

ANALYTICAL REPORT

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Laboratory Job ID: 240-119554-1

Client Project/Site: Ford LTP Livonia MI - E203728
Revision: 1

For:
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Authorized for release by:
10/23/2019 2:25:05 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: 240-119554-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

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

Job ID: 240-119554-1

Job ID: 240-119554-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203728

Report Number: 240-119554-1

Revision

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.

Report revised on 10/23/2019 to include results for 1,1-DCE rather than 1,1-DCA.

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

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

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

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

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

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

RECEIPT

The samples were received on 9/27/2019 8:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-69_092319 (240-119554-1), MW-7_092519 (240-119554-2), MW-1_092519 (240-119554-3), MW-36_092519 (240-119554-4), MW-25_092519 (240-119554-5) and TRIP BLANK (240-119554-6) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/04/2019 and 10/05/2019.

Method(s) 8260B: NO MS/MSD in batch 404189 due to an incorrect spike amount added.

MW-69_092319 (240-119554-1), MW-7_092519 (240-119554-2), MW-1_092519 (240-119554-3), MW-36_092519 (240-119554-4), MW-25_092519 (240-119554-5) and TRIP BLANK (240-119554-6)

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

Case Narrative

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

Job ID: 240-119554-1

Job ID: 240-119554-1 (Continued)

Laboratory: Eurofins TestAmerica, Canton (Continued)

VOLATILE ORGANIC COMPOUNDS (GCMS SIM)

Samples MW-69_092319 (240-119554-1), MW-7_092519 (240-119554-2), MW-1_092519 (240-119554-3), MW-36_092519 (240-119554-4) and MW-25_092519 (240-119554-5) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 10/02/2019 and 10/03/2019.

1,4-Dioxane failed the recovery criteria low for the MS of sample 240-119521-5 in batch 240-403637.

1,4-Dioxane exceeded the RPD limit for the MSD of sample 240-119521-5 in batch 240-403637.

Refer to the QC report for details.

Method(s) 8260B SIM: Internal standard (ISTD) response for the following samples were outside control limits: (240-119521-C-5), (240-119521-C-5 MS) and (240-119521-C-5 MSD). The sample was re-extracted and/or re-analyzed with concurring results, and the original set of data has been reported.

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: 240-119554-1

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: 240-119554-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-119554-1	MW-69_092319	Water	09/23/19 18:03	09/27/19 08:40	
240-119554-2	MW-7_092519	Water	09/25/19 10:15	09/27/19 08:40	
240-119554-3	MW-1_092519	Water	09/25/19 12:10	09/27/19 08:40	
240-119554-4	MW-36_092519	Water	09/25/19 14:42	09/27/19 08:40	
240-119554-5	MW-25_092519	Water	09/25/19 17:45	09/27/19 08:40	
240-119554-6	TRIP BLANK	Water	09/25/19 00:00	09/27/19 08:40	

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

Detection Summary

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

Job ID: 240-119554-1

Client Sample ID: MW-69_092319

Lab Sample ID: 240-119554-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	5.3		2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	0.22	J	1.0	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	3.5		1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-7_092519

Lab Sample ID: 240-119554-2

No Detections.

Client Sample ID: MW-1_092519

Lab Sample ID: 240-119554-3

No Detections.

Client Sample ID: MW-36_092519

Lab Sample ID: 240-119554-4

No Detections.

