

ANALYTICAL REPORT

Eurofins Canton
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Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-166502-1
Client Project/Site: Ford LTP - On Site

For:
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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: 240-166502-1

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.
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: 240-166502-1

Job ID: 240-166502-1

Laboratory: Eurofins Canton

Narrative

**Job Narrative
240-166502-1**

Comments

No additional comments.

Receipt

The samples were received on 5/12/2022 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 4.0° C and 4.0° 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.

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Method Summary

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

Job ID: 240-166502-1

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



Sample Summary

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

Job ID: 240-166502-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-166502-1	TRIP BLANK_69	Water	05/10/22 00:00	05/12/22 08:00
240-166502-2	MW-07_051022	Water	05/10/22 10:35	05/12/22 08:00
240-166502-3	MW-222S_051022	Water	05/10/22 12:19	05/12/22 08:00
240-166502-4	MW-01_051022	Water	05/10/22 13:52	05/12/22 08:00
240-166502-5	MW-24_051022	Water	05/10/22 15:22	05/12/22 08:00
240-166502-6	MW-25_051022	Water	05/10/22 16:38	05/12/22 08:00

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- 2
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- 10
- 11
- 12
- 13
- 14

Detection Summary

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

Job ID: 240-166502-1

Client Sample ID: TRIP BLANK_69

Lab Sample ID: 240-166502-1

No Detections.

Client Sample ID: MW-07_051022

Lab Sample ID: 240-166502-2

No Detections.

Client Sample ID: MW-222S_051022

Lab Sample ID: 240-166502-3

No Detections.

Client Sample ID: MW-01_051022

Lab Sample ID: 240-166502-4

No Detections.

Client Sample ID: MW-24_051022

Lab Sample ID: 240-166502-5

No Detections.

Client Sample ID: MW-25_051022

Lab Sample ID: 240-166502-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.9	J	2.0	0.86	ug/L	1		8260D SIM	Total/NA

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: 240-166502-1

Client Sample ID: TRIP BLANK_69

Lab Sample ID: 240-166502-1

Date Collected: 05/10/22 00:00

Matrix: Water

Date Received: 05/12/22 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			05/20/22 12:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/22 12:46	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 12:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/22 12:46	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 12:46	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/22 12:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		62 - 137		05/20/22 12:46	1
4-Bromofluorobenzene (Surr)	87		56 - 136		05/20/22 12:46	1
Toluene-d8 (Surr)	98		78 - 122		05/20/22 12:46	1
Dibromofluoromethane (Surr)	105		73 - 120		05/20/22 12:46	1

Client Sample Results

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

Job ID: 240-166502-1

Client Sample ID: MW-07_051022

Lab Sample ID: 240-166502-2

Date Collected: 05/10/22 10:35

Matrix: Water

Date Received: 05/12/22 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			05/17/22 00:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		66 - 120		05/17/22 00:56	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 14:01	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/22 14:01	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 14:01	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/22 14:01	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 14:01	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/22 14:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		62 - 137		05/20/22 14:01	1
4-Bromofluorobenzene (Surr)	85		56 - 136		05/20/22 14:01	1
Toluene-d8 (Surr)	97		78 - 122		05/20/22 14:01	1
Dibromofluoromethane (Surr)	103		73 - 120		05/20/22 14:01	1

Client Sample Results

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

Job ID: 240-166502-1

Client Sample ID: MW-222S_051022

Lab Sample ID: 240-166502-3

Date Collected: 05/10/22 12:19

Matrix: Water

Date Received: 05/12/22 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			05/17/22 01:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		66 - 120		05/17/22 01:20	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 14:26	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/22 14:26	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 14:26	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/22 14:26	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 14:26	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/22 14:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137		05/20/22 14:26	1
4-Bromofluorobenzene (Surr)	86		56 - 136		05/20/22 14:26	1
Toluene-d8 (Surr)	97		78 - 122		05/20/22 14:26	1
Dibromofluoromethane (Surr)	102		73 - 120		05/20/22 14:26	1

