

ANALYTICAL REPORT

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Laboratory Job ID: 240-112528-1

Client Project/Site: Ford LTP Livonia MI - E203631

For:

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



Authorized for release by:
5/29/2019 2:22:28 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: 240-112528-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

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: 240-112528-1

Job ID: 240-112528-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203631

Report Number: 240-112528-1

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 5/14/2019 8:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-107S_051019 (240-112528-1), MW-80SR_051019 (240-112528-2), MW-97S_051019 (240-112528-3), MW-98S_051019 (240-112528-4), DUP-02_051019 (240-112528-5) and TRIP BLANK (240-112528-6) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/21/2019 and 05/23/2019.

1,2-Dichloroethane-d4 (Surr) failed the surrogate recovery criteria high for TRIP BLANK (240-112528-6).

4-Bromofluorobenzene (Surr) failed the surrogate recovery criteria high for MW-80SR_051019MS (240-112528-2MS) MW-80SR_051019MSD (240-112528-2MSD). Refer to the QC report for details.

cis-1,2-Dichloroethene and trans-1,2-Dichloroethene failed the recovery criteria high for LCS 240-382195/4. Refer to the QC report for details.

The laboratory control sample (LCS) for 382195 recovered outside control limits for multiple analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported: MW-107S_051019 (240-112528-1), MW-97S_051019 (240-112528-3), MW-98S_051019 (240-112528-4), DUP-02_051019 (240-112528-5), TRIP BLANK (240-112528-6) and

Case Narrative

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

Job ID: 240-112528-1

Job ID: 240-112528-1 (Continued)

Laboratory: Eurofins TestAmerica, Canton (Continued)

(LCS 240-382195/4).

Surrogate recovery for the following sample was outside the upper control limit: TRIP BLANK (240-112528-6). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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-107S_051019 (240-112528-1), MW-80SR_051019 (240-112528-2), MW-97S_051019 (240-112528-3), MW-98S_051019 (240-112528-4) and DUP-02_051019 (240-112528-5) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 05/15/2019 and 05/16/2019.

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: 240-112528-1

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: 240-112528-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-112528-1	MW-107S_051019	Water	05/10/19 12:05	05/14/19 08:50	
240-112528-2	MW-80SR_051019	Water	05/10/19 13:40	05/14/19 08:50	
240-112528-3	MW-97S_051019	Water	05/10/19 16:40	05/14/19 08:50	
240-112528-4	MW-98S_051019	Water	05/10/19 15:15	05/14/19 08:50	
240-112528-5	DUP-02_051019	Water	05/10/19 00:00	05/14/19 08:50	
240-112528-6	TRIP BLANK	Water	05/10/19 00:00	05/14/19 08:50	

Detection Summary

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

Job ID: 240-112528-1

Client Sample ID: MW-107S_051019

Lab Sample ID: 240-112528-1

No Detections.

Client Sample ID: MW-80SR_051019

Lab Sample ID: 240-112528-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	3.2		1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-97S_051019

Lab Sample ID: 240-112528-3

No Detections.

Client Sample ID: MW-98S_051019

Lab Sample ID: 240-112528-4

No Detections.

Client Sample ID: DUP-02_051019

Lab Sample ID: 240-112528-5

No Detections.

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-112528-6

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: 240-112528-1

Client Sample ID: MW-107S_051019

Lab Sample ID: 240-112528-1

Date Collected: 05/10/19 12:05

Matrix: Water

Date Received: 05/14/19 08:50

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			05/15/19 20:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		63 - 125		05/15/19 20:39	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			05/21/19 02:12	1
cis-1,2-Dichloroethene	1.0	U *	1.0	0.16	ug/L			05/21/19 02:12	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/21/19 02:12	1
trans-1,2-Dichloroethene	1.0	U *	1.0	0.19	ug/L			05/21/19 02:12	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/21/19 02:12	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/21/19 02:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		70 - 121		05/21/19 02:12	1
4-Bromofluorobenzene (Surr)	82		59 - 120		05/21/19 02:12	1
Toluene-d8 (Surr)	102		70 - 123		05/21/19 02:12	1
Dibromofluoromethane (Surr)	122		75 - 128		05/21/19 02:12	1

