

ANALYTICAL REPORT

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

Laboratory Job ID: 240-144807-1
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:
3/10/2021 9:01:34 AM

Michael DelMonico, Project Manager I
(330)497-9396
Michael.DelMonico@Eurofinset.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Method Summary	5
Sample Summary	6
Detection Summary	7
Client Sample Results	8
Surrogate Summary	12
QC Sample Results	13
QC Association Summary	16
Lab Chronicle	17
Certification Summary	18
Chain of Custody	19

Definitions/Glossary

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

Job ID: 240-144807-1

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 - Off Site

Job ID: 240-144807-1

Job ID: 240-144807-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

Job Narrative
240-144807-1

Comments

No additional comments.

Receipt

The samples were received on 2/24/2021 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.

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

Method Summary

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

Job ID: 240-144807-1

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

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

Sample Summary

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

Job ID: 240-144807-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-144807-1	TRIP BLANK	Water	02/22/21 00:00	02/24/21 08:00	
240-144807-2	MW-133S_022221	Water	02/22/21 10:35	02/24/21 08:00	
240-144807-3	MW-83_022221	Water	02/22/21 13:37	02/24/21 08:00	
240-144807-4	MW-83S_022221	Water	02/22/21 14:45	02/24/21 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 - Off Site

Job ID: 240-144807-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-144807-1

No Detections.

Client Sample ID: MW-133S_022221

Lab Sample ID: 240-144807-2

No Detections.

Client Sample ID: MW-83_022221

Lab Sample ID: 240-144807-3

No Detections.

Client Sample ID: MW-83S_022221

Lab Sample ID: 240-144807-4

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 TestAmerica, Canton

Client Sample Results

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

Job ID: 240-144807-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-144807-1

Date Collected: 02/22/21 00:00

Matrix: Water

Date Received: 02/24/21 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			03/01/21 23:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/01/21 23:48	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/01/21 23:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/01/21 23:48	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/01/21 23:48	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/01/21 23:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		75 - 130		03/01/21 23:48	1
4-Bromofluorobenzene (Surr)	61		47 - 134		03/01/21 23:48	1
Toluene-d8 (Surr)	86		69 - 122		03/01/21 23:48	1
Dibromofluoromethane (Surr)	112		78 - 129		03/01/21 23:48	1

Client Sample Results

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

Job ID: 240-144807-1

Client Sample ID: MW-133S_022221

Lab Sample ID: 240-144807-2

Date Collected: 02/22/21 10:35

Matrix: Water

Date Received: 02/24/21 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			03/01/21 14:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		70 - 133		03/01/21 14:18	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			03/01/21 18:14	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/01/21 18:14	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/01/21 18:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/01/21 18:14	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/01/21 18:14	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/01/21 18:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		75 - 130		03/01/21 18:14	1
4-Bromofluorobenzene (Surr)	65		47 - 134		03/01/21 18:14	1
Toluene-d8 (Surr)	79		69 - 122		03/01/21 18:14	1
Dibromofluoromethane (Surr)	112		78 - 129		03/01/21 18:14	1

Client Sample Results

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

Job ID: 240-144807-1

Client Sample ID: MW-83_022221

Lab Sample ID: 240-144807-3

Date Collected: 02/22/21 13:37

Matrix: Water

Date Received: 02/24/21 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			03/01/21 14:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		70 - 133		03/01/21 14:43	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			03/01/21 18:38	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/01/21 18:38	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/01/21 18:38	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/01/21 18:38	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/01/21 18:38	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/01/21 18:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		75 - 130		03/01/21 18:38	1
4-Bromofluorobenzene (Surr)	65		47 - 134		03/01/21 18:38	1
Toluene-d8 (Surr)	77		69 - 122		03/01/21 18:38	1
Dibromofluoromethane (Surr)	109		78 - 129		03/01/21 18:38	1