Client Sample ID: MW-25_092519

Lab Sample ID: 240-119554-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.9		2.0	0.86	ug/L	1		8260B SIM	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-119554-6

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: 240-119554-1

Client Sample ID: MW-69_092319

Lab Sample ID: 240-119554-1

Date Collected: 09/23/19 18:03

Matrix: Water

Date Received: 09/27/19 08:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	5.3		2.0	0.86	ug/L			10/02/19 13:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		63 - 125					10/02/19 13:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/04/19 23:44	1
cis-1,2-Dichloroethene	0.22	J	1.0	0.16	ug/L			10/04/19 23:44	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			10/04/19 23:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/04/19 23:44	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			10/04/19 23:44	1
Vinyl chloride	3.5		1.0	0.20	ug/L			10/04/19 23:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		59 - 120					10/04/19 23:44	1
Dibromofluoromethane (Surr)	83		75 - 128					10/04/19 23:44	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 121					10/04/19 23:44	1
Toluene-d8 (Surr)	96		70 - 123					10/04/19 23:44	1

Client Sample Results

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

Job ID: 240-119554-1

Client Sample ID: MW-7_092519

Lab Sample ID: 240-119554-2

Date Collected: 09/25/19 10:15

Matrix: Water

Date Received: 09/27/19 08:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			10/03/19 12:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		63 - 125		10/03/19 12:51	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			10/05/19 00:06	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			10/05/19 00:06	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			10/05/19 00:06	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/05/19 00:06	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			10/05/19 00:06	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			10/05/19 00:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		59 - 120		10/05/19 00:06	1
Dibromofluoromethane (Surr)	89		75 - 128		10/05/19 00:06	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 121		10/05/19 00:06	1
Toluene-d8 (Surr)	98		70 - 123		10/05/19 00:06	1

Client Sample Results

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

Job ID: 240-119554-1

Client Sample ID: MW-1_092519

Lab Sample ID: 240-119554-3

Date Collected: 09/25/19 12:10

Matrix: Water

Date Received: 09/27/19 08:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L	-		10/03/19 13:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		63 - 125		10/03/19 13:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L	-		10/05/19 00:28	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L	-		10/05/19 00:28	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L	-		10/05/19 00:28	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L	-		10/05/19 00:28	1
Trichloroethene	1.0	U	1.0	0.10	ug/L	-		10/05/19 00:28	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L	-		10/05/19 00:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		59 - 120		10/05/19 00:28	1
Dibromofluoromethane (Surr)	83		75 - 128		10/05/19 00:28	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 121		10/05/19 00:28	1
Toluene-d8 (Surr)	98		70 - 123		10/05/19 00:28	1

Client Sample Results

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

Job ID: 240-119554-1

Client Sample ID: MW-36_092519

Lab Sample ID: 240-119554-4

Date Collected: 09/25/19 14:42

Matrix: Water

Date Received: 09/27/19 08:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			10/03/19 13:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		63 - 125					10/03/19 13:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/05/19 00:50	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			10/05/19 00:50	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			10/05/19 00:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/05/19 00:50	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			10/05/19 00:50	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			10/05/19 00:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		59 - 120					10/05/19 00:50	1
Dibromofluoromethane (Surr)	83		75 - 128					10/05/19 00:50	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 121					10/05/19 00:50	1
Toluene-d8 (Surr)	98		70 - 123					10/05/19 00:50	1

Client Sample Results

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

Job ID: 240-119554-1

Client Sample ID: MW-25_092519

Lab Sample ID: 240-119554-5

Date Collected: 09/25/19 17:45

Matrix: Water

Date Received: 09/27/19 08:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.9		2.0	0.86	ug/L			10/03/19 14:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		63 - 125		10/03/19 14:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/05/19 01:12	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			10/05/19 01:12	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			10/05/19 01:12	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/05/19 01:12	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			10/05/19 01:12	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			10/05/19 01:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		59 - 120		10/05/19 01:12	1
Dibromofluoromethane (Surr)	89		75 - 128		10/05/19 01:12	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 121		10/05/19 01:12	1
Toluene-d8 (Surr)	98		70 - 123		10/05/19 01:12	1

Client Sample Results

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

Job ID: 240-119554-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-119554-6