Client Sample Results

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

Job ID: 240-112528-1

Client Sample ID: MW-80SR_051019

Lab Sample ID: 240-112528-2

Date Collected: 05/10/19 13:40

Matrix: Water

Date Received: 05/14/19 08:50

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	-		05/16/19 13:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		63 - 125		05/16/19 13:17	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	-		05/23/19 11:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L	-		05/23/19 11:17	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L	-		05/23/19 11:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L	-		05/23/19 11:17	1
Trichloroethene	1.0	U	1.0	0.10	ug/L	-		05/23/19 11:17	1
Vinyl chloride	3.2		1.0	0.20	ug/L	-		05/23/19 11:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 121		05/23/19 11:17	1
4-Bromofluorobenzene (Surr)	105		59 - 120		05/23/19 11:17	1
Toluene-d8 (Surr)	108		70 - 123		05/23/19 11:17	1
Dibromofluoromethane (Surr)	106		75 - 128		05/23/19 11:17	1

Client Sample Results

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

Job ID: 240-112528-1

Client Sample ID: MW-97S_051019

Lab Sample ID: 240-112528-3

Date Collected: 05/10/19 16:40

Matrix: Water

Date Received: 05/14/19 08:50

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			05/15/19 21:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		63 - 125		05/15/19 21:04	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			05/21/19 02:33	1
cis-1,2-Dichloroethene	1.0	U *	1.0	0.16	ug/L			05/21/19 02:33	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/21/19 02:33	1
trans-1,2-Dichloroethene	1.0	U *	1.0	0.19	ug/L			05/21/19 02:33	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/21/19 02:33	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/21/19 02:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		70 - 121		05/21/19 02:33	1
4-Bromofluorobenzene (Surr)	77		59 - 120		05/21/19 02:33	1
Toluene-d8 (Surr)	99		70 - 123		05/21/19 02:33	1
Dibromofluoromethane (Surr)	126		75 - 128		05/21/19 02:33	1

Client Sample Results

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

Job ID: 240-112528-1

Client Sample ID: MW-98S_051019

Lab Sample ID: 240-112528-4

Date Collected: 05/10/19 15:15

Matrix: Water

Date Received: 05/14/19 08:50

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			05/16/19 14:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		63 - 125		05/16/19 14:32	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			05/21/19 02:55	1
cis-1,2-Dichloroethene	1.0	U *	1.0	0.16	ug/L			05/21/19 02:55	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/21/19 02:55	1
trans-1,2-Dichloroethene	1.0	U *	1.0	0.19	ug/L			05/21/19 02:55	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/21/19 02:55	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/21/19 02:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		70 - 121		05/21/19 02:55	1
4-Bromofluorobenzene (Surr)	77		59 - 120		05/21/19 02:55	1
Toluene-d8 (Surr)	97		70 - 123		05/21/19 02:55	1
Dibromofluoromethane (Surr)	123		75 - 128		05/21/19 02:55	1

Client Sample Results

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

Job ID: 240-112528-1

Client Sample ID: DUP-02_051019

Lab Sample ID: 240-112528-5

Date Collected: 05/10/19 00:00

Matrix: Water

Date Received: 05/14/19 08:50

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	-		05/16/19 14:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		63 - 125		05/16/19 14:56	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	-		05/21/19 03:17	1
cis-1,2-Dichloroethene	1.0	U *	1.0	0.16	ug/L	-		05/21/19 03:17	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L	-		05/21/19 03:17	1
trans-1,2-Dichloroethene	1.0	U *	1.0	0.19	ug/L	-		05/21/19 03:17	1
Trichloroethene	1.0	U	1.0	0.10	ug/L	-		05/21/19 03:17	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L	-		05/21/19 03:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		70 - 121		05/21/19 03:17	1
4-Bromofluorobenzene (Surr)	77		59 - 120		05/21/19 03:17	1
Toluene-d8 (Surr)	100		70 - 123		05/21/19 03:17	1
Dibromofluoromethane (Surr)	124		75 - 128		05/21/19 03:17	1

Client Sample Results

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

Job ID: 240-112528-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-112528-6