Client Sample Results

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

Job ID: 240-166502-1

Client Sample ID: MW-01_051022

Lab Sample ID: 240-166502-4

Date Collected: 05/10/22 13:52

Matrix: Water

Date Received: 05/12/22 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			05/17/22 01:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		66 - 120		05/17/22 01:43	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 14:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/22 14:51	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 14:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/22 14:51	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 14:51	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/22 14:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		62 - 137		05/20/22 14:51	1
4-Bromofluorobenzene (Surr)	86		56 - 136		05/20/22 14:51	1
Toluene-d8 (Surr)	99		78 - 122		05/20/22 14:51	1
Dibromofluoromethane (Surr)	107		73 - 120		05/20/22 14:51	1

Client Sample Results

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

Job ID: 240-166502-1

Client Sample ID: MW-24_051022

Lab Sample ID: 240-166502-5

Date Collected: 05/10/22 15:22

Matrix: Water

Date Received: 05/12/22 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			05/17/22 02:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		66 - 120		05/17/22 02:07	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 15:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/22 15:17	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 15:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/22 15:17	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 15:17	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/22 15:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		62 - 137		05/20/22 15:17	1
4-Bromofluorobenzene (Surr)	83		56 - 136		05/20/22 15:17	1
Toluene-d8 (Surr)	97		78 - 122		05/20/22 15:17	1
Dibromofluoromethane (Surr)	107		73 - 120		05/20/22 15:17	1

Client Sample Results

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

Job ID: 240-166502-1

Client Sample ID: MW-25_051022

Lab Sample ID: 240-166502-6

Date Collected: 05/10/22 16:38

Matrix: Water

Date Received: 05/12/22 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.9	J	2.0	0.86	ug/L			05/17/22 03:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		66 - 120					05/17/22 03:19	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			05/20/22 15:42	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/22 15:42	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 15:42	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/22 15:42	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 15:42	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/22 15:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137					05/20/22 15:42	1
4-Bromofluorobenzene (Surr)	85		56 - 136					05/20/22 15:42	1
Toluene-d8 (Surr)	98		78 - 122					05/20/22 15:42	1
Dibromofluoromethane (Surr)	104		73 - 120					05/20/22 15:42	1

Surrogate Summary

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

Job ID: 240-166502-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (62-137)	BFB (56-136)	TOL (78-122)	DBFM (73-120)
240-166502-1	TRIP BLANK_69	102	87	98	105
240-166502-2	MW-07_051022	100	85	97	103
240-166502-3	MW-222S_051022	101	86	97	102
240-166502-4	MW-01_051022	103	86	99	107
240-166502-5	MW-24_051022	104	83	97	107
240-166502-5 MS	MW-24-MS_051022	99	94	98	106
240-166502-5 MSD	MW-24-MSD_051022	99	96	98	106
240-166502-6	MW-25_051022	101	85	98	104
LCS 240-527337/4	Lab Control Sample	98	98	98	106
MB 240-527337/6	Method Blank	102	87	98	104

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DCA (66-120)
240-166501-I-5 MS	Matrix Spike	83
240-166501-O-5 MSD	Matrix Spike Duplicate	82
240-166502-2	MW-07_051022	86
240-166502-3	MW-222S_051022	83
240-166502-4	MW-01_051022	85
240-166502-5	MW-24_051022	84
240-166502-5 MS	MW-24-MS_051022	86
240-166502-5 MSD	MW-24-MSD_051022	89
240-166502-6	MW-25_051022	86
LCS 240-526644/3	Lab Control Sample	84
MB 240-526644/4	Method Blank	83

Surrogate Legend

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

QC Sample Results

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

Job ID: 240-166502-1

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

Lab Sample ID: MB 240-527337/6
Matrix: Water
Analysis Batch: 527337

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			05/20/22 11:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/22 11:56	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 11:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/22 11:56	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/22 11:56	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/22 11:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		62 - 137		05/20/22 11:56	1
4-Bromofluorobenzene (Surr)	87		56 - 136		05/20/22 11:56	1
Toluene-d8 (Surr)	98		78 - 122		05/20/22 11:56	1
Dibromofluoromethane (Surr)	104		73 - 120		05/20/22 11:56	1

