

ANALYTICAL REPORT

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Laboratory Job ID: 240-119518-1
Client Project/Site: Ford LTP Livonia MI - E203631

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



Authorized for release by:
10/10/2019 3:44:20 PM

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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 Livonia MI - E203631

Job ID: 240-119518-1

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: 240-119518-1

Job ID: 240-119518-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203631

Report Number: 240-119518-1

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 9/26/2019 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.9° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-84_092419 (240-119518-2), MW-84S_092419 (240-119518-3) and TRIP BLANK (240-119518-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/03/2019 and 10/04/2019.

There was an MS/MSD analyzed in batch 240-403996 but could not be reported because the associated sample needed reanalyzed in a different batch: MW-84_092419 (240-119518-2).

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

VOLATILE ORGANIC COMPOUNDS (GCMS SIM)

Samples MW-84_092419 (240-119518-2) and MW-84S_092419 (240-119518-3) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 10/02/2019.

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: 240-119518-1

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: 240-119518-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-119518-2	MW-84_092419	Water	09/24/19 14:19	09/26/19 09:50	
240-119518-3	MW-84S_092419	Water	09/24/19 15:45	09/26/19 09:50	
240-119518-4	TRIP BLANK	Water	09/24/19 00:00	09/26/19 09:50	

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- 10
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- 13
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Detection Summary

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

Job ID: 240-119518-1

Client Sample ID: MW-84_092419

Lab Sample ID: 240-119518-2

No Detections.

Client Sample ID: MW-84S_092419

Lab Sample ID: 240-119518-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.17	J	1.0	0.10	ug/L	1		8260B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-119518-4

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: 240-119518-1

Client Sample ID: MW-84_092419

Lab Sample ID: 240-119518-2

Date Collected: 09/24/19 14:19

Matrix: Water

Date Received: 09/26/19 09:50

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			10/02/19 14:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	74		63 - 125		10/02/19 14:41	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			10/04/19 03:16	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			10/04/19 03:16	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			10/04/19 03:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/04/19 03:16	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			10/04/19 03:16	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			10/04/19 03:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 121		10/04/19 03:16	1
4-Bromofluorobenzene (Surr)	80		59 - 120		10/04/19 03:16	1
Toluene-d8 (Surr)	96		70 - 123		10/04/19 03:16	1
Dibromofluoromethane (Surr)	98		75 - 128		10/04/19 03:16	1

Client Sample Results

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

Job ID: 240-119518-1

Client Sample ID: MW-84S_092419

Lab Sample ID: 240-119518-3

Date Collected: 09/24/19 15:45

Matrix: Water

Date Received: 09/26/19 09:50

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	-		10/02/19 15:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	74		63 - 125		10/02/19 15:06	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	-		10/03/19 22:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L	-		10/03/19 22:32	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L	-		10/03/19 22:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L	-		10/03/19 22:32	1
Trichloroethene	0.17	J	1.0	0.10	ug/L	-		10/03/19 22:32	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L	-		10/03/19 22:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 121		10/03/19 22:32	1
4-Bromofluorobenzene (Surr)	69		59 - 120		10/03/19 22:32	1
Toluene-d8 (Surr)	89		70 - 123		10/03/19 22:32	1
Dibromofluoromethane (Surr)	113		75 - 128		10/03/19 22:32	1

Client Sample Results

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

Job ID: 240-119518-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-119518-4

Date Collected: 09/24/19 00:00

Matrix: Water

Date Received: 09/26/19 09:50

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			10/03/19 22:09	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			10/03/19 22:09	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			10/03/19 22:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/03/19 22:09	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			10/03/19 22:09	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			10/03/19 22:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		70 - 121		10/03/19 22:09	1
4-Bromofluorobenzene (Surr)	75		59 - 120		10/03/19 22:09	1
Toluene-d8 (Surr)	88		70 - 123		10/03/19 22:09	1
Dibromofluoromethane (Surr)	114		75 - 128		10/03/19 22:09	1

Surrogate Summary

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

Job ID: 240-119518-1

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)
240-119518-2	MW-84_092419	105	80	96	98
240-119518-3	MW-84S_092419	95	69	89	113
240-119518-3 MS	MW-84S_092419	82	93	99	97
240-119518-3 MSD	MW-84S_092419	86	93	100	99
240-119518-4	TRIP BLANK	93	75	88	114
LCS 240-403913/4	Lab Control Sample	81	98	101	102
MB 240-403913/7	Method Blank	92	74	90	111

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)
240-119518-2	MW-84_092419	74
240-119518-3	MW-84S_092419	74
240-119520-F-2 MS	Matrix Spike	77
240-119520-F-2 MSD	Matrix Spike Duplicate	76
LCS 240-403698/4	Lab Control Sample	75
MB 240-403698/5	Method Blank	75