Date Collected: 05/10/19 00:00

Matrix: Water

Date Received: 05/14/19 08:50

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			05/21/19 03:39	1
cis-1,2-Dichloroethene	1.0	U *	1.0	0.16	ug/L			05/21/19 03:39	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/21/19 03:39	1
trans-1,2-Dichloroethene	1.0	U *	1.0	0.19	ug/L			05/21/19 03:39	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/21/19 03:39	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/21/19 03:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123	X	70 - 121		05/21/19 03:39	1
4-Bromofluorobenzene (Surr)	77		59 - 120		05/21/19 03:39	1
Toluene-d8 (Surr)	100		70 - 123		05/21/19 03:39	1
Dibromofluoromethane (Surr)	127		75 - 128		05/21/19 03:39	1

Surrogate Summary

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

Job ID: 240-112528-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-121)	BFB (59-120)	TOL (70-123)	DBFM (75-128)
240-112527-N-1 MSD	Matrix Spike Duplicate	112	110	112	120
240-112527-P-1 MS	Matrix Spike	103	104	110	116
240-112528-1	MW-107S_051019	118	82	102	122
240-112528-2	MW-80SR_051019	99	105	108	106
240-112528-2 MS	MW-80SR_051019	92	126 X	115	99
240-112528-2 MSD	MW-80SR_051019	91	123 X	117	101
240-112528-3	MW-97S_051019	121	77	99	126
240-112528-4	MW-98S_051019	118	77	97	123
240-112528-5	DUP-02_051019	118	77	100	124
240-112528-6	TRIP BLANK	123 X	77	100	127
LCS 240-382195/4	Lab Control Sample	107	112	104	125
LCS 240-382711/4	Lab Control Sample	88	110	109	96
MB 240-382195/6	Method Blank	117	79	99	121
MB 240-382711/6	Method Blank	99	113	113	106

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DCA (63-125)
240-112527-C-1 MS	Matrix Spike	89
240-112527-C-1 MSD	Matrix Spike Duplicate	91
240-112528-1	MW-107S_051019	92
240-112528-2	MW-80SR_051019	82
240-112528-2 MS	MW-80SR_051019	91
240-112528-2 MSD	MW-80SR_051019	86
240-112528-3	MW-97S_051019	92
240-112528-4	MW-98S_051019	88
240-112528-5	DUP-02_051019	85
LCS 240-381406/4	Lab Control Sample	85
LCS 240-381667/4	Lab Control Sample	86
MB 240-381406/5	Method Blank	86
MB 240-381667/5	Method Blank	86

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: 240-112528-1

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

Lab Sample ID: MB 240-382195/6
Matrix: Water
Analysis Batch: 382195

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			05/20/19 23:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/20/19 23:39	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/20/19 23:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/20/19 23:39	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/20/19 23:39	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/20/19 23:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		70 - 121		05/20/19 23:39	1
4-Bromofluorobenzene (Surr)	79		59 - 120		05/20/19 23:39	1
Toluene-d8 (Surr)	99		70 - 123		05/20/19 23:39	1
Dibromofluoromethane (Surr)	121		75 - 128		05/20/19 23:39	1

Lab Sample ID: LCS 240-382195/4
Matrix: Water
Analysis Batch: 382195

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	12.2		ug/L		122	65 - 139
cis-1,2-Dichloroethene	10.0	13.6	*	ug/L		136	76 - 128
Tetrachloroethene	10.0	9.73		ug/L		97	74 - 130
trans-1,2-Dichloroethene	10.0	14.5	*	ug/L		145	78 - 133
Trichloroethene	10.0	10.1		ug/L		101	76 - 125
Vinyl chloride	10.0	14.2		ug/L		142	58 - 143

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		70 - 121
4-Bromofluorobenzene (Surr)	112		59 - 120
Toluene-d8 (Surr)	104		70 - 123
Dibromofluoromethane (Surr)	125		75 - 128

Lab Sample ID: 240-112527-N-1 MSD
Matrix: Water
Analysis Batch: 382195

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	1.0	U	10.0	9.21		ug/L		92	53 - 140	10	35
cis-1,2-Dichloroethene	1.0	U *	10.0	10.7		ug/L		107	64 - 130	4	21
Tetrachloroethene	1.0	U	10.0	9.72		ug/L		97	51 - 136	13	23
trans-1,2-Dichloroethene	1.0	U *	10.0	11.3		ug/L		113	68 - 133	4	24
Trichloroethene	1.0	U	10.0	9.20		ug/L		92	55 - 131	8	23
Vinyl chloride	1.0	U	10.0	9.77		ug/L		98	43 - 154	9	29