Lab Sample ID: LCS 240-527337/4
Matrix: Water
Analysis Batch: 527337

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	27.9		ug/L		111	63 - 134
cis-1,2-Dichloroethene	25.0	26.7		ug/L		107	77 - 123
Tetrachloroethene	25.0	26.0		ug/L		104	76 - 123
trans-1,2-Dichloroethene	25.0	27.0		ug/L		108	75 - 124
Trichloroethene	25.0	26.7		ug/L		107	70 - 122
Vinyl chloride	12.5	11.4		ug/L		91	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		62 - 137
4-Bromofluorobenzene (Surr)	98		56 - 136
Toluene-d8 (Surr)	98		78 - 122
Dibromofluoromethane (Surr)	106		73 - 120

Lab Sample ID: 240-166502-5 MS
Matrix: Water
Analysis Batch: 527337

Client Sample ID: MW-24-MS_051022
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	26.6		ug/L		106	56 - 135
cis-1,2-Dichloroethene	1.0	U	25.0	26.3		ug/L		105	66 - 128
Tetrachloroethene	1.0	U	25.0	25.1		ug/L		100	62 - 131
trans-1,2-Dichloroethene	1.0	U	25.0	27.2		ug/L		109	56 - 136
Trichloroethene	1.0	U	25.0	25.7		ug/L		103	61 - 124
Vinyl chloride	1.0	U	25.0	21.6		ug/L		86	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		62 - 137
4-Bromofluorobenzene (Surr)	94		56 - 136
Toluene-d8 (Surr)	98		78 - 122

QC Sample Results

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

Job ID: 240-166502-1

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

Lab Sample ID: 240-166502-5 MS
Matrix: Water
Analysis Batch: 527337

Client Sample ID: MW-24-MS_051022
Prep Type: Total/NA

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	106		73 - 120

Lab Sample ID: 240-166502-5 MSD
Matrix: Water
Analysis Batch: 527337

Client Sample ID: MW-24-MSD_051022
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits	RPD		
1,1-Dichloroethene	1.0	U	25.0	29.7		ug/L		119	56 - 135	11		26
cis-1,2-Dichloroethene	1.0	U	25.0	26.3		ug/L		105	66 - 128	0		14
Tetrachloroethene	1.0	U	25.0	24.7		ug/L		99	62 - 131	1		20
trans-1,2-Dichloroethene	1.0	U	25.0	26.9		ug/L		107	56 - 136	1		15
Trichloroethene	1.0	U	25.0	25.6		ug/L		102	61 - 124	0		15
Vinyl chloride	1.0	U	25.0	21.5		ug/L		86	43 - 157	1		24

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	99		62 - 137
4-Bromofluorobenzene (Surr)	96		56 - 136
Toluene-d8 (Surr)	98		78 - 122
Dibromofluoromethane (Surr)	106		73 - 120

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

Lab Sample ID: MB 240-526644/4
Matrix: Water
Analysis Batch: 526644

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/16/22 20:34	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	83		66 - 120		05/16/22 20:34	1

Lab Sample ID: LCS 240-526644/3
Matrix: Water
Analysis Batch: 526644

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

Analyte	Spike	LCS		Unit	D	%Rec	%Rec
		Result	Qualifier				
1,4-Dioxane	10.0	10.6		ug/L		106	80 - 122

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	84		66 - 120

Lab Sample ID: 240-166501-I-5 MS
Matrix: Water
Analysis Batch: 526644

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

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				
1,4-Dioxane	2.0	U	10.0	11.3		ug/L		113	51 - 153

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QC Sample Results

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

Job ID: 240-166502-1

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

<i>Surrogate</i>	<i>MS</i> <i>%Recovery</i>	<i>MS</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	83		66 - 120

Lab Sample ID: 240-166501-O-5 MSD
Matrix: Water
Analysis Batch: 526644

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

<i>Analyte</i>	<i>Sample</i> <i>Result</i>	<i>Sample</i> <i>Qualifier</i>	<i>Spike</i> <i>Added</i>	<i>MSD</i> <i>Result</i>	<i>MSD</i> <i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i> <i>Limits</i>	<i>RPD</i>	<i>RPD</i> <i>Limit</i>
1,4-Dioxane	2.0	U	10.0	10.5		ug/L		105	51 - 153	7	16