Date Collected: 09/25/19 00:00

Matrix: Water

Date Received: 09/27/19 08:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/05/19 01:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			10/05/19 01:34	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			10/05/19 01:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/05/19 01:34	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			10/05/19 01:34	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			10/05/19 01:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		59 - 120		10/05/19 01:34	1
Dibromofluoromethane (Surr)	83		75 - 128		10/05/19 01:34	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 121		10/05/19 01:34	1
Toluene-d8 (Surr)	96		70 - 123		10/05/19 01:34	1

Surrogate Summary

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

Job ID: 240-119554-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	DBFM	DCA	TOL
		(59-120)	(75-128)	(70-121)	(70-123)
240-119554-1	MW-69_092319	96	83	117	96
240-119554-2	MW-7_092519	98	89	116	98
240-119554-3	MW-1_092519	98	83	116	98
240-119554-4	MW-36_092519	97	83	112	98
240-119554-5	MW-25_092519	98	89	120	98
240-119554-6	TRIP BLANK	98	83	120	96
LCS 240-404189/4	Lab Control Sample	99	84	111	97
MB 240-404189/6	Method Blank	102	91	121	100

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

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

TOL = Toluene-d8 (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)
240-119521-C-5 MS	Matrix Spike	84
240-119521-C-5 MSD	Matrix Spike Duplicate	92
240-119554-1	MW-69_092319	103
240-119554-2	MW-7_092519	101
240-119554-3	MW-1_092519	106
240-119554-4	MW-36_092519	101
240-119554-5	MW-25_092519	100
500-170764-A-18 MS	Matrix Spike	111
500-170764-A-18 MSD	Matrix Spike Duplicate	111
LCS 240-403637/4	Lab Control Sample	99
LCS 240-403887/4	Lab Control Sample	99
MB 240-403637/5	Method Blank	99
MB 240-403887/5	Method Blank	100

Surrogate Legend

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

QC Sample Results

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

Job ID: 240-119554-1

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

Lab Sample ID: MB 240-404189/6
Matrix: Water
Analysis Batch: 404189

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/04/19 23:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			10/04/19 23:00	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			10/04/19 23:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			10/04/19 23:00	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			10/04/19 23:00	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			10/04/19 23:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		59 - 120		10/04/19 23:00	1
Dibromofluoromethane (Surr)	91		75 - 128		10/04/19 23:00	1
1,2-Dichloroethane-d4 (Surr)	121		70 - 121		10/04/19 23:00	1
Toluene-d8 (Surr)	100		70 - 123		10/04/19 23:00	1

Lab Sample ID: LCS 240-404189/4
Matrix: Water
Analysis Batch: 404189

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	10.5		ug/L		105	69 - 134
1,1,1,2-Tetrachloroethane	10.0	12.4		ug/L		124	65 - 139
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.34		ug/L		83	50 - 156
1,1,2-Trichloroethane	10.0	10.6		ug/L		106	78 - 133
1,1-Dichloroethane	10.0	10.6		ug/L		106	75 - 133
1,1-Dichloroethene	10.0	9.04		ug/L		90	65 - 139
1,2,4-Trichlorobenzene	10.0	8.29		ug/L		83	42 - 133
1,2,4-Trimethylbenzene	10.0	11.0		ug/L		110	74 - 120
1,2-Dibromo-3-Chloropropane	10.0	8.56		ug/L		86	46 - 132
1,2-Dibromoethane	10.0	10.6		ug/L		106	77 - 123
1,2-Dichlorobenzene	10.0	9.82		ug/L		98	78 - 120
1,2-Dichloroethane	10.0	12.5		ug/L		125	71 - 135
1,2-Dichloropropane	10.0	11.9		ug/L		119	78 - 133
1,3,5-Trimethylbenzene	10.0	10.9		ug/L		109	75 - 121
1,3-Dichlorobenzene	10.0	9.43		ug/L		94	78 - 120
1,4-Dichlorobenzene	10.0	10.2		ug/L		102	78 - 120
2-Butanone (MEK)	20.0	25.2		ug/L		126	39 - 163
2-Hexanone	20.0	26.8		ug/L		134	43 - 148
4-Methyl-2-pentanone (MIBK)	20.0	26.1		ug/L		130	49 - 143
Acetone	20.0	27.1		ug/L		136	21 - 162
Benzene	10.0	10.3		ug/L		103	80 - 123
Bromodichloromethane	10.0	10.8		ug/L		108	77 - 125
Bromoform	10.0	7.51		ug/L		75	49 - 141
Bromomethane	10.0	8.42		ug/L		84	41 - 175
Carbon disulfide	10.0	7.31		ug/L		73	60 - 138
Carbon tetrachloride	10.0	9.11		ug/L		91	63 - 140
Chlorobenzene	10.0	10.1		ug/L		101	80 - 121
Chloroethane	10.0	10.1		ug/L		101	33 - 173
Chloroform	10.0	10.5		ug/L		105	79 - 127

