluorobenzene (Surr)	107		56 - 136		05/23/22 13:37	1
Toluene-d8 (Surr)	107		78 - 122		05/23/22 13:37	1
Dibromofluoromethane (Surr)	112		73 - 120		05/23/22 13:37	1

Client Sample Results

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

Job ID: 240-166651-1

Client Sample ID: MW-39_051122

Lab Sample ID: 240-166651-2

Date Collected: 05/11/22 10:35

Matrix: Water

Date Received: 05/14/22 08:00

Method: 8260D 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			05/18/22 03:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		66 - 120		05/18/22 03:30	1

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/20/22 18:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/22 18:20	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 18:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/22 18:20	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 18:20	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/22 18:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		62 - 137		05/20/22 18:20	1
4-Bromofluorobenzene (Surr)	108		56 - 136		05/20/22 18:20	1
Toluene-d8 (Surr)	106		78 - 122		05/20/22 18:20	1
Dibromofluoromethane (Surr)	112		73 - 120		05/20/22 18:20	1

Client Sample Results

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

Job ID: 240-166651-1

Client Sample ID: MW-218S_051122

Lab Sample ID: 240-166651-3

Date Collected: 05/11/22 12:00

Matrix: Water

Date Received: 05/14/22 08:00

Method: 8260D 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			05/18/22 03:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		66 - 120		05/18/22 03:54	1

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/23/22 14:01	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/23/22 14:01	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/23/22 14:01	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/23/22 14:01	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/23/22 14:01	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/23/22 14:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		62 - 137		05/23/22 14:01	1
4-Bromofluorobenzene (Surr)	109		56 - 136		05/23/22 14:01	1
Toluene-d8 (Surr)	108		78 - 122		05/23/22 14:01	1
Dibromofluoromethane (Surr)	113		73 - 120		05/23/22 14:01	1

Client Sample Results

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

Job ID: 240-166651-1

Client Sample ID: MW-32_051122

Lab Sample ID: 240-166651-4

Date Collected: 05/11/22 13:55

Matrix: Water

Date Received: 05/14/22 08:00

Method: 8260D 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			05/18/22 04:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		66 - 120		05/18/22 04:19	1

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/23/22 14:25	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/23/22 14:25	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/23/22 14:25	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/23/22 14:25	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/23/22 14:25	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/23/22 14:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		62 - 137		05/23/22 14:25	1
4-Bromofluorobenzene (Surr)	107		56 - 136		05/23/22 14:25	1
Toluene-d8 (Surr)	108		78 - 122		05/23/22 14:25	1
Dibromofluoromethane (Surr)	113		73 - 120		05/23/22 14:25	1

Surrogate Summary

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

Job ID: 240-166651-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (62-137)	BFB (56-136)	TOL (78-122)	DBFM (73-120)
240-166395-F-18 MS	Matrix Spike	96	106	108	100
240-166395-I-18 MSD	Matrix Spike Duplicate	95	101	105	98
240-166501-B-3 MS	Matrix Spike	96	106	109	103
240-166501-B-3 MSD	Matrix Spike Duplicate	99	108	107	103
240-166651-1	TRIP BLANK_75	105	107	107	112
240-166651-2	MW-39_051122	109	108	106	112
240-166651-3	MW-218S_051122	107	109	108	113
240-166651-4	MW-32_051122	106	107	108	113
LCS 240-527288/5	Lab Control Sample	94	106	110	103
LCS 240-527500/5	Lab Control Sample	96	107	108	102
MB 240-527288/7	Method Blank	107	108	108	113
MB 240-527500/7	Method Blank	106	107	109	112

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA
		(66-120)
240-166505-H-3 MS	Matrix Spike	105
240-166505-N-3 MSD	Matrix Spike Duplicate	105
240-166651-2	MW-39_051122	100
240-166651-3	MW-218S_051122	98
240-166651-4	MW-32_051122	99
LCS 240-526826/3	Lab Control Sample	106
MB 240-526826/4	Method Blank	105

Surrogate Legend

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

QC Sample Results

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

Job ID: 240-166651-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-527288/7
Matrix: Water
Analysis Batch: 527288