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: 240-119518-1

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

Lab Sample ID: MB 240-403913/7
Matrix: Water
Analysis Batch: 403913

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			10/03/19 14:35	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			10/03/19 14:35	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			10/03/19 14:35	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/03/19 14:35	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			10/03/19 14:35	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			10/03/19 14:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 121		10/03/19 14:35	1
4-Bromofluorobenzene (Surr)	74		59 - 120		10/03/19 14:35	1
Toluene-d8 (Surr)	90		70 - 123		10/03/19 14:35	1
Dibromofluoromethane (Surr)	111		75 - 128		10/03/19 14:35	1

Lab Sample ID: LCS 240-403913/4
Matrix: Water
Analysis Batch: 403913

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	9.72		ug/L		97	65 - 139
cis-1,2-Dichloroethene	10.0	10.1		ug/L		101	76 - 128
Tetrachloroethene	10.0	10.6		ug/L		106	74 - 130
trans-1,2-Dichloroethene	10.0	10.4		ug/L		104	78 - 133
Trichloroethene	10.0	10.7		ug/L		107	76 - 125
Vinyl chloride	10.0	5.99		ug/L		60	58 - 143

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	81		70 - 121
4-Bromofluorobenzene (Surr)	98		59 - 120
Toluene-d8 (Surr)	101		70 - 123
Dibromofluoromethane (Surr)	102		75 - 128

Lab Sample ID: 240-119518-3 MS
Matrix: Water
Analysis Batch: 403913

Client Sample ID: MW-84S_092419
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	9.30		ug/L		93	53 - 140
cis-1,2-Dichloroethene	1.0	U	10.0	10.0		ug/L		100	64 - 130
Tetrachloroethene	1.0	U	10.0	8.00		ug/L		80	51 - 136
trans-1,2-Dichloroethene	1.0	U	10.0	10.0		ug/L		100	68 - 133
Trichloroethene	0.17	J	10.0	9.53		ug/L		94	55 - 131
Vinyl chloride	1.0	U	10.0	6.05		ug/L		60	43 - 154

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	82		70 - 121
4-Bromofluorobenzene (Surr)	93		59 - 120
Toluene-d8 (Surr)	99		70 - 123

QC Sample Results

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

Job ID: 240-119518-1

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

Lab Sample ID: 240-119518-3 MS
Matrix: Water
Analysis Batch: 403913

Client Sample ID: MW-84S_092419
Prep Type: Total/NA

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	97		75 - 128

Lab Sample ID: 240-119518-3 MSD
Matrix: Water
Analysis Batch: 403913

Client Sample ID: MW-84S_092419
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	10.0	8.56		ug/L		86	53 - 140	8	35	
cis-1,2-Dichloroethene	1.0	U	10.0	9.55		ug/L		96	64 - 130	5	21	
Tetrachloroethene	1.0	U	10.0	6.98		ug/L		70	51 - 136	14	23	
trans-1,2-Dichloroethene	1.0	U	10.0	9.10		ug/L		91	68 - 133	10	24	
Trichloroethene	0.17	J	10.0	8.47		ug/L		83	55 - 131	12	23	
Vinyl chloride	1.0	U	10.0	5.65		ug/L		57	43 - 154	7	29	

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	86		70 - 121
4-Bromofluorobenzene (Surr)	93		59 - 120
Toluene-d8 (Surr)	100		70 - 123
Dibromofluoromethane (Surr)	99		75 - 128

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

Lab Sample ID: MB 240-403698/5
Matrix: Water
Analysis Batch: 403698

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			10/02/19 13:50	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	75		63 - 125		10/02/19 13:50	1

Lab Sample ID: LCS 240-403698/4
Matrix: Water
Analysis Batch: 403698

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

Analyte	Spike	LCS LCS		Unit	D	%Rec	%Rec.
		Result	Qualifier				
1,4-Dioxane	10.0	11.8		ug/L		118	59 - 131

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	75		63 - 125

Lab Sample ID: 240-119520-F-2 MS
Matrix: Water
Analysis Batch: 403698

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

Analyte	Sample	Sample	Spike	MS MS		Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				
1,4-Dioxane	0.93	J	10.0	11.7		ug/L		108	52 - 129

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-119518-1

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)	77		63 - 125

Lab Sample ID: 240-119520-F-2 MSD
Matrix: Water
Analysis Batch: 403698

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	0.93	J	10.0	11.7		ug/L		108	52 - 129	0	13

<i>Surrogate</i>	<i>MSD</i> <i>%Recovery</i>	<i>MSD</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	76		63 - 125

