

ANALYTICAL REPORT

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

Laboratory Job ID: 240-112931-1

Client Project/Site: Ford LTP Livonia MI - E203631

For:

ARCADIS U.S., Inc.
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Attn: Kristoffer Hinskey



Authorized for release by:
5/31/2019 3:42:49 PM

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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	11
QC Sample Results	12
QC Association Summary	15
Lab Chronicle	16
Certification Summary	17
Chain of Custody	18

Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

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.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

Job ID: 240-112931-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203631

Report Number: 240-112931-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Eurofins TestAmerica, Canton attests to the validity of the laboratory data generated by Eurofins TestAmerica facilities reported herein. All analyses performed by Eurofins TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Eurofins TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client.

RECEIPT

The samples were received on 5/18/2019 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.6° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-108S_051419 (240-112931-1), MW-132S_051419 (240-112931-2) and TRIP BLANK (240-112931-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/25/2019.

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

VOLATILE ORGANIC COMPOUNDS (GCMS SIM)

Samples MW-108S_051419 (240-112931-1) and MW-132S_051419 (240-112931-2) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 05/23/2019.

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

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

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 Livonia MI - E203631

Job ID: 240-112931-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-112931-1	MW-108S_051419	Water	05/14/19 16:27	05/18/19 10:15	
240-112931-2	MW-132S_051419	Water	05/14/19 13:22	05/18/19 10:15	
240-112931-3	TRIP BLANK	Water	05/14/19 00:00	05/18/19 10:15	

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- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

Client Sample ID: MW-108S_051419

Lab Sample ID: 240-112931-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.93	J	2.0	0.86	ug/L	1		8260B SIM	Total/NA

Client Sample ID: MW-132S_051419

Lab Sample ID: 240-112931-2

No Detections.

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-112931-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton



Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

Client Sample ID: MW-108S_051419

Lab Sample ID: 240-112931-1

Date Collected: 05/14/19 16:27

Matrix: Water

Date Received: 05/18/19 10:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.93	J	2.0	0.86	ug/L	-		05/23/19 14:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		63 - 125		05/23/19 14:21	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	-		05/25/19 22:49	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L	-		05/25/19 22:49	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L	-		05/25/19 22:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L	-		05/25/19 22:49	1
Trichloroethene	1.0	U	1.0	0.10	ug/L	-		05/25/19 22:49	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L	-		05/25/19 22:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		70 - 121		05/25/19 22:49	1
4-Bromofluorobenzene (Surr)	104		59 - 120		05/25/19 22:49	1
Toluene-d8 (Surr)	106		70 - 123		05/25/19 22:49	1
Dibromofluoromethane (Surr)	101		75 - 128		05/25/19 22:49	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

Client Sample ID: MW-132S_051419

Lab Sample ID: 240-112931-2

Date Collected: 05/14/19 13:22

Matrix: Water

Date Received: 05/18/19 10:15

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			05/23/19 14:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		63 - 125		05/23/19 14:47	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			05/25/19 23:14	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/25/19 23:14	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/25/19 23:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/25/19 23:14	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/25/19 23:14	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/25/19 23:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		70 - 121		05/25/19 23:14	1
4-Bromofluorobenzene (Surr)	101		59 - 120		05/25/19 23:14	1
Toluene-d8 (Surr)	105		70 - 123		05/25/19 23:14	1
Dibromofluoromethane (Surr)	101		75 - 128		05/25/19 23:14	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-112931-3

Date Collected: 05/14/19 00:00

Matrix: Water

Date Received: 05/18/19 10:15

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			05/25/19 23:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/25/19 23:39	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/25/19 23:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/25/19 23:39	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/25/19 23:39	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/25/19 23:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		70 - 121		05/25/19 23:39	1
4-Bromofluorobenzene (Surr)	102		59 - 120		05/25/19 23:39	1
Toluene-d8 (Surr)	103		70 - 123		05/25/19 23:39	1
Dibromofluoromethane (Surr)	101		75 - 128		05/25/19 23:39	1

Surrogate Summary

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

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 (70-121)	BFB (59-120)	TOL (70-123)	DBFM (75-128)
240-112827-B-8 MS	Matrix Spike	105	103	104	94
240-112827-B-8 MSD	Matrix Spike Duplicate	105	103	105	96
240-112931-1	MW-108S_051419	113	104	106	101
240-112931-2	MW-132S_051419	113	101	105	101
240-112931-3	TRIP BLANK	114	102	103	101
LCS 240-383144/5	Lab Control Sample	105	104	104	95
MB 240-383144/8	Method Blank	110	103	105	100