Client Sample Results

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

Job ID: 240-144807-1

Client Sample ID: MW-83S_022221

Lab Sample ID: 240-144807-4

Date Collected: 02/22/21 14:45

Matrix: Water

Date Received: 02/24/21 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			03/01/21 15:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		70 - 133		03/01/21 15:08	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			03/01/21 19:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/01/21 19:02	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/01/21 19:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/01/21 19:02	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/01/21 19:02	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/01/21 19:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		75 - 130		03/01/21 19:02	1
4-Bromofluorobenzene (Surr)	64		47 - 134		03/01/21 19:02	1
Toluene-d8 (Surr)	78		69 - 122		03/01/21 19:02	1
Dibromofluoromethane (Surr)	112		78 - 129		03/01/21 19:02	1

Surrogate Summary

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

Job ID: 240-144807-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (75-130)	BFB (47-134)	TOL (69-122)	DBFM (78-129)
240-144807-1	TRIP BLANK	116	61	86	112
240-144807-2	MW-133S_022221	114	65	79	112
240-144807-3	MW-83_022221	111	65	77	109
240-144807-4	MW-83S_022221	114	64	78	112
240-144807-4 MS	MW-83S-MS_022221	92	91	89	96
240-144807-4 MSD	MW-83S-MSD_022221	86	91	88	90
LCS 240-474892/4	Lab Control Sample	88	89	89	89
MB 240-474892/7	Method Blank	104	70	82	110

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)
240-144807-2	MW-133S_022221	89
240-144807-3	MW-83_022221	94
240-144807-4	MW-83S_022221	85
240-144807-4 MS	MW-83S-MS_022221	90
240-144807-4 MSD	MW-83S-MSD_022221	88
LCS 240-474842/4	Lab Control Sample	90
MB 240-474842/5	Method Blank	86

Surrogate Legend

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

QC Sample Results

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

Job ID: 240-144807-1

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

Lab Sample ID: MB 240-474892/7
Matrix: Water
Analysis Batch: 474892

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			03/01/21 15:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/01/21 15:51	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/01/21 15:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/01/21 15:51	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/01/21 15:51	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/01/21 15:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		75 - 130		03/01/21 15:51	1
4-Bromofluorobenzene (Surr)	70		47 - 134		03/01/21 15:51	1
Toluene-d8 (Surr)	82		69 - 122		03/01/21 15:51	1
Dibromofluoromethane (Surr)	110		78 - 129		03/01/21 15:51	1

Lab Sample ID: LCS 240-474892/4
Matrix: Water
Analysis Batch: 474892

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	9.84		ug/L		98	73 - 129
cis-1,2-Dichloroethene	10.0	9.22		ug/L		92	75 - 124
Tetrachloroethene	10.0	10.9		ug/L		109	70 - 125
trans-1,2-Dichloroethene	10.0	9.78		ug/L		98	74 - 130
Trichloroethene	10.0	9.30		ug/L		93	71 - 121
Vinyl chloride	10.0	9.80		ug/L		98	61 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		75 - 130
4-Bromofluorobenzene (Surr)	89		47 - 134
Toluene-d8 (Surr)	89		69 - 122
Dibromofluoromethane (Surr)	89		78 - 129

Lab Sample ID: 240-144807-4 MS
Matrix: Water
Analysis Batch: 474892

Client Sample ID: MW-83S-MS_022221
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	1.0	U	10.0	9.25		ug/L		93	64 - 132
cis-1,2-Dichloroethene	1.0	U	10.0	9.38		ug/L		94	68 - 121
Tetrachloroethene	1.0	U	10.0	11.7		ug/L		117	52 - 129
trans-1,2-Dichloroethene	1.0	U	10.0	9.98		ug/L		100	69 - 126
Trichloroethene	1.0	U	10.0	9.60		ug/L		96	56 - 124
Vinyl chloride	1.0	U	10.0	10.4		ug/L		104	49 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		75 - 130
4-Bromofluorobenzene (Surr)	91		47 - 134
Toluene-d8 (Surr)	89		69 - 122