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-119554-1

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

Lab Sample ID: LCS 240-404189/4
 Matrix: Water
 Analysis Batch: 404189

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	9.29		ug/L		93	54 - 143
cis-1,2-Dichloroethene	10.0	9.44		ug/L		94	76 - 128
cis-1,3-Dichloropropene	10.0	10.3		ug/L		103	64 - 132
Cyclohexane	10.0	10.4		ug/L		104	58 - 145
Dibromochloromethane	10.0	8.50		ug/L		85	70 - 132
Dichlorodifluoromethane	10.0	7.86		ug/L		79	29 - 148
Diethyl ether	10.0	11.3		ug/L		113	70 - 146
Ethylbenzene	10.0	9.57		ug/L		96	80 - 120
Isopropylbenzene	10.0	9.86		ug/L		99	74 - 120
Methyl acetate	20.0	25.2		ug/L		126	52 - 145
Methyl tert-butyl ether	10.0	11.0		ug/L		110	51 - 133
Methylcyclohexane	10.0	9.55		ug/L		96	60 - 125
Methylene Chloride	10.0	9.56		ug/L		96	70 - 134
Styrene	10.0	10.0		ug/L		100	79 - 120
Tetrachloroethene	10.0	8.54		ug/L		85	74 - 130
Toluene	10.0	10.6		ug/L		106	78 - 129
trans-1,2-Dichloroethene	10.0	9.24		ug/L		92	78 - 133
trans-1,3-Dichloropropene	10.0	10.0		ug/L		100	55 - 128
Trichloroethene	10.0	9.58		ug/L		96	76 - 125
Trichlorofluoromethane	10.0	9.26		ug/L		93	51 - 164
Vinyl chloride	10.0	9.47		ug/L		95	58 - 143
Xylenes, Total	20.0	19.9		ug/L		100	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		59 - 120
Dibromofluoromethane (Surr)	84		75 - 128
1,2-Dichloroethane-d4 (Surr)	111		70 - 121
Toluene-d8 (Surr)	97		70 - 123

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

Lab Sample ID: MB 240-403637/5
 Matrix: Water
 Analysis Batch: 403637

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			10/02/19 11:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		63 - 125		10/02/19 11:53	1

Lab Sample ID: LCS 240-403637/4
 Matrix: Water
 Analysis Batch: 403637

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	10.4		ug/L		104	59 - 131

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-119554-1

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

Lab Sample ID: LCS 240-403637/4
Matrix: Water
Analysis Batch: 403637

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

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

Lab Sample ID: 240-119521-C-5 MS
Matrix: Water
Analysis Batch: 403637

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 * F1 F2	10.0	4.73	F1 *	ug/L		47	52 - 129	
Surrogate	MS %Recovery	MS Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)	84		63 - 125							

Lab Sample ID: 240-119521-C-5 MSD
Matrix: Water
Analysis Batch: 403637

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 * F1 F2	10.0	5.43	F2 *	ug/L		54	52 - 129	14	13
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	92		63 - 125								