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
		(63-125)
240-112871-A-2 MS	Matrix Spike	88
240-112871-A-2 MSD	Matrix Spike Duplicate	91
240-112931-1	MW-108S_051419	90
240-112931-2	MW-132S_051419	90
LCS 240-382738/4	Lab Control Sample	85
MB 240-382738/5	Method Blank	91

Surrogate Legend

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

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

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

Lab Sample ID: MB 240-383144/8
Matrix: Water
Analysis Batch: 383144

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			05/25/19 17:18	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/25/19 17:18	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/25/19 17:18	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/25/19 17:18	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/25/19 17:18	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/25/19 17:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		70 - 121		05/25/19 17:18	1
4-Bromofluorobenzene (Surr)	103		59 - 120		05/25/19 17:18	1
Toluene-d8 (Surr)	105		70 - 123		05/25/19 17:18	1
Dibromofluoromethane (Surr)	100		75 - 128		05/25/19 17:18	1

Lab Sample ID: LCS 240-383144/5
Matrix: Water
Analysis Batch: 383144

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	20.0	18.4		ug/L		92	65 - 139
cis-1,2-Dichloroethene	20.0	18.7		ug/L		93	76 - 128
Tetrachloroethene	20.0	19.3		ug/L		97	74 - 130
trans-1,2-Dichloroethene	20.0	19.6		ug/L		98	78 - 133
Trichloroethene	20.0	18.6		ug/L		93	76 - 125
Vinyl chloride	20.0	18.4		ug/L		92	58 - 143

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		70 - 121
4-Bromofluorobenzene (Surr)	104		59 - 120
Toluene-d8 (Surr)	104		70 - 123
Dibromofluoromethane (Surr)	95		75 - 128

Lab Sample ID: 240-112827-B-8 MS
Matrix: Water
Analysis Batch: 383144

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	25	U	500	390		ug/L		78	53 - 140
cis-1,2-Dichloroethene	25	U	500	395		ug/L		79	64 - 130
Tetrachloroethene	25	U	500	384		ug/L		77	51 - 136
trans-1,2-Dichloroethene	25	U	500	402		ug/L		80	68 - 133
Trichloroethene	25	U	500	372		ug/L		74	55 - 131
Vinyl chloride	580		500	1000		ug/L		84	43 - 154

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		70 - 121
4-Bromofluorobenzene (Surr)	103		59 - 120
Toluene-d8 (Surr)	104		70 - 123

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QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

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

Lab Sample ID: 240-112827-B-8 MS
Matrix: Water
Analysis Batch: 383144

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

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	94		75 - 128

Lab Sample ID: 240-112827-B-8 MSD
Matrix: Water
Analysis Batch: 383144

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	25	U	500	447		ug/L		89	53 - 140	13	35
cis-1,2-Dichloroethene	25	U	500	450		ug/L		90	64 - 130	13	21
Tetrachloroethene	25	U	500	429		ug/L		86	51 - 136	11	23
trans-1,2-Dichloroethene	25	U	500	460		ug/L		92	68 - 133	13	24
Trichloroethene	25	U	500	419		ug/L		84	55 - 131	12	23
Vinyl chloride	580		500	1050		ug/L		94	43 - 154	5	29

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		70 - 121
4-Bromofluorobenzene (Surr)	103		59 - 120
Toluene-d8 (Surr)	105		70 - 123
Dibromofluoromethane (Surr)	96		75 - 128

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

Lab Sample ID: MB 240-382738/5
Matrix: Water
Analysis Batch: 382738

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			05/23/19 11:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		63 - 125		05/23/19 11:00	1

Lab Sample ID: LCS 240-382738/4
Matrix: Water
Analysis Batch: 382738

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	12.2		ug/L		122	59 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	85		63 - 125

Lab Sample ID: 240-112871-A-2 MS
Matrix: Water
Analysis Batch: 382738

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	10.0	12.2		ug/L		122	52 - 129

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QC Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

Method: 8260B 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)	88		63 - 125

Lab Sample ID: 240-112871-A-2 MSD
Matrix: Water
Analysis Batch: 382738

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	12.0		ug/L		120	52 - 129	2	13

<i>Surrogate</i>	<i>MSD</i> <i>%Recovery</i>	<i>MSD</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	91		63 - 125