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/20/22 11:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/22 11:36	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 11:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/22 11:36	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 11:36	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/22 11:36	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	107		62 - 137		05/20/22 11:36	1
4-Bromofluorobenzene (Surr)	108		56 - 136		05/20/22 11:36	1
Toluene-d8 (Surr)	108		78 - 122		05/20/22 11:36	1
Dibromofluoromethane (Surr)	113		73 - 120		05/20/22 11:36	1

Lab Sample ID: LCS 240-527288/5
Matrix: Water
Analysis Batch: 527288

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,1-Dichloroethene	25.0	26.0		ug/L		104	63 - 134
cis-1,2-Dichloroethene	25.0	24.8		ug/L		99	77 - 123
Tetrachloroethene	25.0	26.9		ug/L		107	76 - 123
trans-1,2-Dichloroethene	25.0	25.1		ug/L		101	75 - 124
Trichloroethene	25.0	25.6		ug/L		102	70 - 122
Vinyl chloride	25.0	24.6		ug/L		98	60 - 144

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	94		62 - 137
4-Bromofluorobenzene (Surr)	106		56 - 136
Toluene-d8 (Surr)	110		78 - 122
Dibromofluoromethane (Surr)	103		73 - 120

Lab Sample ID: 240-166395-F-18 MS
Matrix: Water
Analysis Batch: 527288

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

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
1,1-Dichloroethene	6.1		25.0	28.4		ug/L		89	56 - 135
cis-1,2-Dichloroethene	1.4		25.0	23.6		ug/L		89	66 - 128
Tetrachloroethene	4.8		25.0	28.4		ug/L		94	62 - 131
trans-1,2-Dichloroethene	0.91	J	25.0	23.3		ug/L		90	56 - 136
Trichloroethene	1.3		25.0	24.6		ug/L		93	61 - 124
Vinyl chloride	3.0		25.0	25.9		ug/L		91	43 - 157

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	96		62 - 137
4-Bromofluorobenzene (Surr)	106		56 - 136
Toluene-d8 (Surr)	108		78 - 122

QC Sample Results

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

Job ID: 240-166651-1

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

Lab Sample ID: 240-166395-F-18 MS
Matrix: Water
Analysis Batch: 527288

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

Surrogate	%Recovery	MS MS Qualifier	Limits
Dibromofluoromethane (Surr)	100		73 - 120

Lab Sample ID: 240-166395-I-18 MSD
Matrix: Water
Analysis Batch: 527288

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	6.1		25.0	27.5		ug/L		86	56 - 135	3	26
cis-1,2-Dichloroethene	1.4		25.0	23.3		ug/L		88	66 - 128	1	14
Tetrachloroethene	4.8		25.0	26.6		ug/L		87	62 - 131	6	20
trans-1,2-Dichloroethene	0.91	J	25.0	22.7		ug/L		87	56 - 136	3	15
Trichloroethene	1.3		25.0	24.1		ug/L		91	61 - 124	2	15
Vinyl chloride	3.0		25.0	25.1		ug/L		88	43 - 157	3	24

Surrogate	%Recovery	MSD MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		62 - 137
4-Bromofluorobenzene (Surr)	101		56 - 136
Toluene-d8 (Surr)	105		78 - 122
Dibromofluoromethane (Surr)	98		73 - 120

Lab Sample ID: MB 240-527500/7
Matrix: Water
Analysis Batch: 527500

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	0.49	ug/L			05/23/22 13:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/23/22 13:13	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/23/22 13:13	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/23/22 13:13	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/23/22 13:13	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/23/22 13:13	1

Surrogate	%Recovery	MB MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		62 - 137		05/23/22 13:13	1
4-Bromofluorobenzene (Surr)	107		56 - 136		05/23/22 13:13	1
Toluene-d8 (Surr)	109		78 - 122		05/23/22 13:13	1
Dibromofluoromethane (Surr)	112		73 - 120		05/23/22 13:13	1

Lab Sample ID: LCS 240-527500/5
Matrix: Water
Analysis Batch: 527500

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	25.1		ug/L		101	63 - 134
cis-1,2-Dichloroethene	25.0	24.4		ug/L		98	77 - 123
Tetrachloroethene	25.0	26.2		ug/L		105	76 - 123
trans-1,2-Dichloroethene	25.0	24.5		ug/L		98	75 - 124
Trichloroethene	25.0	25.3		ug/L		101	70 - 122