Lab Sample ID: MB 240-403887/5
Matrix: Water
Analysis Batch: 403887

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			10/03/19 11:35	1	
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac				
1,2-Dichloroethane-d4 (Surr)	100		63 - 125		10/03/19 11:35	1				

Lab Sample ID: LCS 240-403887/4
Matrix: Water
Analysis Batch: 403887

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	11.0		ug/L		110	59 - 131
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	99		63 - 125				

QC Sample Results

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

Job ID: 240-119554-1

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

Lab Sample ID: 500-170764-A-18 MS
Matrix: Water
Analysis Batch: 403887

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	0.90	J	10.0	10.7		ug/L		98	52 - 129
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	111		63 - 125						

Lab Sample ID: 500-170764-A-18 MSD
Matrix: Water
Analysis Batch: 403887

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	0.90	J	10.0	11.2		ug/L		103	52 - 129	5	13
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	111		63 - 125								



QC Association Summary

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

Job ID: 240-119554-1

GC/MS VOA

Analysis Batch: 403637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-119554-1	MW-69_092319	Total/NA	Water	8260B SIM	
MB 240-403637/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-403637/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-119521-C-5 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-119521-C-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 403887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-119554-2	MW-7_092519	Total/NA	Water	8260B SIM	
240-119554-3	MW-1_092519	Total/NA	Water	8260B SIM	
240-119554-4	MW-36_092519	Total/NA	Water	8260B SIM	
240-119554-5	MW-25_092519	Total/NA	Water	8260B SIM	
MB 240-403887/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-403887/4	Lab Control Sample	Total/NA	Water	8260B SIM	
500-170764-A-18 MS	Matrix Spike	Total/NA	Water	8260B SIM	
500-170764-A-18 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 404189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-119554-1	MW-69_092319	Total/NA	Water	8260B	
240-119554-2	MW-7_092519	Total/NA	Water	8260B	
240-119554-3	MW-1_092519	Total/NA	Water	8260B	
240-119554-4	MW-36_092519	Total/NA	Water	8260B	
240-119554-5	MW-25_092519	Total/NA	Water	8260B	
240-119554-6	TRIP BLANK	Total/NA	Water	8260B	
MB 240-404189/6	Method Blank	Total/NA	Water	8260B	
LCS 240-404189/4	Lab Control Sample	Total/NA	Water	8260B	

Lab Chronicle

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

Job ID: 240-119554-1

Client Sample ID: MW-69_092319

Lab Sample ID: 240-119554-1

Date Collected: 09/23/19 18:03

Matrix: Water

Date Received: 09/27/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	404189	10/04/19 23:44	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	403637	10/02/19 13:59	SAM	TAL CAN

Client Sample ID: MW-7_092519

Lab Sample ID: 240-119554-2

Date Collected: 09/25/19 10:15

Matrix: Water

Date Received: 09/27/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	404189	10/05/19 00:06	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	403887	10/03/19 12:51	SAM	TAL CAN

Client Sample ID: MW-1_092519

Lab Sample ID: 240-119554-3

Date Collected: 09/25/19 12:10

Matrix: Water

Date Received: 09/27/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	404189	10/05/19 00:28	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	403887	10/03/19 13:16	SAM	TAL CAN

Client Sample ID: MW-36_092519

Lab Sample ID: 240-119554-4

Date Collected: 09/25/19 14:42

Matrix: Water

Date Received: 09/27/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	404189	10/05/19 00:50	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	403887	10/03/19 13:41	SAM	TAL CAN

Client Sample ID: MW-25_092519

Lab Sample ID: 240-119554-5

Date Collected: 09/25/19 17:45

Matrix: Water

Date Received: 09/27/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	404189	10/05/19 01:12	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	403887	10/03/19 14:06	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-119554-6

Date Collected: 09/25/19 00:00

Matrix: Water

Date Received: 09/27/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	404189	10/05/19 01:34	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 - E203728

