

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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TestAmerica Job ID: 240-108854-1

Client Project/Site: Ford LTP Livonia MI - E203631

For:

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



Authorized for release by:
3/18/2019 11:40:06 AM

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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

TestAmerica Job ID: 240-108854-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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
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

TestAmerica Job ID: 240-108854-1

Job ID: 240-108854-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203631

Report Number: 240-108854-1

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.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. 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 TestAmerica and its client.

RECEIPT

The samples were received on 3/2/2019 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-86_022819 (240-108854-1), MW-86S_022819 (240-108854-2), MW-84_022819 (240-108854-3), MW-84S_022819 (240-108854-4), MW-87_022819 (240-108854-5), DUP-04_022819 (240-108854-6) and TRIP BLANK (240-108854-7) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/12/2019.

1,2-Dichloroethane-d4 (Surr) failed the surrogate recovery criteria high for MW-86S_022819 (240-108854-2). Refer to the QC report for details.

The continuing calibration verification (CCV) associated with batch 371206 recovered above the upper control limit for Vinyl Chloride and/or 1,2-Dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-86_022819 (240-108854-1), MW-86S_022819 (240-108854-2), MW-84_022819 (240-108854-3), MW-84S_022819 (240-108854-4), MW-87_022819 (240-108854-5), DUP-04_022819 (240-108854-6) and TRIP BLANK (240-108854-7).

Surrogate recovery for the following sample was outside the upper control limit: MW-86S_022819 (240-108854-2). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Case Narrative

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

TestAmerica Job ID: 240-108854-1

Job ID: 240-108854-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

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-86_022819 (240-108854-1), MW-86S_022819 (240-108854-2), MW-84_022819 (240-108854-3), MW-84S_022819 (240-108854-4), MW-87_022819 (240-108854-5) and DUP-04_022819 (240-108854-6) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 03/07/2019 and 03/08/2019.

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

TestAmerica Job ID: 240-108854-1

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 = 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

TestAmerica Job ID: 240-108854-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-108854-1	MW-86_022819	Water	02/28/19 10:05	03/02/19 09:45
240-108854-2	MW-86S_022819	Water	02/28/19 11:00	03/02/19 09:45
240-108854-3	MW-84_022819	Water	02/28/19 12:25	03/02/19 09:45
240-108854-4	MW-84S_022819	Water	02/28/19 15:10	03/02/19 09:45
240-108854-5	MW-87_022819	Water	02/28/19 16:40	03/02/19 09:45
240-108854-6	DUP-04_022819	Water	02/28/19 00:00	03/02/19 09:45
240-108854-7	TRIP BLANK	Water	02/28/19 00:00	03/02/19 09:45

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- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 240-108854-1

Client Sample ID: MW-86_022819

Lab Sample ID: 240-108854-1

No Detections.

Client Sample ID: MW-86S_022819

Lab Sample ID: 240-108854-2

No Detections.

Client Sample ID: MW-84_022819

Lab Sample ID: 240-108854-3

No Detections.

Client Sample ID: MW-84S_022819

Lab Sample ID: 240-108854-4

No Detections.

Client Sample ID: MW-87_022819

Lab Sample ID: 240-108854-5

No Detections.

Client Sample ID: DUP-04_022819

Lab Sample ID: 240-108854-6

No Detections.

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108854-7

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

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Client Sample Results

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

TestAmerica Job ID: 240-108854-1

Client Sample ID: MW-86_022819

Lab Sample ID: 240-108854-1

Date Collected: 02/28/19 10:05

Matrix: Water

Date Received: 03/02/19 09:45

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			03/07/19 23:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 125					03/07/19 23:48	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			03/12/19 13:52	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 13:52	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 13:52	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 13:52	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 13:52	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 13:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		70 - 121					03/12/19 13:52	1
4-Bromofluorobenzene (Surr)	93		59 - 120					03/12/19 13:52	1
Toluene-d8 (Surr)	110		70 - 123					03/12/19 13:52	1
Dibromofluoromethane (Surr)	110		75 - 128					03/12/19 13:52	1