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QC Sample Results

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

Job ID: 240-166651-1

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

Lab Sample ID: LCS 240-527500/5

Matrix: Water

Analysis Batch: 527500

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl chloride	25.0	24.5		ug/L		98	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		62 - 137
4-Bromofluorobenzene (Surr)	107		56 - 136
Toluene-d8 (Surr)	108		78 - 122
Dibromofluoromethane (Surr)	102		73 - 120

Lab Sample ID: 240-166501-B-3 MS

Matrix: Water

Analysis Batch: 527500

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	7.1	U	179	175		ug/L		98	56 - 135
cis-1,2-Dichloroethene	8.1		179	178		ug/L		95	66 - 128
Tetrachloroethene	7.1	U	179	179		ug/L		100	62 - 131
trans-1,2-Dichloroethene	7.1	U	179	170		ug/L		95	56 - 136
Trichloroethene	7.1	U	179	172		ug/L		96	61 - 124
Vinyl chloride	190		179	332		ug/L		81	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		62 - 137
4-Bromofluorobenzene (Surr)	106		56 - 136
Toluene-d8 (Surr)	109		78 - 122
Dibromofluoromethane (Surr)	103		73 - 120

Lab Sample ID: 240-166501-B-3 MSD

Matrix: Water

Analysis Batch: 527500

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	7.1	U	179	180		ug/L		101	56 - 135	3	26
cis-1,2-Dichloroethene	8.1		179	185		ug/L		99	66 - 128	4	14
Tetrachloroethene	7.1	U	179	177		ug/L		99	62 - 131	1	20
trans-1,2-Dichloroethene	7.1	U	179	173		ug/L		97	56 - 136	2	15
Trichloroethene	7.1	U	179	177		ug/L		99	61 - 124	3	15
Vinyl chloride	190		179	346		ug/L		89	43 - 157	4	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		62 - 137
4-Bromofluorobenzene (Surr)	108		56 - 136
Toluene-d8 (Surr)	107		78 - 122
Dibromofluoromethane (Surr)	103		73 - 120

QC Sample Results

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

Job ID: 240-166651-1

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

Lab Sample ID: MB 240-526826/4
Matrix: Water
Analysis Batch: 526826

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			05/17/22 20:01	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		66 - 120					05/17/22 20:01	1

Lab Sample ID: LCS 240-526826/3
Matrix: Water
Analysis Batch: 526826

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	9.73		ug/L		97	80 - 122
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	106		66 - 120				

Lab Sample ID: 240-166505-H-3 MS
Matrix: Water
Analysis Batch: 526826

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 F1	10.0	9.65		ug/L		97	51 - 153
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	105		66 - 120						

Lab Sample ID: 240-166505-N-3 MSD
Matrix: Water
Analysis Batch: 526826

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
1,4-Dioxane	2.0	U F1	10.0	10.2		ug/L		102	51 - 153	6	16
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	105		66 - 120								

QC Association Summary

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

Job ID: 240-166651-1

GC/MS VOA

Analysis Batch: 526826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166651-2	MW-39_051122	Total/NA	Water	8260D SIM	
240-166651-3	MW-218S_051122	Total/NA	Water	8260D SIM	
240-166651-4	MW-32_051122	Total/NA	Water	8260D SIM	
MB 240-526826/4	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-526826/3	Lab Control Sample	Total/NA	Water	8260D SIM	
240-166505-H-3 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-166505-N-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Analysis Batch: 527288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166651-2	MW-39_051122	Total/NA	Water	8260D	
MB 240-527288/7	Method Blank	Total/NA	Water	8260D	
LCS 240-527288/5	Lab Control Sample	Total/NA	Water	8260D	
240-166395-F-18 MS	Matrix Spike	Total/NA	Water	8260D	
240-166395-I-18 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 527500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166651-1	TRIP BLANK_75	Total/NA	Water	8260D	
240-166651-3	MW-218S_051122	Total/NA	Water	8260D	
240-166651-4	MW-32_051122	Total/NA	Water	8260D	
MB 240-527500/7	Method Blank	Total/NA	Water	8260D	
LCS 240-527500/5	Lab Control Sample	Total/NA	Water	8260D	
240-166501-B-3 MS	Matrix Spike	Total/NA	Water	8260D	
240-166501-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Lab Chronicle