Job ID: 240-119554-1

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-20
Connecticut	State	PH-0590	12-31-19
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-16-00404	12-28-19
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-20
West Virginia DEP	State	210	12-31-19

MICHIGAN 190

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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		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: kristoffer.hinskey@arcadis.com		Site Contact: Mike DeMonico Telephone: 330-497-9396	
Project Name: Ford LTP Project Number: M1001454.0004.0001B PO # M1001454.0004.0001B		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	
Method of Shipment/Carrier: Shipping/Tracking No:		Analysis Walk-in client <input type="checkbox"/> Lab sampling <input type="checkbox"/> Job/SDG No:	
Sample Identification		Sample Specific Notes / Special Instructions:	
Sample Date	Sample Time	Matrix	Containers & Preservatives
9/23/19 18:03		Air	<input checked="" type="checkbox"/> H2SO4 <input checked="" type="checkbox"/> HNO3 <input checked="" type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> ZnAc <input type="checkbox"/> Ulnpres Other:
9/25/19 10:15		Aqueous	<input checked="" type="checkbox"/> H2SO4 <input checked="" type="checkbox"/> HNO3 <input checked="" type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> ZnAc <input type="checkbox"/> Ulnpres Other:
9/25/19 12:10		Sediment	<input checked="" type="checkbox"/> H2SO4 <input checked="" type="checkbox"/> HNO3 <input checked="" type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> ZnAc <input type="checkbox"/> Ulnpres Other:
9/25/19 14:42		Solid	<input checked="" type="checkbox"/> H2SO4 <input checked="" type="checkbox"/> HNO3 <input checked="" type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> ZnAc <input type="checkbox"/> Ulnpres Other:
9/25/19 17:45		Other:	<input checked="" type="checkbox"/> H2SO4 <input checked="" type="checkbox"/> HNO3 <input checked="" type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> ZnAc <input type="checkbox"/> Ulnpres Other:
trip blank			



Possible Hazard Identification
 Non-Hazard Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:
 Submit all results through Cadena at jim.tomalia@cadenana.com. Cadena #E203728
 Level IV Reporting.


Relinquished by: <i>Melissa Weaver</i>	Date/Time: 9/25/19 1815	Company: Arcadis	Received by: <i>Melissa Weaver</i>	Date/Time: 9/25/19 1815	Company: Arcadis
Relinquished by: <i>Gregor</i>	Date/Time: 9/25/19 1900	Company: Arcadis	Received by: <i>Melissa Weaver</i>	Date/Time: 9/25/19 1900	Company: Arcadis
Relinquished by: <i>Melissa Weaver</i>	Date/Time: 9/26/19 13:30	Company: Arcadis	Received in Laboratory by: <i>Nelly Maxwell</i>	Date/Time: 9/26/19 1330	Company: Arcadis
Relinquished by: <i>Nelly Maxwell</i>	Date/Time: 9/26/19 1445	Company: Arcadis	Received by: <i>Nelly Maxwell</i>	Date/Time: 9/26/19 1445	Company: Arcadis



Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 119554


Client Accadis Site Name _____
 Cooler Received on 9-27-19 Opened on 9-27-19

Cooler unpacked by:


FedEx: 1st 2nd 3rd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

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

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 1.4 °C Corrected Cooler Temp. 2.1 °C
 IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes ~~No~~
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
 4. Did custody papers accompany the sample(s)? Yes No
 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes ~~No~~
 7. Did all bottles arrive in good condition (Unbroken)? Yes No
 8. Could all bottle labels be reconciled with the COC? Yes No
 9. Were correct bottle(s) used for the test(s) indicated? Yes No
 10. Sufficient quantity received to perform indicated analyses? Yes No
 11. Are these work share samples? Yes ~~No~~
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No ~~NA~~ pH Strip Lot# HC991818
 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:
GB

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: _____