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QC Association Summary

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

Job ID: 240-119518-1

GC/MS VOA

Analysis Batch: 403698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-119518-2	MW-84_092419	Total/NA	Water	8260B SIM	
240-119518-3	MW-84S_092419	Total/NA	Water	8260B SIM	
MB 240-403698/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-403698/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-119520-F-2 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-119520-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 403913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-119518-3	MW-84S_092419	Total/NA	Water	8260B	
240-119518-4	TRIP BLANK	Total/NA	Water	8260B	
MB 240-403913/7	Method Blank	Total/NA	Water	8260B	
LCS 240-403913/4	Lab Control Sample	Total/NA	Water	8260B	
240-119518-3 MS	MW-84S_092419	Total/NA	Water	8260B	
240-119518-3 MSD	MW-84S_092419	Total/NA	Water	8260B	

Analysis Batch: 403996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-119518-2	MW-84_092419	Total/NA	Water	8260B	

Lab Chronicle

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

Job ID: 240-119518-1

Client Sample ID: MW-84_092419

Lab Sample ID: 240-119518-2

Date Collected: 09/24/19 14:19

Matrix: Water

Date Received: 09/26/19 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	403996	10/04/19 03:16	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	403698	10/02/19 14:41	SAM	TAL CAN

Client Sample ID: MW-84S_092419

Lab Sample ID: 240-119518-3

Date Collected: 09/24/19 15:45

Matrix: Water

Date Received: 09/26/19 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	403913	10/03/19 22:32	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	403698	10/02/19 15:06	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-119518-4

Date Collected: 09/24/19 00:00

Matrix: Water

Date Received: 09/26/19 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	403913	10/03/19 22:09	LRW	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: 240-119518-1

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	02-23-20
Connecticut	State	PH-0590	12-31-19
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-16-00404	12-28-19
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-20
West Virginia DEP	State	210	12-31-19

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: 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: kris@hinskey@arcadis.com

Site Contact: Rachel Bielak
Telephone: 248-946-6331

TestAmerica Laboratories, Inc.
COC No: _____ of _____ COCs

For lab use only

Walk-in client
Lab sampling
Job/SDG No: _____

Sample Specific Notes / Special Instructions: _____

Sample Identification	Sample Date	Sample Time	Matrix						Filtered Sample (Y/N)	Analyses						Sample Specific Notes / Special Instructions				
			Air	Aqueous	Sediment	Solid	Other:	H2SO4		HNO3	HCl	NACH	Zn/Cd	Unpres	Other:		1,1-DCE 8260B	Trans-1,2-DCE 8260B	PCE 8260B	TCE 8260B
MW-129-092419	9-24-19	1224	X						X	X	X	X	X	X	X	X	X	X	X	CO CONTAINERS
MW-84-092419	9-24-19	1419	X						X	X	X	X	X	X	X	X	X	X	X	CO CONTAINERS
MW-84S-092419	9-24-19	1545	X						X	X	X	X	X	X	X	X	X	X	X	CO CONTAINERS
Trip Blank (1)																				

Analysis Turnaround Time:
TAT if different from below:
 3 weeks
 2 weeks
 1 week
 2 days
 1 day

Method of Shipment/Carrier: _____

Shipping/Tracking No: _____

Containers & Preservatives:
H2SO4 HNO3 HCl NACH Zn/Cd Unpres Other: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal By Lab Archive For _____ Months



Possible Hazard Identification
 Non-Hazard Flammable Corrosive Irritant Unknown

Special Instructions/QC Requirements & Comments:
Submit all results through Cadena at jim.tomalia@cadena.com. Cadena #E203631
Level IV Reporting requested.

Relinquished by: *John McElroy*
Date/Time: 9/24/19/1630
Company: Arcadis

Relinquished by: *John McElroy*
Date/Time: 9/24/19/1820
Company: Arcadis

Relinquished by: *Holly Maxson*
Date/Time: 09/25/19 11:40
Company: ARCADIS

Relinquished by: *Holly Maxson*
Date/Time: 9/25/19 1250
Company: BIAL-MI

Received by: *John McElroy*
Date/Time: 9/24/19/1630
Company: Arcadis

Received by: *John McElroy*
Date/Time: 9/24/19/1820
Company: Arcadis

Received in Laboratory by: *Holly Maxson*
Date/Time: 9/25/19 1140
Company: BIAL-MI

Relinquished by: *Holly Maxson*
Date/Time: 9/25/19 1250
Company: BIAL-MI



**Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility**


Login # : 119518

Client Arcadi's Site Name _____
Cooler Received on 7-26-19 Opened on 7-26-19
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 # 111 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-10 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #IR-11 (CF +0.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 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# HC991818
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Yes No NA  Larger than this.
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: _____

Martin

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: _____