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	112		70 - 121
4-Bromofluorobenzene (Surr)	110		59 - 120
Toluene-d8 (Surr)	112		70 - 123

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-112528-1

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

Lab Sample ID: 240-112527-N-1 MSD
Matrix: Water
Analysis Batch: 382195

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

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dibromofluoromethane (Surr)	120		75 - 128

Lab Sample ID: 240-112527-P-1 MS
Matrix: Water
Analysis Batch: 382195

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	1.0	U	10.0	8.33		ug/L		83	53 - 140
cis-1,2-Dichloroethene	1.0	U *	10.0	10.3		ug/L		103	64 - 130
Tetrachloroethene	1.0	U	10.0	8.57		ug/L		86	51 - 136
trans-1,2-Dichloroethene	1.0	U *	10.0	10.9		ug/L		109	68 - 133
Trichloroethene	1.0	U	10.0	8.49		ug/L		85	55 - 131
Vinyl chloride	1.0	U	10.0	8.89		ug/L		89	43 - 154

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		70 - 121
4-Bromofluorobenzene (Surr)	104		59 - 120
Toluene-d8 (Surr)	110		70 - 123
Dibromofluoromethane (Surr)	116		75 - 128

Lab Sample ID: MB 240-382711/6
Matrix: Water
Analysis Batch: 382711

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			05/23/19 08:16	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/23/19 08:16	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/23/19 08:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/23/19 08:16	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/23/19 08:16	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/23/19 08:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 121		05/23/19 08:16	1
4-Bromofluorobenzene (Surr)	113		59 - 120		05/23/19 08:16	1
Toluene-d8 (Surr)	113		70 - 123		05/23/19 08:16	1
Dibromofluoromethane (Surr)	106		75 - 128		05/23/19 08:16	1

Lab Sample ID: LCS 240-382711/4
Matrix: Water
Analysis Batch: 382711

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	10.6		ug/L		106	65 - 139
cis-1,2-Dichloroethene	10.0	10.7		ug/L		107	76 - 128
Tetrachloroethene	10.0	9.20		ug/L		92	74 - 130
trans-1,2-Dichloroethene	10.0	10.6		ug/L		106	78 - 133
Trichloroethene	10.0	8.97		ug/L		90	76 - 125

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-112528-1

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

Lab Sample ID: LCS 240-382711/4
Matrix: Water
Analysis Batch: 382711

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	10.0	11.1		ug/L		111	58 - 143

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		70 - 121
4-Bromofluorobenzene (Surr)	110		59 - 120
Toluene-d8 (Surr)	109		70 - 123
Dibromofluoromethane (Surr)	96		75 - 128

Lab Sample ID: 240-112528-2 MS
Matrix: Water
Analysis Batch: 382711

Client Sample ID: MW-80SR_051019
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	9.43		ug/L		94	53 - 140
cis-1,2-Dichloroethene	1.0	U	10.0	10.1		ug/L		101	64 - 130
Tetrachloroethene	1.0	U	10.0	8.52		ug/L		85	51 - 136
trans-1,2-Dichloroethene	1.0	U	10.0	9.70		ug/L		97	68 - 133
Trichloroethene	1.0	U	10.0	8.60		ug/L		86	55 - 131
Vinyl chloride	3.2		10.0	12.4		ug/L		92	43 - 154

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		70 - 121
4-Bromofluorobenzene (Surr)	126	X	59 - 120
Toluene-d8 (Surr)	115		70 - 123
Dibromofluoromethane (Surr)	99		75 - 128

Lab Sample ID: 240-112528-2 MSD
Matrix: Water
Analysis Batch: 382711

Client Sample ID: MW-80SR_051019
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	10.8		ug/L		108	53 - 140	14	35
cis-1,2-Dichloroethene	1.0	U	10.0	10.0		ug/L		100	64 - 130	1	21
Tetrachloroethene	1.0	U	10.0	9.19		ug/L		92	51 - 136	8	23
trans-1,2-Dichloroethene	1.0	U	10.0	9.90		ug/L		99	68 - 133	2	24
Trichloroethene	1.0	U	10.0	8.89		ug/L		89	55 - 131	3	23
Vinyl chloride	3.2		10.0	14.8		ug/L		117	43 - 154	18	29

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		70 - 121
4-Bromofluorobenzene (Surr)	123	X	59 - 120
Toluene-d8 (Surr)	117		70 - 123
Dibromofluoromethane (Surr)	101		75 - 128