Client Sample Results

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

TestAmerica Job ID: 240-108854-1

Client Sample ID: MW-86S_022819

Lab Sample ID: 240-108854-2

Date Collected: 02/28/19 11:00

Matrix: Water

Date Received: 03/02/19 09:45

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			03/08/19 00:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		63 - 125					03/08/19 00:13	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			03/12/19 14:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 14:13	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 14:13	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 14:13	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 14:13	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 14:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	124	X	70 - 121					03/12/19 14:13	1
4-Bromofluorobenzene (Surr)	101		59 - 120					03/12/19 14:13	1
Toluene-d8 (Surr)	112		70 - 123					03/12/19 14:13	1
Dibromofluoromethane (Surr)	116		75 - 128					03/12/19 14:13	1

Client Sample Results

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

TestAmerica Job ID: 240-108854-1

Client Sample ID: MW-84_022819

Lab Sample ID: 240-108854-3

Date Collected: 02/28/19 12:25

Matrix: Water

Date Received: 03/02/19 09:45

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			03/08/19 00:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		63 - 125					03/08/19 00:39	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			03/12/19 14:35	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 14:35	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 14:35	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 14:35	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 14:35	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 14:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		70 - 121					03/12/19 14:35	1
4-Bromofluorobenzene (Surr)	100		59 - 120					03/12/19 14:35	1
Toluene-d8 (Surr)	111		70 - 123					03/12/19 14:35	1
Dibromofluoromethane (Surr)	109		75 - 128					03/12/19 14:35	1

Client Sample Results

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

TestAmerica Job ID: 240-108854-1

Client Sample ID: MW-84S_022819

Lab Sample ID: 240-108854-4

Date Collected: 02/28/19 15:10

Matrix: Water

Date Received: 03/02/19 09:45

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			03/08/19 01:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 125					03/08/19 01:05	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			03/12/19 14:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 14:57	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 14:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 14:57	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 14:57	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 14:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		70 - 121					03/12/19 14:57	1
4-Bromofluorobenzene (Surr)	96		59 - 120					03/12/19 14:57	1
Toluene-d8 (Surr)	107		70 - 123					03/12/19 14:57	1
Dibromofluoromethane (Surr)	110		75 - 128					03/12/19 14:57	1

Client Sample Results

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

TestAmerica Job ID: 240-108854-1

Client Sample ID: MW-87_022819

Lab Sample ID: 240-108854-5

Date Collected: 02/28/19 16:40

Matrix: Water

Date Received: 03/02/19 09:45

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			03/08/19 15:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		63 - 125					03/08/19 15:43	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			03/12/19 15:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 15:19	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 15:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 15:19	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 15:19	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 15:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		70 - 121					03/12/19 15:19	1
4-Bromofluorobenzene (Surr)	94		59 - 120					03/12/19 15:19	1
Toluene-d8 (Surr)	112		70 - 123					03/12/19 15:19	1
Dibromofluoromethane (Surr)	109		75 - 128					03/12/19 15:19	1

Client Sample Results

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

TestAmerica Job ID: 240-108854-1

Client Sample ID: DUP-04_022819

Lab Sample ID: 240-108854-6

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/02/19 09:45

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			03/08/19 16:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		63 - 125					03/08/19 16:09	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			03/12/19 15:41	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 15:41	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 15:41	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 15:41	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 15:41	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 15:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		70 - 121					03/12/19 15:41	1
4-Bromofluorobenzene (Surr)	97		59 - 120					03/12/19 15:41	1
Toluene-d8 (Surr)	114		70 - 123					03/12/19 15:41	1
Dibromofluoromethane (Surr)	112		75 - 128					03/12/19 15:41	1

Client Sample Results

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

TestAmerica Job ID: 240-108854-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108854-7

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/02/19 09:45

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			03/12/19 16:03	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 16:03	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 16:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 16:03	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 16:03	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 16:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		70 - 121		03/12/19 16:03	1
4-Bromofluorobenzene (Surr)	97		59 - 120		03/12/19 16:03	1
Toluene-d8 (Surr)	110		70 - 123		03/12/19 16:03	1
Dibromofluoromethane (Surr)	110		75 - 128		03/12/19 16:03	1

Surrogate Summary

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

TestAmerica Job ID: 240-108854-1

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)
240-108854-1	MW-86_022819	118	93	110	110
240-108854-2	MW-86S_022819	124 X	101	112	116
240-108854-3	MW-84_022819	120	100	111	109
240-108854-4	MW-84S_022819	115	96	107	110
240-108854-5	MW-87_022819	121	94	112	109
240-108854-6	DUP-04_022819	119	97	114	112
240-108854-7	TRIP BLANK	120	97	110	110
240-108876-H-2 MS	Matrix Spike	105	105	115	94
240-108876-K-2 MSD	Matrix Spike Duplicate	110	110	118	102
LCS 240-371206/4	Lab Control Sample	105	102	114	96
MB 240-371206/6	Method Blank	120	102	115	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

