



Environment Testing
TestAmerica

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-110999-1

Client Project/Site: Ford LTP Livonia MI - E203728

For:

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

Mike DelMonico

Authorized for release by:
4/29/2019 4:50:27 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 - E203728

Job ID: 240-110999-1

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.
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 - E203728

Job ID: 240-110999-1

Job ID: 240-110999-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203728

Report Number: 240-110999-1

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 4/16/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.6° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples HPT-224A_21-25_041219 (240-110999-1), HPT-224A_16-20_041219 (240-110999-2), HPT-224A_11-15_041219 (240-110999-3), HPT-224A_6-10_041219 (240-110999-4), TRIP BLANK (240-110999-5) and DUP-05 (240-110999-6) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/19/2019 and 04/22/2019.

Dibromofluoromethane (Surr) failed the surrogate recovery criteria high for HPT-224A_21-25_041219 (240-110999-1) and HPT-224A_11-15_041219 (240-110999-3). 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 HPT-224A_21-25_041219 (240-110999-1), HPT-224A_16-20_041219 (240-110999-2), HPT-224A_11-15_041219 (240-110999-3), HPT-224A_6-10_041219 (240-110999-4) and DUP-05 (240-110999-6) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 04/17/2019.

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

Job ID: 240-110999-1 (Continued)

Laboratory: Eurofins TestAmerica, Canton (Continued)

The pH is greater than 2 for the following sample: HPT-224A_6-10_041219 (240-110999-4).

No additional 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 - E203728

Job ID: 240-110999-1

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 - E203728

Job ID: 240-110999-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-110999-1	HPT-224A_21-25_041219	Water	04/12/19 10:00	04/16/19 10:00
240-110999-2	HPT-224A_16-20_041219	Water	04/12/19 10:15	04/16/19 10:00
240-110999-3	HPT-224A_11-15_041219	Water	04/12/19 10:30	04/16/19 10:00
240-110999-4	HPT-224A_6-10_041219	Water	04/12/19 10:45	04/16/19 10:00
240-110999-5	TRIP BLANK	Water	04/12/19 00:00	04/16/19 10:00
240-110999-6	DUP-05	Water	04/12/19 00:00	04/16/19 10:00

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Eurofins TestAmerica, Canton

Detection Summary

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

Client Sample ID: HPT-224A_21-25_041219

Lab Sample ID: 240-110999-1

No Detections.

Client Sample ID: HPT-224A_16-20_041219

Lab Sample ID: 240-110999-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.32	J	1.0	0.10	ug/L	1	—	8260B	Total/NA

Client Sample ID: HPT-224A_11-15_041219

Lab Sample ID: 240-110999-3

No Detections.

Client Sample ID: HPT-224A_6-10_041219

Lab Sample ID: 240-110999-4

No Detections.

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-110999-5

No Detections.

Client Sample ID: DUP-05

Lab Sample ID: 240-110999-6

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 - E203728

Job ID: 240-110999-1

Client Sample ID: HPT-224A_21-25_041219

Lab Sample ID: 240-110999-1

Matrix: Water

Date Collected: 04/12/19 10:00

Date Received: 04/16/19 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			04/17/19 13:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		63 - 125					04/17/19 13:51	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			04/19/19 20:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			04/19/19 20:00	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			04/19/19 20:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			04/19/19 20:00	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			04/19/19 20:00	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			04/19/19 20:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		70 - 121					04/19/19 20:00	1
4-Bromofluorobenzene (Surr)	77		59 - 120					04/19/19 20:00	1
Toluene-d8 (Surr)	97		70 - 123					04/19/19 20:00	1
Dibromofluoromethane (Surr)	130	X	75 - 128					04/19/19 20:00	1

Client Sample Results

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

Client Sample ID: HPT-224A_16-20_041219

Lab Sample ID: 240-110999-2

Matrix: Water

Date Collected: 04/12/19 10:15

Date Received: 04/16/19 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			04/17/19 14:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		63 - 125					04/17/19 14:17	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			04/19/19 21:40	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			04/19/19 21:40	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			04/19/19 21:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			04/19/19 21:40	1
Trichloroethene	0.32	J	1.0	0.10	ug/L			04/19/19 21:40	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			04/19/19 21:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 121					04/19/19 21:40	1
4-Bromofluorobenzene (Surr)	70		59 - 120					04/19/19 21:40	1
Toluene-d8 (Surr)	92		70 - 123					04/19/19 21:40	1
Dibromofluoromethane (Surr)	122		75 - 128					04/19/19 21:40	1