QC Sample Results

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

Job ID: 240-112528-1

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

Lab Sample ID: MB 240-381406/5
Matrix: Water
Analysis Batch: 381406

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			05/15/19 12:16	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		63 - 125					05/15/19 12:16	1

Lab Sample ID: LCS 240-381406/4
Matrix: Water
Analysis Batch: 381406

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	11.9		ug/L		119	59 - 131
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	85		63 - 125				

Lab Sample ID: 240-112527-C-1 MS
Matrix: Water
Analysis Batch: 381406

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	11.6		ug/L		116	52 - 129
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	89		63 - 125						

Lab Sample ID: 240-112527-C-1 MSD
Matrix: Water
Analysis Batch: 381406

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
1,4-Dioxane	2.0	U	10.0	12.2		ug/L		122	52 - 129	5	13
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	91		63 - 125								

Lab Sample ID: MB 240-381667/5
Matrix: Water
Analysis Batch: 381667

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			05/16/19 12:26	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		63 - 125					05/16/19 12:26	1

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QC Sample Results

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

Job ID: 240-112528-1

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

Lab Sample ID: LCS 240-381667/4
Matrix: Water
Analysis Batch: 381667

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	11.8		ug/L		118	59 - 131
Surrogate	%Recovery	LCS Qualifier	LCS Limits				
1,2-Dichloroethane-d4 (Surr)	86		63 - 125				

Lab Sample ID: 240-112528-2 MS
Matrix: Water
Analysis Batch: 381667

Client Sample ID: MW-80SR_051019
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	11.8		ug/L		118	52 - 129
Surrogate	%Recovery	MS Qualifier	MS Limits						
1,2-Dichloroethane-d4 (Surr)	91		63 - 125						

Lab Sample ID: 240-112528-2 MSD
Matrix: Water
Analysis Batch: 381667

Client Sample ID: MW-80SR_051019
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	12.2		ug/L		122	52 - 129	4	13
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
1,2-Dichloroethane-d4 (Surr)	86		63 - 125								

QC Association Summary

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

Job ID: 240-112528-1

GC/MS VOA

Analysis Batch: 381406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-112528-1	MW-107S_051019	Total/NA	Water	8260B SIM	
240-112528-3	MW-97S_051019	Total/NA	Water	8260B SIM	
MB 240-381406/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-381406/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-112527-C-1 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-112527-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 381667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-112528-2	MW-80SR_051019	Total/NA	Water	8260B SIM	
240-112528-4	MW-98S_051019	Total/NA	Water	8260B SIM	
240-112528-5	DUP-02_051019	Total/NA	Water	8260B SIM	
MB 240-381667/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-381667/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-112528-2 MS	MW-80SR_051019	Total/NA	Water	8260B SIM	
240-112528-2 MSD	MW-80SR_051019	Total/NA	Water	8260B SIM	

Analysis Batch: 382195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-112528-1	MW-107S_051019	Total/NA	Water	8260B	
240-112528-3	MW-97S_051019	Total/NA	Water	8260B	
240-112528-4	MW-98S_051019	Total/NA	Water	8260B	
240-112528-5	DUP-02_051019	Total/NA	Water	8260B	
240-112528-6	TRIP BLANK	Total/NA	Water	8260B	
MB 240-382195/6	Method Blank	Total/NA	Water	8260B	
LCS 240-382195/4	Lab Control Sample	Total/NA	Water	8260B	
240-112527-N-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
240-112527-P-1 MS	Matrix Spike	Total/NA	Water	8260B	

Analysis Batch: 382711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-112528-2	MW-80SR_051019	Total/NA	Water	8260B	
MB 240-382711/6	Method Blank	Total/NA	Water	8260B	
LCS 240-382711/4	Lab Control Sample	Total/NA	Water	8260B	
240-112528-2 MS	MW-80SR_051019	Total/NA	Water	8260B	
240-112528-2 MSD	MW-80SR_051019	Total/NA	Water	8260B	

Lab Chronicle

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

Job ID: 240-112528-1

Client Sample ID: MW-107S_051019

Lab Sample ID: 240-112528-1

Date Collected: 05/10/19 12:05

Matrix: Water

Date Received: 05/14/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	382195	05/21/19 02:12	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	381406	05/15/19 20:39	SAM	TAL CAN