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA
		(63-125)
240-108850-A-4 MS	Matrix Spike	98
240-108850-A-4 MSD	Matrix Spike Duplicate	95
240-108854-1	MW-86_022819	97
240-108854-2	MW-86S_022819	95
240-108854-3	MW-84_022819	102
240-108854-4	MW-84S_022819	97
240-108854-5	MW-87_022819	100
240-108854-6	DUP-04_022819	96
240-109088-A-1 MS	Matrix Spike	92
240-109088-A-1 MSD	Matrix Spike Duplicate	95
LCS 240-370737/4	Lab Control Sample	85
LCS 240-370850/4	Lab Control Sample	97
MB 240-370737/5	Method Blank	89
MB 240-370850/5	Method Blank	94

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (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
		(10-150)
MRL 240-370737/6	Lab Control Sample	95
MRL 240-370850/6	Lab Control Sample	95

TestAmerica Canton

Surrogate Summary

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

TestAmerica Job ID: 240-108854-1

Surrogate Legend

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

1

2

3

4

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14

QC Sample Results

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

TestAmerica Job ID: 240-108854-1

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

Lab Sample ID: MB 240-371206/6

Matrix: Water

Analysis Batch: 371206

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			03/12/19 10:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 10:30	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 10:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 10:30	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 10:30	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 10:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		70 - 121		03/12/19 10:30	1
4-Bromofluorobenzene (Surr)	102		59 - 120		03/12/19 10:30	1
Toluene-d8 (Surr)	115		70 - 123		03/12/19 10:30	1
Dibromofluoromethane (Surr)	106		75 - 128		03/12/19 10:30	1

Lab Sample ID: LCS 240-371206/4

Matrix: Water

Analysis Batch: 371206

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	10.7		ug/L		107	65 - 139
cis-1,2-Dichloroethene	10.0	9.40		ug/L		94	76 - 128
Tetrachloroethene	10.0	7.57		ug/L		76	74 - 130
trans-1,2-Dichloroethene	10.0	10.0		ug/L		100	78 - 133
Trichloroethene	10.0	7.62		ug/L		76	76 - 125
Vinyl chloride	10.0	14.0		ug/L		140	58 - 143

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		70 - 121
4-Bromofluorobenzene (Surr)	102		59 - 120
Toluene-d8 (Surr)	114		70 - 123
Dibromofluoromethane (Surr)	96		75 - 128

Lab Sample ID: 240-108876-H-2 MS

Matrix: Water

Analysis Batch: 371206

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	9.38		ug/L		94	53 - 140
cis-1,2-Dichloroethene	1.0	U	10.0	9.66		ug/L		97	64 - 130
Tetrachloroethene	1.0	U	10.0	6.80		ug/L		68	51 - 136
trans-1,2-Dichloroethene	1.0	U	10.0	9.71		ug/L		97	68 - 133
Trichloroethene	1.0	U	10.0	7.03		ug/L		70	55 - 131
Vinyl chloride	1.0	U F1	10.0	12.4		ug/L		124	43 - 154

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		70 - 121
4-Bromofluorobenzene (Surr)	105		59 - 120
Toluene-d8 (Surr)	115		70 - 123

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108854-1

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

Lab Sample ID: 240-108876-H-2 MS
Matrix: Water
Analysis Batch: 371206

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

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

Lab Sample ID: 240-108876-K-2 MSD
Matrix: Water
Analysis Batch: 371206

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

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits			
1,1-Dichloroethene	1.0	U	10.0	11.5		ug/L		115	53 - 140	20		35
cis-1,2-Dichloroethene	1.0	U	10.0	10.6		ug/L		106	64 - 130	9		21
Tetrachloroethene	1.0	U	10.0	7.92		ug/L		79	51 - 136	15		23
trans-1,2-Dichloroethene	1.0	U	10.0	10.6		ug/L		106	68 - 133	9		24
Trichloroethene	1.0	U	10.0	8.02		ug/L		80	55 - 131	13		23
Vinyl chloride	1.0	U F1	10.0	16.3	F1	ug/L		163	43 - 154	27		29