Client Sample Results

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

Client Sample ID: HPT-224A_11-15_041219

Lab Sample ID: 240-110999-3

Matrix: Water

Date Collected: 04/12/19 10:30

Date Received: 04/16/19 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			04/17/19 14:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		63 - 125					04/17/19 14:42	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			04/22/19 15:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			04/22/19 15:02	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			04/22/19 15:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			04/22/19 15:02	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			04/22/19 15:02	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			04/22/19 15:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		70 - 121					04/22/19 15:02	1
4-Bromofluorobenzene (Surr)	75		59 - 120					04/22/19 15:02	1
Toluene-d8 (Surr)	97		70 - 123					04/22/19 15:02	1
Dibromofluoromethane (Surr)	130	X	75 - 128					04/22/19 15:02	1

Client Sample Results

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

Client Sample ID: HPT-224A_6-10_041219

Lab Sample ID: 240-110999-4

Matrix: Water

Date Collected: 04/12/19 10:45

Date Received: 04/16/19 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			04/17/19 15:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		63 - 125					04/17/19 15:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			04/22/19 15:24	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			04/22/19 15:24	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			04/22/19 15:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			04/22/19 15:24	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			04/22/19 15:24	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			04/22/19 15:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		70 - 121					04/22/19 15:24	1
4-Bromofluorobenzene (Surr)	77		59 - 120					04/22/19 15:24	1
Toluene-d8 (Surr)	95		70 - 123					04/22/19 15:24	1
Dibromofluoromethane (Surr)	125		75 - 128					04/22/19 15:24	1

Client Sample Results

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

Client Sample ID: TRIP BLANK

Date Collected: 04/12/19 00:00

Date Received: 04/16/19 10:00

Lab Sample ID: 240-110999-5

Matrix: Water

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			04/22/19 15:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			04/22/19 15:46	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			04/22/19 15:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			04/22/19 15:46	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			04/22/19 15:46	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			04/22/19 15:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		70 - 121					04/22/19 15:46	1
4-Bromofluorobenzene (Surr)	77		59 - 120					04/22/19 15:46	1
Toluene-d8 (Surr)	99		70 - 123					04/22/19 15:46	1
Dibromofluoromethane (Surr)	127		75 - 128					04/22/19 15:46	1

Client Sample Results

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

Client Sample ID: DUP-05

Date Collected: 04/12/19 00:00

Date Received: 04/16/19 10:00

Lab Sample ID: 240-110999-6

Matrix: Water

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			04/17/19 15:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		63 - 125					04/17/19 15:33	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			04/22/19 16:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			04/22/19 16:08	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			04/22/19 16:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			04/22/19 16:08	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			04/22/19 16:08	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			04/22/19 16:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 121					04/22/19 16:08	1
4-Bromofluorobenzene (Surr)	72		59 - 120					04/22/19 16:08	1
Toluene-d8 (Surr)	94		70 - 123					04/22/19 16:08	1
Dibromofluoromethane (Surr)	125		75 - 128					04/22/19 16:08	1

Surrogate Summary

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

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)
240-110950-E-2 MS	Matrix Spike	95	99	107	115
240-110950-E-2 MSD	Matrix Spike Duplicate	91	98	104	113
240-110973-G-1 MSD	Matrix Spike Duplicate	89	91	104	106
240-110973-H-1 MS	Matrix Spike	98	99	106	115
240-110999-1	HPT-224A_21-25_041219	112	77	97	130 X
240-110999-2	HPT-224A_16-20_041219	105	70	92	122
240-110999-3	HPT-224A_11-15_041219	110	75	97	130 X
240-110999-4	HPT-224A_6-10_041219	109	77	95	125
240-110999-5	TRIP BLANK	110	77	99	127
240-110999-6	DUP-05	107	72	94	125
LCS 240-377344/4	Lab Control Sample	91	100	108	112
LCS 240-377602/4	Lab Control Sample	96	101	111	119
MB 240-377344/6	Method Blank	104	78	98	121
MB 240-377602/35	Method Blank	106	75	96	120