<i>Surrogate</i>	<i>MSD</i> <i>%Recovery</i>	<i>MSD</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	82		66 - 120

Lab Sample ID: 240-166502-5 MS
Matrix: Water
Analysis Batch: 526644

Client Sample ID: MW-24-MS_051022
Prep Type: Total/NA

<i>Analyte</i>	<i>Sample</i> <i>Result</i>	<i>Sample</i> <i>Qualifier</i>	<i>Spike</i> <i>Added</i>	<i>MS</i> <i>Result</i>	<i>MS</i> <i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i> <i>Limits</i>
1,4-Dioxane	2.0	U	10.0	10.8		ug/L		108	51 - 153

<i>Surrogate</i>	<i>MS</i> <i>%Recovery</i>	<i>MS</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	86		66 - 120

Lab Sample ID: 240-166502-5 MSD
Matrix: Water
Analysis Batch: 526644

Client Sample ID: MW-24-MSD_051022
Prep Type: Total/NA

<i>Analyte</i>	<i>Sample</i> <i>Result</i>	<i>Sample</i> <i>Qualifier</i>	<i>Spike</i> <i>Added</i>	<i>MSD</i> <i>Result</i>	<i>MSD</i> <i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i> <i>Limits</i>	<i>RPD</i>	<i>RPD</i> <i>Limit</i>
1,4-Dioxane	2.0	U	10.0	10.6		ug/L		106	51 - 153	2	16

<i>Surrogate</i>	<i>MSD</i> <i>%Recovery</i>	<i>MSD</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	89		66 - 120

QC Association Summary

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

Job ID: 240-166502-1

GC/MS VOA

Analysis Batch: 526644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166502-2	MW-07_051022	Total/NA	Water	8260D SIM	
240-166502-3	MW-222S_051022	Total/NA	Water	8260D SIM	
240-166502-4	MW-01_051022	Total/NA	Water	8260D SIM	
240-166502-5	MW-24_051022	Total/NA	Water	8260D SIM	
240-166502-6	MW-25_051022	Total/NA	Water	8260D SIM	
MB 240-526644/4	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-526644/3	Lab Control Sample	Total/NA	Water	8260D SIM	
240-166501-I-5 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-166501-O-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	
240-166502-5 MS	MW-24-MS_051022	Total/NA	Water	8260D SIM	
240-166502-5 MSD	MW-24-MSD_051022	Total/NA	Water	8260D SIM	

Analysis Batch: 527337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166502-1	TRIP BLANK_69	Total/NA	Water	8260D	
240-166502-2	MW-07_051022	Total/NA	Water	8260D	
240-166502-3	MW-222S_051022	Total/NA	Water	8260D	
240-166502-4	MW-01_051022	Total/NA	Water	8260D	
240-166502-5	MW-24_051022	Total/NA	Water	8260D	
240-166502-6	MW-25_051022	Total/NA	Water	8260D	
MB 240-527337/6	Method Blank	Total/NA	Water	8260D	
LCS 240-527337/4	Lab Control Sample	Total/NA	Water	8260D	
240-166502-5 MS	MW-24-MS_051022	Total/NA	Water	8260D	
240-166502-5 MSD	MW-24-MSD_051022	Total/NA	Water	8260D	

Lab Chronicle

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

Job ID: 240-166502-1

Client Sample ID: TRIP BLANK_69
Date Collected: 05/10/22 00:00
Date Received: 05/12/22 08:00

Lab Sample ID: 240-166502-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527337	05/20/22 12:46	SAM	TAL CAN

Client Sample ID: MW-07_051022
Date Collected: 05/10/22 10:35
Date Received: 05/12/22 08:00

Lab Sample ID: 240-166502-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527337	05/20/22 14:01	SAM	TAL CAN
Total/NA	Analysis	8260D SIM		1	526644	05/17/22 00:56	CS	TAL CAN

Client Sample ID: MW-222S_051022
Date Collected: 05/10/22 12:19
Date Received: 05/12/22 08:00

Lab Sample ID: 240-166502-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527337	05/20/22 14:26	SAM	TAL CAN
Total/NA	Analysis	8260D SIM		1	526644	05/17/22 01:20	CS	TAL CAN