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	110		70 - 121
4-Bromofluorobenzene (Surr)	110		59 - 120
Toluene-d8 (Surr)	118		70 - 123
Dibromofluoromethane (Surr)	102		75 - 128

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

Lab Sample ID: MB 240-370737/5
Matrix: Water
Analysis Batch: 370737

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			03/07/19 15:14	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	89		63 - 125		03/07/19 15:14	1

Lab Sample ID: LCS 240-370737/4
Matrix: Water
Analysis Batch: 370737

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
1,4-Dioxane	10.0	9.99		ug/L		100	59 - 131

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

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108854-1

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

Lab Sample ID: MRL 240-370737/6
Matrix: Water
Analysis Batch: 370737

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	0.00100	0.00123	J	ng/uL		123	10 - 150
Surrogate		MRL %Recovery	MRL Qualifier				Limits
1,2-Dichloroethane-d4 (Surr)		95					10 - 150

Lab Sample ID: 240-108850-A-4 MS
Matrix: Water
Analysis Batch: 370737

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	100		10.0	109	4	ug/L		98	52 - 129
Surrogate		MS %Recovery			MS Qualifier				Limits
1,2-Dichloroethane-d4 (Surr)		98							63 - 125

Lab Sample ID: 240-108850-A-4 MSD
Matrix: Water
Analysis Batch: 370737

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	100		10.0	112	4	ug/L		126	52 - 129	3	13
Surrogate		MSD %Recovery			MSD Qualifier				Limits		
1,2-Dichloroethane-d4 (Surr)		95							63 - 125		

Lab Sample ID: MB 240-370850/5
Matrix: Water
Analysis Batch: 370850

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			03/08/19 12:43	1
Surrogate		MB %Recovery					Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)		94						03/08/19 12:43	1

Lab Sample ID: LCS 240-370850/4
Matrix: Water
Analysis Batch: 370850

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	9.41		ug/L		94	59 - 131
Surrogate		LCS %Recovery	LCS Qualifier				Limits
1,2-Dichloroethane-d4 (Surr)		97					63 - 125

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108854-1

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

Lab Sample ID: MRL 240-370850/6
Matrix: Water
Analysis Batch: 370850

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	0.00100	0.00119	J	ng/uL		119	10 - 150
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	95		10 - 150				

Lab Sample ID: 240-109088-A-1 MS
Matrix: Water
Analysis Batch: 370850

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	9.72		ug/L		97	52 - 129
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	92		63 - 125						

Lab Sample ID: 240-109088-A-1 MSD
Matrix: Water
Analysis Batch: 370850

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	9.42		ug/L		94	52 - 129	3	13
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	95		63 - 125								

QC Association Summary

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

TestAmerica Job ID: 240-108854-1

GC/MS VOA

Analysis Batch: 370737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108854-1	MW-86_022819	Total/NA	Water	8260B SIM	
240-108854-2	MW-86S_022819	Total/NA	Water	8260B SIM	
240-108854-3	MW-84_022819	Total/NA	Water	8260B SIM	
240-108854-4	MW-84S_022819	Total/NA	Water	8260B SIM	
MB 240-370737/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-370737/4	Lab Control Sample	Total/NA	Water	8260B SIM	
MRL 240-370737/6	Lab Control Sample	Total/NA	Water	8260B SIM	
240-108850-A-4 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-108850-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 370850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108854-5	MW-87_022819	Total/NA	Water	8260B SIM	
240-108854-6	DUP-04_022819	Total/NA	Water	8260B SIM	
MB 240-370850/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-370850/4	Lab Control Sample	Total/NA	Water	8260B SIM	
MRL 240-370850/6	Lab Control Sample	Total/NA	Water	8260B SIM	
240-109088-A-1 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-109088-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 371206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108854-1	MW-86_022819	Total/NA	Water	8260B	
240-108854-2	MW-86S_022819	Total/NA	Water	8260B	
240-108854-3	MW-84_022819	Total/NA	Water	8260B	
240-108854-4	MW-84S_022819	Total/NA	Water	8260B	
240-108854-5	MW-87_022819	Total/NA	Water	8260B	
240-108854-6	DUP-04_022819	Total/NA	Water	8260B	
240-108854-7	TRIP BLANK	Total/NA	Water	8260B	
MB 240-371206/6	Method Blank	Total/NA	Water	8260B	
LCS 240-371206/4	Lab Control Sample	Total/NA	Water	8260B	
240-108876-H-2 MS	Matrix Spike	Total/NA	Water	8260B	
240-108876-K-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Lab Chronicle