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)			
240-110996-A-2 MS	Matrix Spike	107			
240-110996-A-2 MSD	Matrix Spike Duplicate	103			
240-110999-1	HPT-224A_21-25_041219	100			
240-110999-2	HPT-224A_16-20_041219	105			
240-110999-3	HPT-224A_11-15_041219	104			
240-110999-4	HPT-224A_6-10_041219	102			
240-110999-6	DUP-05	104			
LCS 240-376915/4	Lab Control Sample	99			
MB 240-376915/5	Method Blank	101			

Surrogate Legend

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

Eurofins TestAmerica, Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

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

Lab Sample ID: MB 240-377344/6

Matrix: Water

Analysis Batch: 377344

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			04/19/19 12:18	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			04/19/19 12:18	1
Tetrachloroethylene	1.0	U	1.0	0.15	ug/L			04/19/19 12:18	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			04/19/19 12:18	1
Trichloroethylene	1.0	U	1.0	0.10	ug/L			04/19/19 12:18	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			04/19/19 12:18	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	104		70 - 121		04/19/19 12:18	1
4-Bromofluorobenzene (Surr)	78		59 - 120		04/19/19 12:18	1
Toluene-d8 (Surr)	98		70 - 123		04/19/19 12:18	1
Dibromofluoromethane (Surr)	121		75 - 128		04/19/19 12:18	1

Lab Sample ID: LCS 240-377344/4

Matrix: Water

Analysis Batch: 377344

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

Analyte	Spike		LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result							
1,1-Dichloroethene	10.0	10.0			ug/L		100	65 - 139	
cis-1,2-Dichloroethene	10.0	11.4			ug/L		114	76 - 128	
Tetrachloroethylene	10.0	12.0			ug/L		120	74 - 130	
trans-1,2-Dichloroethene	10.0	12.5			ug/L		125	78 - 133	
Trichloroethylene	10.0	9.92			ug/L		99	76 - 125	
Vinyl chloride	10.0	10.6			ug/L		106	58 - 143	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	91		70 - 121
4-Bromofluorobenzene (Surr)	100		59 - 120
Toluene-d8 (Surr)	108		70 - 123
Dibromofluoromethane (Surr)	112		75 - 128

Lab Sample ID: 240-110973-G-1 MSD

Matrix: Water

Analysis Batch: 377344

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

Analyte	Sample		Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier									
1,1-Dichloroethene	1.0	U	10.0	8.70		ug/L		87	53 - 140	2	35
cis-1,2-Dichloroethene	1.0	U	10.0	9.74		ug/L		97	64 - 130	1	21
Tetrachloroethylene	1.0	U	10.0	9.82		ug/L		98	51 - 136	2	23
trans-1,2-Dichloroethene	1.0	U	10.0	10.9		ug/L		109	68 - 133	2	24
Trichloroethylene	0.21	J	10.0	8.73		ug/L		85	55 - 131	3	23
Vinyl chloride	1.0	U	10.0	9.87		ug/L		99	43 - 154	8	29

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	89		70 - 121
4-Bromofluorobenzene (Surr)	91		59 - 120
Toluene-d8 (Surr)	104		70 - 123

Eurofins TestAmerica, Canton

QC Sample Results

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

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

Lab Sample ID: 240-110973-G-1 MSD

Matrix: Water

Analysis Batch: 377344

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

Surrogate	MSD	MSD	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)			106		75 - 128

Lab Sample ID: 240-110973-H-1 MS

Matrix: Water

Analysis Batch: 377344

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

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1-Dichloroethene	1.0	U	10.0	8.52		ug/L	85	53 - 140	
cis-1,2-Dichloroethene	1.0	U	10.0	9.84		ug/L	98	64 - 130	
Tetrachloroethene	1.0	U	10.0	9.63		ug/L	96	51 - 136	
trans-1,2-Dichloroethene	1.0	U	10.0	11.1		ug/L	111	68 - 133	
Trichloroethene	0.21	J	10.0	8.44		ug/L	82	55 - 131	
Vinyl chloride	1.0	U	10.0	10.6		ug/L	106	43 - 154	