Client Sample ID: MW-01_051022
Date Collected: 05/10/22 13:52
Date Received: 05/12/22 08:00

Lab Sample ID: 240-166502-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527337	05/20/22 14:51	SAM	TAL CAN
Total/NA	Analysis	8260D SIM		1	526644	05/17/22 01:43	CS	TAL CAN

Client Sample ID: MW-24_051022
Date Collected: 05/10/22 15:22
Date Received: 05/12/22 08:00

Lab Sample ID: 240-166502-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527337	05/20/22 15:17	SAM	TAL CAN
Total/NA	Analysis	8260D SIM		1	526644	05/17/22 02:07	CS	TAL CAN

Client Sample ID: MW-25_051022
Date Collected: 05/10/22 16:38
Date Received: 05/12/22 08:00

Lab Sample ID: 240-166502-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527337	05/20/22 15:42	SAM	TAL CAN
Total/NA	Analysis	8260D SIM		1	526644	05/17/22 03:19	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: 240-166502-1

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

THE LEADER IN ENVIRONMENTAL TESTING

Regulatory program: DW NPDES RCRA Other

Client Project Manager: Kris Hinskey Telephone: 269-832-7478
 Site Contact: Christina Weaver Telephone: 248-994-2329
 Email: Kristoffer.Hinskey@arcadis.com
 Telephone: 330-966-9783

Lab Contact: Mike DelMonico
 Telephone: 330-966-9783

Company Name: Arcadis
 Address: 28550 Cabot Drive, Suite 500
 City/State/Zip: Novi, MI, 48377

Phone: 248-994-2240
 Project Name: Ford ITP On-Site
 Project Number: 30080642.401.03
 PO # 30080642.401.03

Sampler Name: *Madison Olander*
 Method of Shipment/Carrier:
 Shipping/Tracking No:

Sample Identification	Sample Date	Sample Time	Matrix				Containers & Preservatives				Filtered Sample (Y/N)	Composite=C/Grab=G	1-DCE 8260D	cis-1,2-DCE 8260D	Trans-1,2-DCE 8260D	PCE 8260D	TCE 8260D	Vinyl Chloride 8260D	1,4-Dioxane 8260D SIM	Sample Specific Notes / Special Instructions:
			Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl										
TRIP BLANK_69	5/10/22	—	X																	1 Trip Blank
MW-07_051022		1035																		3 VOAs for 8260D 3 VOAs for 8260D SIM
MW-2225_051022		1219																		
MW-01_051022		1352																		
MW-24_051022		1522																		
MW-24-MS_051022																				RUN MS/MSD
MW-25 MW-25_051022		1638																		

Possible Hazard Identification
 Non-Hazard Irritable Irritant Poison B Unknown

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

Received by: *Abraham* Date/Time: 5/10/22 1830 Company: Arcadis
 Relinquished by: *[Signature]* Date/Time: 5/11/22 0930 Company: ARCADIS
 Relinquished by: *[Signature]* Date/Time: 5/11/22 1041 Company: CEF

Received in Laboratory by: *[Signature]*

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

Barcode: 240-166502 Chain of Custody



Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # : 166502
Canton Facility

Client Arcadis Site Name Ford - LTP Cooler unpacked by: [Signature]
Cooler Received on 5-12-22 Opened on 5-12-22
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

- Cooler temperature upon receipt See Multiple Cooler Form
IR GUN# IR-13 (CF 0.0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #IR-15 (CF -0.7°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
- Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 ea 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
- Shippers' packing slip attached to the cooler(s)? Yes No
- Did custody papers accompany the sample(s)? Yes No
- Were the custody papers relinquished & signed in the appropriate place? Yes No
- Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
- Did all bottles arrive in good condition (Unbroken)? Yes No
- Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No
- For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
- Were correct bottle(s) used for the test(s) indicated? Yes No
- Sufficient quantity received to perform indicated analyses? Yes No
- 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.
- Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC157842
- Were VOAs on the COC? Yes No
- Were air bubbles >6 mm in any VOA vials? ← Larger than this. Yes No NA
- Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered Yes No
- 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: _____