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

Job ID: 240-166651-1

Client Sample ID: TRIP BLANK_75

Lab Sample ID: 240-166651-1

Date Collected: 05/11/22 00:00

Matrix: Water

Date Received: 05/14/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527500	05/23/22 13:37	SAM	TAL CAN

Client Sample ID: MW-39_051122

Lab Sample ID: 240-166651-2

Date Collected: 05/11/22 10:35

Matrix: Water

Date Received: 05/14/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527288	05/20/22 18:20	SAM	TAL CAN
Total/NA	Analysis	8260D SIM		1	526826	05/18/22 03:30	CS	TAL CAN

Client Sample ID: MW-218S_051122

Lab Sample ID: 240-166651-3

Date Collected: 05/11/22 12:00

Matrix: Water

Date Received: 05/14/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527500	05/23/22 14:01	SAM	TAL CAN
Total/NA	Analysis	8260D SIM		1	526826	05/18/22 03:54	CS	TAL CAN

Client Sample ID: MW-32_051122

Lab Sample ID: 240-166651-4

Date Collected: 05/11/22 13:55

Matrix: Water

Date Received: 05/14/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527500	05/23/22 14:25	SAM	TAL CAN
Total/NA	Analysis	8260D SIM		1	526826	05/18/22 04:19	CS	TAL CAN

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

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

Job ID: 240-166651-1

Laboratory: Eurofins 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	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22 *
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	05-24-22
Oregon	NELAP	4062	05-24-22
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-22-16	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

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

Eurofins Canton

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

Client Contact Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240		Regulatory program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other	
Client Project Manager: Kristina Weaver Telephone: 248-994-2329 Email: Kristina.Weaver@arcadis.com		Lab Contact: Mike DeMonico Telephone: 330-966-9783	
Sampler Name: Eileen Redner		Analyses Walk-in client Lab sampling Job/SDG No:	
Method of Shipment/Carrier: Shipping/Tracking No:		1 of 1 COCs For lab use only	
Sample Identification TRIP BLANK_75 MW-39_051122 MW-218S_051122 MW-32_051122		Sample Specific Notes / Special Instructions: 1 Trip Blank 3 VOAs for 8260D 3 VOAs for 8260D SIM	
Sample Date 5/11/22 5/11/22 5/11/22 5/11/22		TCE 8260D PCE 8260D Trans-1,2-DCE 8260D cis-1,2-DCE 8260D 1,1-DCE 8260D Composite=C / Grab=G Filtered Sample (Y / N) N N N N	
Sample Time --- 1035 1200 1355		Vinyl Chloride 8260D 1,4-Dioxane 8260D SIM	
Matrix Air Aqueous Sediment Solid Other:		Containers & Preservatives HCl HNO3 H2SO4 NaOH ZnAc NaOH Other:	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Sample Disposal (A fee may be assessed if samples are retained longer than 1 year) <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For	
Special Instructions/QC Requirements & Comments: Submit all results through Cadena at jtomalia@cadenaco.com, Cadena #E203728 Level IV Reporting requested.			



Relinquished by: Eileen Redner	Company: ARCADIS	Date/Time: 5/11/22 @ 1550	Received by: Nou	Company: ARCADIS	Date/Time: 5/11/22 @ 1550
Relinquished by: Eileen Redner	Company: ARCADIS	Date/Time: 5/13/22 1250	Received by: Eileen Redner	Company: EETA	Date/Time: 5/13/22 1750
Relinquished by: Eileen Redner	Company: EETA	Date/Time: 5/13/22 1250	Received in Laboratory by: Eileen Redner	Company: EETA	Date/Time: 5-14-22 800

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # : 116651
Canton Facility

Client Arcadis Site Name _____ Cooler unpacked by: Vany Boyer
Cooler Received on 5-14-22 Opened on 5-16-22
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-13 (CF 0.0 °C) Observed Cooler Temp. 3.0 °C Corrected Cooler Temp. 3.0 °C
IR GUN #IR-15 (CF -0.7 °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 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# HC157842
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 # 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: _____