Surrogate	MS	MS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 121		
4-Bromofluorobenzene (Surr)	99		59 - 120		
Toluene-d8 (Surr)	106		70 - 123		
Dibromofluoromethane (Surr)	115		75 - 128		

Lab Sample ID: MB 240-377602/35

Matrix: Water

Analysis Batch: 377602

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0		1.0	0.19	ug/L		04/22/19 13:00		1
cis-1,2-Dichloroethene	1.0	U	1.0		1.0	0.16	ug/L		04/22/19 13:00		1
Tetrachloroethene	1.0	U	1.0		1.0	0.15	ug/L		04/22/19 13:00		1
trans-1,2-Dichloroethene	1.0	U	1.0		1.0	0.19	ug/L		04/22/19 13:00		1
Trichloroethene	1.0	U	1.0		1.0	0.10	ug/L		04/22/19 13:00		1
Vinyl chloride	1.0	U	1.0		1.0	0.20	ug/L		04/22/19 13:00		1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 121				04/22/19 13:00	1
4-Bromofluorobenzene (Surr)	75		59 - 120				04/22/19 13:00	1
Toluene-d8 (Surr)	96		70 - 123				04/22/19 13:00	1
Dibromofluoromethane (Surr)	120		75 - 128				04/22/19 13:00	1

Lab Sample ID: LCS 240-377602/4

Matrix: Water

Analysis Batch: 377602

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
1,1-Dichloroethene	10.0	9.97		ug/L	100	65 - 139	
cis-1,2-Dichloroethene	10.0	11.5		ug/L	115	76 - 128	
Tetrachloroethene	10.0	11.9		ug/L	119	74 - 130	
trans-1,2-Dichloroethene	10.0	12.7		ug/L	127	78 - 133	
Trichloroethene	10.0	10.2		ug/L	102	76 - 125	

Eurofins TestAmerica, Canton

QC Sample Results

Client: ARCADIS U.S., Inc.

Job ID: 240-110999-1

Project/Site: Ford LTP Livonia MI - E203728

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

Lab Sample ID: LCS 240-377602/4

Matrix: Water

Analysis Batch: 377602

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Vinyl chloride	10.0	10.0		ug/L	100	58 - 143	

Surrogate	%Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		70 - 121
4-Bromofluorobenzene (Surr)	101		59 - 120
Toluene-d8 (Surr)	111		70 - 123
Dibromofluoromethane (Surr)	119		75 - 128

Lab Sample ID: 240-110950-E-2 MS

Matrix: Water

Analysis Batch: 377602

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
1,1-Dichloroethene	10	U	100	82.0		ug/L	82	53 - 140	
cis-1,2-Dichloroethene	270		100	359		ug/L	90	64 - 130	
Tetrachloroethene	10	U	100	84.8		ug/L	85	51 - 136	
trans-1,2-Dichloroethene	120		100	232		ug/L	110	68 - 133	
Trichloroethene	42		100	120		ug/L	78	55 - 131	
Vinyl chloride	10	U	100	104		ug/L	104	43 - 154	

Surrogate	%Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 121
4-Bromofluorobenzene (Surr)	99		59 - 120
Toluene-d8 (Surr)	107		70 - 123
Dibromofluoromethane (Surr)	115		75 - 128

Lab Sample ID: 240-110950-E-2 MSD

Matrix: Water

Analysis Batch: 377602

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
1,1-Dichloroethene	10	U	100	91.6		ug/L	92	53 - 140		11	35
cis-1,2-Dichloroethene	270		100	360		ug/L	91	64 - 130		0	21
Tetrachloroethene	10	U	100	100		ug/L	100	51 - 136		17	23
trans-1,2-Dichloroethene	120		100	239		ug/L	117	68 - 133		3	24
Trichloroethene	42		100	128		ug/L	85	55 - 131		6	23
Vinyl chloride	10	U	100	109		ug/L	109	43 - 154		5	29