QC Sample Results

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

Job ID: 240-144807-1

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

Lab Sample ID: 240-144807-4 MS
Matrix: Water
Analysis Batch: 474892

Client Sample ID: MW-83S-MS_022221
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	96		78 - 129

Lab Sample ID: 240-144807-4 MSD
Matrix: Water
Analysis Batch: 474892

Client Sample ID: MW-83S-MSD_022221
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	1.0	U	10.0	9.00		ug/L		90	64 - 132	3	35
cis-1,2-Dichloroethene	1.0	U	10.0	8.99		ug/L		90	68 - 121	4	35
Tetrachloroethene	1.0	U	10.0	11.0		ug/L		110	52 - 129	6	35
trans-1,2-Dichloroethene	1.0	U	10.0	9.43		ug/L		94	69 - 126	6	35
Trichloroethene	1.0	U	10.0	9.01		ug/L		90	56 - 124	6	35
Vinyl chloride	1.0	U	10.0	10.1		ug/L		101	49 - 136	3	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	86		75 - 130
4-Bromofluorobenzene (Surr)	91		47 - 134
Toluene-d8 (Surr)	88		69 - 122
Dibromofluoromethane (Surr)	90		78 - 129

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

Lab Sample ID: MB 240-474842/5
Matrix: Water
Analysis Batch: 474842

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			03/01/21 12:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		70 - 133		03/01/21 12:12	1

Lab Sample ID: LCS 240-474842/4
Matrix: Water
Analysis Batch: 474842

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	9.05		ug/L		91	80 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90		70 - 133

Lab Sample ID: 240-144807-4 MS
Matrix: Water
Analysis Batch: 474842

Client Sample ID: MW-83S-MS_022221
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	8.95		ug/L		90	46 - 170

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-144807-1

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	90		70 - 133

Lab Sample ID: 240-144807-4 MSD
 Matrix: Water
 Analysis Batch: 474842

Client Sample ID: MW-83S-MSD_022221
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	2.0	U	10.0	9.28		ug/L		93	46 - 170	4	26

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	88		70 - 133

QC Association Summary

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

Job ID: 240-144807-1

GC/MS VOA

Analysis Batch: 474842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-144807-2	MW-133S_022221	Total/NA	Water	8260B SIM	
240-144807-3	MW-83_022221	Total/NA	Water	8260B SIM	
240-144807-4	MW-83S_022221	Total/NA	Water	8260B SIM	
MB 240-474842/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-474842/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-144807-4 MS	MW-83S-MS_022221	Total/NA	Water	8260B SIM	
240-144807-4 MSD	MW-83S-MSD_022221	Total/NA	Water	8260B SIM	

Analysis Batch: 474892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-144807-1	TRIP BLANK	Total/NA	Water	8260B	
240-144807-2	MW-133S_022221	Total/NA	Water	8260B	
240-144807-3	MW-83_022221	Total/NA	Water	8260B	
240-144807-4	MW-83S_022221	Total/NA	Water	8260B	
MB 240-474892/7	Method Blank	Total/NA	Water	8260B	
LCS 240-474892/4	Lab Control Sample	Total/NA	Water	8260B	
240-144807-4 MS	MW-83S-MS_022221	Total/NA	Water	8260B	
240-144807-4 MSD	MW-83S-MSD_022221	Total/NA	Water	8260B	

Lab Chronicle

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

Job ID: 240-144807-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-144807-1

Date Collected: 02/22/21 00:00

Matrix: Water

Date Received: 02/24/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	474892	03/01/21 23:48	LRW	TAL CAN

Client Sample ID: MW-133S_022221

Lab Sample ID: 240-144807-2

Date Collected: 02/22/21 10:35

Matrix: Water

Date Received: 02/24/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	474892	03/01/21 18:14	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	474842	03/01/21 14:18	SAM	TAL CAN