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

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

GC/MS VOA

Analysis Batch: 382738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-112931-1	MW-108S_051419	Total/NA	Water	8260B SIM	
240-112931-2	MW-132S_051419	Total/NA	Water	8260B SIM	
MB 240-382738/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-382738/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-112871-A-2 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-112871-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 383144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-112931-1	MW-108S_051419	Total/NA	Water	8260B	
240-112931-2	MW-132S_051419	Total/NA	Water	8260B	
240-112931-3	TRIP BLANK	Total/NA	Water	8260B	
MB 240-383144/8	Method Blank	Total/NA	Water	8260B	
LCS 240-383144/5	Lab Control Sample	Total/NA	Water	8260B	
240-112827-B-8 MS	Matrix Spike	Total/NA	Water	8260B	
240-112827-B-8 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203631

Job ID: 240-112931-1

Client Sample ID: MW-108S_051419

Lab Sample ID: 240-112931-1

Date Collected: 05/14/19 16:27

Matrix: Water

Date Received: 05/18/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	383144	05/25/19 22:49	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	382738	05/23/19 14:21	SAM	TAL CAN

Client Sample ID: MW-132S_051419

Lab Sample ID: 240-112931-2

Date Collected: 05/14/19 13:22

Matrix: Water

Date Received: 05/18/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	383144	05/25/19 23:14	HMB	TAL CAN
Total/NA	Analysis	8260B SIM		1	382738	05/23/19 14:47	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-112931-3

Date Collected: 05/14/19 00:00

Matrix: Water

Date Received: 05/18/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	383144	05/25/19 23:39	HMB	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 Livonia MI - E203631

Job ID: 240-112931-1

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-20
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-19 *
Illinois	NELAP	5	200004	07-31-19 *
Iowa	State Program	7	421	06-01-21
Kansas	NELAP	7	E-10336	04-30-20
Kentucky (UST)	State Program	4	58	02-23-20
Kentucky (WW)	State Program	4	98016	12-31-19
Minnesota	NELAP	5	039-999-348	12-31-19 *
Minnesota (Petrofund)	State Program	1	3506	07-31-19 *
Nevada	State Program	9	OH00048	07-31-19
New Jersey	NELAP	2	OH001	06-30-19 *
New York	NELAP	2	10975	03-31-20
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-20
Pennsylvania	NELAP	3	68-00340	08-31-19 *
Texas	NELAP	6	T104704517-18-10	08-31-19
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-19
Washington	State Program	10	C971	01-12-20 *
West Virginia DEP	State Program	3	210	12-31-19

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

Eurofins TestAmerica, Canton



Client Information: Sample: *S. Johnson*, Lab PM: DeIMonico, Michael; Phone: 248-662-7233; E-Mail: michael.deimonico@testamericainc.com; Carrier Tracking No(s): 240-60548-25803.8; Page: 8 of 43; Job #: CF 1

ARCADIS U.S. Inc. Address: 28550 Cabot Drive Suite 500, Novi, MI 48377; Project Name: Ford LTP Livonia MI - E203631; Site: FORD LTP

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Organic, BT-Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_VOCs (Short List)	8260B_8260B_SIM	Total Number of Containers	Special Instructions/Notes:
MW-888-051419	5-14-19	1627	6	Water	Y	X			6	
MW-1375-051419	5-14-19	1322	6	Water	Y	X			6	
<i>[REDACTED]</i>				Water					6	
TRIP BLANK				Water	Y	X			1	
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						

Barcode: 240-112931 Chain of Custody

Analysis Requested: Return To Client, Disposal By Lab, Archive For Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Received by: NAILED STORAGE (Date: 5-14-19 / 1830), ARCADIS; Received by: [Signature] (Date: 5-17-19 1200), ARCADIS; Received by: [Signature] (Date: 5-17-19 1530), ETA

Company: ARCADIS (Received by NAILED STORAGE), ARCADIS (Received by [Signature]), ETA (Received by [Signature])



TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 112931

Client Arcadis Site Name _____
 Cooler Received on 5-18-19 Opened on 5-18-19
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Cooler unpacked by: _____

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-8 (CF -0.2 °C) Observed Cooler Temp. 0.8 °C Corrected Cooler Temp. 0.6 °C
 IR GUN #36 (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
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC984738
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:

 VOAs
 Oil and Grease
 TOC

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

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

18. SAMPLE CONDITION

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

19. SAMPLE PRESERVATION

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

VOA Sample Preservation - Date/Time VOAs Frozen: _____