Surrogate	%Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		70 - 121
4-Bromofluorobenzene (Surr)	98		59 - 120
Toluene-d8 (Surr)	104		70 - 123
Dibromofluoromethane (Surr)	113		75 - 128

Eurofins TestAmerica, Canton

QC Sample Results

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

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

Lab Sample ID: MB 240-376915/5

Matrix: Water

Analysis Batch: 376915

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			04/17/19 12:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		63 - 125		04/17/19 12:59	1

Lab Sample ID: LCS 240-376915/4

Matrix: Water

Analysis Batch: 376915

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
1,4-Dioxane	10.0	10.5		ug/L		105	59 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		63 - 125

Lab Sample ID: 240-110996-A-2 MS

Matrix: Water

Analysis Batch: 376915

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
1,4-Dioxane	2.0	U	10.0	10.8		ug/L		108	52 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		63 - 125

Lab Sample ID: 240-110996-A-2 MSD

Matrix: Water

Analysis Batch: 376915

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD
1,4-Dioxane	2.0	U	10.0	11.1		ug/L		111	52 - 129

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		63 - 125

QC Association Summary

Client: ARCADIS U.S., Inc.

Project/Site: Ford LTP Livonia MI - E203728

Job ID: 240-110999-1

GC/MS VOA

Analysis Batch: 376915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-110999-1	HPT-224A_21-25_041219	Total/NA	Water	8260B SIM	
240-110999-2	HPT-224A_16-20_041219	Total/NA	Water	8260B SIM	
240-110999-3	HPT-224A_11-15_041219	Total/NA	Water	8260B SIM	
240-110999-4	HPT-224A_6-10_041219	Total/NA	Water	8260B SIM	
240-110999-6	DUP-05	Total/NA	Water	8260B SIM	
MB 240-376915/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-376915/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-110996-A-2 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-110996-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 377344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-110999-1	HPT-224A_21-25_041219	Total/NA	Water	8260B	
240-110999-2	HPT-224A_16-20_041219	Total/NA	Water	8260B	
MB 240-377344/6	Method Blank	Total/NA	Water	8260B	
LCS 240-377344/4	Lab Control Sample	Total/NA	Water	8260B	
240-110973-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
240-110973-H-1 MS	Matrix Spike	Total/NA	Water	8260B	

Analysis Batch: 377602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-110999-3	HPT-224A_11-15_041219	Total/NA	Water	8260B	
240-110999-4	HPT-224A_6-10_041219	Total/NA	Water	8260B	
240-110999-5	TRIP BLANK	Total/NA	Water	8260B	
240-110999-6	DUP-05	Total/NA	Water	8260B	
MB 240-377602/35	Method Blank	Total/NA	Water	8260B	
LCS 240-377602/4	Lab Control Sample	Total/NA	Water	8260B	
240-110950-E-2 MS	Matrix Spike	Total/NA	Water	8260B	
240-110950-E-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Lab Chronicle

Client: ARCADIS U.S., Inc.

Job ID: 240-110999-1

Project/Site: Ford LTP Livonia MI - E203728

Client Sample ID: HPT-224A_21-25_041219

Lab Sample ID: 240-110999-1

Matrix: Water

Date Collected: 04/12/19 10:00

Date Received: 04/16/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	377344	04/19/19 20:00	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	376915	04/17/19 13:51	SAM	TAL CAN

Client Sample ID: HPT-224A_16-20_041219

Lab Sample ID: 240-110999-2

Matrix: Water

Date Collected: 04/12/19 10:15

Date Received: 04/16/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	377344	04/19/19 21:40	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	376915	04/17/19 14:17	SAM	TAL CAN

Client Sample ID: HPT-224A_11-15_041219

Lab Sample ID: 240-110999-3

Matrix: Water

Date Collected: 04/12/19 10:30

Date Received: 04/16/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	377602	04/22/19 15:02	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	376915	04/17/19 14:42	SAM	TAL CAN

Client Sample ID: HPT-224A_6-10_041219

Lab Sample ID: 240-110999-4

Matrix: Water

Date Collected: 04/12/19 10:45

Date Received: 04/16/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	377602	04/22/19 15:24	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	376915	04/17/19 15:08	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-110999-5