Client Sample ID: MW-80SR_051019

Lab Sample ID: 240-112528-2

Date Collected: 05/10/19 13:40

Matrix: Water

Date Received: 05/14/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	382711	05/23/19 11:17	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	381667	05/16/19 13:17	SAM	TAL CAN

Client Sample ID: MW-97S_051019

Lab Sample ID: 240-112528-3

Date Collected: 05/10/19 16:40

Matrix: Water

Date Received: 05/14/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	382195	05/21/19 02:33	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	381406	05/15/19 21:04	SAM	TAL CAN

Client Sample ID: MW-98S_051019

Lab Sample ID: 240-112528-4

Date Collected: 05/10/19 15:15

Matrix: Water

Date Received: 05/14/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	382195	05/21/19 02:55	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	381667	05/16/19 14:32	SAM	TAL CAN

Client Sample ID: DUP-02_051019

Lab Sample ID: 240-112528-5

Date Collected: 05/10/19 00:00

Matrix: Water

Date Received: 05/14/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	382195	05/21/19 03:17	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	381667	05/16/19 14:56	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-112528-6

Date Collected: 05/10/19 00:00

Matrix: Water

Date Received: 05/14/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	382195	05/21/19 03:39	LEE	TAL CAN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Eurofins TestAmerica, Canton

Accreditation/Certification Summary

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

Job ID: 240-112528-1

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

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

Client Contact Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240 Project Name: Ford LTP Project Number: M1001454.0004.00003 PO # M1001454.0004.00003		Regulatory program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other	
Client Project Manager: Kris Hinskey Telephone: 248-994-2240 Email: kris@hinskey.com		Site Contact: Caitlin O'Neill Telephone: 248-722-2411	
Method of Shipment/Carrier: Shipping/Tracking No:		Analysis Turnaround Time TAT if different from below <input type="checkbox"/> 3 weeks <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day	
Sample Identification MW-1075-051019 MW-80SR-051019 MW-975-051019 MW-985-051019 DUP-02-051019 Trip blank		Filtered Sample (Y/N) Composite C/Grab-G 1,1-DCE 8260B GS-1,2-DCE 8260B Trans-1,2-DCE 8260B PCE 8260B TCE 8260B Vinyl Chloride 8260B 1,4-Dioxane 8260B SIM	
Sample Date 5/10/19 1205 5/10/19 1340 5/10/19 1640 5/10/19 1515 5/10/19 —		Containers & Preservatives H2SO4 HNO3 HCl NaOH NaOH Tupper Other:	
Sample Time 1205 1340 1640 1515 —		Matrix Air Aqueous Sediment Solid Other:	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Irritant <input type="checkbox"/> Corrosive <input type="checkbox"/> Toxic		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 <input type="checkbox"/> Archive For _____ Months	
Relinquished by: Ellen Redner/Gurp Relinquished by: Kasey Matteson Relinquished by: [Signature]		Received by: Novi Cold Storage Received by: [Signature] Received in Laboratory by: [Signature]	
Date/Time: 5/10/19 1830 Date/Time: 5/13/19 1220 Date/Time: 5-13-19 1335		Company: Arcadis Company: Arcadis Company: ETA	



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Canton Facility

Client Arcadis Site Name _____

Cooler unpacked by: [Signature]

Cooler Received on 5-14-19 Opened on 5-14-19

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

Receipt After-hours: Drop-off Date/Time

Storage Location _____

TestAmerica Cooler # 7A 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. _____ °C Corrected Cooler Temp. _____ °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 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 NA
-Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels 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? Yes No NA

15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B83400ZVA Yes No

16. Was a LL Hg or Me Hg trip blank present? Yes No

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

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: MS

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: _____

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

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

TestAmerica Canton Sample Receipt Multiple Cooler Form

This is lost only

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA Client Box Other	IR-8 #36	4.2	4.0	Wet Ice Water None
TA Client Box Other	IR-8 #36	2.0	1.8	Wet Ice Water None
TA Client Box Other	IR-8 #36			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-8 #36			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-8 #36			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-8 #36			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-8 #36			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-8 #36			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-8 #36			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-8 #36			Wet Ice Blue Ice Dry Ice Water None
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TA Client Box Other	IR-8 #36			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-8 #36			Wet Ice Blue Ice Dry Ice Water None

See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 Multiple Coolers