Client Sample ID: MW-83_022221

Lab Sample ID: 240-144807-3

Date Collected: 02/22/21 13:37

Matrix: Water

Date Received: 02/24/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	474892	03/01/21 18:38	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	474842	03/01/21 14:43	SAM	TAL CAN

Client Sample ID: MW-83S_022221

Lab Sample ID: 240-144807-4

Date Collected: 02/22/21 14:45

Matrix: Water

Date Received: 02/24/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	474892	03/01/21 19:02	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	474842	03/01/21 15:08	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: 240-144807-1

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21 *
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21 *
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21 *
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

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

Chain of Custody Record

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

Regulatory program: DW NPDES RCRA Other

Client Contact Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240		Client Project Manager: Kris Hinskey Telephone: 248-994-2240 Email: kristoffer.hinskey@arcadis.com		Lab Contact: Mike DelMontico Telephone: 330-497-9396		TestAmerica Laboratories, Inc. COC No:	
Sampler Name: Allison Hartz		Analysis Turnaround Time TAT if different from below: 3 weeks 2 weeks 1 week 2 days 1 day 10 day		Analyses Walk-in client Lab sampling Job/SDG No:		/ of / COCs For lab use only	
Method of Shipment/Carrier: Shipping/Tracking No:		Containers & Preservatives HCl HNO3 H2SO4 NaOH ZnAc NaOH Uppers Other:		1,1-DCE 82608 cis-1,2-DCE 82608 Trans-1,2-DCE 82608 PCE 82608 TCE 82608 Vinyl Chloride 82608 1,4-Dioxane 82608 SIM		Sample Specific Notes / Special Instructions:	
Sample Identification TRIP BLANK MW-1335-022221 MW-83-022221 MW-835-022221 MW-835-MS-022221 MW-835-MSD-022221		Matrix Air Aqueous Sediment Solid Other:		Filtered Sample (Y/N) Composite=C / Grab=C		1 + trip blank 3 VOCs for 82608 3 VOCs for 82608 SIM RUN MS/MSD RUN MS/MSD	
Sample Date Sample Time		H2SO4 HNO3 HCl NaOH ZnAc NaOH Uppers Other:		240-144807 Chain of Custody		Date/Time: 2/22/21 17:00 Date/Time: 2/23/21 10:04 Date/Time: 2/24/21 8:00	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <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 month) <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal By Lab Archive For: _____ Months		Company: Arcadis Company: Arcadis Company: ETA		Received by: Nov Cold Storage Received by: Amanda Patterson Received in Laboratory by:	
Relinquished by: A. Hartz Relinquished by: Kris Hinskey Relinquished by: Amanda Patterson		Date/Time: 2/22/21 17:00 Date/Time: 2/23/2021 Date/Time: 2/23/21 10:04		Company: Arcadis Company: Arcadis Company: ETA		Date/Time: 2/22/21 17:00 Date/Time: 2/23/21 10:04 Date/Time: 2/24/21 8:00	

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

Relinquished by: A. Hartz
Relinquished by: Kris Hinskey
Relinquished by: Amanda Patterson



240-144807 Chain of Custody

Relinquished by: Amanda Patterson

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 144807

Client Arcadis Site Name _____

Cooler unpacked by: _____

Cooler Received on 2-24-21 Opened on 2-24-21

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

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

TestAmerica Cooler # 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-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 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

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

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)?
 10. Were correct bottle(s) used for the test(s) indicated? Yes No
 11. Sufficient quantity received to perform indicated analyses? Yes No
 12. Are these work share samples and all listed on the COC? Yes No

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

13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC907861
 14. Were VOAs on the COC? Yes No
 15. Were air bubbles >6 mm in any VOA vials?  ← Larger than this. Yes No NA
 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
 17. Was a LL Hg or Me Hg trip blank present? _____ Yes No

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

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES additional next page

Samples processed by: _____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____