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

TestAmerica Job ID: 240-108854-1

Client Sample ID: MW-86_022819

Date Collected: 02/28/19 10:05

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108854-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371206	03/12/19 13:52	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370737	03/07/19 23:48	SAM	TAL CAN

Client Sample ID: MW-86S_022819

Date Collected: 02/28/19 11:00

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108854-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371206	03/12/19 14:13	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370737	03/08/19 00:13	SAM	TAL CAN

Client Sample ID: MW-84_022819

Date Collected: 02/28/19 12:25

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108854-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371206	03/12/19 14:35	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370737	03/08/19 00:39	SAM	TAL CAN

Client Sample ID: MW-84S_022819

Date Collected: 02/28/19 15:10

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108854-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371206	03/12/19 14:57	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370737	03/08/19 01:05	SAM	TAL CAN

Client Sample ID: MW-87_022819

Date Collected: 02/28/19 16:40

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108854-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371206	03/12/19 15:19	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 15:43	SAM	TAL CAN

Client Sample ID: DUP-04_022819

Date Collected: 02/28/19 00:00

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108854-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371206	03/12/19 15:41	LEE	TAL CAN

TestAmerica Canton

Lab Chronicle

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

TestAmerica Job ID: 240-108854-1

Client Sample ID: DUP-04_022819

Lab Sample ID: 240-108854-6

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 16:09	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108854-7

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371206	03/12/19 16:03	LEE	TAL CAN

Laboratory References:

TAL CAN = 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

TestAmerica Job ID: 240-108854-1

Laboratory: 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
Kansas	NELAP	7	E-10336	04-30-19 *
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	03-31-19 *
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.

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 Project Manager: Kris Hinskey
 Telephone: 248-994-2240
 Email: kris@hinskey.com

Site Contact: Angela DeGrandis
 Telephone: 734-320-0065

Lab Contact: Mike DelMonico
 Telephone: 330-497-9396

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: MI001454-0004-00002
 PO # MI001454-0004-00002

Method of Shipment/Carrier: 3 weeks 2 weeks 1 week 2 days 1 day

Shipping/Tracking No: MI001454-0004-00003

Sample Identification	Sample Date	Sample Time	Matrix				Containers & Preservatives				Filtered Sample (Y/N)	Composite (C/Grab)	1,1-DCE 8260B	GIS-1,2-DCE 8260B	Trans-1,2-DCE 8260B	PCE 8260B	TCE 8260B	Vinyl Chloride 8260B	1,4-Dioxane 8260B SIM	Sample Specific Notes / Special Instructions
			Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl										
MW-86-022819	2/28/19	1005	X				X								X	X	X	X	3 VOAS FOR 8260B	
MW-865-022819	2/28/19	1100	X				X								X	X	X	X	3 VOAS FOR 8260B	
MW-84-022819	2/28/19	1225	X				X								X	X	X	X	6 VOAS / SAMPLE	
MW-845-022819	2/28/19	1510	X				X								X	X	X	X		
MW-87-022819	2/28/19	1640	X				X								X	X	X	X		
DUP-04-022819	2/28/19	---	X				X								X	X	X	X		
TRUP BLANK																				

Possible Hazard Identification
 Non-Hazard Irritable Corrosive Flammable Toxic Other

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
RACHEL BLEAH Paul Fishak	ARCADIS	2/28/19 1930	NOVI COLD STORAGE	ARCADIS	2/28/19 1930
CAROL DINEEN	ARCADIS	03/11/19	JAC	JAC	3-1-19 1515
JIM HELL	JAC	3-1-19 1520	JAC	JAC	3-2-19 995

Barcode: 240-108854 Chain of Custody



TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 108854

Client Arcadis Site Name _____
Cooler Received on 3-2-19 Opened on 3-2-19

Cooler unpacked by: [Signature]

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

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

TestAmerica Cooler # 14 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. 2.0 °C Corrected Cooler Temp. 1.8 °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 _____ 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# HC861525
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: _____