Matrix: Water

Date Collected: 04/12/19 00:00

Date Received: 04/16/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	377602	04/22/19 15:46	LEE	TAL CAN

Client Sample ID: DUP-05

Lab Sample ID: 240-110999-6

Matrix: Water

Date Collected: 04/12/19 00:00

Date Received: 04/16/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	377602	04/22/19 16:08	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	376915	04/17/19 15:33	SAM	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 - E203728

Job ID: 240-110999-1

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
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	03-31-20
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 Canton

4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

TestAmerica MICHIGAN
Chain of Custody Record

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Client Information Client Contact: Caitlin O'Neill Company: ARCADIS U.S. Inc				Sampler: Christina Weaver Phone: (989)-619-5009	Lab PM: DellMonico, Michael E-Mail: michael.dellmonico@testamericainc.com	Carrier Tracking No(s): Page <u>1</u> of <u>1</u>	Job #:
Analysis Requested							
Address: 28550 Cabot Drive Suite 500 City: Novi State, Zip: MI, 48377 Phone: 248-722-2411 Email: Caitlin.O'Neill@arcadis.com Project Name: Ford LTP Livonia MI - E203631 Site: SSO#:							
Due Date Requested: TAT Requested (days): <u>14</u> (<u>10 DAY</u>) PO #: MI001318.00002.00002 WO #: E203631 Project #: 24015533 SSO#:							
Total Number of containers: 1							
Preservation Codes: A - HCl B - NaOH C - Zn Acetate D - Na2O4S E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:							
Special Instructions/Note: 8260B - VOCs (Short List) 8260B - MI - VOCs (Short List) 8260B - SIM							
Field Filtered Sample (Yes or No): Perform MS/MSD (Yes or No):							
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Sample Matrix (Water, Spiked, On-WasteOil, Et/Tissue, Air)	Preservation Code:	A	F
HPT-224A_21-25	4/12/19	1000	G	Water	UN303	6	6
HPT-224A_16-20	4/12/19	1015	G	Water	UN303	6	6
HPT-224A_11-15	4/12/19	1030	G	Water	UN303	6	6
HPT-224A_6-10	4/12/19	1045	G	Water	UN303	6	6
Top Blank	4/12/19	—	—	Water	UN303	1	6
Dup-05	4/12/19	—	6	Water	UN303	6	6
				Water			
				Water			
				Water			
				Water			
				Water			
				Water			
Possible Hazard Identification	<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						Time: <u>Jan 1 month</u>
Deliverable Requested: I, II, III Other (specify)							<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months <u>Submit all results through codaia.com</u>
Empty Kit Relinquished by:	Date:	Date:	Received By <u>Caitlin Weaver</u>	Company <u>ARCADIS</u>	Received By <u>Micheal DellMonico</u>	Company <u>ARCADIS</u>	Time: <u>4/12/19</u>
Relinquished by <u>Caitlin Weaver</u>	Date/Time: <u>4/15/19</u>	Date/Time: <u>0900</u>	Received By <u>Micheal DellMonico</u>	Company <u>ARCADIS</u>	Received By <u>Micheal DellMonico</u>	Company <u>ARCADIS</u>	Date/Time: <u>4/15/19</u>
Custody Seals intact: △ Yes ▲ No	Custody Seal No.: 1000	Cooler Temperature(°C) and Other Remarks:					

Ver: 01/16/2019

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TestAmerica Canton Sample Receipt Form/Narrative

Login # : 110999

Canton Facility

Client Accelis Site Name _____
 Cooler Received on 4/16/19 Opened on 4/16/19 Cooler unpacked by: S
 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. 1.8 °C Corrected Cooler Temp. 1.6 °C
 IR GUN #36 (CF +0.7°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
 3. Shippers' packing slip attached to the cooler(s)? Yes No
 4. Did custody papers accompany the sample(s)? Yes No
 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
 7. Did all bottles arrive in good condition (Unbroken)? Yes No
 8. Could all bottle labels be reconciled with the COC? Yes No
 9. Were correct bottle(s) used for the test(s) indicated? Yes No
 10. Sufficient quantity received to perform indicated analyses? Yes No
 11. Are these work share samples?

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 NA
 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 # N/A Yes No NA
 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:

JR

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: _____